POSITION PAPER

2019 EDITION

POSITION PAPER 2019

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The views expressed in each chapter are generally in conformity with the views of EBG Federation. Information in this Position Paper is therefore intended for general guidance only. The views and recommendations put forward in this Position Paper are proposed only to stimulate discussions and offer suggestions to make Indian business environment more competitive. Whilst efforts have been made to ensure that the information contained in this Position Paper is accurate to the best of our knowledge, EBG Federation and its Knowledge Partners namely Deloitte Touche Tohmatsu India LLP, EY, Grant Thornton, JMP Advisors, KPMG in India, OPPI, PwC and TMF-Group does not assume any liability or responsibility for the outcome of any decision taken by any reader on the basis of this position paper.

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EBG FEDERATION

An introduction to EBG Federation in India

Founded as the European Business Group (EBG), in 1997 as a joint initiative of the European Commission and the European Business Community in India, EBG has come to be recognized by the Indian Government and the European Commission as the industry advocacy group representing the interest of European companies and Indo-European Joint Ventures in India. EBG Federation was established on March 11, 2015 as a Section 8 company under the Companies Act 2013 in order to ensure long term stability and broaden its sphere of activities offering support and advocacy for European businesses in India.

EBG Federation is supported by the Delegation of the European Union to India and works towards promoting, propagating and safe guarding European business interests in India. The EU Ambassador is our Patron.

Currently EBG Federation has Chapters in Delhi, Mumbai, and Bengaluru with approximately 170 companies as Members.

The primary objective of EBG Federation is to actively support growth in India-EU trade relations, and become the most relevant advocacy group for European business in India and ensure that the needs of European business are well presented to policy and decision makers.

Every year the EBG publishes a ‘Position Paper’ which highlights the group’s views on policy issues. The EBG Federation Position Paper is a collective expression of the views of the members of EBG Federation and supported by knowledge partners on key aspects of the business environment in India such as Ease of Doing Business. The EBG Position Paper proposes key policy reforms that will be conducive to the growth of business and what we believe are in the realm of possibility for the Indian government to put in place.

The 2019 edition of the EBG Position Paper covers the following key sectors, including Agrochemicals, Alcoholic Beverages, Automotive, Aviation, Banking, Chemicals & Petrochemicals, Defence, Energy – (Oil & Gas, Power), Financial Services, FMCG, Healthcare, ICT, Infrastructure, Logistics, Pharmaceuticals, Retail, and Telecommunications.

Message from Mr. Raman Sidhu, FCA
Chairman, EBG Federation, India

In a world where isolationism and protectionism currently dominate the headlines, India and Europe have a unique opportunity to lead the way and show that international trade and a rule-based global order is mutually beneficial for all parties in the long run. From an EU perspective this has been particularly noticed in the updated EU strategy on India which re-commit EUs relationship to India. With an economy growing at above 7%, India is an important market and sourcing partner for European companies. As India's largest trading partner, EU remains a significant partner to India.

The annual EBG Position Paper gets European companies engaged in a policy dialogue which will ensure that the views in this policy document have both validity and support from the very practitioners on the ground that it affects. The Position Paper is created in India by senior representatives from our European member companies who have been operating in India for decades on the ground. The challenges as well as opportunities described in this document reflect the experience of our members. This has been proven important in the ongoing interactions with the Government ministries/departments and agencies with whom we have a sound working relationship and to whom we regularly provide input on matters such as ease of doing business in India. By being a speaking partner to the Government of India, state governments, local regulators and EU as well as EFTA, the EBG Federation is in a unique position to consolidate the beneficial Indo-European business relationships.

The EBG Federation remains committed to further strengthen the ties with EU and EFTA members diplomatic missions as well as bilateral chambers in India to ensure effective business advocacy. I believe that the joint effort of the recently constituted European Economic Group (EEG), which is financed by the European Commission, will be a valuable platform that gathers EBG Federation and bilateral chambers of commerce as well as European diplomatic missions to India to promote these mutual interests.

We are very pleased to present the EBG Federation's 17th annual Position Paper that covers 18 sector committees' work over the past year. I express my gratitude to our patron the Ambassador of the European Union to India, Heads of missions, counsellors and their team for their ongoing support of the EBG Federation. The chairpersons and members of sector committees and their respective knowledge partners that have created this policy document deserve a special appreciation for their deep knowledge and contribution. I would also like to thank the regional chapters in Mumbai and Bengaluru, our board of directors and our secretariat that organise and manage EBG activities which are the foundation of creating a real impact for the European business community in India.

Message from Mr. Kersi Hilloo
Chairman, EBG Federation, Mumbai Chapter

This 17th Edition of the EBG Federation Position Paper 2019 actively supports and strengthens the rapid growing relationship between the EU and India, covering new sectors in the industry giving an idea of the wide interests of EU companies in this country.

India is one of the fastest growing economies in the world maintaining consistent economic growth with an ambitious drive for modernization and thereby a strategic partner for the EU. Together, the EU and India represent a population of close to 2 billion people which is a considerable reservoir of economic growth with a huge potential for both, the EU and India to benefit from strengthened trade, economic and investment relations.

A strong partnership between the EU and India is key for sustainable modernization and to foster investment and trade.

The Annual Position Paper is a key instrument in the development and growth of the dedicated sectors and the goal is to widen the scope of partnerships between Europe and India with our shared vision and commitment towards EU corporations in India.

The primary focus in EBG Federation continues to be on ‘advocacy’ and strengthening the partnership between India and EU companies.

Message from Sanjeev Varma
Chairman, EBG Bengaluru Chapter

As the chair of EBG Bengaluru Chapter, it is a pleasure and honour to contribute to Indo-European community through EBG. EBG Bengaluru has contributed to the ICT and Innovation paper this year which would not have been possible without inputs from our knowledge Partners, Deloitte Touche Tohmatsu India LLP. This has been a complete team effort where representatives from various European companies came together to contribute their ideas to make it a success. This year’s ICT and Innovation position paper provides insights into the IT & ITeS industry landscape, recent macro-economic developments and covers some of industry issues and suggestions.

Building a common platform for European companies to come together, share ideas and network would be EBG Bengaluru Chapter’s priority. I look forward to active participation and support from existing members of EBG and hope to on-board new members who share a common agenda.

Message from Christofer Littorin
General Manager, EBG Federation

We are delighted to once again present the annual version of the EBG Federation Position Paper. All in all, we are covering 18 industry sectors, out of which two sector committees have been added this year: healthcare and infrastructure. In total almost 100 senior representatives, from a wide range of European companies, have contributed in the creation of this document spanning over 300 pages. The Position Paper is what outlines the priorities for the coming 12 months for EBG Federation. Together with representatives from the delegation of the European Union, EU and EFTA Member States and their respective chambers of commerce, EBG Federation will work with the Government of India, and regulators at state and local level to further build on the important progress India has made in Ease of Doing Business. Creating a level playing field for both European and Indian companies will support more FDI, increase technology transfer and support job creation. In this light our members' investments in India are for the long-term and are a sign of the growing partnership as India increases its share of the world economy.

Over the past year EBG Federation has partnered with several representatives from the European Commission that have visited India, and co-hosted numerous events with embassies where we have raised issues such as data and privacy protection, the role of FDI for India's economic growth, and the role of start-ups in a digital India. We will continue to encourage these types of joint activities with our close European partners. Over the next year we will increase our impact by bringing even more focus on our sector committees which are the foundation of our policy related work.

Europe's strength lies in its strong bonds between neighbours and its bilateral relationships. With this in mind, collaboration is the natural starting point. We believe that the European Economic Group (EEG) will play an important role in continuing that track record of partnership. The EEG forum will give the opportunity for each participant to gain support and advocacy on mutual issues. This forum will also be an opportunity to highlight European SMEs, including start-ups, and include them in the dialogue.

Reading through the Ambassadors' and High Commissioners' messages in this document, it is impossible not to be optimistic about the future of Indo-European relations. We share mutual values and want to continue investing in our common future. As a representative of EBG Federation I can say that we will do our outmost to support these aspiring promises and we are looking forward to the year ahead.

Message from Mr. Gokul Chaudhri
Partner – Deloitte Touche Tohmatsu India LLP

The India-EU ties date back to several decades with India being amongst the first nations to forge bilateral economic and diplomatic association with the European Union, then known as European Economic Community. The partnership stood reinforced at the beginning of the 21st century, as India and EU became 'Strategic Partners' and agreed on a Joint Action Plan in 2005 (updated in 2008). Since, India's engagement with the EU has substantially intensified and now spans over 30[1] dialogue mechanisms, covering foreign policy and security issues, trade and investment and sustainable development among others. The European Investment Bank (EIB), that has EU member states as its shareholders, has invested Euro 2.5 billion[2] in infrastructure, renewable energy and climate projects in India creating almost 6 million[2] job opportunities.

On trade front, India-EU relationship has flourished over years with EU emerging as India's largest trade partner contributing for Euro 92 billion worth of trade in goods in 2018 or 12.9% of total Indian trade, ahead of China (10.9%) and the USA (10.1%)[3]. India, on the other hand, continues to remain hugely attractive investment destination for EU investors, and is ninth-largest trade partner for the EU[4]. The existing EU-India Clean Energy and Climate Partnership, the establishment of a formal India-EU climate change dialogue, along with enhanced EU support to the International Solar Alliance (ISA) and cooperation in the International Renewable Energy Agency, offers impetus to India in achieving its ambitious goal of 175GW of renewable energy by 2022.

As the two sides continue to evolve bilateral relationship, the engagement continues to hold increased potential. In addition to bilateral engagement, India and EU continue to engage on various multilateral platforms like G20, OECD, WTO and UN on issues ranging from climate change to tax policy framework. Amid slowing global growth, mounting trade wars and increasing economic protectionism, India and the EU remain strongly committed to effective multilateralism including at global forums such as United Nations (UN) and WTO.

India could become the next manufacturing hub (post China) for European manufacturers like automobiles and others. Successful negotiation of Bilateral Trade and Investment Agreement (BTIA) or Free Trade Agreement (FTA) should go a long way in achieving this objective. In the backdrop of re-elected Modi administration with massive electoral win, unprecedented focus on scaling up infrastructure capabilities, growing thrust on industrialization and indigenisation, and creating employment through R&D and technological advancements hold out tremendous potential for European businesses investing in India. In fact, interest already evinced by EU businesses in Government's flagship programmes – Make in India, Skill India and Digital India is quite encouraging. There has been a paradigm shift in approach towards governance as government has unveiled multiple reforms aimed towards improving business climate in

1 Media release of Ministry of External Affairs – https://www.mea.gov.in/press-releases.htm?dtl/30643/India+welcomes+Joint+Communication+by+the+European+Commission+on+IndiaEU+partnership++A+Partnership+for+Sustainable+Modernisation+and+Rulesbased+Global+Order

2 Factsheet on the new EU Strategy on India (https://eeas.europa.eu/sites/eeas/files/eu-india_factsheet_november_2018.pdf)

3 http://ec.europa.eu/trade/policy/countries-and-regions/countries/india/

4 http://ec.europa.eu/trade/policy/countries-and-regions/countries/india/

India. In the World Bank's rankings on 'ease of doing business', India has been ranked at 77 in 2018 from 139 rank in 2010 among 190 countries assessed by the World Bank. India's leap in 'ease of doing business' ranking is significant and the government is consistently endeavouring in this direction to improve it further. Successful roll out of the comprehensive GST regime and overarching effort of the government to simplify tax legislations and modernise tax administration are important initiatives.

Both EU and India share interest in further strengthening their political, economic and defence cooperation not only on a robust bilateral agenda, but also on regional and global issues of shared concern and for reforming the multilateral system. Against this rapidly evolving geo-economic landscape, EBG Federation India, has played a commendable role in facilitating trade and investment flows as well as emerging as a credible voice of the EU businesses in bringing forth concerns and recommendations of businesses for deliberation by the Indian policy makers. The EBG Position Papers, over the years, have become instrumental in shaping policy discussions across industries and successfully enhancing the dialogue on ways to deal with impediments for cross-border trade and investments.

We at Deloitte would like to congratulate the EBG Federation on the 2019 edition of this annual publication and extend our gratitude and pleasure in partnering with them on this significant initiative.

Message from Rajeev Gupta
MD Resource Development Intl. (I) Pvt Ltd & Sr Advisor EBG

Friends,

I have been talking about the building of a new India and my conviction of a new order being built. The thumping victory of the present regime is testimony enough of a new narrative getting established and the emergence of Strong and Decisive New India which will be for sure bigger, better, stronger, corruption free, peaceful & more prosperous than ever before.

I think there is little doubt on the potential that India holds for businesses, given the mix of extremely favorable demographics, the increasing consumerism, explosion of media and hence awareness & aspirations, a per capita income bordering at levels which can tip-over to aspirational spending, an evolving stable society given the politico social environment (read democracy, secularism, etc.), all of which give the recipe for multifold growth for a reasonably long period of time. India has thus been one of the fastest growing economies of the world over the last more than a decade or so which is further likely to continue for a good 35-40 years if not more.

Having said this & given the fact that India is still a developing country with an ever evolving eco-system, the business environment does pose lot of challenges. It is thus pertinent & important for all Global Powers to look at India as a Country with huge potential & participate and Partner with it in its journey of Growth. I also feel strongly that the Indian challenges are unique & hence the solutions to succeed will also have to new & unique. It is thus quite possible that we may not find references from other parts of the World to deal with these and may thus need a fresh set of thinking & ideas.

It has thus been our endeavour at EBG to engage with Policy Makers to further facilitate an environment which results into the emergence of a more vibrant, conducive and powerful India through greater Indo-European trade and collaboration. Our focus has been and continues to be to have serious and open discussions and to come out with innovative solutions which while taking care of National Interests can hasten the pace of growth by leveraging the strengths available elsewhere.

These position papers, which are a result of a series of intensive brainstorming sessions involving hundreds of man-hours of some of the best brains available in the business world, in the seventeen key sectors and representing the who's who of European businesses, is our attempt to draw the attention of stake holders in general & Policy makers in particular to the contributions made by European players in this growth journey of India and the possible corrective actions required in the policies to facilitate higher growth and participation.

We are confident that a continued & closer engagement between the two sides would go a long way in creating a win-win for all and help Europe to be a preferred Partner in India's Journey of Growth.

Message from H.E. Mr Tomasz Kozlowski
Ambassador of the European Union to India

India's economy is going through a fundamental modernization process and the EU is playing a key role as India's partner in the country's sustainable modernization. In order to strengthen and deepen our strategic partnership, the EU has recently adopted a new strategy for India. The strategy, developed in broad consultation with European and Indian stakeholders, shows how significant the EU considers India's role in international and regional matters and how determined the EU is to further develop and realize the full potential of this partnership.

With a GDP growth of more than 7%, India has emerged as the fastest growing, major economy in the world, thus representing an important opportunity for EU businesses to trade with and invest in India.

The EU is already India's first partner in terms of trade and investments. Bilateral trade in goods and services total € 125 billion (US$ 140 billion), while cumulative FDI amounts to US$ 81.5 billion. It is also worth noting that the EU-India trade in goods is remarkably balanced with both exports and imports amounting to € 45.7 billion (US$ 51.2 billion). This proves the complementarity of the two economies. Around 6000 EU companies are present in India, providing direct and indirect employment to around 6.7 million people.

EBG has an important role to play in advocating and advancing EU-wide business interests in India. Organized in different sector committees, it has acquired an in-depth knowledge of the Indian business environment, thus making it an important voice in advancing EU interests and EU-India economic cooperation in these sectors.

The Position Paper reflects the devotion and hard work of EBG and EU businesses in India, and I am once again delighted to support it. It has indeed, become an important reference document, laying out the challenges that EU businesses face in India. More importantly, it does not only identify challenges but also proposes solutions to address those challenges, aiming at a more conducive and attractive market for doing business.

In the coming years, EBG will have the opportunity to play an even more important role in strengthening EU business advocacy in India, by leading the European Economic Group (EEG), a recently established working group under an EU financed project to provide business support to EU-India policy dialogues. EEG will group together participants from the EBG, the bilateral chambers of EU Member States and any other relevant EU business associations. The overarching aim of EEG is to create one single EU business voice to address common issues across sectors and Member States. It will also have a special focus on SME related business and policy challenges.

I would like to, once again, express my full support to the EBG and its 2019 edition of the Position Paper.

Message from H.E. Brigitte Öppinger-Walchshofer
Ambassador of Austria to India

Congratulations to this year's publication of the EBG's Position Paper 2019.

This Position Paper again honors the reputation of the annual series as a successful manifestation of business relations between India and the European Union. The variety of business fields covered as well as the in-depth analysis offered by experts is useful to readers from both sides.

It is a good source of information and a business guide for new and further developments. India's economic growth is remarkable and the European Union is conscious of it. Both India and the European Union will not only need to strengthen mutual trade flows but also international trade routes and increase their mutual attractiveness for foreign investment.

There are currently more than 150 Austrian enterprises and joint ventures in India, 55 of them are active in the manufacturing sector. Many of them operate in market niches and all of the together employ about 10,000 Indians.

Austrian companies are represented in the areas of mechanical and plant engineering, automotive industry, infrastructure and energy sectors, electrical engineering and electronics. Consumer goods, food and lifestyle products are considered as potential options for future expansion.

It is the aim of the Austrian Embassy in New Delhi to support the business relations between India and Austria and emphasize the need to ensure collaborative development. The Embassy does not only focus on the bilateral relations between India and Austria, but also on the joint development of the European Union's multilateral economic relations with India.

This Position Paper is a collective assessment of India's business environment and of what is needed to foster international trade relations. The Embassy is grateful that Austrian business can rely on the EGB Federation as a strong partner and therefore fully supports this Position Paper 2019.

Message from H.E. Mr. François Delhaye
Ambassador of the Kingdom of Belgium to India

On behalf of the Embassy of Belgium, I would like to congratulate EBG for the work undertaken towards the drafting of the 2019 Position Paper. This position paper compiles information about relevant industrial sectors by the EBG as well as the promotion of the business interests of the European Union in India.

In the months following my arrival in New Delhi in September 2018, I had not only a foretaste of the cultural wealth and diversity of India, but I also realized in the course of my several interactions with the Belgian and Indian businessmen and other stakeholders, the commercial potential that India offers and the mutual interests that our two countries can strengthen further.

Belgium is a longstanding partner of India with a considerable importance on the economic level. As one of the largest and one of the top 3 trading partners among the EU Member States for India, Belgium is fully committed to promote, through its diplomatic representations in New Delhi, Mumbai, Chennai and its commercial representations, the deepening of economic relations as much in the traditional sectors such as the diamond trade, but also in the cutting-edge sectors such as the renewable energy, waste management, IT solutions, engineering among others. This mutual economic relationship is emphasized by the presence of a large number of Belgian business establishments in India but also by the presence of Indian companies and other investments in Belgium in various sectors.

As Brussels is not only the capital of Belgium but also hosts important European institutions, we hope that once the electoral deadlines have been overcome, India and the European Union will strive to work together to achieve an equitable and balanced Free Trade Agreement and an agreement for protection of investments that can contribute to the economic development of India and the European Union and its Member States.

We are confident that the EBG will succeed in carrying out an excellent advocacy work for the economic interests of the EU in India as much through the different sectoral committees as through the new initiatives.

Message from H.E. Ms. Eleonora Dimitrova
Ambassador of the Republic of Bulgaria to India

I would like to congratulate EBG on the release of its Position Paper for 2019. The Position Paper addresses key aspects of the business environment in India that supplement the business ties between European companies and their Indian counterparts.

The EU is India's largest trading partner and Bulgaria, member of the EU since 2007, contributes to the development of trade and investment relations between the EU and India.

The interest of Bulgarian companies towards India has led to the implementation of large scale projects under various programs of the Indian government, such as Make in India, Smart Cities and Clean India. Bulgarian entrepreneurs have strengthened their position as the fastest growing Internet providers in New Delhi and Hyderabad. IT specialists have developed innovative mobile safety applications used by individuals and police departments in India. Bulgarian companies have established production facilities in India, as the largest facility for bitumen packing in Asia and a manufacturing unit for veterinary medicines and also investment projects under Make in India.

The economic policy of Bulgaria puts special emphasis on developing capital-intensive and innovation-driven industries with high value added such as information technologies and outsourcing, automotive industry, electronics and electrical equipment, machinery, chemical and pharmaceutical industry. Bulgaria can contribute to the European trade and investment in India in a number of above mentioned industries that are part of the key pillars of the Indian economy.

EBG's Position Paper 2019 is an important reference tool, addressing all aspects of trade and investment, for the European companies that wish to invest in the country and providing recommendations and measures to facilitate the policy making process. Therefore, I would like to express my appreciation to the EBG for the extensive research and analysis in the Position Paper of the complex Indian market and to encourage them to continue to play a valuable role in advocating the EU trade relations with India.

Message from H.E. Petar Ljubičić
Ambassador of Croatia to India

I congratulate the EBG Federation on the release of its latest EGB Federation Position Paper for the 2019 edition, providing us all with valuable tool in reflecting our further steps in boosting economic ties between India and Croatia. I would also like to extend my gratitude for tireless work the EBS Federation out in releasing its annual position paper as a part of our mutual endeavor for future achievements. This Position Paper is significant effort in promoting cooperation between Europe and India.

If I would have to describe the elapsed year of Indo – Croatian relations I would chose continuity. Projects and plans that were in pipeline for several years witnessed a strong boost in two high level visits we had in the last year. The first was the visit of Minister of Foreign and European affairs of the Republic of Croatia to India, and the recent one – visit of the President of the Republic of India HE Ram Nath Kovind to Croatia. With HE the President, almost two hundred business people came for a three days intensive program of exchanging experiences and visions with Croatian business community, paving the way for the future individual and joint ventures.

The scope for business cooperation between Croatia and India is expanding fast. We are witnessing strong interest of Indian business to invest and trade with Croatia, and several joint ventures projects were incepted in the last year. Strong dedication to clean technologies and sustainable development are the framework for most of the said ventures. So, the focus is now shifting from traditional trading that has been there for decades towards cooperation in modern industries and IT. The very number of business visas issued by Croatian embassy portrays an incredible spike in recognizing possibilities for the business communities from the both countries.

Dramatic rise of tourist visa applications received daily at the Croatian embassy in Delhi indicates new visibility of Croatia in Indian market and awareness of Indian tourist of Croatia as preferred travel destination. This year we are striving to accommodate double the amount of applications as compared with the last year. And in last five years, the number of tourist visa applications for Croatia is multiplied by ten. Knowing that almost 90% of Indian tourists are coming in Croatia with Schengen visas gives us the real scope of trend we are witnessing.

One of the players in promoting Indo – European business cooperation is certainly the EBG and this Position Paper is an important contribution to that end.

Message from H.E. Mr Agis Loizou
High Commissioner of the Republic of Cyprus to India

It is my pleasure as High Commissioner of the Republic of Cyprus India to sincerely congratulate the EBG Federation on the release of the 2019 edition of its Position Paper.

As we continue to maintain our interest in the activities of the EBG Federation, we wish to felicitate the EBG Federation, for its consistent hard work, including the release of the Position Papers, which reflects its commitment in further strengthening trade and economic ties between the EU and India.

EBG's Position Paper, which has an added value in terms of new ideas and innovative approaches to businesses, is a very useful reference tool to understand and identify the challenges faced by the EU businesses in India, along with solutions to these challenges.

EBG's support and joint representation to the European businesses in India is highly commendable, throughout its remarkable journey of over two decades, since its establishment in 1997. This is duly recognized by both sides.

Moreover it is a forum that plays a significant role in facilitating cooperation and partnerships for the mutual benefit of both the sides in order to further share experiences and best practices and open up new avenues to promote research and development.

Cyprus and India historically enjoy very close bilateral relations. In terms of cooperation in the domains of trade, commerce and investment, both countries are keen to work together to further enhance these ties to their mutual benefits. Cyprus has been India's 8th largest FDI contributor between April 2000 and December 2018.

On its part, the High Commission of the Republic of Cyprus in New Delhi is pleased to further encourage Cypriot businesses to join the High Commission to engage with EBG in order to promote Public Private Partnerships.

In light of India being the world's fastest-growing large economy and an important trade and investment partner for the EU, much as Europe continues to be a desired destination for Indian entrepreneurs, both sides positively look forward to high-level engagements in order to continue with the trade and investment initiatives so as to bolster these ties in the years to come.

Message from H.E. Mr Milan Hovorka
Ambassador Extraordinary and Plenipotentiary of the Czech Republic to India

I am pleased and honoured to salute once again the European Business Group Federation on the occasion of releasing its annual policy document covering the issues and recommendations of the European companies. Once again, I am privileged to express on behalf on the Embassy of the Czech Republic in New Delhi our sincerest appreciations for all the tremendous efforts made the EBG Federation sectoral committees to produce the 2019 Position Paper.

I find particularly interesting, that the Position Paper has been created by businessmen for businessmen. It reflects a useful feedback given by European companies on what more could and should be done at the Indian authorities' level to improve further business environment in India and make it more conducive to creating and nurturing new business opportunities. But it is also a great source of inspiration for newcomers and facilitates their initiation to invest in India.

I should congratulate the EBG Federation for becoming the point of reference for European Business in India which was clearly reflected not only through the large membership of European entrepreneurs in this organization but it is also demonstrated on the occasion of important visits of representatives of European Union in India during which the meeting with EBG Federation has become undisputable part of the official programme of these visits.

But I should also like to congratulate the EBG Federation for becoming a respected partner to the Government of India in its policy making as all the efforts to produce the Position Paper every year helps the Government fulfil one of its key policy objectives of ease of doing business.

European Union and India are natural partners determined to take their strategic partnership forward.

European Union is the single most important partner of India in terms of trade and investment. Cultivating conditions for doing business in India through the Position Paper is one of the efficient ways to enhance bilateral economic cooperation and generate better understanding regarding a meaningful and sufficiently ambitious institutional framework governing bilateral trade and investments flows.

In this respect, I cannot but underline that the Czech Republic remains committed to the cause of reducing trade and investment barriers preventing both European and Indian businesses from benefiting fully of the existing potential and will do its utmost to help both sides find a common ground on which protracted negotiations on free trade and investment protection agreement could be relaunched. This point has been clearly articulated during recent contacts at the head of state and prime minister´s level.

To conclude, I would like to congratulate once again the EBG Federation for its tireless efforts to produce the 2019 Position Paper. I wish a lot of success to the EBG Federation and its Members.

Message from H.E. Mr. Peter Taksøe-Jensen
Ambassador of Denmark to India

With its large scale, India offers a tremendous amount of opportunities for EU businesses that can contribute to the development and to SDG agenda. This provides the foundation of the cooperation between India and the EU. A cooperation that holds great potential and can bring mutual benefits for both parties in many decades to come. Potential that India should take advantage of in order to become further integrated into the global value chain.

A free trade agreement including bilateral investment protection between India and the EU remains crucial in order to exploit the considerable untapped potential in the trade relations. Additionally, it will be critical for India not to demand data localization in the coming Data Protection Bill. This would essentially challenge European corporations' opportunities to tap into the Indian service sector, an area that continues to create jobs and provides the basic for further future job opportunities. Similarly, India should continue to simplify and streamline the tax environment by expanding the Goods and Services Tax to include e.g. alcohol, electricity and petroleum products, in order to keep moving up the Ease of Doing Business Index. Finally, removing the ban on fur skins would create a tremendous high value added industry in India where the entire production is re-exported. The fur industry is currently shifting from China to other countries in South and South East Asia with lower labour costs and India could seize this opportunity.

2018 was an excellent year for Indo-Danish relations. The official visit in December of the Danish Minister of Foreign Affairs, Mr. Anders Samuelsen, and the meeting between the Foreign Ministers marked the revival of the Danish-Indian Joint Commission and emphasised the great scope for cooperation between our nations. This was further underlined during the official visit of the Danish Prime Minister, Mr. Lars Løkke Rasmussen, in January, which laid the foundation for a strategic partnership that will focus on off shore wind, solutions for smart cities, water management, India stack, milk productivity and dairy solutions, and non-communicable diseases (NCD's). Finally yet importantly, the partnership will focus on the entire ship value chain from cradle to grave, including trade and shipping facilitation and intelligent solutions for upgradation of airports and heavy infrastructure projects. Building on this positive momentum, I look forward to continuing the common effort to strengthen the cooperation between Europe and India.

Concluding, I would like to express my sincere appreciation for the EBG's commitment to promote Indo-European business cooperation and for their constant effort to support European companies in India.

Message from H.E. Mr Riho Kruuv
Ambassador of Estonia to India

Trade relations between India and Estonia have developed gradually and evolutionary over past decades and go well beyond the time that Estonia joined European Union in 2004. However, major developments and growth in our bilateral trade and investment flows started in 2014 after Estonia opened its Embassy in New Delhi. This trend and growth is expected to continue also in the future.

Although Estonian export to India has been mostly dominated by traditional economic sectors like machinery, wood and paper, food and chemicals, major effort is now put into new technology driven sectors like ICT, Cyber Security, fintech, and related services that have the biggest potential in the future and reflect the character of modern Estonian economy and its export interest in global market. It is therefore very important for Estonia to see EBG putting so much of their efforts in bringing out the issues and potential for improvements in regulatory environment in all these areas. Both, traditional and new.

Since most of Estonian businesses that have interest in Indian and regional markets can be considered SMEs that, by definition, have less resources and influence in bringing the change in regulatory environments and finding solutions to their issues in market access, the work that EBG has been doing is extremely valuable for them. The issues and business cases brought into limelight by some of their bigger industry peers in their sectors of activity will definitely help to tackle their specific concerns, as well.

Estonia is looking forward to cooperating with EBG also in the future and hoping to contribute to the work of this organization according to its potential and resources both bilaterally and as a Member State of the European Union.

We wish EBG and its contributors all the best in carrying on their important mission also in the future.

Message from H.E. Ms. Nina Vaskunlahti
Ambassador of Finland to India

Ease of Doing Business is something we are all striving for, and I thank the EBG Federation for preparing the Position Paper which reflects the vision and views of European Companies in India. Step by step we will overcome the challenges – free trade and open markets are beneficial for all.

The year 2019 marks the 70th Anniversary of Diplomatic Relations between Finland and India. The ever-strengthening ties between the two countries are manifested through the increasing collaboration, which takes many forms: political, economic, R&D, innovation, culture, people-to-people contacts... There are over 100 Finnish companies operating in India, and around 25 Indian companies present in Finland. It is truly exciting to see all these businesses focusing on expanding their operations.

Year 2019 kicked off very nicely for Finland when it ranked first in the global Good Country Index. The index, currently on its fourth edition, reflects whether a country's "balance sheet" burdens humankind or contributes to the common good of humanity. Finland topped the ranking thanks to its performance in parameters such as social security, freedom of movement, press freedom, cyber security, refugee policies, environmental agreements compliance, free trading, FDI outflows, and development aid. Initiatives towards reducing harmful emissions undertaken by Finnish companies in India are just one example marking Finland's international commitment to mitigate climate change.

Finnish companies in India are widely spread across sectors such as energy, mining, network operations & telecommunications, and infrastructure. Future Indo-Finnish investment potential is vested in sectors such as smart cities, sustainable energy systems, digital solutions, artificial intelligence as well as food and beverage.

Finland's Presidency of the Council of the European Union during the latter half of 2019 will focus on sustainable growth and global competitiveness through open and rules-based trade policy. Strengthening the multilateral trading system and advancing EU's bilateral and regional trade relations will also benefit Indian companies.

The Finnish talent attraction programme for foreign tech experts, Talent Boost, was introduced to India earlier this year in Bengaluru. The Talent Boost programme in India targets highly skilled software developers to work in companies in Finland, and also startup entrepreneurs who wish to grow their business in Europe. The Indo-Finnish start-up and incubator collaboration has seen a boost in the recent years, taking place especially in the context of SLUSH, world's leading start-up event organized annually in Helsinki. This provides great opportunities for Indian start-ups to venture overseas and at the same fosters the access of international startups into the Indian market.

Finland supports open markets and low barriers to market entry and takes pride in having a transparent and investor-friendly business climate and well-educated population. According to the UN, Finland is also the Happiest Country in the World (for the second year in a row) – an additional encouragement to make business with and in Finland! EBG Position Paper 2019

Message from H.E. Mr. Alexandre Ziegler
Ambassador of France to India

On behalf of the Embassy of France, I would like to thank the European Business Group (EBG) for the work undertaken towards the drafting of the 2019 Position Paper. This position paper constitutes a useful source of information in a wide array of sectors of the Indian economy, and is, directly or indirectly, related to the priorities of the companies of EU Members' States operating in India.

In this regard, one has to recognize the dynamism of the economic bilateral relationship between India and France in recent times. The total amount of our trade in goods with India indeed continues to grow, as it has increased by +7.6% in 2018, up to €11.5 billion. French exports to India went up 3,4% last year, reaching €5.53 billion. The good sales orientation was confirmed for aeronautical components, as well as chemicals (+16% to €248 million) and pharmaceutical sales.

The foundation of our bilateral relationship with India is strong, with almost 600 French companies established in this country. A continuous flow of investments have put France among the top countries in terms of FDI; more than 3,50,000 salaried workers are employed in French companies in all sectors of activity. These companies do not regard India as a short-term market or a business opportunity, but mostly come forward as partners to engage in a lasting relationship with India. They invest, create jobs, and also innovate in India.

Within the framework of the European Union - India economic bilateral relationship, the situation looks equally globally satisfying. EU is indeed India's largest trading partner in Goods, as well as one of the major investors. But nevertheless, this relation has to be intensified and deepened, from both sides. Indeed, on the one hand, both India and the EU have vast domestic markets and a strong entrepreneurial tradition. I am convinced that there is scope for much more trade, investment and cooperation between European and Indian companies, from SME' to Medium and big size companies. On the other hand, the EU is committed to modernize its economy, adapt it to the challenges of the digital economy and engage itself with foreign partners through the conclusion of FTAs.

In this context, the work undertaken by the EBG should be underlined, as it makes the interests and concerns of the EU Member States' companies' better known in this country. Congratulations to the EBG Federation and may this 2019 edition be followed by many others in order to facilitate a better understanding and development of the growing businesses ties between India and the EU.

Message from H.E. Walter J. Lindner
Ambassador of the Federal Republic of Germany to India

The first half of 2019 saw the two biggest democratic unions in the world hold elections: during several weeks in April and May, Indians were called to the polls which ended exactly on the same day as EU citizens started to vote for a new European parliament. The results of both these elections will shape the policy frameworks in India and in the European Union for the years to come. And Germany, an economic powerhouse in the heart of Europe, is ready to play a key role in contributing to the EU-India relations.

Ahead of China and the United States, the EU is India's largest trading partner with trade amounting to €125bn. The EU accounted for 15% of total FDI inflows into India in the fiscal year 2017-18. Close to 6000 EU companies are present in India, collectively providing direct employment to 1.7 million workers and indirect employment to 5 million. Indo-German Trade grew to nearly €20bn, the German exporters increased their business by 9,3%, the Indian exporters were even more successful with a growth rate of 10,5%.

But apart from these success stories, there are many challenges that lie ahead of us: addressing climate change and increasing our efforts to protect the environment we live in, but at the same time keeping in mind socio-economic factors such as employment and social stability. In a world of increasingly instable political frameworks and rising socio-economic tensions, it is important to acknowledge the achievements of long-term trade partnerships, but at the same time to collaborate even more closely to overcome still existing hurdles, such as non-tariff trade barriers, infrastructure and access to skilled labour. Having a common approach to standardization and regulatory harmonization in a variety of fields, from product safety to environmental and skills training standards, helps to eliminate so-called red tape and is therefore highly beneficial to the policy framework in which companies operate.

So what better way to find out about chances and challenges, wants and worries than to listen directly to the needs of European businesses here in India? This is what the European Business Group Federation (EBG) has been doing for over 20 years and the results of which are summed up excellently in its annual position paper: the result of a comprehensive consultation process with key stakeholders from a wide array of sectors, it has become one of the central documents to make the interests as well as the concerns of the European business community heard in India.

Let me take this opportunity to thank the EBG for its commitment in furthering EU-India relations: I am confident that the 2019 edition will continue to be a valuable input for the policy-making process. I am also confident that India will remain one of the most important partners for European businesses and that through fruitful discussions and close cooperation the ties between India and the EU will continue to grow and thrive.

Message of H.E. Panos Kalogeropoulous
Ambassador of Greece to India

I would like to convey my congratulations to the EBG Federation for the release of its Position Paper for Year 2019 as well as EBG's efforts and activities to promote European-Indian trade and investment relations.

The EU is India's first partner in terms of trade and investment inflows. EU-India trade in goods and services is well beyond €130 billion and there is a great potential for a further increase of the EU-India turnover.

India is one of the biggest economic partners for Greece in Asia and represents a priority country in the Greek Economy internationalization strategy. The volume of trade between Greece and India for goods and services during 2018 exceed the mark of 1.25 billion euro. 2018 brought a rise in mutual trade by approximately 50%. Greek exports to India in 2018 have risen by approximately 52% year-on-year basis and the service sector by 30% respectively.

Interaction between the countries is appreciated to be particularly intense in the sector of tourism. According to our National Tourism Organization, in 2017 Greece received 27,000 Indian tourists. In 2018 they were 39.000, a 44.4% increase.

At the 84th Thessaloniki International Fair in September 2019 (Northern Greece), India is going to be the focus country with the participation of numerous Indian companies from the Hi-tech, shipping, tourism, pharmaceuticals, real estate, energy, entertainment, machinery, automobiles, etc. sectors.

I perceive EBG as a part of the European expert community here in India, and a reliable partner for Greece as a member state of the European Union. The Position Paper for the year 2019 is going to be an excellent tool in the hands of the European companies active in incredible India.

Message from H.E. Gyula Pethő
Ambassador of Hungary to India

I would like to congratulate EBG upon the release of the 2018 edition of the EBG Position Paper. This important document demonstrates how Europe can assist India every year, and the current edition is no exception. Growing even faster than China, India has emerged as the next global powerhouse, the lone shining star in the otherwise sluggish group of large economies. Similarly, Hungary has been growing at a very brisk speed, outpacing all but a very few European countries. It is thus natural, that our economic ties are ever stronger and our bilateral trade is reaching unprecedented levels.

SMEs in both countries are the bedrock of the economy. India, with its substantial market, represents an important opportunity for Hungarian SMEs, while Hungary presents many prospects for Indian SMEs, for the much needed technology transfer that can boost the *Make in India* initiative – and their profits. Hungary has a lot to offer, as it has a very long history of innovation in various fields (water management, biotechnology, agricultural technologies, food processing etc.) and is equally adept in frugal engineering as India. These common points can spell a success story for cooperation of SMEs between the two countries.

India's aspiring middle class is the perfect market, and calls for a collaboration between the burgeoning start-up universe in our nations. Hungarian and Indian start-ups are both at the forefront of technology and innovation, cooperation of these new companies can offer solutions to the many problems India is facing – high levels of pollution, urban congestion, insufficient water supply, job creation, education, just to name a few.

India and Hungary has had a long history of cooperation, many Indian large corporates have strong presence in Hungary. The best examples are Apollo Tyres's first green-field investment outside of India, the four factories built by the Sumi Motherson group and Tata Consultancy Services' large delivery centre in Budapest, which employs over 2000 associates serving their clients in 29 languages. Likewise, some Hungarian companies have also gained foothold in India, for example the pharmaceutical producer Gedeon Richter, which has a factory in Vapi, Gujarat, in cooperation with an excellent local partner.

I would like to commend EBG again for the part they play in strengthening European-Indian business relations and congratulate them on constantly improving the Indian business landscape. The EBG position paper is a great collection of opinions from our European companies, channelling their views and comments to the appropriate Indian parties.

Message from H.E. Mr. Gudmundur Arni Stefansson
Ambassador of Iceland to India

India is one of Iceland's priority countries when it comes to foreign economic relations. The Governments of Iceland and India have taken measures to facilitate stronger business relations, through the conclusion of bilateral agreements on the Promotion and Protection of Investments and on the Avoidance of Double Taxation, as well as an Air Service Agreement and Memorandum of Understandings in such areas as renewable energy and sustainable fisheries. Furthermore, a broad-based Free Trade Agreement is being negotiated between India and the European Free Trade Association (EFTA) of which Iceland is a member. The trade agreement, when concluded, will serve as a catalyst for increased bilateral trade and investment between Iceland and India.

Trade relations between Iceland and India is growing, and there are ample business and investment opportunities in targeted areas in both the countries. To mention a few, it includes renewable energy (geothermal energy and hydropower), food processing technologies, medical devices (prosthetics and braces), biotechnology (food supplements, nutritional, biomedical and cosmetic products), and IoT/ Gaming. Tourism is a fast-growing area where the number of Indian tourists visiting Iceland has increased annually by 50 per cent for the last few years. Another area is Filming in Iceland by Indian film production companies is becoming well-established.

I wish to congratulate the European Business Group (EBG) on the forthcoming release of its EBG Position Paper 2019. We are appreciative of the important role that EBG plays in building bridges between European and Indian businesses.

Message from H.E. Mr Brian McElduff
Ambassador of Ireland to India

This is a historic year for Ireland in India with the opening of our Consulate-General in Mumbai, which will next year include our trade and investment representatives as an Ireland House office under one roof. Such a major investment by the Irish Government underlines the value we place on our economic ties with India and the potential we see for substantial further growth.

Ireland has enjoyed a remarkable economic performance in recent years and has consistently been Europe's strongest performing economy. It was recently ranked in an IMD survey as the seventh most competitive economy in the world.

More and more Indian companies look to Ireland as a base for their European operations, while Irish businesses seek to establish a foothold in the enormous Indian market. There are now more than 60 Indian companies with operations in Ireland, including India's top six IT services companies which have a large footprint there. More than 70 Irish companies have operations in India and over 180 are actively doing business here.

We have benefitted enormously from our EU membership – and not just in the economic sphere. While Brexit poses serious challenges, this is a British decision and Ireland is dedicated to remaining a strong and reliable EU member State. However it is in all our interests that the UK continues to have a harmonious and mutually beneficial trading relationship with the EU and we will wherever possible contribute towards this objective.

The European Business Group continues to play a valuable and much-needed role in promoting European business in India. The Embassy of Ireland enjoys excellent cooperation with the EBG and I would like to join my EU colleagues in welcoming the launch of their 2019 Position Paper.

Message from H.E. Mr Lorenzo Angeloni
Ambassador of Italy to India

I wish to congratulate the European Business Group Federation (EBG) on its endeavours in support of European companies in India and its commitment to strengthen business ties between them and their Indian counterparts. We look forward to the release of the 2019 edition of the EBG Position Paper, an important reference tool for both the EU and India in their quest to improve their partnership, remove existing hurdles and explore ever new pathways of cooperation.

The Indian and European industrial worlds of both large corporations and small and medium businesses are progressively integrating their respective activities in India and servicing each other's needs to mutual benefit.

As far as the EU–India relations are concerned, we very much believe that the newly appointed government headed by Prime Minister Narendra Modi will significantly contribute to foster the resumption of BTIA negotiations. In a changing global scenario, an agreement is now more than ever the need of the hour as such a treaty would give a major boost to the further growth of EU-India business partnership, considering that the EU is the first investor and first trading partner of India.

In the huge and complex market that is India every source of sound information and well researched analysis is indeed precious. I commend the EBG Federation for their efforts and encourage them to continue to expand the scope of their Position Paper, as they have been doing in the past years, by progressively adding new sectors and new suggestions for improving EU-India partnership.

I wish the 2019 edition the best of success.

Message from H.E. Mr. Artis Bērtulis
Ambassador of Latvia to India

I am privileged to address you through this valuable platform of the EBG Federation. I am honoured to be the second Ambassador of Latvia to India, as it also symbolically coincides with several important anniversaries, including Latvia commemorating the centenary of its statehood, 30th anniversary of the non-violent action of resistance – the Baltic Way, 15 years since joining the EU and NATO in 2004, and 5 years since joining the common currency euro. This year is also a special one as we are celebrating the 150th birth anniversary of Mahatma Gandhi.

I am delighted to note the vivid interest and considerable potential for expanding and deepening the cooperation between Latvia and India, including at the level of States. Let me particularly highlight the sectors of transport and logistics, ICT, higher education, high added value tourism, and the film industry. Let me also point out the vast possibilities in expanding the cooperation on a level of start-ups, and using the untapped potential of trade relations.

In this regard I am looking forward and hoping for potential relaunch of the EU-India Free Trade Agreement (FTA) negotiations in the foreseeable future. It would create conditions for a better connectivity and new trade and business opportunities. In a more connected and complex world, a better connectivity can also create closer coordination on common global challenges and responsibilities to promote peace, democracy, the rule of law and respect for human rights. The new EU Strategy on India (2018) and the new context of India's global and domestic agenda remarkably invigorates the dynamics between the EU and India.

I believe that the widening and strengthening of our business networks will contribute to the economies of our countries, and I have no doubt that our entrepreneurs are ready to consider new forms of cooperation for the mutual benefit and strategic positioning. The EBG Federation is a solid platform to expand and deepen this cooperation. I, therefore, convey my appreciation of efforts that has brought to light this comprehensive Position Paper.

Message from H.E. Mr. Julius Pranevičius
Ambassador of the Republic of Lithuania to India

It is an honour and privilege to congratulate EBG Federation for the release of its Position Paper for the year 2019. It is a tremendous source of information for European companies looking to establish its business in India and a very important document to look at in further strengthening Indo-European economic and trade cooperation.

India has been part of Lithuania's national legend, thanks to close proximity of the Lithuanian language to Sanskrit. From mid-19th century, several generations were brought up on the idea of our exclusive connection to ancient India. Contemporary relations between Lithuania and India have also been very cordial and although our bilateral economic cooperation still shows the lack of dynamic exchange in trade and investments, the most recent statistics reflect much more positive trends. Moreover, business communities of our respective countries demonstrate mutual interest in deepening economic ties. Recent years were rich with business visits both ways. The best way to promote a more active economic cooperation is to encourage the exchange of business delegations, a more active participation in international trade fairs and establishment of direct B2B contacts that helps to spread the message about the openness for a new cooperation projects.

According to the 'Global Competitiveness Report' by the World Economic Forum, my country is home to a highly educated, IT-literate, multi-lingual workforce. Lithuania offers excellent food products (cheeses, chocolates, drinks), has a competitive wood processing and furniture. Since both Lithuania and India are well-known for high-tech products and services, it may well be time to go beyond traditional export-import relations. Lithuania produces high-end products like wastewater treatment equipment, biotech, solar modules, lasers – in fact 10 per cent of world's scientific lasers come from Lithuania. Just last week the world's most powerful laser, created by Lithuanian companies, started working at the Laser Research Center in Europe.

I was very happy to discover that the 16th EBG Position Paper for 2018 included a new sector – Pharmaceuticals. Among the industries, it is one that is leading the way in Lithuania and where high potential for Lithuanian-Indian collaboration may be put forward. We are very optimistic about bringing Lithuanian government and business delegation from biotechnology, pharmaceuticals sector and explore opportunities for both sides.

As a member of the European Union, Lithuania operates under the same trade rules and market regulations as the other EU member states. Hence, the conclusion of the EU-India free trade agreement would benefit our companies. On a bilateral scale, we need to invest more in raising our people's awareness about each other. Lithuanian companies know very little about investment opportunities in India. Likewise, Indian people have limited knowledge of Lithuania in general.

Let us hope that EU joint initiatives will help pull the trigger and unleash a new impetus in our collaboration. I wish to thank EBG for continuous support and engagement to our common work and fostering cooperation between European Union and India.

Message from H.E. Mr. Jean Claude Kugener
Ambassador of the Grand Duchy of Luxembourg to India

I am very honoured to acknowledge the important work done by the EBG Federation, which clearly illustrates in this position paper the opportunities and challenges of the trade relations between the European Union and India.

The European Union continues to be by far, India's largest trade and investment partner. A founding member of the EU, Luxembourg is a strong proponent of further strengthening the Union's relations with India, which has shown to be the fastest growing major economy over the last couple of years. Luxembourgish companies recognised quite early the important role that the Indian economy will also be playing in the future and many have decided to produce locally and/or regionally and continue to invest in India. Allow me to mention just a few examples:

Based in Luxembourg since its creation in 1870, the international engineering company Paul Wurth is present in India since 1993, the first Asian subsidiary of the Group. The world's biggest steel producer Arcelor Mittal is headquartered in Luxembourg and currently has strong ambitions for the Indian market. Ceratizit has a large presence in West Bengal and two factories in Karnataka, where it produces hard metal cutting material. Amer-Sil, the reputed specialist for separators and gauntlets in industrial lead acid batteries merged in 2015 with Ketex to become Amer-Sil Ketex Ltd and has three factories in India. Rotarex manufactures high performance valves, regulators and fittings for all gas applications and currently operates in three different locations in India, serving its customers across various sectors including fire safety, automotive, oil and gas, energy and fertilizers. Boson Energy, a Luxembourgish company specialised in Cleantech, participates in the Clean Ganga project. In space, the Société européenne des satellites (SES), the world-leading satellite operator, currently has six satellites over India. It is therefore no coincidence that Luxembourg ranks as 16th Foreign Direct Investor in India.

A large number of Indian issuers have chosen the Luxembourg Stock Exchange (LuxSE) to list their debt securities on an international market and we have seen a large number of Indian graduates coming to Luxembourg to work in ICT, finance or the steel sector. There is clearly an interest to go further and Luxembourg has the ambition to do more, also in the areas of Fintech, Bio health, Green Bonds and Space Resources.

In this context, I would like to warmly thank the EGB Federation's contribution to these exchanges with our Indian partners to find the best win-win solutions to bring the EU-India relationship to the next level, which will ultimately also benefit the European companies and their Indian counterparts.

Message from H.E. Mr. Stephen Borg
High Commissioner of Malta to India

Relations between Malta and India are continuing to grow from strength to strength as a result of the vision and far-sighted economic policies of their leaders. Malta continues to be one of the most dynamic economies in the EU with a real GDP growth of 6.2 per cent in 2018 that is set to continue on a strong trajectory in the coming years. A robust economy and a highly vibrant environment for technological innovation together with sectors including ITES, pharmaceuticals and life-sciences, maritime and aviation services, human resource development and tourism have contributed to the growing economic ties between Malta and India.

The participation in January 2019 of the Hon. Joseph Muscat, Prime Minister of Malta, together with Malta-based entrepreneurs and Government trade and economic agencies, in the *Vibrant Gujarat Global Summit* hosted by Indian Prime Minister Hon'ble Sri Narendra Modi, has further consolidated and intensified the political and commercial ties between the two countries.

As Maltese and Indian business relations are set to grow further in the course of 2019, I commend the work of the European Business Group Federation in promoting European businesses in India and I welcome the EBG Position Paper 2019 as a valuable contribution to our common endeavours.

Message of H.E. Marten van den Berg
Ambassador of the Netherlands in India

The EU is a key trading partner for India. At the same time the bilateral economic relations between India and the Netherlands have been deepened and expanded in recent years. Many Dutch companies are looking to India to do business.

India has shown impressive growth figures and the business climate has been improved. However, many EU companies, including Dutch companies, experience challenges in doing business in India. Trade and investment challenges relating to border and behind the border barriers.

The EBG is with its annual position paper and in depth knowledge of the Indian business climate a very important voice of the European business community to India about the trade and investment barriers. With its knowledge the EBG contributes to a dialogue between the EU and India on how to further improve doing business in India. With its knowledge it will help to further boost trade and investment between the EU and India. The EBG plays therefore an important role in further strengthening the trade and investment relation between India and the EU.

I think it is very important that the EBG continues its work. The Netherlands very much supports the work of the EBG. It is also relevant that the EU speaks with one voice. Therefore I would like to encourage the EBG to strengthen their collaboration with bilateral chambers of commerce.

Message from H.E. Nils Ragnar Kamsvåg
Ambassador of Norway to India

I am very pleased to again extend Norway's support to the work done by EBG on its position paper.

India is important for Norway and has become a crucial partner in trade, research, technological development and sustainability. To develop an even stronger cooperation, bilaterally and multilaterally, the Norwegian government launched a new India strategy 'Norway–India 2030' in December 2018. The strategy points to four priority areas of engagement: Democracy and a rules-based world order, the Oceans, Energy and Climate and Environment. Both Norway and India stand to gain from our mutually beneficial cooperation in these areas.

The commercial relations between our two countries has grown substantially in recent years. Hence, promoting the Norwegian business sector is one of the overriding objectives of Norway's engagement in India. As of 2018 more than 100 Norwegian companies are established here, and around 50 are represented by local agents. By the end of 2018 the Norwegian Government's Pension Fund Global has invested approximately US$ 7.4 billion in the country, making it amongst the largest individual foreign investors in India.

A major part of the Norwegian economy is linked to the ocean, including maritime industry and shipping, fisheries, marine industry and oil and gas. India's increased focus on the oceans thus fits well with Norwegian priorities. During Norwegian Prime Minister Erna Solberg's official visit to India in January this year, the Norwegian and Indian governments signed an agreement to initiate an Ocean Dialogue, focusing particularly on Blue Economy. This initiative has already had a vigorous follow up from both governments. A number of projects relating to marine pollution have already been agreed.

Other important sectors are clean energy, environment and IT. The rapid development of future mobile networks (5G), the Internet of Things and artificial intelligence is changing the way business is being done. This create new opportunities for developing new solutions that can, for example, help us achieve the Sustainable Development Goals.

Norway strongly encourages cooperation between Norwegian and Indian research institutions and promotes Norwegian expertise and technology in India, which in turn will strengthen business cooperation, trade and investment.

I join my friends and colleagues in welcoming the launch if the EBG 2019 Position Paper – an important document highlighting the significance of trade relationship between India and Europe.

Message of H.E. Prof. Adam Burakowski
Ambassador of the Republic of Poland to India

It gives me great pleasure to take this opportunity to express my appreciation for the work carried out by the European Business Group Federation (EBG) in facilitating greater bilateral economic cooperation between the European Union and India, and in its release of the EBG Federation Position Paper 2019.

India remains one of the most exciting destinations for Polish trade and investment outside the European Union.

This is amply borne out by the ever-strengthening bilateral trade between Poland and India in recent years, as well as the growing number of agreements, Memorandums of Understanding and high-level government visits between Polish and Indian government officials seen over the course of the preceding year.

In fact, over the last year, Poland and India have signed MOUs in the fields of mining and aviation with the government of India, as well as an agreement in increasing collaboration in the field of coal with the state government of West Bengal.

The commitment to further consolidating our economic cooperation with India can also be highlighted by the growing participation of Polish companies in trade fairs, conferences, exhibitions and other fora across India.

However, challenges remain. A lack of clarity on policies regarding Indian sectors, market entry strategies, foreign direct investments and regulations stand as a barrier to increasing Polish trade and investments with India.

It is in this light that I would like to commend the work of the EBG Federation and its annual Position Paper in providing companies in the European Union in-depth and up-to-date information on the issues highlighted above.

The work carried out by the EBG Federation can act as a conduit of important information for investors and businesses in E.U. member states interested in entering the Indian market.

I, therefore, look forward to further collaboration with the EBG Federation in the future and wish you every success.

Message from H.E. Carlos Pereira Marques
Ambassador of Portugal to India

It is my utmost pleasure to send my warm regards, in the name of the Embassy of Portugal, to EBG and to congratulate its action throughout the years on contributing to establish more deeply rooted economic relations between the European and Indian parties.

As it is known, Portugal is the European country with the longest modern-day maritime trade with India, having set a commercial route that was unprecedented 500 years ago and set the world to change forever. Nowadays, India, for its own intrinsic qualities, is itself marking a new page on history. Given our common history, it is easy to understand why for my country India is such a vital key partner.

Such relationship stopped being a historical one to become a "XXI century partnership" in the words of our Prime-Minister, Mr. António Costa, when he was invited by the Prime-Minister Narendra Modi to an official visit in January 2017, with passages through New Delhi, Bangalore, Gujarat and Goa.

Later the same year, India's Prime Minister officially visited Portugal, the purpose of this visit being to further down the agreements discussed on the first meeting between both sides. Ever since, the exchanges on the areas of startups, ITC, research and innovation, have become the newly instituted bridge between the two banks, without also forgetting renewable energies, agriculture, water and waste management, defense, automotive, infrastructure, food processing and security.

With this being said, it is a clear objective from the Portuguese side to increase the balance of trade with India, counting on EBG's action and expertise to upgrade our national presence in the market. So far the year has been successful given the entry of products that until this point in time weren't still known to the Indian market but that slowly are becoming introduced. On another positive note, our Defense Minister has also been to India this year, opening interesting perspectives for future cooperation on the area of Defense.

My wish, not only as a citizen of my country, but also a citizen of Europe, is to see EBG flourish alongside the European businesses, for we know that if we all work together, the results will only be better for all involved.

I thank you for this opportunity with congratulatory wishes for this year's Position Paper.

Message from H.E. Radu Octavian DOBRE
Ambassador of Romania to India

I would like to congratulate EBG for the excellent work in supporting and encouraging the European companies to settle and expanding their business on Indian market. India is a “must be” destination in terms of business and European companies have understood that.

For Romania also, India could be the next target for business expansion and products development and EBG can contribute to support this initiative by facilitating a better understanding of the Indian market.

I do believe that including EBG in the project **“Business Support to the EU-India Policy Dialogues”** would give a greater touch to this initiative, and will strengthen the positioning of the EU as a credible partner of India for priority sectors.

The year 2019 is important for the bilateral relation between Romania and India, due to the fact that we concluded 70 years since the establishment of our diplomatic relations. Our extensive partnership with India gives us the bases to build upon our similarities and complementarities, in order to achieve better developments and greater success for our people.

I would like in this context to congratulate EBG for the tremendous job in releasing yearly the “EBG Position Paper” which provides excellent information on important sectors in India and gives guidance to Indian authorities for improving the business environment, which could lead to attract more foreign companies in this market.

Message from H. E. Ivan Lančarič
Ambassador of the Slovak Republic to India

I would like to congratulate EBG Federation on the release of its Position Paper for the year 2019 and express our gratitude and support to EBG for their efforts.

With the successful realisation of 10th Session of India-Slovakia Joint Committee on Economic Cooperation, that was held in February 2019 in New Delhi, we have focused on new areas of possible cooperation between our countries. We believe that in following years we will be able to establish and expand cooperation in the fields of heavy machinery, automotive industry, electrotechnical industry, water management, renewable energy, food processing, R&D, technology transfer and tourism.

Slovakia is highly industrial and one of the most open and export oriented economies. Therefore we cannot be content with our low export volume to India and growing trade deficit. Therefore I want to believe that in coming years we will achieve considerable progress in EU - India negotiations on ambitious and balanced free trade agreement including investment protection, which will open door for manufacturers based in Slovakia, especially from automotive industry.

In this regard we very much appreciate the biggest Tata Group investment in Continental Europe - the new state-of-the-art 1,4 bln.€ Jaguar Land Rover manufacturing facility in Slovakia, which we believe will serve as a catalyst for further investments by Indian companies with higher added value in Slovakia.

I perceive EBG as a part of the European expert community here in India, and a reliable partner for Slovakia as a member state of the European Union. The Position Paper for the year 2019 is going to be a great source of important information for diplomats as well as for entrepreneurs.

Message from H.E. Mr. José Ramón Barañano
Ambassador of Spain to India

Recent years have been excellent for the relationship between **Spain and India** with trade and investment flows in both directions keeping an upward trend. In 2018 commercial flows achieved more than 5 billion euro, and exports from India to Spain grew 3.2% compared to 2017 amounting to over 4 billion euros. This data reflects the dynamic growth and purchase power of the Spanish market. 2019 has started in the same positive trend, and has backed this economic momentum with a strengthening of the diplomatic relations with the official visit in January of the Spanish Ministry of External Affairs, European Union and Cooperation.

In the near future, in order to seize this unique opportunity and continue this positive trend for all parties **we should keep on making efforts to strengthen** bilateral relations and promote trade between our economies. In every special occasion such this Message, Spain repeats the same "mantra", showing its unconditional commitment to re-launch negotiations of an ambitious, deep and comprehensive trade agreement, closely supporting the European Union in its continuous attempts to reach a Bilateral Trade and Investment Agreement (BITA) between the EU and India, on the base that multilateralism is the best framework for trade and investment.

In the sein of the European Union, Spain plays a relevant role as the fifth economy of the EU, with a GDP of 1.4 trillion USD, and a robust economic growth above the average. **The EU is nowadays the largest investor in India and also it is already India's first partner in terms of trade. Therefore there is no doubt that these two main international players are** meant to make an effort to listen and understand to each other.

In this context, the Embassy of Spain would like to **congratulate the European Business Group for the Position Paper for the year 2019** and take this opportunity to praise the EBG Federation for all its efforts to create a unique guide for Indian leaders and European companies which highlights business opportunities and shared interests.

Spanish companies are now able to help India in their determination of consolidating as the strongest performing developing country. Only with collaboration is how India and its European partners could strengthen their ties and would be able to develop a trade agreement that will enhance the bilateral relations. Both regions should work together to create the best environment for companies to follow the path that has been shaped during the last years.

Message from H.E. Klas Molin
Ambassador of Sweden to India

The close bilateral relationship between India and Sweden rests on a foundation of both long and strong ties between our countries, characterized by continuously growing levels of investments and trade, as well as global collaboration of values, strengthening our cooperation further. Numerous high-level visits have taken place in both directions during the past years including Prime Minister Modi's visit to Stockholm in April 2018. During this visit, Sweden and India agreed upon a Sweden-India Joint Action Plan, as well as a Joint Declaration on Innovation Partnership for a Sustainable Future. As these initiatives now are being implemented, they further deepen the bilateral collaboration in several areas, charting an ambitious road ahead.

Swedish businesses' presence in India stretches back to the early 1900s, and companies' establishment and continued investments in the country are today growing at a steady pace. Swedish companies are present across many business sectors in the country, and many of them are willing to make long-term investments. According to the latest Swedish Business Climate Survey of 2017/18, a large majority of the Swedish companies in India recognize the business climate in the country as favorable. Swedish companies in India are creating key employment opportunities in sectors such as retail, manufacturing and R&D. More than 200 000 jobs have been created through direct employment, as well as an estimated 1,6 million in indirect terms. These numbers are growing continuously as Swedish companies are intended to further increase their investments in the country. Furthermore, the high-level India-Sweden Business Leader's Roundtable that was launched by our two PM's has now enhanced continuous business to business dialogues between the two countries. The third roundtable was held in New Delhi in February this year.

The Government of India has set ambitious goals regarding the transitioning of the Indian economy. Swedish companies across many business sectors have shown an interest to be part of this change, both by setting up manufacturing bases in the India, as well as creating high end innovation and technology solutions for a market characterized by growing levels of domestic consumption and high investments in public infrastructure. As Sweden ranks high in world innovation indexes, there is today an increased focus on promoting innovative start-ups, green technology and incubation solutions, as well as on contributions to a sustainable circular economy. Many of the Swedish companies in India today, however, also voice continued challenges with regards to the need for a strong connection to the global value chain, which would enable them to go from Make in India to Made in India – for the world. The establishment of investment facilitation mechanisms between the European Union and India, as well as bilaterally between Sweden and India, has therefore been a highly welcome platform to address these matters. It has further deepened the dialogue between the parties to bring transparency and to seek mutual understanding in terms of how to make co-beneficiary progress in the business climate in India.

I want to congratulate the EBG Federation and its members for preparing this Position Paper of 2019, which captures the interests and challenges that face both Swedish and European companies in India. As a small and export oriented country like Sweden, bilateral as well as multilateral cooperation regarding these matters are of high importance. I believe the paper will provide valuable insight into how the investment and partnership between the EU and India will develop in the future. I therefore warmly welcome this year's EBG Position Paper to further strengthen the mutually beneficial Indo-European partnership!

Message from Dr. Andreas Baum
Ambassador of Switzerland to India

India is a very significant and important partner for Switzerland when it comes to trade and investment. There are currently more than 250 Swiss companies operating through a branch office or a joint venture in India, making Switzerland the 11th biggest investor in India. Regarding trade, India is the third most important trade partner in Asia. India is one of the fastest growing major economies worldwide and offers vast business opportunities in a broad range of sectors. Therefore, Swiss investments in the fields of mechanical and plant engineering, automotive industry, consumer goods, food and lifestyle products, financial and insurance services or in the infrastructure and energy sectors are likely to grow in the near future.

The EBG Federation plays an important role in further deepening economic and business ties between European countries and India since it acts as a facilitator and bridge builder. For Swiss companies, it offers an excellent platform to align and connect themselves with other European companies and to combine forces with them across different industries.

The 17th EBG 2019 Position Paper gives those efforts of the EBG visibility and is therefore a crucial and indispensable product. I welcome the launch of this year's Position Paper and join my colleagues in conveying my congratulations to the EBG. I look forward to future collaboration between Switzerland and EBG with the goal to further deepening Swiss-India ties in trade and investment.

AGROCHEMICALS

ALCOHOLIC
BEVERAGES

AUTOMOTIVE

AVIATION

BANKING

CHEMICALS &
PETROCHEMICALS

DEFENCE

FINANCIAL SERVICES

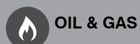
FMCG

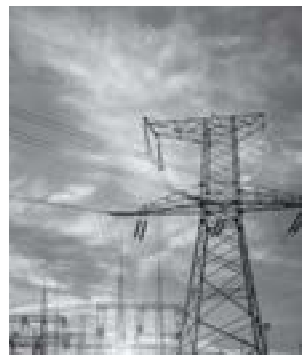
HEALTHCARE

ICT

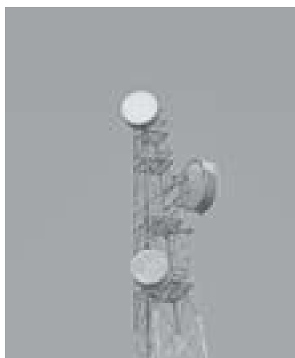
INFRASTRUCTURE

LOGISTICS


OIL & GAS

PHARMACEUTICALS


POWER

RETAIL


TELECOMMUNICATIONS

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INTRODUCTION

1. INDIA: WORLD'S LARGEST DEMOCRACY AND ONE OF THE FASTEST GROWING ECONOMIES

India, with a population of about 1.3 billion, is the world's largest democracy. Over the past decade, the country's integration into the global economy has been accompanied by impressive economic growth. It is amongst the fastest growing economies in the world and with a gross domestic product (GDP) of US$2.6 trillion (€2.3 trillion), it is the sixth largest economy and poised to become the largest in 25 years. Also with a government with full majority at the Centre, strong reforms are expected in the coming years.

In 2018–19, India started the fiscal year with a high 8.2 per cent growth in the first quarter on the back of domestic robustness. Growth eased to 7.3 per cent in the second quarter on account of rising global volatility, largely from financial volatility, normalized monetary policy in advanced economies, externalities from trade disputes, and investment rerouting. Further, the Indian rupee suffered because of the crude price shock, and conditions exacerbated as recovery in some advanced economies caused faster investment outflows[1]. The Indian economy is expected to grow at 7.3 per cent in calendar year 2019 and 2020, and the government spending announced ahead of elections this year will support near-term growth[2].

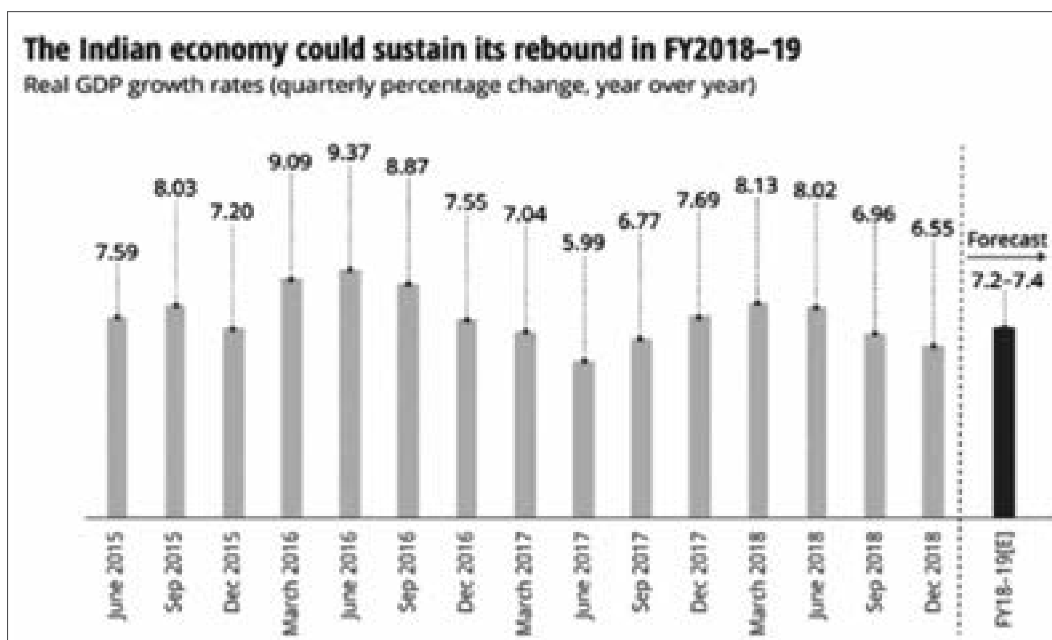
Despite softer growth, the Indian economy remains one of the fastest growing and possibly the least affected by global turmoil. In fact, the effects of the aforementioned external shocks were contained in part by India's strong macroeconomic fundamentals and policy changes (including amendments to the policy/code related to insolvency and bankruptcy, bank recapitalization, and foreign direct investment.

Figure 1: India – growing faster than the world (GDP, per cent)

Source: World Economic Outlook (April 2019); ©IMF, 2019.

The Indian economy is likely to sustain the rebound as growth is projected to be in the 7.2–7.5 per cent range in near future and is estimated to remain upward of 7 per cent for the years ahead[3]. These projections could be attributed to the sustained rise in consumption and a gradual revival in investments, especially with a greater focus on infrastructure development. The improving macroeconomic fundamentals have further been supported by the implementation of reform measures, which has helped foster an environment to boost investments and ease banking sector concerns.

Figure 2: GDP growth rates (y-o-y, per cent)



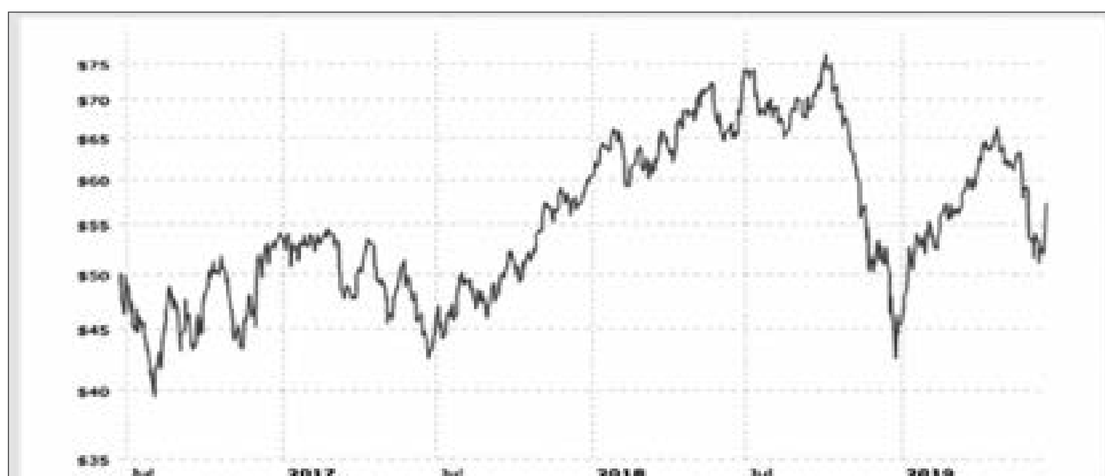
Note: Estimates for 2018–19 have been taken from the budget.
Sources: CEIC; Deloitte.

1.1 Strong Macroeconomic Fundamentals

The Indian growth path has been built on strong macroeconomic fundamentals. Over the last few years, India saw declining inflation levels and price levels fell to multi-year lows during the last fiscal. This came on the back of falling or stable global commodity prices and better management of supply shortages in the agrarian economy. Consumer price index (CPI) inflation for FY 2018–19, was at an average of around 3.4 per cent for the full fiscal year, below the long-term target of 4 per cent set by the Reserve Bank of India (RBI) [4]. In fact, the latest reading for May 2019 saw larger than expected easing in the retail inflation, as food inflation declined to 1.83 per cent as against 3.10 per cent in May 2018[5].

In 2019, the main challenges are likely to come due to increases in minimum support price (MSP) for agricultural products, an expansionary fiscal policy, and liquidity crunch in the market. The crude prices movements are volatile but are expected to remain at current levels and thus add impetus to the growth. Headline CPI inflation is expected to move up from its recent lows as the favourable base effects dissipate but is expected to remain below the target of 4 per cent. Higher crude oil prices, volatility in international financial markets, the risk of a sudden reversal in the prices of perishable food items, and fiscal slippages are, however, upside risks to the inflation trajectory.

Figure 3: Movement in crude oil prices

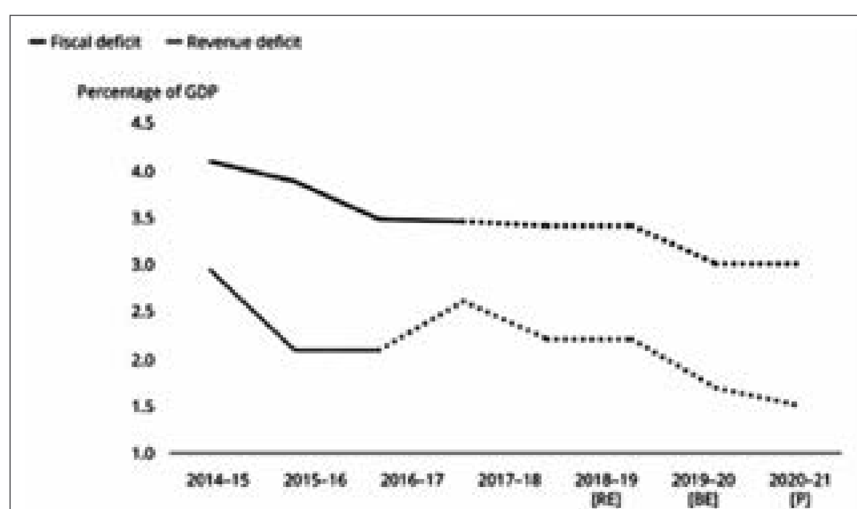


1.2 Expanding the Fiscal Space to Create Further Growth Avenues

The Indian government has adopted an expansionary fiscal policy, with the stated objective to provide funds for the various structural reforms and investments in infrastructure. As per the budget announcements, the government was on its way towards meeting fiscal deficit target of 3.4 per cent of GDP for FY 2018–19 and expects to contain it to 3.1 per cent for FY 2019–20[6]. In the current year, the government is expected to enhance revenue generation both because of gains from the goods and services tax (GST) as well as because of an accelerated disinvestment programme. As India moves to privatize more public sector units (PSUs), it will have multiple benefits of unlocking revenues for welfare and infrastructure spends as well as encouraging private investments.

There is no gainsaying that in order to provide for the multiple needs of a complex growing economy, a longer fiscal consolidation is a necessary policy decision. However, more than the absolute quantitative fiscal deficit ration, what is more important is the quality of spends by the governments, both at the Centre and the states.

Figure 4: Fiscal deficit and revenue deficit (per cent of GDP)



Note: RE, BE, and P denote revised estimates, budget estimates, and provisional as given in the budget document for 2019–20, respectively.
Sources: CEIC; Deloitte.

1.3 India Continues to Attract High Levels of Foreign Direct Investment[7]

India's foreign direct investment (FDI) reflects remarkable strength according to Department for Promotion of Industry and Internal Trade (DIPP). The total FDI investments in India in April to March 2019 were US$44.36 billion (€39.34 billion). Foreign flows in India have remained robust not only on account of improving domestic strength, effective policy measures, and FDI liberalization but also on account of global recognition that has ensured India's place as a strong investment destination.

Data for 2018–19 from DIPP indicates that the services sector attracted the highest FDI equity inflow of US$9.16 billion (€8.12 billion), followed by computer software and hardware – US$6.42 billion (€5.69 billion), trading – US$4.46 billion (€3.95 billion) and telecommunications – US$2.67 billion (€2.36 billion). Most recently, the total FDI equity inflows for the month of March 2019 touched US$3.60 billion (€3.19 billion). During 2018–19, India received the maximum FDI equity inflows from Singapore (US$16.23 billion or €14.39 billion), followed by Mauritius (US$8.08 billion or €7.16 billion), Netherlands (US$3.87 billion or €3.43 billion), USA (US$3.14 billion or €2.78 billion), and Japan (US$2.97 billion or €2.63 billion).

The remarkable rise in FDI investments reflects a growing optimism in the Indian economy and indicates that the government's effort to improve Ease of Doing Business and relaxation in FDI norms is yielding results. Further, India's foreign exchange reserves came in at US$422 billion (€374.27 billion) as on 14 June 2019 indicating a healthy import cover[8].

Since 2017, India has launched a series of reforms to liberalize its foreign investment norms in sectors such as infrastructure, construction, development, and single brand retail trading. These reforms have been instrumental in smoothening the process for obtaining required government approvals and thereby facilitating foreign investments into the country. Currently, India is among the most open economies globally for foreign investment. It allows FDI of up to 100 per cent of the equity shareholding in most sectors under the automatic route. The World Bank has stated that private investments in India is expected to grow by 8.8 per cent in FY 2018–19 to overtake private consumption growth of 7.4 per cent, and thereby drive the growth in India's gross domestic product (GDP) in FY 2018–19.

1.4 Continuing Focus on Ease of Doing Business

India moved up, a significant 23 places in the World Bank's latest Doing Business Report, to reach the 77th position. It was the second year in a row that India was among the 10 economies that improved the most in the areas measured by the report and one among the two countries to achieve this feat. It is noteworthy that India implemented the highest number of business regulation reforms in FY 2016–17. Following these reforms, according to the report India made 14 sizeable improvements in various in various areas moving it closer to international best practices.

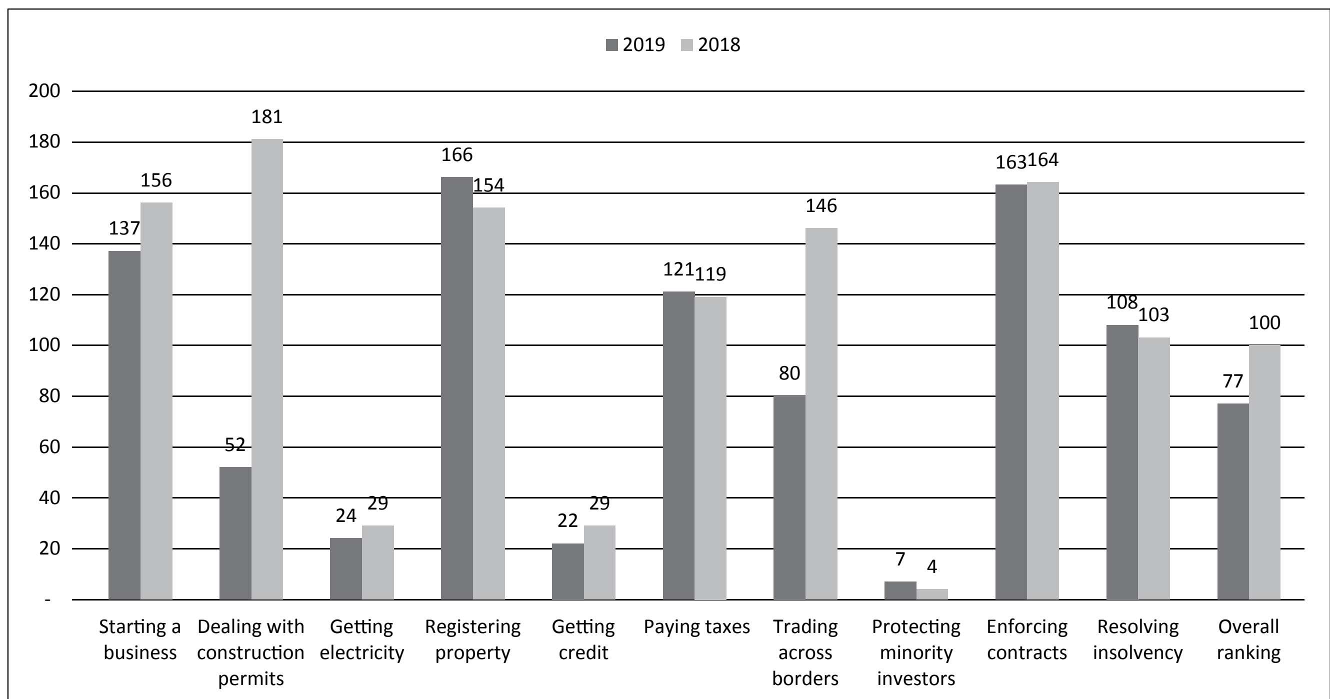
Among the improvements, India focused on streamlining business processes. Under its National Trade Facilitation Action Plan 2017–2020, India implemented several initiatives that improved the efficiency of cross-border trade, reducing border and documentary compliance time for both exports and imports. Enhanced risk-based management now allows exporters to seal their containers electronically at their own facilities; as little as 5 per cent of shipments must undergo physical inspections. India also invested in port equipment, strengthened management and improved electronic document flow.

In order to further improve Ease of Doing Business in India, the focus on some specific areas still continue. These include further improving licensing and size restrictions that have led to misallocation of resources and have reduced total factor productivity.

Removing licensing restrictions is expected to raise total factor productivity by an estimated 40–60 per cent. The economy also continues to face some procedural barriers to starting a business and cumbersome and lengthy tax litigation processes.

owing to shift in consumer behaviour and expenditure pattern, according to a Boston Consulting Group (BCG) report[9]. With the Union Budget a round the corner in July, India is well positioned to unleash its economic potential.

Figure 5: Ease of Doing Business rankings – India



Source: Compilation from the World Bank's 'Doing Business Report' – 2018 and 2019

1.5 Way Forward

India has emerged as the fastest growing major economy in the world and is expected to be one of the top three economic powers of the world over the next 10–15 years, backed by its strong democracy and partnerships. India's gross domestic product (GDP) is expected to reach US$6 trillion (€5.32 trillion) by FY27 and achieve upper-middle income status on the back of digitization, globalization, favourable demographics, and reforms. India's revenue receipts are estimated to touch ₹28–30 trillion (US$385–412 billion; €356.76–382.25 billion) by 2019, owing to the Government of India's measures to strengthen infrastructure and reforms like demonetization and GST. India is also expected to be the third largest consumer economy as its consumption may triple to US$4 trillion (€3.54 trillion) by 2025,

There are headwinds – twin balance sheet problem, rising protectionism in the global economy, possible impact of US tax reforms. Inflationary pressures are also a risk with increased government spending, potential rise in crude oil prices, and increases in MSP.

But none of the above factors can overwhelm the huge advantage India enjoys in terms of its large domestic economy; it may be even larger than currently estimated with the increasing push towards formalization of the informal sector. Therefore, with the prospect of a largely formal and unified market, ultimately whether Indian economy achieves its potential will depend on global factors as well as efficacy and effectiveness of implementation of reforms and policies for a sustainable growth.

2. RECENT POLICY MEASURES

2.1 Goods and Services Tax

In recent years, the government assumed a refreshed and expeditious approach in addressing challenges faced by industry. The authorities have addressed public concerns very quickly by issuing a series of notifications, clarifications, press releases, and FAQs. It has extensively used social media, especially Twitter, which was completely unheard of till now. Various web-based mobile applications have also been launched to facilitate spreading of information on a real-time basis. Several working groups have been formed to work on sector-specific issues. In addition, the GST Council has organized numerous meetings during the last one year to address industry's concern and has to a large extent resolved issues.

As per various industry reports, the GST is expected to be positive for India's GDP growth and credit profile, contribute to gains in productivity, and support increased government revenue through enhanced tax compliance.

The collections are slowly picking up; April 2019 is the second consecutive month when GST collection exceeded ₹1 trillion (€12.74 billion). In March, the collection was ₹1.06 trillion (€13.5 billion). As per a recent statement from the finance ministry, the total gross GST revenue collected in April 2019 was ₹1.14 trillion (€14.52 billion) which is a growth of 10.05 per cent over the revenue in the same month last year.

2.2 Insolvency and Bankruptcy Code (IBC), 2016 [10]

The scheme aims to consolidate the existing framework by creating a single law for insolvency and bankruptcy. This is a one-stop solution for resolving insolvencies which at present is a long process and does not offer an economically viable arrangement. The code was able to simplify the otherwise very lengthy process of insolvency. It repealed two laws and amended 11 others and has made the process time-bound. IBC is one of the most effective reforms introduced with the aim of resolving the issue of rising non-performing assets (NPAs) in India. The regulators have remained very agile and have continuously improved the code with amendments to ensure that loopholes are plugged immediately Just two years since its launch, IBC has resulted in resolution of 88 corporate loan default cases involving ₹2.09 lakh crore (€26.63 billion) NPAs and facilitated recovery of ₹1.12 lakh crore (€14.27 billion) as of 25 March 2019. This is a recovery rate of 54 per cent.

2.3 National Policy on Electronics, 2019 [11]

The policy envisages positioning India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally. The policy will promote domestic manufacturing and export in the entire value-chain of ESDM for economic development to achieve a turnover of US$400 billion (€354.76 billion) by 2025. This will include targeted production of 1 billion mobile handsets by 2025, valued at US$190 billion (€168.51 billion), including 600 million mobile handsets valued at US$110 billion (€97.56 billion) for export.

The government is looking to create ecosystem for globally competitive ESDM sector by promoting domestic manufacturing and export in the entire value-chain of ESDM, provide incentives and support for manufacturing of core electronic components, provide special package of incentives for mega projects which are technologically advanced and entail large investments, such as semiconductor facilities display fabrication. The government will also promote industry-led R&D and innovation in all sub-sectors of electronics such as 5G, Internet of Things (IoT)/sensors, artificial intelligence

(AI), machine learning, virtual reality (VR), drones, robotics, additive manufacturing, photonics, nano-based devices, etc.

2.4 Real Estate (Regulation and Development) Act, 2013[12]

The Act came into effect from May 2017 and aims to bring unprecedented levels of transparency into real estate projects. The act envisions to minimize delays in projects, weed out unscrupulous developers, and provide homebuyers with detailed information on the specifications and the progress of the projects they invest in. Given the central government's mandate to make Aadhaar linkage compulsory for all property transactions, the move is expected to further help in curbing malpractices and stop the inflow of black money into real estate. So far, uprising that in its first two years of operation, RERA has witnessed wholehearted participation from major Indian states. According to the latest data available, out of 36 Indian states and Union Territories, general rules of RERA were notified in 30 states, web portals were set up in 23 states, and permanent regulatory authority was established in 20 states. Though there is a long way to go, it is a remarkable feat to receive acceptance, especially, since there were several apprehensions during the formation of the act that took close to 10 years of deliberations. Today, 39,855 projects and 30,824 agents across India have been registered under this act.

2.5 Innovation and Technology

The Indian IT Industry has predominantly been a service industry and the government felt the need to move up the value chain through technology-oriented products and services. To create a robust software product ecosystem the government has introduced the National Policy on Software Products, 2019[13], which aims to develop India as a global software product hub, driven by innovation, improved commercialization, sustainable intellectual property (IP), promoting technology start-ups, and specialized skill sets. The government largely aims to do the following:

- To promote the creation of a sustainable Indian software product industry, driven by IP, driving ten-fold increase of India's share of the global software product market by 2025.
- To nurture 10,000 technology start-ups in software product industry with special focus on start-ups in tier-II and tier-III towns and cities and generating direct and in-direct employment for 3.5 million people by 2025.
- To create a talent pool for software product industry through up-skilling of 1,000,000 IT professionals, motivating 100,000 school and college students, and generating 10,000 specialized professionals that can provide leadership.

2.6 Boost to Agriculture through Agriculture Export Policy, 2018

The government aims to double farmers' income by 2022[14]. Exports of agricultural products would play a pivotal role in achieving this goal. In order to provide an impetus to agricultural exports, the government has come out with a comprehensive Agriculture Export Policy aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains. The Agriculture Export Policy has the vision to harness export potential of Indian agriculture, through suitable policy instruments, to make India a global power in agriculture and raise farmers' income. The government will invest ₹14 billion (€178.38 million) to set up specialized clusters in different states for different produce to push exports. The policy would double agricultural exports from present ~US$30+ billion (~€26.6+ billion) to ~US$60+ billion (~€53.21 billion) by 2022 and reach US$100 billion (€88.69 billion) in the next few years. It would also diversify the export basket, the number of export destinations and boost high value and value-added agricultural exports including focus on perishables. It will promote

novel, indigenous, organic, ethnic, traditional and non-traditional agri-products for export. This policy would drive to double India's share in world agri-exports by integrating with the global value chain.

3. INDIA-EU TRADE AND INVESTMENT RELATIONS[15]

In a press release dated November 2018, The European Commission and the High Representative of the Union for Foreign Affairs and Security Policy adopted a Joint Communication that sets out the EU's vision for a strategy to strengthen cooperation and the partnership with India.

This Joint Communication replaces the last Commission Communication on India of 2004, recognizing that India has emerged as the fastest-growing large economy and has acquired an important geopolitical role. The Communication aims to strengthen the EU–India Strategic Partnership by focusing on sustainable modernization and on common responses to global and regional issues. It also seeks to reinforce the effectiveness of the EU's external action and is coherent with the implementation of the global strategy.

'India is a key player in our interconnected world', said High Representative/Vice-President Federica Mogherini. *'We want to further reinforce our political, economic and people-to-people ties with India in order to address together global challenges, to promote together economic growth and to expand together business opportunities. The EU and India are committed to seize opportunities to support and promote effective multilateralism and solutions whenever peace and stability are in danger.'*

The joint communication will strengthen the EU–India Strategic Partnership by focusing on sustainable modernization and on common responses to global and regional issues. It is meant to serve for the next decade as a coherent platform to advance key EU interests, improving the way the EU approaches India. The Joint Communication seeks to maximize the opportunities in terms of trade, investment, people-to-people exchanges, foreign policy and security, and global governance, particularly through synergies and coherence in actions by the EU and its Member States.

Key points:

- Seize the full potential of the EU–India strategic partnership.
- Build a strong partnership for sustainable modernization, to benefit both sides.
- Join forces with India to consolidate the rules-based global order, based on multilateralism with the UN and the WTO at its core.
- Develop a shared approach at the multilateral level to address global challenges and increase coordination.
- Seek common responses to security threats and regional issues.

3.1 India and EU: Trade and Investment Trends[16]

The European Union and India have upgraded their long-standing relationship to a strategic partnership acknowledging their common goals and principles. Nowadays, in a challenging international environment, the EU and India share the same values of democracy, human rights, and fundamental freedoms and support the rules-based global order centred on multilateralism. Both India and EU have taken several measures in order to boost and improve the scope of bilateral trade and investments. India remains a key trade partner on multiple fronts. Following is a key snapshot:

- The EU is India's largest trading partner, accounting for €92 billion worth of trade in goods in 2018 or 12.9 per cent of total Indian trade, ahead of China (10.9 per cent) and the USA (10.1 per cent).
- The EU is the leading destination for Indian exports (almost 18 per cent of the total).
- India is the EU's 9th largest trading partner, accounting for 2.3 per cent of EU's total

trade in goods in 2018, well behind the USA (16.9 per cent) and China (15.3 per cent).

- Trade in goods between the EU and India increased by 72 per cent in the last decade.
- Trade in services between the EU and India increased from €23 billion in 2010 to €29 billion in 2016. India is now the 4th largest service exporter to the EU and the 6th largest destination for EU services exports.
- The EU's share in foreign investment inflows to India more than doubled from 8–18 per cent in the last decade, making the EU the largest foreign investor in India.
- EU's foreign direct investment in stocks in India amounted to €73 billion in 2016, which is significant but way below EU foreign investment stocks in China (€178 billion).
- Some 6,000 EU companies are present in India, providing directly 1.7 million jobs and indirectly 5 million jobs in a broad range of sectors.
- Indian companies invested over €50 billion in Europe since 2000.

Figure 6: Total goods – top trading partners, 2018

	Imports				Exports				Total trade		
	Partner	Value Mio €	% World		Partner	Value Mio €	% World		Partner	Value Mio €	% World
	World	430,981	100.0		World	273,725	100.0		World	704,706	100.0
1	China	62,455	14.5	1	EU 28	48,642	17.8	1	EU 28	93,533	13.3
2	EU 28	44,892	10.4	2	USA	43,704	16.0	2	China	76,339	10.8
3	USA	27,945	6.5	3	United Arab Emi...	24,564	9.0	3	USA	71,649	10.2
4	Saudi Arabia	24,020	5.6	4	China	13,884	5.1	4	United Arab Emi...	47,245	6.7
5	United Arab Emi...	22,681	5.3	5	Hong Kong	11,187	4.1	5	Saudi Arabia	28,682	4.1
6	Iraq	19,531	4.5	6	Singapore	8,830	3.2	6	Hong Kong	24,653	3.5
7	Switzerland	15,269	3.5	7	Bangladesh	7,474	2.7	7	Iraq	21,102	3.0
8	South Korea	13,860	3.2	8	Nepal	6,218	2.3	8	Singapore	20,964	3.0
9	Indonesia	13,573	3.1	9	Vietnam	5,682	2.1	9	South Korea	17,925	2.5
10	Hong Kong	13,466	3.1	10	Malaysia	5,518	2.0	10	Indonesia	17,626	2.5
2	EU 28	44,892	10.4	1	EU 28	48,642	17.8	1	EU 28	93,533	13.3

Source: IMF

4. CONCLUSION

EU–India trade and investment relations have seen significant changes and has been defined by deepening integration over the past decade. The recent most joint declaration has further deepened the relationship and revived certain long-standing issues and pending development. The EU and India completed 56 years of diplomatic relations in 2018. Between EU and India, regular and effective political and business dialogue has helped reach a balanced and forward-looking relationship.

EU and India already plays an important role in each other's development. India's international reach and relevance will continue to grow, and therefore its importance to the EU, in line with the development of its economy and its diplomatic and defence capabilities. Likewise, India seeks improved market access and harmonization of barriers to movement across Europe.

On many global, international and regional issues, there is a clear convergence between the EU's and India's views and objectives. Although EU–India political consultations have broadened and deepened considerably in the last few years, more could be done together to ensure regional stability and global crisis management.

Endnotes

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AGROCHEMICALS

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EXECUTIVE SUMMARY

Agriculture continues to be the main focus of the government. The agrarian crisis in the recent past has shaken up the entire government machinery and all stakeholders related to agriculture directly and indirectly are rising to the occasion to resolve this crisis. The Prime Minister has reiterated that the main aim of the government is to double farmers' income by 2022. It has taken up several new measures keeping this objective. The Indian government is investing hugely in various farmer welfare schemes and creating more avenues that will help in achieving its aim. Additionally, the government is also giving loan waivers to farmers, which could help farmers in the short run to remain operational. The government should deploy sustainable long-term productivity improvement measures to overcome the problem of rising costs and falling profitability in agriculture by adopting various affordable technologies and exit out of the vicious cycle of loan waivers.

The input industry has a very important role to play in enhancing the farmer output. While all three; namely seeds, fertilizers, and agrochemicals have a key role to play, a deep dive into the agrochemical industry sector has been addressed in this sectorial paper.

The Indian agrochemical industry is highly diversified and regulated. It operates in a complex environment with several factors influencing the speed of adoption of new technologies. The industry is expected to gain momentum in the next few years due to increased investments in agricultural infrastructure. There are significant growth opportunities for agrochemicals due to India's low-cost manufacturing base, under-penetration of pesticide uses in domestic market, key products going-off patent globally, huge export potential and growth in herbicides and fungicides sub-sectors especially. In coming years, the agrochemical industry should focus on developing new processes and products with stewardship and sustainability as the core principle. This requires developing a collaborative platform in which academia, government, regulatory bodies, farmers associations, manufacturers, industry associations come together to promote safe and judicious usage of pesticides. This will address the present demand of the public for safe and quality food.

Of the many challenges, that need to be addressed to give a fillip to this sector, the most critical ones are the regulatory reforms to be pursued by the government, infrastructural investments, incentivizing R&D, ensuring data protection to innovators and educating the most important stakeholder – 'the farmer' about the proper usage of agrochemicals. In the light of the growth drivers of the Indian agrochemicals industry, the government's push to the sector and the need for bolstering digital capabilities, Indian players are well-poised to reap the benefits of the growth pockets within the market. The future is bright for the Indian agrochemicals industry as a facilitator of Indian agriculture and also of the Indian economy.

1. INTRODUCTION

Agriculture with its allied sectors is the largest livelihood provider in the Indian economy, providing livelihood to more than 50 per cent of India's population. It contributes ~17 per cent to India's gross domestic product (GDP).[1] India is the second-largest agricultural producer right behind China, and it has the second-largest agricultural landholdings (157 million hectares) in the world.[2] India is also among the leading exporters of agricultural products globally. The total agricultural exports from India have grown at a compound annual growth rate (CAGR) of 17 per cent from US$11.3 billion (€10.02 billion) in FY10 to US$33.9 billion (€30.06 billion) in FY17[3]. In FY18, total food grain production in India was recorded at 284.8 million tonnes.[4]

The Indian government is committed to double the income of farmers by 2022, for which the government has increased the budgetary allocation of Ministry of Agriculture and Farmers' Welfare in the Interim Budget 2019–2020 to ₹1,407.6 billion (€17.93 billion) from ₹576 billion (€7.33 billion) in Union Budget 2018–19.[5] Under the seven-point strategy laid down to attain the stated objective, the government has been taking several measures including:

1. Increased focus on irrigation and mechanization.
2. Provision of quality seeds and nutrients customized to soil health of each field.
3. Investments in warehousing, logistics, and technology to prevent post-harvest crop losses.
4. Value addition through food processing.
5. Implementation of National Agricultural Markets and e-platforms (e-NAM) to eliminate shortcomings across 585 stations, especially middlemen.
6. Focus on crop insurance scheme to mitigate risks.
7. Promotion of ancillary activities such as dairy-animal husbandry, poultry, bee-keeping, 'Medh Par Ped' (trees on every field boundary), horticulture, and fisheries, to increase non-farm income.

Overall, the focus is not limited to increasing productivity but also reducing the costs of cultivation to increase the net income of farmers.

However, agriculture sector still suffers from the following major challenges impeding its growth[6]:

1. High dependency on monsoon in India with rainfall being the primary source of water, 54 per cent of land under cultivation is watered only by rainfall.
2. Impact of climate change on crop productivity.
3. Low average seed replacement rate (only 25 per cent of the farmers buy new seeds every year).
4. Low penetration of agrochemicals (per capita consumption of pesticides is 0.5 kg/ha in India as compared to 13 kg/ha in China and 12 kg/ha in Japan).
5. Low levels of mechanization: 40–45 per cent as opposed to levels as high as 95 per cent in the US.
6. Illiteracy amongst farmers and consumers.

Furthermore, post-harvest losses cost farmers ₹926 billion (€11.79 billion) every year due to poor storage and transportation facilities.[7] The Union Budget 2019–2020 and 2018–19 had a higher focus on rural income and flow to agriculture with significant increase in agriculture credit, crop insurance, promotion of food processing infrastructure, agro exports, irrigation, and credit facilities to related sectors such as animal husbandry, fisheries, and aquaculture.[8]

Recent initiatives by the Indian government to support the agriculture sector[9]

The Indian government has taken various measures to achieve improvement in farm productivity and protect the small and marginal farmers from the vagaries of the weather. Some major steps include:

1. **Soil Health Cards:** Soil Health Card (SHC) scheme was launched by the Government of India in 2015 and endorsed by the Department of Agriculture & Co-operation under the Ministry of Agriculture and Farmers' Welfare. SHCs provides every farmer soil nutrient status of his land and advises them accordingly on

the dosage of fertilizers and essential soil amendments that should be maintained for good soil health[10]. Since its launch, SHCs have been distributed to nearly 170 million farmers so far.[11]

2. **PM Kisan Samman Nidhi (PMKISAN):** In the Union Budget 2019–2020, the government launched the PMKISAN scheme, benefiting 120 million rural farmers. Under the scheme, the vulnerable farmers, who own up to 2 hectares of land, will get direct income support of ₹6,000 (€76.45) per annum. The income support will be transferred directly to the account of the beneficiary farmer in three equal instalments of ₹2,000 (€25.48) each. To implement the scheme, around ₹750 billion (€9.55 billion) will be borne by the government every year.
3. **Kisan Credit Cards**: The government proposed Kisan Credit Cards scheme in Union Budget 2018–19 to provide short-term credit support for animal husbandry, fisheries, and aquaculture farmers to help them meet their working capital needs and double their income by 2022. Also, under the Interim Budget 2019–2020, loans availed through Kisan Credit Cards would be eligible for interest subvention of 2.5 per cent in case of natural calamities and an additional interest subvention of 3 per cent on timely repayment of interests. Along with this, a 2 per cent interest subvention has been announced for farmers pursuing animal husbandry and fisheries[12].
4. The government has hiked allocation to the agriculture sector in the Interim Budget 2019–2020 by 144 per cent from ₹576 billion (€7.33 billion) in FY19 to ₹1,407.6 billion (€17.93 billion) in FY20.[13]
5. In the Union Budget 2018–19, the government increased the allocation to **Pradhan Mantri Krishi Sinchai Yojana (PMKSY)** by 28 per cent to ₹94.3 billion (€1.2 billion) to improve irrigation access to farmers.
6. The government plans to set new deadlines for completion of irrigation projects being implemented under the **Accelerated Irrigation Benefit Programme (AIBP)** of the Ministry of Water Resources. Out of 99, 23 projects are completed and brought in an additional irrigation infrastructure of 1.3 million hectares in 2017.
7. **National e-Governance Plan (NeGP)** aims to digitalize the government's records to provide easy access to farmers over the internet. Services include touch screen kiosks, agri-clinics, mass media, Kisan Call Centres, etc.[14]
8. **Crop insurance scheme:** In the Interim Budget 2019–20, the outlay for **Pradhan Mantri Fasal Bima Yojana (PMFBY)** has been increased to ₹140 billion (€1.78 billion), up from budgeted ₹130 billion (€1.65 billion) in 2018–19. The coverage of scheme has been increased from 40 per cent of cropped area in 2017–18 to 50 per cent in 2018–19 and to be further increased to 60 per cent in 2019–20. Additionally, eight state governments have given farm loan waivers worth ₹1.9 trillion (€24.20 billion) since April 2018 to allay farmer distress[15]. This is expected to increase the risk appetite of farmers and lead to more spending on agri-inputs and fertilizers, fuelling growth in the agri-inputs sector.
9. **Agriculture credit:** In the Union Budget 2018–19, the government increased the volume of institutional credit for agriculture sector to ₹11 trillion (€140.16 billion) from ₹10 trillion (€127.41 billion) in 2017–18.
10. **Minimum support prices (MSP)** for all unannounced kharif crops to be hiked to 50 per cent more than production costs, which is currently at ~33 per cent more. This will benefit the farmers by ~15–18 per cent improvement in average incremental income.
11. **Operation Greens**: The government has proposed to launch 'Operation Greens' on the lines of 'Operation Flood'. 'Operation Greens' is expected to promote farmer producer organizations (FPOs), agri-logistics, processing facilities, and professional management of farmers. The operation aims to aid farmers and help control and limit the erratic fluctuations in the prices of onions, potatoes, and tomatoes. The government has allocated a sum of ₹50 billion (€637.08 million) for this purpose.
12. **Agri-Market Infrastructure Fund**: The government has announced to set up an Agri-

Market Infrastructure Fund with a corpus of ₹20 billion (€254.83 million) to develop and upgrade agricultural marketing infrastructure in the 22,000 Grameen Agricultural Markets (GrAMs) and 585 Agricultural Produce Market Committees (APMCs).

13. **Direct benefit transfer (DBT) scheme:** The government was targeting ₹100 billion (€1.27 billion) payment under DBT schemes involving cash pay-out in 2018. Two major in-kind subsidies – public distribution system in 34 states and Union Territories (UTs) and kerosene subsidy are also being brought under the DBT. The target was to cover 534 schemes, including about 300 cash schemes, over 200 in-kind schemes as well as over a dozen services under DBT by March 2018.[16]
14. **Food processing:** The government has increased the allocation of Ministry of Food Processing from ₹10 billion (€127.41 million) in 2018–19 to ₹12 billion (€152.90 million) in 2019–2020 and proposed to set up state-of-the-art testing facilities in all the 42 mega food parks.
15. **M-Kisan** is a mobile-based agriculture advisory tool that connects local farmer with subject matter experts via SMS facility in the local language. It also provides regular weather updates, pest and disease alerts, and real-time market price information to its users.[17]
16. **National Agriculture Market (eNAM)** is a pan-India electronic trading portal for agriculture commodities. It links the existing APMC *mandis* to create a unified national market. Its coverage was expanded to 585 APMCs from the existing 479 and eNAMs were be de-linked from APMC regulations in 2018. The government has strengthened eNAM with features such as MIS dashboard for better analysis, BHIM and other mobile payment facilities, enhanced features on mobile apps such as gate entry and payment via mobiles, integration of farmer's database and e-learning module.[18]

Future farming trends

Indian agriculture has been witnessing growth, both in terms of value and volume, primarily driven by productivity improvement on account of digitization and favourable government policies. There are various trends that are shaping the future of Indian agriculture:

1. **Emergence of digital agriculture/farming**: Digital farming, which combines sensors, software, and precision machines, is still in its infancy but almost all the large players are developing digital offerings, or buying into assets. The focus is on technologies for automated or remotely controlled climate, insect, and disease monitoring and treatment. In 2013, for example, Monsanto (now owned by Bayer) acquired Climate Corporation for its proprietary technology platform that combines hyper-local weather monitoring, agronomic data modelling, and high-resolution weather simulations to deliver a solution that helps farmers make better informed operating and financing decisions. In 2018, as part of statutory requirements, Bayer sold its digital farming platform, Xarvio, to BASF. Recently, Sumitomo purchased an equity stake in Taranis, an Israeli start-up that offers risk-prediction/prevention solutions for crop cultivation. The company utilizes proprietary biological data and deep-learning technology for the integrated analysis of non-image data (weather, soil data, etc.), to identify crop stress levels in real time, and even predict outbreaks of infectious diseases and propose measures for tackling them.
   a. **Usage of unmanned drones**: Drones in agriculture can prove beneficial to improve the efficiency of agriculture. Drones are an alternative to the lack of skilled human resources and to other heavy machines and tools as well as economical to manage farming. There are several kinds of drones based on the purpose in agriculture, including crop spraying drones, NVDI drones, seeding drones, surveillance drones, etc. These drones are fully automated and can help improve productivity. In August 2018, the government released its Drone 1.0 policy, which makes it legal for individuals and companies to operate drones from December 2018 in certain areas other than those barred for security reasons, thereby

giving a major boost to its usage[19]. Benefits of using drones in agriculture include:

- Optimize inputs (seeds, fertilizer, and water).
- React faster to threats (weeds, fungi, and pests).
- Save time crop scouting.
- Improve variable rate application.
- Estimate yield[20].

b. **Application of blockchain technology**: The use of blockchain can play a vital role in solving many agriculture-related problems in India. With blockchain technology, all the information related to the entire cycle of agricultural events can be fed onto blockchain to enable a transparent and trusted source of information for the farmers. Farmers can get instant data related to the seed quality, soil moisture, climate and environment related data, payments, demand and sale price, etc., all at one platform. Blockchain will also help in establishing direct links between farmers and consumers/retailers. It will empower small farmers to organize themselves and get together to reach the market without taking any help from middlemen. This will reduce the problems of low income, as blockchain will give transparency in supply chain, enabling farmers to get the real price for their produce.[21] In 2018, NITI Aayog and Gujarat Narmada Valley Fertilizers and Chemicals Limited (GNFC) signed a statement of intent to work towards implementing a proof-of-concept application using blockchain technology for fertilizer subsidy management.[22]

c. **Using AI (artificial intelligence)/machine learning in agricultural value chain**: In collaboration with the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), Microsoft has developed an AI-Sowing App powered by Cortana Intelligence Suite including machine learning and Power BI. The app sends sowing advisories through text messages to participating farmers on the optimal date to sow, without the need for any capital expenditure on the part of the farmers.[23] There have been a surge in the number of agri-tech start-ups that help farmers increase productivity using advanced internet of things (IoT) and machine learning technologies. In May 2018, NITI Aayog signed an agreement with IBM to develop a model for crop-yield predictions using AI so that farmers can be provided real-time advisories in some states.[24]

d. **Data-driven decision-making:** The Indian farm ministry is planning to develop a price forecast model based on the supply and demand of crops primarily to provide market intelligence to farmers ahead of *rabi* harvests (winter crops) in 2019. With the help of this model and its data, growers can also select highly remunerative crops for sowing, thereby realizing better price for their produce.[25] Data will continue to drive farming which could change usage, distribution, and manufacture of inputs required in the Indian agriculture sector. Companies are increasingly trying to integrate satellite, weather, and IoT analytics with the agriculture sector to increase food security and insurance for farmers.[26]

2. **Emergence of ag-biological products/integrated pest management (IPM):** IPM is a sustainable approach to pest management that combines biological, mechanical, physical, and chemical methods. It is an ecological approach and strives to significantly reduce the use of pesticides while maintaining acceptable levels of pest growth. New products such as biological pesticides and seed treatment chemicals are being introduced, which require a small volume of chemicals for treatment as compared to normal crop protection chemicals. Department of Agriculture Cooperation & Farmers Welfare (DAC&FW) implement a scheme ‘Strengthening and Modernization of Pest Management Approach in India’ to promote IPM. Some of the benefits of IPM are:

a. Improved crop profitability owing to better pest control measures and appropriate use of crop protection solutions.
b. Stable, reliable, and good quality crop yields.
c. Fall in intensity of pest infestations.
d. Reduced potential for problems of pest resistance or resurgence.

3. **Integrated farming systems (IFS)**: The government is promoting the adoption of IFS by states, a holistic farming practice meant for all-round sustainable development of agriculture with animal husbandry, fishery, dairy, and other occupations related to core agricultural practices. The adoption will increase productivity by 2–3 times, create additional employment, save 40–60 per cent resources and will ensure 100 per cent household nutritional security. The government is promoting the Indian Council of Agricultural Research (ICAR) model on IFS across the country via agri-science centres to help small and marginal farmers tide over problems associated with climate change. ICAR has developed 45 IFS by including 15 agro-climatic zones.[27]
4. **Promotion of zero budget natural farming**: Under zero budget natural farming, neither fertilizer nor pesticide is used, and only 10 per cent of water is to be used for irrigation as compared to traditional farming technique. Farmers use only local seeds and produce their own seeds. Niti Aayog is pushing states to adopt the technique to combat the side effects of chemicals and fertilizers in crops.[28]

Indian agriculture and its allied sub-sectors

The Indian agriculture industry has various allied sub-sectors, major ones being seeds, fertilizers, and agrochemicals.

Indian seeds market was valued at US$3.6 billion (€3.19 billion) in 2017.[29] Globally, India is the fifth-largest seeds market measured in value terms. In 2016, India ranked 26th globally in terms of export with annual seeds export of ₹9.2 billion (€117.22 million). Vegetable crop seeds are mainly exported to Asia-Pacific (57 per cent), Europe (23 per cent), and North America (8 per cent). About 8 per cent of total vegetable seeds export goes to Africa.[30] BASF has become the vegetable seeds leader in India after the acquisition of Bayer’s global vegetable seeds business, mainly operating under the brand Nunhems. The acquired vegetable seeds business comprises 24 crops and about 2,600 varieties. It also includes well-established, strong R&D, and breeding systems with over 100 unique breeding programmes in more than 15 crops.[31]

The Indian fertilizer industry was estimated to produce 46.2 million tonnes in FY18.[32] To support the fertilizer industry, the Union Cabinet had announced ‘New Urea Policy 2015’ with the objective of maximizing indigenous urea production, promoting energy efficiency in urea units, and rationalizing the subsidy burden on the government. In March 2017, the government approved the new amendment under which the ceiling imposed on production beyond Re-assessed Capacity (RAC) during 2016–17 had been raised so as to enable all urea units to produce additional production which otherwise they were not able to do due to low import parity price.[33] In addition, the Department of Fertilizers made it mandatory for all the domestic producers of urea to produce 100 per cent of the plant capacity as ‘neem-coated’ urea. This is expected to increase the farmer’s income as the use of neem-coated urea will increase productivity with less usage of urea.[34] The Government of India is planning to provide customized fertilizers to farmers based on the quality of soil to promote site-specific nutrient management and to achieve maximum fertilizer use efficiency and cost reduction.[35] Make in India campaign is also encouraging the domestic fertilizer industry by reviving sick fertilizer plants.

1.1 Market description

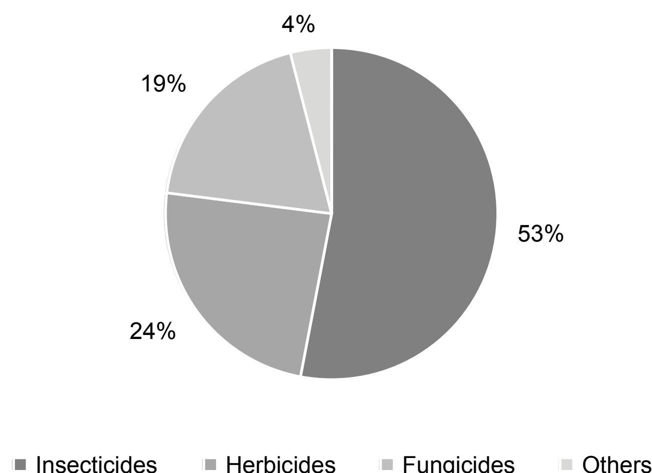
1.1.1. India is the fourth-largest producer of agrochemicals globally, behind the US, Japan, and China. The Indian agrochemical industry is expected to grow at a CAGR of 7.9 per cent per annum from US$4.1 billion (€3.63 billion) in FY16 to reach US$8.1 billion (€7.18 billion) by FY25.[36] The total installed capacity of the agrochemical industry in India was 329,100 tonnes in 2015 and is expected to reach 493,700 tonnes by 2020, growing at

CAGR of 8.5 per cent.[37] Globally, India is the thirteenth-largest exporter of pesticides.

1.1.2 Global agrochemical industry has witnessed a wave of consolidation and the trend has been towards mega-deals. The top six players have consolidated to four major players after the completion of these mega-deals. With Bayer acquiring Monsanto, Dow and DuPont merging, ChemChina acquiring Syngenta and Adama, and BASF acquiring assets from Solvay and Bayer, there will be significant implications on the market in all major agri-markets across the world. This consolidation in the global industry will have significant impact on the Indian players as well, in terms of competitive positioning and market expansion.

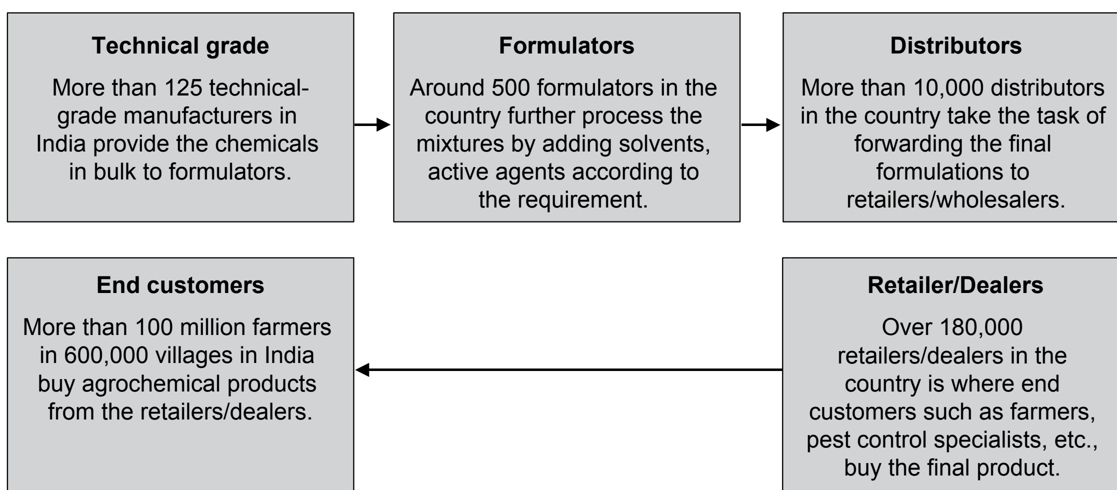
1.1.3 Over 25 per cent of crop production is lost due to insects, weeds, and diseases.[38] The total value of crops lost annually due to pest and disease attack in India is estimated at ₹900 billion (€11.46 billion).[39] While the global average consumption of pesticides is 3 kg/ha, India's consumption is only 0.6 kg/ha. Furthermore, area treated with crop protection products is only 35 per cent indicating untapped potential for pesticides usage in crop cultivation.[40]

Figure 1: Indian agrochemicals market (FY16)



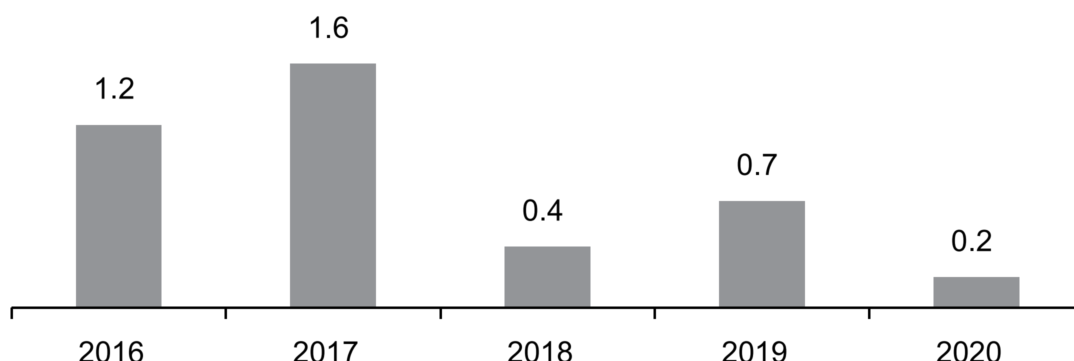
Source: A Report on Indian Agrochemical Industry, FICCI, July 2018

Figure 2: Agrochemicals distribution network in India



Source: Agrochemicals Market in India, 2016–20, Technavio and HSBC report, 2 November 2015.

Figure 3: Agrochemicals going off-patent, 2016–2020 (US$ billion)



Source: A Report on Indian Agrochemical Industry, FICCI, July 2016

1.1.4 The Indian agrochemicals market is dominated by insecticides. Herbicides is the fastest-growing segment.

1.1.5 The sale of herbicides is seasonal. Rice, wheat, sugarcane, and soyabean are the major application areas for herbicides. Rising wage rates and reducing labour availability are the growth drivers for herbicides. Fungicides are mostly used for fruits, vegetables, and rice. The key growth drivers for fungicides include a shift in agriculture from cash crops to fruits and vegetables and government support for exports of fruits and vegetables. Bio-pesticides offer significant growth opportunities due to increasing concerns of safety and toxicity of pesticide residues, stringent regulations, and government support.

1.1.6 Agrochemicals going off-patent – an opportunity for Indian generic players

It is expected that agrochemicals worth US$4.1 billion (€3.63 billion) will go off-patent by 2020.[41] During the period 2017–2022, patents of 26 pesticides are expected to expire which includes 13 herbicides, 4 insecticides, 8 fungicides, and 1 safener[42]. Indian generic agrochemicals manufacturers can capitalize on this opportunity. They should also look to increase the export of these generics to further penetrate the global market. To lay a strong export foundation, Indian agrochemical manufacturers could strengthen their marketing network by partnering with local players in the foreign markets. The Indian agrochemical manufacturers could also explore collaborations, merger and acquisitions to expand their worldwide reach.

1.2 Recent Developments

1.2.1 Make in India initiative

Make in India is a Government of India initiative to encourage companies to manufacture their products in India. The initiative is aimed at enhancing the Ease of Doing Business in India and is expected to attract foreign capital. India's Ease of Doing Business ranking jumped from 142 in 2015 to 100 in 2018[43]. The government could also consider extending support in terms of incentives/tax benefits to agrochemicals, as given to fertilizers and seeds, as all of them facilitate the agriculture sector. While the government's thrust is rightly on Make in India, keeping in mind the market dynamics of supply and demand and farmers' needs, the government should allow adequate import of the quality technical grade material too to meet the requirements. To attain the goals of the initiative, the government should expedite the policy implementation process so that the benefits accrue to the players in a timely fashion. Conversion of technical material to formulation also generates considerable employment locally and hence should be encouraged as part of the Make in India campaign.

1.2.2 India as a global manufacturing hub

Exports currently constitute almost 50 per cent of the Indian agrochemical industry and are expected to grow at a CAGR of 8.6 per cent to reach US$4.2 billion (€3.72 billion) by FY25.[44] Additionally, the ongoing challenges of the Chinese chemical industry provides incremental exports opportunity for the Indian players. In the wake of tightening environmental norms in China, the global players manufacturing in China are facing increasing losses due to plant shutdowns and increasing input prices. This has led to these global players looking out for alternative locations, viz., India as a manufacturing hub. This will in turn bring increased foreign direct investment (FDI) to India in the form of capital and more importantly advanced technical knowhow; leading to greater production and greater exports. Further, there is a growing trend of labour migration to cities and thereby their availability is declining due to higher wage expectations. In addition, India has a large pool of qualified and skilled chemical engineers, which constitutes the backbone in this technology-oriented segment. The government has recognized the immense potential and is focusing efforts on developing research and development (R&D) capabilities, technical skill training, infrastructure reforms, etc., to support the endeavour to create India as a global manufacturing hub for agrochemicals. The government should encourage agrochemical companies to mandatorily adopt Good Manufacturing Practice (GMP) codes.

1.2.3 Impact of GST implementation

Under the new goods and services tax (GST) regime, agrochemicals are now taxed at 18 per cent while chemical fertilizers are taxed at 5 per cent. In the pre-GST era, agrochemicals attracted an excise duty of 12.5 per cent and value-added tax (VAT) of 5 per cent for intra-state sales or central sales tax (CST) of 2 per cent for inter-state sales. As a result, there has not been any significant impact on taxes payable. The petroleum sector, the largest source of feedstock for the chemical industry, is out of GST. Hence, the raw material will continue to have the cascading effect of the indirect taxes.[45]

1.2.4 Foreign collaboration

In December 2018, Australia's Western Sydney University forged a partnership with ICAR and 13 state agricultural universities to invest AUD5 million (€3.06 million) to leverage new research and developments, which is expected to double farmers' income by 2022.[46] India also signed multiple memorandums of understanding (MoUs) towards trade cooperation in the agricultural space with Netherlands, the second-largest exporter of agricultural products in the world, after US, and known for its smart logistics, storage, and packaging technologies that keep food fresh longer.[47] United Arab Emirates and Saudi Arabia is planning to make India a base for food security and invest in both organic and food processing industries.[48] India also signed an MoU with Lebanon and Egypt aimed at boosting agriculture production as well as productivity by getting access to best practices and global market.[49] In 2018, India and Israel agreed to jointly develop new crop varieties and share post-harvest technologies following the success of the 10-year-old Indo-Israeli Agriculture Project (IIAP), 2008. There will be increased focus on drip irrigation and how to design better farms by using canopy management and use of improved irrigation and fertigation technologies.[50]

India and the US have also discussed the sharing of global best practices on agriculture-extension reforms to boost productivity, leverage agri-tech for last-mile development, and create a conducive ecosystem to fund innovation in agri-business at the sidelines of the World Food India Conference 2017.[51]

The European Union (EU) has also been collaborating with India on extensive EU legislation on pesticides, maximum residue levels, etc., in different forums. The German Agribusiness Alliance (GAA) and Agriculture Skill Council of India (ASCI) signed a MoU with the objective of jointly developing the establishment of 'Indo-German Centres of

Excellence in Agriculture', a platform for practical skill development in agriculture in India.[52]

The Indian government signed MoUs with many African nations to boost agricultural trade and technology transfer agreements. Notably on the same lines, the Indian government has also proposed an agreement with South Africa.[53]

In addition, the government has allowed 100 per cent FDI under the automatic route in the agriculture and allied sectors industry.

1.3 Some leading European companies in India in the agrochemical sector

1. BASF
2. Syngenta
3. Bayer CropScience
4. Rabo Equity Advisors

Further there are few more major agrochemical companies from Europe that are active in the Indian agrochemicals market.

2. KEY ISSUES AND RECOMMENDATIONS

2.1 Issue/Objective: Regulatory Hurdles

Stringent environmental regulations requiring time-consuming registration procedures are increasing the cost of developing new products and simultaneously delaying the introduction of new products in the market. Further, the registration of a product in India for the first time u/s 9(3) of the Insecticides Act, 1968 is very tedious, requiring the company to do field trials, lab tests, undertaking product stewardship and risk management for the product. This generally takes 4–5 years of time. On the other hand, the process u/s 9(4), registering the product as 'Me too' in India usually takes less than 1–1.5 years as data guidelines have been relaxed. This discourages the research-based companies to introduce new products in the market.[54]

Recommendations

Process of registration by Central Insecticide Board (CIB), the regulatory body under Ministry of Agriculture, needs to be streamlined in a way that the period for getting a new registration gets minimized while meeting the safety related requirements. The guidelines need to be clearly defined to avoid interpretation challenges, which lead to confusion and add to the complexities for agrochemical companies. Fast-track approvals and clearances should be provided by regulatory bodies to encourage companies to develop new products.

The government should take adequate measures to help the players to navigate the regulatory complexities in the business environment and to facilitate the launch of new products quicker. This will in turn, help India achieve better Ease of Doing Business rankings and bring more FDI in the sector. The 'Regulators' should adopt crop grouping and encourage label extensions with minimal data to prevent misuse of pesticides on crops and thereby facilitate proper product stewardship.

India being a signatory of Organization for Economic Cooperation and Development (OECD) should implement its requirements in letter and spirit and encourage data generation under the Good Laboratory Practice (GLP). Industry players should form consensus to initiate a dialogue with government over rules and regulations with the support of industry associations.

2.2 Issue/Objective: Focus on Green Chemistry

Green chemistry is the designing of chemical products and processes that reduce or eliminate the use or generation of hazardous substances.

Recommendations

Green chemistry and sustainable agriculture are inherently intertwined. Government should focus on bringing green chemistry to the farms which is safe to the environment and also to human beings with characteristics of less

persistence in soil, water, and plants. Minor change in formulations with replacement of safer intermediates, both synthetic and natural should be permitted with ease. Bio-pesticides and safer green chemistry molecules should be given priority for introduction. Companies should invest in R&D activities to develop new green routes of chemical synthesis. Gradually, firms should look to shift form fossil fuels to renewable resources, and adopt low-carbon manufacturing and clean sustainable technologies.

2.3 Issue/Objective: Overdependence on Monsoons and Low Irrigation Coverage

About 46 per cent of India's net sown area (land on which cultivation is done at least once a year) is irrigated. The balance 54 per cent is un-irrigated and hence dependent on the vagaries of monsoon, mostly in the four monsoon months. The farmers owning this 54 per cent land switch to utilizing groundwater to survive, depleting the groundwater table.

Recommendations

Enhancing access to irrigation and technological advancement are the most potent instruments to raise agricultural productivity and production in the country. The government should facilitate investments in irrigation infrastructure through high technology irrigation systems. In October 2018, farmers in 401 drought-hit villages in Gujarat suffered over 33 per cent crop loss due to inadequate access to alternative irrigation measures.[55]

There have been some recent initiatives taken by the government to counter this problem. The Pradhan Mantri Krishi Sinchai Yojana, for instance, ensures 'more crop per drop' which covers 28.5 lakh hectares (2.85 million hectares) area under irrigation. ₹50,000 crore (₹500 billion; €6.37 billion) has also been earmarked for ensuring that every farm gets water whereas ₹5,000 crore (₹50 billion; €637.08 million) fund for micro-irrigation has been made available, encouraging farmers to install solar pumps for irrigation.[56] Compostable mulching films should be encouraged in cultivation practices in the fields and the government should come forward to subsidize the same to farmers. This will help in considerable water savings.

2.4 Issue/Objective: Data Protection for Innovators/Pesticides Management Bill, 2017

The key concerns of the pesticides segment are time-bound grants of licences, grant of registration for new pesticides molecules, accreditation of private laboratories to function as Central Pesticide Laboratories (CPL), elaborate procedure for withdrawal of pesticide samples, and making punishments more stringent for misbranded, sub-standard, and spurious pesticides.[57]

Recommendations

The global agrochemical research-based companies have to wait for 9–10 years and pass more than 100 safety tests to bring a new molecule into the market with a cost of minimum US$250 million (€221.72 million).[58] In order to safeguard the rights of innovating companies, the government needs to bring in data protection as practiced globally so that companies follow certain guidelines or procedures vis-à-vis cost incurred by the original registrant as per the existing global practice.

The government has released a new draft Pesticide Management Bill, 2017 to replace an almost 50-year old legislation governing the agrochemicals sector. The bill introduces right to compensation for farmers if the pesticide fails to provide the expected performance or causes any harm to human or animal health or damage to the environment. However, industry players and experts said it is not a big improvement from a similar draft presented in Parliament in 2008.[59] Data protection must be included in the Pesticide Management Bill to encourage innovations.

2.5 Issue/Objective: Low Investment in R&D

The industry is facing a serious challenge due to increasing R&D costs. There has been lack of data protection for innovators developing new molecules. This prevents companies from investing in R&D activities and they tend to focus more on the generic products, which require low investments.

Recommendations

Government needs to encourage R&D activities to facilitate new innovations in the Indian market. Additionally, the government must provide conducive business environment for the agrochemical companies to set up R&D labs in India. Government should encourage labs to follow GLP. New innovations or developments should be recognized and the companies should be awarded for the same. Indian companies spend only 1–2 per cent of their revenues in R&D compared with the global multinational corporations (MNCs), which invest about 8–10 per cent of their revenues. Notably, the Indian government has mandated the accreditation of labs by CIB to generate data for registration purposes. This will ensure that the tests meet the CIB requirements and prevent unfair practices in data generation. This will create level playing field for the agrochemical companies. There have been some investments in R&D including BASF opening its new innovation campus for Asia-Pacific region in Navi Mumbai in 2017 with an approximate investment of ₹3.5 billion (€44.59 million). This is BASF's biggest R&D investment in South Asia and it will serve the growing global and regional research activities including automotive, food and nutrition with a special focus on R&D in crop protection.[60]

2.6 Issue/Objective: Low Awareness Among Farmers

Only 25–30 per cent of Indian farmers are aware of agrochemical products and their usage, and farmers rarely read labels.[61] Hence product stewardship is of paramount importance. Poor extension services, language barriers, and a general reluctance toward adoption of new products because of possible risks of crop failure add to the woes. The main point of contact between farmers and manufacturers are the retailers who don't have adequate technical expertise and are therefore, unable to impart proper product understanding to farmers.

Recommendations

Government should collaborate with private companies in spreading awareness and educating the farmers about the appropriate use of pesticides by organizing awareness camps/industry conferences more frequently. To curb the malpractice of selling unwanted farm chemicals to the farmers, the Indian government had issued a notification in November 2015, wherein it was made mandatory for the dealers setting up insecticide/pesticide shop to possess a graduate degree in agriculture science or biochemistry or biotechnology or life science or graduation with either chemistry or botany or zoology. Existing retailers or dealers could employ a qualified person to continue their business or attain the qualification within two years to renew their licence. For selling the fertilizers, the dealer is expected to produce a six-month diploma in fertilizer management. This is a welcome step as the qualified retailers, having thorough knowledge of pesticides and fertilizers, can guide the farmers about their appropriate use. The government should focus on ensuring pragmatic implementation of the same so as to not affect the overall availability of retailers in rural India.[62]

2.7 Issue/Objective: Presence of Counterfeit/Spurious Products

In India, it is estimated that size of counterfeit pesticide market is around ₹32 billion (€407.73 million).[63] These products are inferior formulations, which are unable to kill the pests. They also leave by-products residues, which may significantly harm human, soil, and environment. Apart from the counterfeit products of leading companies, a new practice

has emerged by which counterfeiters are selling insecticides in the name of 'bio products' to avoid rigorous registration procedure. Use of non-genuine products leads to loss of revenue to farmers, agrochemical companies, and the government.

Recommendations

The government needs to come up with stringent regulations to prevent illegal imports, spurious, and spiked products being sold in India. Heavy fines should be imposed on the guilty and licence of such companies should be cancelled after a pre-defined number of defaults. The farmers need to be educated on how to differentiate between genuine and fake products. The companies should invest in technology to help end-users distinguish and validate the authenticity of the original products. The companies should use 3D security system more proactively on product packaging to distinguish their products. Government should formulate a single anti-counterfeiting committee/body to arrest the spread of non-genuine pesticides.

2.8 Issue/Objective: Extension Services

Extension services help the farmers' and other rural population to gain access to knowledge, information and technologies. These assist them to develop their own technical, organizational and management skills and practices, so as to improve their livelihoods and well-being.

Recommendations

Enhancement of extension activities is required both by the government and private sector to increase awareness among farmers for safe and right use of agrochemicals. Extension services rendered should be incentivized. Under the Union Budget 2017–18, the government planned to set up new mini-labs in Krishi Vigyan Kendras (KVKs) and 100 per cent coverage of all 648 KVKs in the country. In addition, 1,000 mini labs were also planned to be set up by qualified local entrepreneurs with credit-linked subsidy from the government. Through KVKs, the government is aiming to help farmers to shift to proper crop patterns and achieve yield improvement, which is commendable.[64]

2.9 Issue/Objective: Negative Perception Linked to the Agrochemical Industry

There has been an increase in the cases of breaching of maximum residue levels (MRLs) in India mainly because of indiscriminate use of pesticides by farmers and this has affected exports of rice, fruits and vegetables to many countries in Middle East, EU, and US.

Recommendations

Industry players need to take up the primary onus of enhancing the image of the agrochemical industry by creating the right kind of perceptions through public awareness. Support from the government will also be vital in this regard by showcasing the importance of the industry in various public forums. Adequate awareness regarding the new MRLs should be spread by the Food Safety and Standards Authority of India (FSSAI) to bring down the number of cases of breaching of MRLs. Crop grouping to facilitate label approvals for correct use of pesticides and product stewardship should be adopted by companies and government should encourage this practice to facilitate safe food production. This adherence will boost the export of agricultural commodities. These efforts will also serve well in attracting skilled technical talent to the industry. This is vital for long-term growth as well as in conveying the importance of the industry within the national landscape. A roadmap in this direction needs to be put in place.

2.10 Issue/Objective: Incentivizing the Agrochemical Industry to Enhance Manufacturing

The government needs to focus on providing more incentives and subsidies for the agrochemical sector to enhance the production level.

Recommendations

The governments at the Centre and the states should encourage the setting up of domestic agrochemical industries through incentives and tax holidays/exemptions, etc. This would garner more investments in the country and will bring employment opportunities. This compliments the Indian government's Make in India initiative. Going forward, the government needs to continue to provide infrastructural support to the industry to develop effective marketing and distribution solutions. The applicable GST too should be reduced from the current 18 per cent to 5 per cent. Micro loans for farmers should be incentivized, to invest in pesticides, fertilizers, seeds and other focus areas like poultry and animal husbandry which serve as alternative sources of income.

2.11 Issue/Objective: Health, Safety, Security, and Environment (HSSE) Implementation

Recommendations

The government and public bodies must incentivize agrochemicals units to adhere to safety requirements and abide by global standards, especially related to Good Manufacturing Practices. HSSE guidelines framed by the competent authority in the government should be implemented at the earliest.

3. CONCLUSION

The Indian government is investing in various farmer welfare schemes and creating more avenues that will help in achieving its aim to double the income of farmers by 2022. Additionally, the government is also giving loan waivers to farmers, which could help farmers in the short run to remain operational. However, they help little to solve the fundamental problem of rising costs and falling profitability in agriculture. The government should deploy sustainable long-term productivity improvement measures to get out of the vicious cycle of loan waivers.

The Indian agrochemical industry is highly diversified and regulated. It operates in an environment faced with many complex factors influencing the speed of adoption of new technologies. The industry is expected to gain momentum in the next few years due to increased investments in agricultural infrastructure. There are significant growth opportunities for agrochemicals due to India's low-cost manufacturing base, under-penetration of pesticide uses in domestic market, key products going-off patent globally, huge export potential and growth in herbicides and fungicides sub-sectors especially. In coming years, the agrochemical industry should focus on developing new processes and products with sustainability as the core principle. This requires developing a collaborative platform in which the academia, government and regulatory bodies, farmers and farmers associations, and manufacturers and industry associations come together to promote safe and judicious usage of pesticides.

Of the many challenges, which need to be addressed to give a fillip to this sector, the most critical ones are the regulatory reforms to be pursued by the government, infrastructural investments, incentivizing R&D, ensuring data protection to innovators and educating the most important stakeholder – 'the farmer' about the proper usage of agrochemicals.

In the light of the growth drivers of the Indian agrochemicals industry, the government's push to the sector and the need for bolstering digital capabilities, Indian players are well-poised to reap the benefits of the growth pockets within the market. The future is bright for the Indian agrochemicals industry, as a facilitator of Indian agriculture and also of the Indian economy.[65]

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ALCOHOLIC BEVERAGES

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EXECUTIVE SUMMARY

The Indian alcobev industry which passed through a difficult phase in the year 2016 and 2017 due to multiple factors has just managed to come out of it and started showing some positive results recently. It all started with the Prohibition in Bihar in 2016 followed by the sudden disruption caused by the Supreme Court imposed highway ban in 2017. These incidents made a huge dent on the Indian alcobev industry as well as the states' revenue. After the Supreme Court ban on highways was relaxed in 2018, volumes slowly picked up and industry made up lost ground and managed to maintain the growth story amidst multiple regulatory challenges. Despite the above challenges, India is still one of the fastest growing alcobev market globally. Rapid urbanization, growing middle class population, with rising spending power and demand for premium products are some of the drivers behind the increase in consumption of alcohol in India.

Today liquor companies continue to suffer high incidence of import tariff, ever increasing state levies such as excise duties and fees, low pricing flexibility, and delay in payments that are common in most of the states. Rising taxation without price rise have led to drop in margins in most of the markets. Increasing pressure of cost of inputs, additional burden of goods and services tax (GST) on inputs, delay in decision-making by the corporations/states are some of the inherent challenges of the alcobev industry in India.

The states' reliance on revenue from alcohol continues unabated. With the introduction of GST, resources left under the direct control of the states is restricted alcohol and petro products. With the growing dependence on revenue from alcohol, the states continue to raise its share of revenue by increasing tax and levies without compensating the manufacturers by giving a price hike. Such high prices are expected to fuel counterfeits, posing high health risk to consumers, and rising incidence of illicit liquor, etc.

Another interesting feature of the Indian alcobev industry is the story of 'premiumization'. More and more consumers are looking for premium alcohol within the category. With rising aspiration and increasing disposable income, consumers are upgrading towards premium alcoholic beverages in the country, be it Indian-made foreign liquor (IMFL) or international brands. In order to meet the aspiration of discerning consumers companies in India are introducing premium products, which they feel is the driver of growth in the next decade. Various companies over the last couple of years have introduced several premium brands to get a share in the premium category which are significantly adding to their bottomline. More and more people in the urban areas are looking for premium products and are willing to pay for it.

Similar to the international market, the Indian industry has also seen players with large portfolios to attain leadership positions. However, the regulatory constraints continue to dampen the efforts of companies to expand their operations across various states. The Indian alcohol industry has been subjected to a high degree of uncertainty despite it being a major revenue contributor to the state governments. Uncertainty in terms of annual excise policy announcements across states, complex and time consuming label registration process, higher incidence of excise duties and taxes, variable value-added tax (VAT) and applicability of GST on dry goods, amongst others, are major contributors constraining the growth of the industry including attracting foreign investments in the sector. Simplifying and removing some of these complexities will certainly help the alcobev industry to grow in India.

One breakthrough this year has been the introduction of Alcoholic Beverages Standard by the Food Safety & Standards Authority of India (FSSAI) under the Ministry of Health & Family Welfare from 1 April 2019. The introduction of alcobev standard by FSSAI this year is unique in many ways. The standard introduced by FSSAI which is at par with rest of the world is the culmination of several rounds of consultation with the local and global industry associations. The standards talk about different alcoholic drinks, their alcohol content, list of ingredients, processing aids, their labelling requirement, and the various parameters on which those items will be tested at the labs. It also mandates a declaration on the labels stating 'Consumption of Alcohol is Injurious to Health, Be Safe – Don't Drink & Drive'. The introduction of a regulatory

standard has put to rest several ambiguities which often used to arise in the absence of a globally comparable one. In addition, FSSAI has given adequate time to switch over to the new regulatory regime thereby avoiding any trade disruption which is a laudable.

The revenue from the alcobev segment forms a large chunk of revenue for most of the states to carry out development activities. Apart from Bihar, Gujarat, Nagaland, Mizoram, and Manipur, where liquor is prohibited, revenue from alcoholic beverage industry is a major contributor to the state exchequer – with over ₹190,000 crore (€24.20 billion) revenue for the year 2017–18 from excise duty and VAT and it is expected that the revenue from alcohol would surpass ₹220,000 crore (€28.03 billion) for the year 2018–19. It is estimated that alcobev industry would provide employment to more than 2.5 million people directly and indirectly.

The alcoholic beverage industry – as a substantial revenue contributor to the state exchequer and a provider of employment to millions – awaits fair treatment to be accorded by accepting the recommendations made by the industry and resolving some of the key issues.

1. Introduction

India is one of the key markets for the global alcoholic beverages industry, consistently occupying a spot amongst the leading countries.

The total consumption of wines and spirits (9 litres branded) in India during 2018[1] were as follows:

i. Imported wines accounted 515K 9-litre cases out of a total of 2.69 million cases.

ii. Of the total 337-million case spirits market, whiskey accounted for 213 million cases followed by brandy for nearly 71 million cases, rum for 41 million cases, vodka for 7.6 million cases and gin for 2 million cases.

iii. Only 1.4 million cases of spirits (whisky, gin, vodka, rum, brandy, etc.) were imported into India in 2018.

iv. Of the total spirits imported into India in 2018, imported bottled of international origin (BIO) whiskey accounted for only 0.8 million cases.

v. Out of the above 213 million cases, bottled in India (BII) whisky is about 3.0 million cases, made with the help of bulk imports of whisky.

The marginal increase in consumption of spirits and wines in 2018 as compared to 2017 (315 million cases spirits market) could be attributed to factors such as continued levy of high taxes and duties – both at central and state levels, states raising taxes, additional levy, etc.

In addition to high incidence of import duty imposed at the central level for imported products, alcoholic beverages are also subject to varying rates of excise duty, VAT, or sales tax at the state level. Accordingly, the total incidence of tax (including import duty and local taxes) on products imported into India varies from 300 per cent to 500 per cent.

The challenge for Made in India as well as imported products gets compounded due to the following factors:

i. GST – alcohol being kept outside the ambit of GST.

ii. States' unwillingness to offer price increases in spite of:

    a. Increased production costs by much as 30 per cent.

    b. Increase in excise duties.

iii. Levy of GST on inputs and services.

Furthermore, the producers are forced to bear the brunt as they cannot pass on the increased costs to the consumers leading to shrinking margins, reduced consumption, thereby leading to reduced revenue generation to the Centre and states.

The Indian alcohol industry is significantly different from markets in other large countries. The market architecture varies from one state to another in terms of taxation, regulation, legalization, production, and promotion. It is like operating in 36 different countries (29 states and 7 Union Territories). The tax structure in two neighbouring states is typically different, resulting in a strong incentive for unauthorized inter-state movement of alcoholic beverages. Even the legal drinking age varies from one state to another.

Distribution and logistics are under developed in most Indian states. More and more states are opting for state-owned corporations which are managed in a better way. The model varies from part/fully owned by the state government and part/fully owned by private enterprises. Distribution in the southern states like Tamil Nadu, Telangana, Andhra Pradesh, and Kerala are fully owned and managed by the state government-run corporations.

Any form of advertising of alcoholic beverage products is strictly 'prohibited', thereby making brand visibility and/or introduction of new products extremely difficult. This has led to the emergence of brand extensions.

Star-rated hotels, stand-alone restaurants, and duty-free shops (travel retail) have traditionally been the key channels of sale for international alcoholic beverages. Star-rated hotels and stand-alone restaurants can spend only up to 3 per cent (reduced from 10 per cent) of their annual foreign exchange earnings to purchase capital goods and duty-free alcoholic beverages. Travel retail continues to be a channel for international brands sales in India and increase in international travel has boosted such sales. However, the high incidence of customs duty on imported alcoholic beverages limits the potential of increased availability and not least depriving potential consumers with an opportunity to upgrade to the choicest wines and spirits.

2. KEY ISSUES AND RECOMMENDATIONS

2.1 Reduction of Basic Customs Duty on Alcoholic Beverages

Imported alcoholic beverages (other than beer made from malt at 100 per cent) is subject to a basic customs duty (BCD) of 150 per cent, before the application of state levies and duties. This is very high by international standards when compared to China (5 per cent), Brazil (20 per cent) and the average G20 countries duty of 30 per cent.

According to an analysis, the gradual reduction of China's tariff from 65 per cent to 5 per cent between 2000 and 2007, while maintaining domestic taxes at relatively low levels by regional standards, led to a massive increase in legal spirits imports (from US$30 million [€26.60 million] to roughly US$500 million [€443.45 million]), thereby also vastly increasing revenue collection (from US$30 million [€26.60 million] to US$265 million [€235.03 million], counting tariff + special consumption tax + VAT). Regarding cognac imports only, government revenues soared by 785 per cent between 2000 and 2007. The revenues went up by nearly 1,500 per cent as regards wine imports.

In India, the high incidence of customs duty coupled with state duties/taxes acts as a major hindrance for the import of alcoholic beverages. Products becoming expensive beyond the reach of majority of Indian consumers renders them non-saleable. The high level of taxes also leads to promotion of grey market trade resulting in a loss of revenue for both the central and state governments. Moreover, there is also a high influx of counterfeit products in the market, which undermines brand equity, deceives consumers, and poses a high health risk for consumers.

The size of the imported alcoholic beverage segment as compared to domestic production is currently negligible. (1 per cent of the total consumption of legitimate commercial alcohol is imported.)

Recommendation

There is a need to rationalize the import tariff in a phased manner from 150 per cent to 75 per cent and ultimately to 30 per cent over a period of 2–3 years. However, to protect interests of the domestic alcobev industry, an appropriate threshold limit has to be determined in consultation with the stakeholders.

2.2 Establishment of a National Alcohol Regulatory Body

There is a need to bring greater transparency in operating environment of the alcohol industry; a greater degree of transparency will curb corrupt practices, which in turn shall lead to plug the leakage of the official revenue that should effectively flow to the country's exchequer. Studies have revealed that the unrecorded alcohol generates tax equivalent revenue which is almost 50 per cent of the official tax revenue.

The industry is a large consumer of the agriculture produce and hence linked to the agriculture sector at the backend. The industry supports tourism in the country. It contributes revenues in excess of (€25.48 billion) and an estimated 2.5 million jobs directly and indirectly put together.

As per the Constitution of India, alcohol is a state subject; it falls under entry 8 and 51 of List II of 7th Schedule of the Constitution of India:

- Entry 8. Intoxicating liquors, that is to say, the production, manufacture, possession, transport, purchase, and sale of intoxicating liquors.
- Entry 51. Duties of excise on the following goods manufactured or produced in the state and countervailing duties at the same or lower rates on similar goods manufactured or produced elsewhere in India:
    (i) Alcoholic liquors for human consumption.
    (ii) Opium, Indian hemp and other narcotic drugs and narcotics but not including medicinal and toilet preparations containing alcohol or any substance included in sub-paragraph (b) of this entry.

Presently, the state governments control grants of licences to manufacture, regulate both maximum retail prices (MRPs) and ex-distillery prices, distribution of alcohol, and in some states even retailing of alcohol, at times by creating state monopolies. Despite stringent controls put forward by the state governments, there are challenges in terms of counterfeit, illicit liquor, which leads to revenue loss and risk to precious lives.

The central government should set up a national alcohol regulatory body to control and regulate manufacturing of alcohol along the lines similar to the Central Electricity Regulatory Commission.

Key benefits arising out of the proposed establishment:

- By enforcing transparent ways of doing business – plugging revenue leaks and curbing/eliminating corrupt practices. It will address revenue leakages by providing documentary audit trail which will increase government tax collection, reduce black money generation and corruption, curb unreported/undeclared sales, reduce illicit and spurious alcohol thereby curbing incidence of deaths from consumption of counterfeit products.
- The state governments will retain its control on the revenue generated from possession, transport, purchase, and sale of alcohol through state excise laws.

Recommendations

A national alcohol regulatory body should be set up by the central government to control and regulate manufacturing of alcohol along with following suggestions on carving primary role of the authority.

- The regulatory body *will not* interfere with state level taxes and levies but only play an advisory role.
- The regulatory body shall – in consultation with the states – formulate a model excise

policy, which can be implemented by all states to maintain uniformity across the country, thereby bringing Ease of Doing Business within this industry.

- The regulatory body shall regulate route to market channels in states to ensure state monopolies or state created monopolies for distribution of alcohol which encourage corrupt practices are obviated.
- The regulatory body shall regulate manufacturing capacity in the country to ensure there is no mismatch between supply and demand for alcohol.
- The regulatory body shall ensure that regulatory environment pertaining to the value chain in states' domain are uniform across all states.
- The regulatory body shall, in consultation with the state governments, prescribe prices on advisory basis to ensure healthy competition between the states.
- It will prescribe norms for number of retail outlets/100,000 consumers to ensure supply of sufficient alcohol thereby discouraging supply of spurious/illicit alcohol.
- The regulatory body shall also promote responsible retailing and consumption of alcohol by creating special purpose vehicle to promote responsible retailing and consumption where both government and the industry will contribute resources.

2.3 State Level Issues

2.3.1 State excise cycle and regulatory requirement under central acts

Labels should be registered with concerned state excise department before commencement of business in respective states. It is an annual requirement and varies across states beginning with the financial year and gets over by early July. Labels once approved by the state excise department on payment of fees can only be revised after paying additional fees. The industry also complies with specific labelling requirements mandated by central authorities like FSSAI under Food Safety and Standards (FSS) Act as well as the Legal Metrology Act (Department of Consumer Affairs).

The requirement under the various state excise legislation and the central legislations are almost similar in nature except difference in the size of the alphabets/numerals, etc. Frequent changes in the labelling requirement creates disruptions in business and most importantly huge financial implications on businesses. This year the introduction of Alcobev Standard by FSSAI and mandatory labelling requirements lead to a situation where most of the states agreed to the guidelines suggested by FSSAI under the central act. This is a welcome move and tend to move towards uniform labelling regime.

Recommendations

1. Changes in labelling or other requirement under the central acts should follow the excise cycle which begins from 1 April barring a few states. Compliance would enhance substantially if changes required follows the excise cycle.
2. Labelling requirements under the central acts should not lead to repetition and avoid confusion.
3. Move towards simplified uniform labelling requirement combining both FSSAI and state excise labelling requirement.
4. States should aim at announcing their annual excise policy, possibly beginning April each year.

2.3.2 Ease of Doing Business: Introduction of online registration and renewal of label

The Government of India in consultation with the state governments has embarked upon a journey to simplify processes to run business in India. It has led to a cut down on the number of processes and practices adopted earlier to run and operate businesses. This exercise has significantly improved India's position in the World Bank ranking on Ease of Doing Business

(EoDB) conducted each year by the World Bank. Unfortunately, the large alcobev sector in India has remained outside the ambit of EoDB run by the government. Once included and some of the issues are addressed, it will lead to significant improvement in the way alcobev trade is conducted. Online registration of labels and their renewals would be major step in this direction.

Alcobev companies operating in India have to register their brands/labels with the respective state excise departments before commencing their business. The labels contain the mandatory information prescribed under the state excise laws/FSSAI/legal metrology meant for the consumers like net quantity/alcoholic strength/volume/MRP/ statutory warnings/name and address of manufacturer or importers/FSSAI licence no, etc.

Renewal of labels is an annual exercise with the states' excise departments. One has to register their brands before the beginning of the new financial year by submitting their hard copy labels of each stock keeping unit (SKU) along with a host of other documents relating to the company's business and its directors each year with the state governments, followed by multiple follow-ups and personal visits. It is a time consuming and cumbersome process that leads to enormous delay. At times, half of the year is gone before brands are registered and one has to pay the fee for the full year, not least the lost opportunity in terms of business.

There is an ample scope for simplification and thereby enhancing Ease of Doing Business.

Recommendations

1. To introduce Ease of Doing Business, the industry suggests introduction of 'Online Registration of Labels' in each state bringing transparency and ensuring compliance.
2. The current annual registration process should be replaced by longer duration approvals, say for 3–5 years, on annual payment of fees by the brand owners.
3. Renewal of labels should be automatic on payment of fees in case there is no change in labels as compared to the previous year.
4. Companies shall furnish an undertaking stating no changes in labels and pay the annual fees online and labels should get automatically registered for the next excise cycle/year so that companies could start business from day one.

3. CONCLUSION

To sum up, the year 2018 has been an incredible year for the Indian alcobev industry. It could bounce back and regain its lost glory despite the many hurdles faced by it. We have already witnessed revival by seeing some traction in this industry as far as transaction activity is concerned with Grover Zampa Vineyards and Quintela Assets' acquisition of Four Seasons Wines and Charosa Wineries. Further, with PEs also showing renewed interested in the sector with Sofina, Sequoia Capital, and Sixth Sense Ventures' US$55 million (€48.78 million) investments in B9 Beverages Pvt Ltd – Bira 91, the stage seems set for greater traction and growth in the sector. The contribution of the alcobev industry also improved significantly, providing employment, and improving industry practices by being ethical and compliant. It has also taken up several projects to educate consumers to behave responsibly.

The introduction of the new alcobev standard by FSSAI in line with global standards brings the Indian alcobev industry at par with its global counterparts. India being one of the largest growing alcobev markets, more and more premium international brands are trying to test the Indian market. This offers an unique opportunity to Indian consumers to experience all premium brands, albeit at a higher price point. That boils down to the factor that high incidence of tariff and local taxes hinders the growth of premium alcobev products. Gradual reduction of tariff, reform in

excise laws, and rationalization of state taxes and levies will provide the required impetus to maintain the growth story. That will ensure sustained investment in developing markets and new products which will further propel the growth of premiumization and building premium brands.

Endnotes

1 Source: IWSR 2018

AUTOMOTIVE

Acknowledgements: Vinod Pandey (BMW India) – Chairman, Automotive Sector Committee & its Members

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EXECUTIVE SUMMARY

The automobile industry is a key pillar of the Indian economy. Currently, the automotive sector contributes around 7.5 per cent to India's gross domestic product (GDP) and the Automotive Mission Plan 2016–26 sets an aspiration to increase the contribution to 12 per cent. India recently became the world's fourth largest passenger vehicle market and is expected to emerge as the world's third largest passenger vehicle market in the next couple of years. The key drivers will be expansion of the domestic consumption base, high value manufacturing competitiveness, and technological capabilities.

The Government of India has been supportive of the automotive sector, acting as a critical enabler to drive manufacturing volumes and excellence through a multi-pronged policy framework. The government's Make in India initiative has played an important role in elevating country's position. In the past three to four years, India improved on nine out of ten parameters for Ease of Doing Business. Through the Automotive Mission Plan, National Electric Mobility Mission Plan (NEMMP), and various other initiatives, the government aims to build a sustainable industry with higher indigenization, reduced emissions, and improved vehicle safety.

The EBG Federation recommends a few points for attention across the three levers of taxation, trade, and technology to truly realize the immense potential of Indian automotive industry:

- Create an equitable taxation structure for the large vehicle segments by having uniform rate for the automotive industry. This will enable greater manufacturing competitiveness and help India compete on the global stage. The taxation structure needs to be clearly delinked from the vehicle length and engine capacity.
- Significant reduction in the import duty on vehicles with volumes capped at 5,000 units/annum. Reduced import duties will provide impetus to new model introduction, lead to growth of domestic market and facilitate manufacturing in the medium- to long-term.
- Diesel needs to be handled 'strategically' and not 'stigmatized' given the inherent benefits especially in the context of India – a) Higher fuel efficiency resulting in less dependence on imported oil (energy security); b) Lower CO_2 emission (climate protection) supporting the stringent Intended Nationally Determined Contributions (INDCs) adopted by India.
- Long-term electric vehicle (EV) policy framework of at least seven years that allows for continuity and attracts desired investments required for EV deployment. The focus should be to drive localization of key EV components by incentivizing local manufacturing.
- Collaborate with European Union (EU) on working out modalities and framework conditions for developing connected mobility ecosystem.

The European original equipment manufacturers (OEMs) have made significant investments in the country and have established themselves as trusted partners in driving the nation's growth agenda. They are willing to continue contributing by introducing well-researched automotive technologies, products, and systems but would need an enabling framework. We look forward to early implementation of the recommendations proposed in this position paper.

1. INTRODUCTION

1.1 Significance of the Indian Automobile Industry

The automobile industry has been instrumental in shaping the country's economy and hence rightfully regarded as a 'sunrise sector' under Make in India. India's GDP growth rate is likely to be at a three-year high of 7.3 per cent in 2019–20 after picking up to 7.2 per cent in 2018–19[1]. The automotive industry is a significant contributor to the national economy comprising over 7.5 per cent of the total GDP and approximately 49 per cent of manufacturing GDP. As a major employment generator, the industry provides employment to around 37 million people directly and indirectly[2]. It is estimated that the industry will contribute 12 per cent to the country's GDP over the coming decade[3]. The industry will need expansion of the domestic consumption base, high value manufacturing competitiveness, and technological capabilities to drive to the next level of growth.

India is one of the world's largest and fastest growing automobile markets, with annual sales of 26.3 million vehicles and production of 30.9 million vehicles in FY19[4]. India is the world's largest tractor, two and three-wheeler manufacturer, the fourth largest passenger vehicle manufacturer, and the seventh largest commercial vehicle manufacturer. Despite its large size, the auto industry has significant growth potential owing to the country's low passenger vehicle penetration. Vehicle penetration is estimated at 22 passenger cars per 1,000 people in 2018 and expected to reach 72 vehicles per 1,000 people by 2025, clearly establishing a strong upside potential.[5]

India exported 4.6 million vehicles globally in FY19. Two-wheeler accounted for 71 per cent of Indian vehicle exports in FY19, followed by passenger vehicles (15 per cent)[6]. In FY19, passenger vehicles exports declined by 9.5 per cent (year on year), largely due to decline in exports to Indonesia (restricted imports to reduce trade deficit) and Sri Lanka (growth in used cars market impacted new car sales) along with the strategic decision of the OEMs to focus on domestic market than exports[7]. However, with increasing manufacturing prowess, vehicle exports could play a significant role in India's future manufacturing growth.

1.2 European Investments

- European players continue to make significant investments in India throughout the automotive value chain – from manufacturing components to sales and after-sales services.
- Leading OEMs such as BMW, Daimler, Fiat, Volvo, Renault, Piaggio, and VW Group have invested over ₹300 billion (€3.82 billion) in the country so far. They have significantly contributed in terms of R&D, training and employment, and provided greater choices to the Indian consumer.
- Leading component suppliers such as Bosch, Continental, Durr, Michelin, and Magnetti Marelli have played a pivotal role by bringing in latest technology and improve product performance.
- The share of European vehicles in India is estimated at approximately 6 per cent in the passenger vehicle (PV) segment and about 7 per cent in the commercial vehicle (CV) segment during FY19. The market share is expected to increase owing to increasing consumer preference for premium and technologically advanced products, both in the PV and CV segments[8].

1.3 Government Initiatives

The Indian government recognizes the importance of the automobile industry. The government's Automotive Mission Plan (AMP) 2016–26 envisions the industry to grow around four times by FY26, with sales volumes touching 66 million units growing at a CAGR of around 10 per cent[9]. To achieve the projections, the auto industry will require additional investment of ₹4.5–5.5 trillion (€57.33–70.08 billion). The government has taken several measures for

realizing the potential of the Indian automobile industry:

- According to a recent report from NITI Aayog successful implementation of government initiatives could help India realize EV sales penetration of 30 per cent of private cars, 70 per cent of commercial cars, 40 per cent of buses, and 80 per cent of two- and three-wheelers by 2030.
- E-mobility has emerged as a top priority in the government's transportation strategy. In February 2019, the Government of India announced the Faster Adoption and Manufacturing of Electric Vehicles-II (FAME-II) scheme with a fund allocation of ₹100 billion (€1.27 billion) for FY 2020–22. It aims to provide impetus to the adoption of EVs and plug-in hybrid electric vehicle (PHEVs) by way of offering an upfront incentive on the purchase of vehicle and establishing necessary charging infrastructure.
- Following the FAME-II incentives announcements, the government has levied stringent eligibility criteria basis vehicle end-use, vehicle price cap, localization, and product features which would restrict the incentives for majority of the OEMs. Unlike FAME-I, FAME-II does not benefit the private-owned vehicles except for the two-wheelers. The government also announced a road map under the phased manufacturing programme (PMP), entailing phased increase of basic custom duty on EVs, its inputs, parts and assemblies to promote indigenous development. Also, as per the guidelines released by Department of Heavy Industries (DHI) in April 2019, OEMs will have to indigenize a significant portion of components to avail the FAMEII incentives. DHI listed EV's assembly and components used across vehicle categories and charted the associated deadlines (during 2019 to 2021) as the effective timelines for indigenization.
- We believe that these restrictions will not only impede technology transfer but also slow down the pace of development and adoption of EVs.[10] While the government has a legitimate objective in terms of providing incentives for locally manufactured products, indigenization requires volumes, which may take time depending on the consumer acceptance and demand for EVs. Government may therefore consider a longer duration for targeting indigenization. It is imperative to focus on market creation in the initial few years.
- The Ministry of Road Transport and Highways has relaxed homologation norms for OEM imports of up to 2,500 units of CBUs (completely built units) or CKDs (completely knocked down) of PVs or motorcycles and up to 500 units of other categories annually, irrespective of their price and engine capacity. We consider this as a positive step for automakers as they can now experiment with multiple models to explore market acceptance, especially for niche/non-existent models, and alternative drive train variants without being concerned about the homologation cost and time spent on certification. Successful experiments can then be adapted for localization.[11]
- The ministry has also introduced hologram-based coloured stickers on vehicles plying in Delhi NCR (National Capital Region) to indicate the nature of fuel being used. The holograms are in three colours – light blue for petrol and CNG vehicles, orange for diesel and grey for all other fuels, while EVs are assigned a green number plate. We understand that the objective of this exercise is to promote clean energy, however, this categorization does not take into consideration Bharat Stage (BS) norms and could be misleading as a BS-II petrol vehicle is tagged better than BS-VI compliant diesel vehicle. We recommend that holograms should be based on the BS norms instead and should have a same colour for BS-VI compliant diesel and petrol vehicles.[12]

- The government announced a pan-India rollout of BS-VI fuel by April 2020, with early introduction in Delhi (April 2018) and Delhi NCR (October 2019). However, the pan-India rollout plan is not in sync with the transition as industry needs the fuel at least three months in advance, i.e. by December 2019 to manage the transition. OEMs have ensured their production is in line with the BS-VI norms, however, there is no clarity on the detailed BS-VI fuel rollout across India. Non-availability of low-sulphur BS-VI fuel will seriously jeopardize the transition to the new BS-VI regime.[13]
- The Ministry of Road Transport and Highways has mandated multiple vehicular standards across segments, besides strengthening the Motor Vehicles Act through uniform driver licensing system, protection of children and vulnerable road users and rationalizing penalties. The Bill also proposes to introduce digitization in the monitoring and enforcement of traffic laws.[14]

2. FUTURE OF MOBILITY IS DRIVING DISRUPTION

It may be noted that the global automobile industry is undergoing significant transformation. The industry is likely to witness more change in the next five years than it has in the last 20 years. Accelerating technological changes together with changes in consumer choices and preference can result in an industry structure that may be very different from the current one. Number of analysts believe that the industry may be at a major crossroad as the future of mobility would be impacted by:

- Electric vehicles
- Shared mobility
- Autonomous driving
- Connected vehicles

Future direction of mobility provides unique challenges to the industry. Industry needs to invest in new technologies while also deepening expertise in the existing technologies to improve efficiency and reduce emissions. It is therefore important for India to frame and evaluate policy choices (GST rates, EV policy, etc.) that incentivize innovation and adoption of advanced technologies.

3. INTERVENTIONS TO REALIZE POTENTIAL

Realizing the true potential of the Indian auto industry and making it globally competitive will require concerted efforts of all stakeholders. There is an urgent need to focus on specific policy interventions across the *three levers of trade, technology, and taxation* to enable Indian automotive industry to position itself as a global leader.

3.1 Trade

- Passenger vehicle exports need strong attention from the government to continue increasing focus of global manufacturers in positioning India as an export hub, especially to markets without local manufacturing capabilities.
- There is a mismatch between the Indian capability and needs of the global markets. Globally, small cars are estimated to account for 15–20 per cent of the overall passenger vehicles produced[15]. However, share of small car production in India is much higher at around 60 per cent in FY19[16].
- EBG sees it as a positive development that the India export portfolio has started to diversify with the share of small cars produced shrinking to 60 per cent in FY19 as compared to around 69 per cent in FY10.[17] However, the pace of change is slow and there is a lack of capabilities and investments directed towards increasing capacity to manufacture medium to large size vehicles. It is challenging for automakers to manufacture and realize volumes for medium and large vehicles, given the construct of the government's automobile policy.

Recommendation

a. EBG emphasizes the urgent need for government support in creating an equitable domestic duty structure in the large vehicle segments to enable greater manufacturing competitiveness and volumes and help India compete on the global stage.

3.1.1 Export incentive schemes by the Government of India

US has registered a complaint against India in the World Trade Organization (WTO) claiming the export incentives are against WTO norms. WTO has appointed a dispute settlement panel to examine the complaints registered by the US:

- Popular export incentive schemes for Indian exporters such as the Merchandize Exports from India Scheme (MEIS), Service Exports from India Scheme (SEIS), and the Export Promotion Capital Goods (EPCG) scheme – may have to be withdrawn by end of 2019.
- Withdrawal of the EPCG will increase the cost of importing capital goods which will in turn increase the overall cost of manufacturing.
- Export competitiveness will also be adversely impacted if MEIS and SEIS are withdrawn.

Recommendation

a. EBG recommends the government to work out alternative schemes that are WTO compatible and announce them well in advance to enable industry to plan their business accordingly.

3.1.2 Import/custom duty

The premium vehicle penetration remains very low in India. The premium car manufacturers bring in products with latest innovative technology, highest safety and emission standards. Though there has been a shift in consumer preference to more sophisticated, durable and reliable vehicles, higher tax incidence remains a major deterrent.

- High duty on import of fully built passenger cars into India: Most CBUs of new cars are charged at basic customs duty of 100 per cent for cars with free on board (FOB) value >US$40,000 (€35,476) or engine capacity >3.0 litres for petrol engines or >2.5 litres for diesel engines[18].
- European manufacturers are constrained by economies of scale and quality considerations and hence not able to develop the supplier ecosystem to expand localization beyond a point.

Recommendations

a. While EBG recognizes the intent of government in promoting local manufacturing, we believe it will not serve the intended purpose as localization process requires sufficient lead time.

b. As import duty in India on imported vehicles is among the highest globally, EBG strongly recommends a significant reduction. Reduced import duties will provide impetus to new model introduction, leading to growth of the domestic market. This will facilitate expansion of manufacturing activity in the mid- to long-term.

c. EBG welcomes the move of homologation relaxation. It will save extra time and investments and will also help assess the market acceptance of new models for the future local investment or assembly at a reduced cost. We urge the government to increase the limit to 5,000 and also reduce the import duties on these vehicles. This will help test market new products and a successful market acceptance could pave the way for localization in the future, also bringing in technological advancements.

d. EBG recommends an *offsetting mechanism to the government to a fixed percentage of total vehicles manufactured in India to be imported under the reduced duty structure thus promoting local manufacturing.*

- Number of CBU vehicles for import at a concessional rate to be limited to 10 per cent of the volumes produced locally in the financial year.
- Applicable concessional basic customs duty: 15 per cent.

- Import volume cap at 5,000 units in a financial year.

3.1.3 Government's policy on steel imports and steel products quality control

The Government of India introduced policy measures in 2018 to prevent imports of substandard products by bringing in steel products under the Quality Control Order.

- The auto industry does not impart or use any substandard steel. In fact, to meet the requisite standards including for exports, the auto industry needs specialized raw materials, inputs, and components which are not available in India, such as unique grades of steel with chemical, mechanical, surface properties and dimensional tolerances to meet the global standards.
- Also, certain raw materials like steel cannot be localized because it is not commercially viable for Indian mills/ vendors/suppliers to develop these as per specifications for small volumes.

Recommendation

a. The auto sector is compelled to import certain special auto-grade products, parts, and components which are of very high standards but not available in India. EBG recommends the government to exempt these products from the Steel & Steel Products Quality Control Order, 2018 dated 13 August 2018.

3.2 Technology

- The auto industry is undergoing significant technological change on the back of multiple disruptive forces. Besides increasing technological maturity (autonomous, connected) and emergence of sharing economy, the need for environmental protection has been a key driver in the Indian perspective. In this context, the need for reduced vehicular pollution is creating a push for greater electrification and consequent charging infrastructure, alternative fuels and policy initiative on CO_2 standards.
- India has a dismal record as far as road fatalities are concerned with over 140,000 fatalities in 2017. The situation is compounded by ever increasing road congestion, impacting productivity, and subsequently driving erosion of economic value creation.

3.2.1 Clean diesel technology

- While EBG shares concern for rising pollution in Indian cities, it disagrees with the approach of singling out diesel vehicles as the key contributor.
- Diesel passenger vehicles have been getting a lot of flak for its perceived contribution to the growing pollution in metros despite an IIT study showing contribution to be less than 2 per cent in Delhi NCR.
- Euro-VI advanced clean diesel technology has emissions almost on par with petrol. European companies have advanced technologies and would be able to introduce it in India subject to pan India availability of requisite diesel fuel (<10 ppm sulphur).

Recommendations

a. Diesel needs to be handled ‘strategically’ and not ‘stigmatized’ given the inherent benefits especially in the context of India – a) Higher fuel efficiency resulting in less dependence on imported oil (Energy Security); b) lower CO_2 emission (Climate Protection) supporting the stringent Intended Nationally Determined Contributions (INDCs) adopted by India.

b. EBG strongly supports the government’s decision of leapfrogging to BS-VI emission standard in 2020 and would emphasize on early availability of requisite BS-VI fuel at least three months in advance, i.e. by December 2019 to manage the transition. There should not be any change in the timeline and pan-India availability of BS-VI fuel before 2020 remains essential to make the transition to BS-VI successful.

3.2.2. Electric mobility

- The future of mobility is electric cars. While there has been a lot of deliberation and action initiated around promoting EVs, it has not translated into impactful penetration for electric vehicles. High cost of batteries, unavailability of compelling EV models, sparse charging infrastructure and lack of long-term policy roadmap on incentives have been some of the reasons for very limited off-take of electric vehicles in India.
- The National Electric Mobility Mission Plan and schemes such as FAME are very positive initiatives and convey the government's intent to promote EVs. The recently launched FAME-II scheme, is a welcome move. However, it levies stringent eligibility criteria which excludes majority of EV OEMs. It is wrong to link incentives with localization, the original equipment supplier (OES) and the component suppliers are not yet ready to manufacture vehicles or components for the current low volume. The process of safety tests, checking, vehicle testing will take at least 12–18 months. Further, the incentives apply to vehicles used for public transport or those registered for commercial purposes in 3W, 4W, and bus segments, and only 2Ws are covered in privately-owned category. Also, with an implementation plan for only three years, it lacks clarity on the financial support that would be available on a long-term basis. Furthermore, FAME-II incentives, with an upward ceiling of ₹1.5 million (€19,113) for 4Ws, is not relevant for the premium vehicles.

Recommendations

a. EBG recommends a long-term EV policy framework of at least seven years, which will allow for continuity and attracts desired investments required for EV deployment. The focus should be to drive localization of key EV components by incentivizing local manufacturing.

b. EV manufacturing in India is at a very nascent stage. Restricting the incentives could impede the growth of technology. The government should offer both fiscal and non-fiscal incentives in the short to medium run, until the market and local manufacturing achieve reasonable scale.

c. Linking incentives to local manufacturing will not be enough. Additionally, investing in local manufacturing of electric vehicles will require sufficient volumes and long-term stability of market demand. EBG recommends restriction free incentive scheme for three years.

d. EBG welcomes the government's move to include plug-in hybrids under the FAME-II scheme. However, initial market creation is a pre-requisite for faster electric mobility adoption. EBG recommends that the policy framework should also cover privately registered and premium vehicles to enable the mass uptake.

e. EBG appreciates the government decision to reduce GST rate on EVs to 12 per cent and strongly recommends reducing the GST rate of PHEVs to 18 per cent[19]. PHEVs offer an excellent conduit to transition to battery electric vehicles.

f. Charging infrastructure: EBG recommends that India should go the global way, by bringing about a definite set of charging standards and following it up with concrete policies. EBG recommends adoption of the combined charging system (CCS) charging standards for DC fast charger (>100 volts). Learning from successful EV markets clearly alludes to strong investment from the government in early stage of charging infrastructure development.

g. The FAME-II planned outlay of ₹10 billion (€127.42 million) towards the charging infrastructure is a welcome move, however the government should ensure they are in line with international standards and the DHI and Ministry of Power should work together their deployment.

h. EBG would like to urge upon the government to make foreign players, who have invested heavily in terms of economic and technological growth of India, to be an integral part of the EV scenario in India. Foreign OEMs having manufacturing base in India should be treated

as an integral part of the Indian automotive industry and have made substantial contribution to the Prime Minister's Make in India programme.

3.2.3. Connected and autonomous mobility

- The global automotive industry is making significant efforts to focus on connected and autonomous mobility to bring safety and convenience to all mobility consumers. It is important to shape the future from a technical perspective as a vehicle manufacturer and establish enabling regulatory framework and infrastructure. Despite India being the fourth largest PV manufacturer, India is still not a leading country from technology perspective.
- Vehicle-to-vehicle and vehicle-to-infrastructure communication is key to developing intelligent transportation systems. Connected and autonomous vehicles can allow for fundamentally new use cases for vehicles and for more efficient use of infrastructure.
- European vehicle manufacturers can also offer advanced safety features in the products such as driver assistance, anti-collision, and lane departure warning; however, they are not able to do so due to lack of requisite frequency licensing.
- Data privacy implications for connected and autonomous vehicles are significant. The data collected by the cars will not only be commercially valuable but also contain extremely sensitive information about individuals.
- EBG can play a critical role in introducing and adaptation of new technologies such as the lane departures, radar, lidar, etc., in the Indian auto industry. These new advanced technology solutions, if implemented consistently, can significantly improve safety quotient of urban mobility.
- European vehicle manufacturers can also offer advanced safety features in the products such as driver assistance, anti-collision, and lane departure warning; however, they are not able to do so due to lack of requisite frequency licensing.

Recommendations

a. EBG recommends that the Government of India works together with the EU on working out modalities and framework conditions for developing connected mobility ecosystem.

b. Finalize 'M2M' (machine-to-machine) policy framework and provide ample flexibility to OEMs to offer mobility services.

c. De-licensing of frequency bands is important to introduce advanced product safety features.

d. Rollout of 5G network with fast and steady network across India to explore full potential of connected mobility and autonomous vehicles.

e. Autonomous driving: Seek an international alignment on laws and regulations. The Vienna Convention changes must be carried over into national law quickly. Regulatory and certification law must be further developed in harmony with increasing levels of automation.

f. EBG recommends the government to support research on autonomous driving through R&D incentives and testing infrastructure. It can partner with European automotive industry.

g. Data safety, security, and privacy would be the critical factors. Therefore, the Government of India needs to come out with clearly defined regulations for data handling and management in alignment with European laws.

3.3 Taxation

A favourable taxation policy can provide a major fillip to the automotive industry. EBG recommends transparent, consistent, and stable tax and regulatory regime as pre-requisite to drive growth. Companies need a level playing field and long-term clarity to plan their business strategy and investments.

3.3.1. GST on cars

- EBG expected GST regime to address the tax rate anomaly existing between small and large vehicles. Since GST rates are on ad valorem basis therefore the customer

will anyway pay higher taxes on ex-showroom price of large/premium vehicles which is higher than that for small cars.

Recommendations

a. We strongly recommend single rate for the automotive industry, capped at 28 per cent. The taxation structure needs to be clearly delinked from the length of the car and should solely be meant to incentivize safer and greener cars.

b. EBG is disappointed with additional cess on large/premium cars. Premium car manufacturers bring in products with latest innovative technology, highest safety and emission standards, contribute to high skill development, and provide employment opportunities. Therefore, 'demerit' categorization of these products is akin to penalizing 'innovation'. This clearly carries forward the past tax distortions and not provide an enabling environment for the premium segment to grow. This will also provide an excellent opportunity to export such premium products to the global markets in future.

c. EBG acknowledges government's concern on revenue collection. It would however suggest a phased approach:
   - Difference between GST rate for small cars (length<4 metres) and large/premium cars (length>4 metres) should be reduced to 10 per cent by capping compensation cess at 10 per cent. Review the proposed two-rate tax structure after three years to evaluate the possibility of converging to a single rate.
   - Standard GST rate of 18 per cent for two-wheelers.
   - Currently the GST rate of 18 per cent has been administered on a select few auto components which comprise merely ~30 per cent of the overall auto component production, while others are taxed at much higher 28 per cent. We believe a standard 18 per cent rate for auto components is critical, especially when the auto component industry is expected to undergo large transitions due to the government's push on e-mobility.

d. EBG expects a continuous improvement in GST operational procedures to make them user-friendly to further improve Ease of Doing Business.

e. Leverage GST regime to incentivize electric and plug-in hybrid cars to promote clean and green mobility.

4. FOCUSED POLICY INITIATIVES

Policy support can have significant impact on issues concerning pollution and road safety.

4.1 End of Life Vehicles

- Undertake a fleet modernization programme to ensure old polluting and unsafe vehicles are safely disposed and are replaced by new modern vehicles. A successful execution of the programme will need a robust dismantling infrastructure.

Recommendations

a. Comprehensive 'Inspection and Maintenance' regime will have a strong positive impact to ensure only road-worthy vehicles.

b. EBG recommends a 'fleet modernization'/ 'scrapping' programme by providing liberal one-time incentive for vehicles more than fifteen years old:
   i. Financial incentive of 50 per cent reduction in applicable taxes (including road tax) for buying new vehicles.
   ii. Higher incentive to promote green mobility – the incentive can be increased to 75 per cent reduction in applicable taxes for buying battery electric vehicles.

c. The financial incentives need to be tradable against a certificate of destruction.

d. The government should encourage independent private recycling centres to come up thereby encouraging entrepreneurship and employment through new businesses.

e. EBG recommends that OEMs and their dealers should not be thrust with the sole responsibility of collection and scrappage of vehicles. The OEMs

and the dealers can provide technical guidance to independent private recycling centres. For example, in Germany, vehicle scrappage is handled through certified and independent dismantling centres that handle scrap vehicles.

5. CONCLUSION

India, with its continuously growing local market and expanding exports, offers ample promise to be a global manufacturing hub. The need of the hour is to address multiple issues impacting sustainable growth. As the global mobility landscape continues to evolve and transform, the Indian government will have to facilitate and enable a vibrant automotive ecosystem through policy interventions and infrastructure support. European companies could contribute by introducing advanced sustainable technologies, products and systems. The companies will benefit from the rapid growth of the Indian economy, thereby creating a winning and successful partnership.

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Notes

AVIATION

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EXECUTIVE SUMMARY

India is the third largest domestic aviation market and seventh largest aviation market in the world, with 207 million passengers (to, from, and within India) in FY2019. It is expected to become the third largest aviation market by 2022.

A steady growth in the economy, easing regulations, and government support for greater private sector involvement are key drivers that have driven this rapid growth. These measures have given the aviation sector a major boost with transparency, Ease of Doing Business, and improvement in the investment climate.

The National Civil Aviation Policy (NCAP 2016) signalled the government's intent to radically alter the sector's growth trajectory. NCAP's flagship programme – Regional Connectivity Scheme (RCS or UDAN) is taking flying to the masses by offering subsidized fares as low as US$35 (€31.04) for a one-hour flight.

Along with UDAN scheme, the government has launched the NABH Nirman initiative with the objective of developing airport infrastructure, improving connectivity, and increasing affordability in the sector. The government has undertaken some regulatory reforms to stimulate the development of a domestic maintenance, repair and overhaul (MRO) and aero-manufacturing ecosystem. Digi Yatra Biometric Boarding System and the AirSewa app initiatives have been launched to enhance passenger satisfaction, taking into account the increasing importance of customer experience.

Yet, many believe, the Indian aviation market is only scratching the surface. The potential of the industry is evident from the aspirational targets set under Vision 2040. The passenger traffic is expected to grow six-fold to around 1.1 billion by 2040 with a commercial airline fleet of 2,359 aircraft and around 200 operational airports. More conducive policies, regulatory reforms and industry–government collaboration are needed to tap into India's full potential.

With greater emphasis on efficient capex and opex for airport development and operations, upcoming airports need to be developed as part of a holistically-planned aerotropolis. 'Gold plating' of expenses by airport operators can be avoided through the use of pre-determined tariffs. The government must continue promoting use of technology at airports, to ensure faster passenger movement through customs, immigration, and security.

A comprehensive hub development policy should be developed by the government that provides fiscal, monetary, and procedural advantages to its top Indian airlines to promote long haul connectivity. The privatization of Air India can unlock significant value for aviation industry in India, and needs to be pursued by addressing the concerns of potential investors.

It is necessary to bring aviation turbine fuel (ATF) under the ambit of goods and services tax (GST) at the earliest. The government may consider raising the GST rate on from 5 per cent to 12 per cent on economy class tickets to reduce the short term GST loss.

Despite strong growth, India's air cargo volume is significantly lower than the world's top airports. India has a significant potential to become a transshipment hub. Priority should be given to easing cumbersome customs, safety, and security procedures for transshipment cargo. It is necessary to implement seamless ramp to ramp transfer of transshipment cargo with due safeguards; followed by increased engagement with logistics companies in neighbouring countries. Paperless processing, e-freight initiatives and digital innovations with new technologies are required to improve efficiencies and make the industry globally competitive. The Air Cargo Logistics Promotion Board (ACLPB) is working in close coordination with government ministries and industry to implement growth-oriented cargo policies. ACLPB needs to be strengthened to increase focus on key initiatives like transshipment, performance monitoring, use of technology, and for promotion of freighters.

India has a significant potential to be a global MRO hub in the long term. The government needs to create a roadmap for promoting the development of an MRO ecosystem in India and address the tax disparity between India and competing nations in the Middle East and South-East Asia. Procedural challenges on custom clearance of components, tools, test benches, and consumables related to MRO needs to be addressed.

So far, the air infrastructure planning and roadmap has not taken note of the requirements of General Aviation (GA). The GA industry remains largely unsuccessful in India. A clear policy regarding slot allocation needs to be developed at congested airports. It is necessary to develop infrastructure and facilities for GA operations at airports and airstrips throughout India. The Ministry of Civil Aviation (MoCA) may consider developing a public–private partnership (PPP) policy for development of heliports. MoCA, Directorate General of Civil Aviation (DGCA), Airports Authority of India (AAI) and GA industry should work together to develop heli-taxi routes in high demand areas of India's congested metro cities. MoCA and DGCA should co-develop GA regulations with the industry to bring regulations in line with global practices with due checks and balances.

The Indian aero-manufacturing sector needs government support and global collaboration in order to unlock its substantial potential. The Indian government has set up a task force to develop a plan under the National Civil Aircraft Development for the development of indigenous civilian aircraft, helicopters, and associated aviation equipment. The task force may identify the top five aeronautical technologies in which India is expected to achieve global leadership. The government then needs to develop 3–4 focused aero-clusters for the identified technologies. Defence offsets should be strategically used to promote aerospace manufacturing in India.

The government recognizes the huge potential of drones and plans to develop India as a drone hub of the world. In order to support the growth of the drone market, several policies, and regulatory changes are needed. DGCA should establish a single window clearance system to enable registration of remotely piloted aircrafts (RPAs) in a time-bound manner. The maximum take-off weight (MToW) and maximum above ground level (AGL) height for nano-drones should be increased to 500 grams and 500 feet respectively.

India needs to develop a domestic aircraft finance industry for sustainable long-term growth of its aviation industry. The Indian government, financial institutions, and airline industry will need to have a long-term horizon and a proactive engagement with top leasing companies to attract them to India. Key action steps for achieving this include tax treaties with leading countries and zero rating of GST, corporate tax, stamp duty, and withholding taxes exemptions on aircraft leases. The government should consider establishing a NABH Nirman Fund (NNF) to provide capital support to low traffic greenfield airports which could be developed under PPP model. To attract global airport companies, private equity, and pension funds into the Indian airport sector, the airport concession agreements for greenfield and brownfield airports need to be made simpler, predictable, and industry-friendly. This could be achieved through pre-determined tariffs at upcoming airports.

Skilled manpower should be developed on priority basis for sustainable long-term growth of the aviation sector. MoCA should consider setting up a high-level task force, led by a Joint Secretary, for making India an aviation education hub. Certificates issued by reputed flying academies in the developed world should be acceptable in India in order to attract foreign investment and talent in aviation education and the graduates thereof should be given faster clearances by DGCA.

The Indian aviation market will be able to unlock its true potential by focusing on execution and implementation of the proposed improvements in infrastructure, skills, and regulatory mechanism. This potential for growth in turn provides an opportunity for EBG and European countries for playing a significant role in India's civil aviation and aerospace market.

1. INTRODUCTION

India is the third largest domestic aviation market and seventh largest aviation market in the world, with 207 million passengers (to, from, and within India) in FY2019. It is expected to become the third largest aviation market by 2022.

A steady growth in the economy, easing regulations, and government support for greater private sector involvement are key drivers that have driven this rapid growth. These measures have given the aviation sector a major boost with transparency, Ease of Doing Business and improvement in the investment climate.

The Indian civil aviation industry has managed to exhibit significant resilience against risks over the last two decades. Some of the key reasons behind the rapid growth of the Indian aviation sector include:

i. Steady growth in the Indian economy, which is now poised to become the fifth largest after US, China, Japan, and Germany.

ii. Domestic open-skies, which allows new airlines to freely enter the market, subject to stipulated norms.

iii. Partial open skies in international routes wherein India's neighbouring countries and those outside a 5,000 km radius from the capital New Delhi can have unlimited flights to designated international airports in India.

iv. Growth of highly competitive low cost carriers (LCC) in India.

v. Development and operation of leading airports at Delhi, Mumbai, Hyderabad, Bengaluru, Hyderabad, and Cochin through PPP. Many more are on the anvil.

vi. Formulation of the industry-friendly NCAP 2016, which covers almost all aspects of Indian aviation.

vii. Opening up of regional airports in India's hinterland through the landmark Regional Connectivity Scheme (RCS) popularly known as UDAN (Ude Desh ka Aam Naagrik).

The unprecedented growth being witnessed in the Indian aviation market, though impressive, is significantly lower than its untapped potential. A nation of nearly 1.35 billion people, with a middle class of over 350 million (and growing) should be flying, at conservative estimates, over 700 million passengers per annum.

2. IMPORTANT DEVELOPMENTS

2.1 NABH Nirman – Driving Growth Through Capacity Augmentation

In February 2018, India's Finance Minister announced India's plans for a five-fold increase in its airport capacity to handle over a billion trips a year under a new initiative called 'NABH Nirman' (NABH – NexGen Airports for Bharat; Nirman – Development). The key aspects of NABH Nirman are long-term master plan for airport and regional growth and balanced economics for all stakeholders.

Under this initiative, the Government of India has proposed a new transaction structure for future greenfield airports. The guiding principles of this transaction structure are affordability, sustainability, and predictability. The proposed bid parameter is a concession fee in Indian currency per passenger, which has near-zero risk of revenue leakage. A system of pre-determined aeronautical pegged to inflation is also proposed, in order to prevent 'gold-plating' of tariffs by concessionaires. The regulator's mandate will be to determine key performance indicators (KPI) for the concessionaires and to monitor quality of infrastructure and service. These measures are expected to save time and disputes, and bring about greater transparency.

In August 2018, the draft transaction structure for greenfield airports was released for stakeholder feedback. The Draft Model Concession Agreement (MCA) is under development and is expected to be released for stakeholder feedback soon. The AERA Act (Amendment) Bill, 2018 is awaiting approval by Parliament.

2.2 Thrust on Private Participation in Airport Development

There has been a renewed thrust on private participation in airport development under PPP mode. AAI has undertaken transactions for six brownfield airports at Ahmedabad, Lucknow, Jaipur, Guwahati, Thiruvanathapuram, and Mangaluru with the selection of a new entrant, the Adani Group. GMR airports has won concessions to develop and operate airports at Bhogapuram and Nagpur. The transaction process for a new airport near Delhi at Jewar has been initiated.

2.3 Challenges in Airline Industry and Taxes on Aviation Turbine Fuel Continue to Hurt

The airline industry is facing short-term headwinds with ceasing of operations by Jet Airways and pressures on margins of other airlines. One of the key challenges for airline industry is that the landed price of ATF for domestic flights in India is one of the highest in the world. ATF remains outside the scope of the GST which is an anomaly. In many states, the local taxes on ATF are in the range of 25–30 per cent. This is besides federal taxes.

ATF accounts for nearly 30–40 per cent of an airline's operating expenses. The taxes add pressure on the airline's bottomline, since airlines do not have the flexibility of raising fares at will. One can imagine the surge in demand if the government decides to bring ATF under GST and provides input credit on the taxes paid thereon.

Many states like Andhra Pradesh, Odisha, Jharkhand, Madhya Pradesh, Chhattisgarh, and West Bengal, etc., have reduced taxes on ATF to 0–5 per cent at many or all of their airports. Larger states like Delhi, Maharashtra, Tamil Nadu, Karnataka, etc., continue to charge high rates of 24–30 per cent. There is a need to address the tax anomaly by bringing ATF under the ambit of GST urgently.

2.4 Digi Yatra and AirSewa – Focus on Enhanced Passenger Experience

In October 2018, MoCA announced the draft Digi Yatra Biometric Boarding System which will enhance passenger movement at airports through facial recognition. Digi Yatra aims to provide air travellers in India with a 'seamless experience' of passing through airports by using facial recognition for passenger verification.

The enhanced passenger experience may lead to higher consumer spends at the airport, resulting in more jobs, lower airport tariffs, and higher tax revenues for the government. It is planned that airports will be able to provide innovative services through Digi Yatra, such as immersive shopping experiences and targeted advertisements.

In 2016, MoCA launched the AirSewa app to provide an efficient grievance redressal mechanism for passengers. The app allows passengers to upload voice and video complaints regarding all aspects of their travel experience, along with a detailed description. As of November 2018, around 12,000 complaints have been addressed through AirSewa.

An upgraded version – AirSewa 2.0 has been introduced in November 2018, allowing passengers to register complaints through social media using the hashtag #airsewa. The portal also features an interactive chatbot to handle customer queries, real-time flight and airport information, and a link with BHIM e-payment app. The next update may include a ranking of airlines based on customer feedback, among other features.

2.5 Regional Connectivity Scheme and International UDAN – a Potential Game-Changer

Under NCAP 2016, the RCS (also known as UDAN) has attempted to enhance connectivity to unserved and underserved airports. RCS has received significant interest from leading domestic carriers and start-up airlines due

to the various fiscal and monetary incentives therein and the three-year exclusive right to operate on the allotted RCS routes.

The selection of the RCS operator on a particular route is through a transparent electronic bidding process. Under RCS-1 in April 2017, five airlines won licences to operate on 128 routes connecting over 31 new and 12 underserved airports. Under RCS-2 in January 2018, the aviation ministry awarded 325 routes to 15 airlines and helicopter operators. These routes included 25 new airports and 31 new helipads. The second round of RCS bidding saw significant improvement over the first one, including doubling of the number of RCS flights for priority routes (the Northeast, Jammu and Kashmir, Andaman and Nicobar Islands, and Lakshadweep areas) and participation by market leader IndiGo and helicopter companies.

On many UDAN routes, large airlines have reported high load factors and good yields. However, some small operators are facing challenges related to non-performance, limited slots for UDAN flights in congested airports like Delhi, Mumbai, etc., and limited leasing options for small fleet owners. These are teething problems that are likely to be dealt with as the UDAN scheme matures.

The International UDAN scheme, an extension of RCS, seeks to promote international connectivity from non-metro cities. State governments will be offering a pre-decided amount per seat as subsidy on routes covered under this scheme. The government has identified eight potential routes so far for the implementation of International UDAN. Six of these routes are to provide connectivity from Guwahati to Dhaka, Kathmandu, Yangon, Kuala Lumpur, Singapore and Bangkok, while two routes are from Vijayawada to Dubai and Singapore. In October 2018, AAI invited bids for the six proposed routes from Assam. Spice Jet is expected to start the first route under International UDAN from July 1 connecting Guwahati and Dhaka.

2.6 Maintenance, Repair and Overhaul – Reforms Provide Welcome Reprieve

The landmark NCAP 2016 removed many procedural hurdles faced by the MRO industry and have been duly welcomed by them.

The duty free period for component imports was increased from one to three years. Foreign aircraft were allowed to come to India for MRO for a period of six months (instead of 15 days earlier) without any permission.

MROs were required to provide proof of their requirements of parts, or orders from their client airlines. This has been done away with. Visas and temporary landing permits will be issued promptly to foreign pilots and MRO experts. Airport royalty and additional charges for a period of five years will not be charged on MRO service providers. In order to facilitate repairs of damaged sub-assemblies like engines and landing gears of foreign carriers, the notification has been revised to enable advance export of serviceable parts.

Yet, the benefits of NCAP 2016 have been completely undone by the tax regime applicable to MROs. GST on MRO providers in India is 18 per cent for most items as compared to 0–7 per cent tax in competing nations in Middle East and South-East Asia. Thus, despite a rising fleet, MRO industry continues to struggle for relevance.

2.7 Made in India Aircraft – a Not Too Distant Future

The Indian government is taking a slew of initiatives to promote aerospace manufacturing in the country. It has set up a task force led by the aviation minister to formulate a plan for the development of indigenous civilian aircraft, helicopters and associated aviation equipment under the National Civil Aircraft Development (NCAD) programme. The programme aims to promote India as global hub for the manufacture, design, and innovation in aeronautical manufacturing under the Make in India initiative.

The task force consists of over a hundred experts from Hindustan Aeronautics Limited (HAL), National Aerospace Laboratories (NAL), Aeronautical Development Agency (ADA), and the Defence Research and Development Organization (DRDO). A special purpose vehicle (SPV) will soon be set up for the project, with an initial investment of US$1.4 billion (€1.24 billion).

The government is strongly engaging with all leading original equipment manufacturers (OEMs) to establish manufacturing and assembly lines for production of aircraft in India like in USA, EU, and China.

2.8 Drones – the Next Big Revolution in Aviation

The government acknowledges the huge potential of drones and plans to develop India as a drone hub of the world. It has set up a 13-member task force comprising government officials, academia and private sector CEOs to help it prepare a road map for the sector. The task force will focus on areas like research and development, acquisition and commercialization, application and adoption in specific sectors, regulatory framework, as well as preference for Make in India.

In August 2018, the government released Drone Regulations 1.0 which became effective from 1 December 2018. The regulations are intended to enable visual line-of-sight daytime-only and a maximum of 400 feet altitude operations. The Digital Sky Platform will register pilots, devices, service providers; and implement the ‘no permission, no take-off’ (NPNT) regime.

Drone regulations 2.0, expected in late 2019, may enable beyond visual line of sight (BVLOS) operations, delivery of payloads and automation of the air traffic management to the extent possible. One pilot may be allowed to operate any number of RPAs.

Under drone regulations 3.0, human transportation by RPAs may be allowed. Given the speed of innovations, this may happen faster than one can imagine.

3. KEY ISSUES AND RECOMMENDATIONS

3.1 Airlines

Despite Jet Airways’ crisis, the Indian domestic market recorded a year-on-year growth of 13.1 per cent in FY2019 in terms of passenger throughput. This is on the back of low airfares driven cutthroat competition among Indian carriers.

As of April 2019, LCCs like IndiGo, SpiceJet, GoAir, and AirAsia control nearly 79 per cent of the passenger market share. Indigo is the leading carrier with its passenger market share steadily rising to over 49 per cent. It is followed by Air India (13.9 per cent), SpiceJet (13.1 per cent) and Go Air (10.8 per cent) with double-digit market shares.

The growth in domestic traffic has encouraged all major Indian carriers to place large aircraft orders. In December 2018, Indian carriers had a fleet of around 670 aircraft with pending deliveries of around 1,024 aircraft. Among the aircraft orders, the low cost carriers account for more than 70 per cent of India’s order book, closely followed by full service carriers. Yet, India’s fleet of aircraft pales in comparison with the fleet of world’s largest carriers in US and China. A significant portion of their fleet comprises wide-bodies, something that Indian carriers will have to catch up on as they expand their presence in the long haul market. The share of Indian carrier on international traffic to and from India is growing with increasing fleet and policy support.

The government should come up with a hub development policy (akin to the highly successful Regional Connectivity Scheme 2016) that provides fiscal, monetary, and procedural benefits to all Indian carriers that venture into international routes.

Despite the government’s significant efforts, the much-delayed privatization of Air India has been missed. Losses for the national carrier in FY2019 are likely to mount. This may require further fund infusion from the

exchequer. With no or limited fleet expansion, Air India may see further fall in its domestic and international market share. Air India has huge untapped value in terms of high value slots at international and domestic airports, a wide-body fleet, and highly-trained crew. These can be better leveraged by a well-funded private investor. Some of the clauses – like debt, employees, and government shareholding in Air India, etc. – that investors found challenging, need to be addressed appropriately when the privatization process re-commences.

The Indian airline market continues to be heavily susceptible to the rising cost of ATF. ATF needs to be brought under the ambit of GST at the earliest. The benefits in terms of growth in travel, tourism, infrastructure, jobs, and the long-term taxes therefrom will more than compensate for the small amount of GST foregone in the short term. The government may consider raising the GST rate on economy class tickets from 5 per cent to 12 per cent to reduce the GST loss in the short term.

As concerns about the environmental impact of aviation continue to rise, the government should come up with an aviation-grade biodiesel policy to promote cultivation and manufacturing of biofuel. This wonder fuel, developed from the Jathropha plant, has the ability to reduce airline carbon footprint significantly.

3.2 Airports

There are over 450 airports and airfields in India out of which 101 are operational as in December 2018. The government-owned AAI owns 125 airports.

There are six airports being operated under the PPP model, namely Delhi, Mumbai, Bengaluru, Hyderabad, Cochin, and Nagpur. Six more airports at Ahmedabad, Jaipur, Lucknow, Guwahati, Thiruvanathapuram, and Mangaluru will be handed over to a private operator under the PPP model. This will free AAI's administrative and financial bandwidth to focus on smaller airports in the hinterland where no private capital is likely to come in the initial phase.

Air traffic in India is still concentrated in the top 15 airports. In FY2019, top 15 airports in India contributed to around 82 per cent of total throughput in the country. The concentration of traffic in top 15 airports is significantly higher than comparable markets such as USA and China.

Most of the large Indian airports are expected to be saturated over the next 10–15 years. While large cities will see capacity expansion at existing airports and development of second airports in the city, the interiors and tier-2/tier-3 cities will see old airports and airfields being revived. The future growth in Indian aviation market is therefore expected to be driven by non-metro cities.

By 2040, the number of operational airports in India is expected to nearly double to 190–200. The total capital expenditure for brownfield and greenfield capacity expansion in India till 2040 is expected to be in the range of US$40–50 billion (€35.47–44.34 billion).

Upcoming airports need to be developed as part of a holistically-planned aerotropolis than a mere plot of land where aircraft land and take off. This has traditionally not happened in the past. For airport operations, greater emphasis also needs to be placed on efficient capex and opex. Experiences across the world show that passengers value efficiency over grandeur. The concept of pre-determined tariffs will help mitigate the need for 'gold-plating' of capex and opex to obtain higher tariffs from the regulator. This concept should be implemented as soon as possible. The role of the regulator under pre-determined tariff approach will shift more towards ensuring service quality since some airport operators may try to cut corners on capex and opex.

The government should come up with a detailed roadmap for national airport capacity augmentation in consultation with state governments, airlines, travel trade, hospitality industry, funding institutions, and other

stakeholders. It should be widely shared so that state governments and industry stakeholders can plan their investments, staffing, and business activities well in advance.

There is an urgent need to build consensus and amend India's Land Acquisition Rehabilitation and Resettlement (LARR) Act, 2013, especially for growth drivers like aviation and tourism. Finding 3,000–5,000 acre land parcels for new airports in metros and large cities will be extremely difficult. Setting up greenfield airports 50 km or beyond from the city centres will increase cost and travel time for passengers. The concept of land pooling wherein displaced landowners get cash compensation and a developed plot closer to the airport has been adopted by some states with encouraging results.

Airlines are introducing wide-body aircraft in the domestic sector to address rising demand and constrained slots. This requires significant changes in the airside infrastructure. Airports undertaking expansion programmes need to take cognizance of this trend and incorporate the same in their masterplan.

Significant steps have been taken in order to improve the air passenger experience in India. Introduction of the Digi Yatra Biometric Boarding System will enhance passenger movement at airports, resulting in higher consumer spends leading to more jobs, lower airport tariffs, and higher tax revenues for the government. The AirSewa app launched by MoCA provides an efficient grievance redressal mechanism for passengers. The government needs to continue promoting use of technology at airports, to ensure faster passenger movement through customs, immigration, and security.

In-airport shuttle trains can be used for terminal transfers, and automatic e-gates can be introduced for immigration. Central authorities like Customs, Immigration, and Central Industrial Security Force (CISF) need to enter into service-level agreements with airport operators. This will help monitor and reduce passenger handling times without compromising on safety and security.

The next two decades are expected to see capital investments of over US$40 billion (€35.47 billion) in the airport sector, not including the cost of land acquisition for development of 80–90 new airports. Many of these developments may be undertaken on a PPP basis.

Some PPP projects may require funding support in the initial stages. The government should consider establishing the NNF with a starting corpus of around US$2 billion (€1.77 billion). This fund could provide capital support to greenfield airports in return for up to 25 per cent equity stake, based on a well laid out investment criteria. The fund may sell its shares to the private partners at a premium based on a pre-agreed valuation criteria. The premium thereof can be reinvested in the next batch of airports.

3.3 Maintenance Repair and Overhaul (MRO)

India has long been viewed with interest from MROs globally seeking a valuable gateway between the Middle East and Asia-Pacific. The current market size of the MRO industry in India is assessed at about $700–800 million (€620.84–709.53 million). With its growing aircraft fleet size, strategic geographic location, rich pool of engineering expertise, and low labour cost, India has a huge potential to be a global MRO hub in the long term.

Despite this potential, the MRO industry in India continues to struggle for relevance. Due to a limited MRO ecosystem and a sub-optimal tax structure, most Indian carriers carry out MRO in Sri Lanka, South East Asia, Middle East or Europe.

As discussed previously, NCAP 2016 removed many procedural hurdles faced by the MRO industry. Yet, the benefits of NCAP 2016 have been completely undone by the tax regime applicable to MROs. Other challenges include lack of adequate infrastructure, investments, and technical capabilities.

GST on MRO providers in India is 18 per cent for most items as compared to 0–7 per cent tax in competing nations in Middle East and

South-East Asia. The Government of India does impose a GST of 5 per cent on the invoice value of the MRO done abroad, but airlines can take a setoff against the same. The significant tax differential between Indian and global MRO providers renders MRO in India highly unattractive for airlines.

This tax disparity needs to be addressed on priority basis, by declaring MROs and component warehouses as free trade zones with zero-rate of GST and a ten-year holiday on corporate tax, capital gains tax, and dividend distribution tax. This will help create a complete MRO ecosystem in India and encourage airlines to switch from their current service providers. There will be no loss of indirect tax revenue since the GST will be recovered from the end consumer – the airlines. There will be no loss of direct tax revenue since the MRO industry is almost non-existent today.

Airports in India charge royalties on the invoice value of MROs, over and above the space rentals that MROs pay to the airport companies. This is a violation of Clause 18B(f) of NCAP 2016 that stipulates removal of all such royalties and add-on costs for a five-year period. The said clause needs to be enforced with immediate effect. MoCA may issue a notification abolishing, with immediate effect, all royalties and charges (other than reasonable lease rentals) levied by airport operators on MROs for a period of five years.

A high-level task force for promotion of MRO needs to be formed under the leadership of a Joint Secretary of MoCA. The task force may have members and representatives from relevant ministries, regulators, OEMs, and MROs. The task force may analyse the various options and action steps required to make India a global MRO hub, develop a clear roadmap, and report outcomes to the aviation minister.

If there is a continued push for tax and procedural reforms, aircraft servicing in India can be 20–25 per cent cheaper than its competing nations. It will help transform the moribund Indian MRO industry from mere line or base maintenance providers to value providers.

3.4 General Aviation

While scheduled airlines are facing significant demand growth, the GA industry in India has not been very successful, and remains one of the most untapped areas of civil aviation in the country. The planning and roadmap for aviation infrastructure so far has not taken note of GA requirements.

The number of operators with the non-scheduled operator's permit (NSOP) has reduced from a peak of 147 in FY2012 to 111 in FY2018. The NSOP fleet in India comprises around 356 aircraft, including helicopters. This is down from a peak of 412 aircraft in FY2012.

The biggest challenge faced by the GA industry is the infrastructure deficit, especially at major airports such as at Delhi and Mumbai. This is where a majority of owners and clients of GA live and work. Since preference is given to scheduled airlines in the morning and evening peak hours, the curfew hours imposed on GA renders them ineffective. A clear policy on GA slot allocation needs to be developed at congested airports. Till then, a few slots per hour could be allocated to GA during peak hours.

To boost the GA industry, it is important to develop the supporting infrastructure at airports in tier-2/tier-3 cities including night-landing facilities, enhancement of passenger amenities and state support in statutory services, like security. GA facilities at metro airports need an upgrade in terms of dedicated terminal, entry point, apron, parking space, etc. Non-operational airstrips need to be upgraded in places of economic significance such as ports, mines, industrial clusters, and tourist locations.

Other challenges that have contributed to the stagnation of the GA industry include high ATF taxes and airport charges, and shortage of hangars and parking slots. NCAP 2016 stipulated that airport charges for helicopter operations will be suitably rationalized. The same needs to be implemented on priority.

The high taxes and charges imposed on GA are primarily due to its branding as a 'luxury'

item. Import of private jets incurs basic customs duty and a GST of 28 per cent, while a non-scheduled operator has to pay basic customs duty plus 18 per cent. Thus, most private buyers import an aircraft under the NSOP category. A large number of NSOPs have single aircraft fleet, which creates a huge pressure on DGCA in terms of monitoring and oversight. Removing the tax differential between NSOP and private aircraft may help reduce the number of NSOPs. The option of a separate monitoring and facilitation agency for GA may be evaluated by MoCA.

Helicopters are highly versatile and have wide range of applications including – intra- and inter-city commuting, cargo, air ambulance, law enforcement, search and rescue, tourism, firefighting, agriculture, media and entertainment, etc. Most of these have tremendous potential in India. Yet, the whole of India has just around 319 helicopters. Over 70 per cent of the flying hours of the Indian helicopter fleet is accounted for by just around 40 helicopters deployed in the offshore oil rigs.

It is important to develop heliports to support the growth of GA in India, especially in areas that cannot have runways due to financial constraints or terrain-related challenges. MoCA may consider developing a PPP policy for development of heliports. NCAP 2016 has proposed a series of reforms to support the helicopter industry. The same should be implemented in letter and spirit, especially for use in intra-city travel and medical evacuation.

MoCA should work with ministries of railways and highways, insurance companies, helicopter operators, and hospitals to evolve a cashless system for medical evacuation. Rooftop helipads need to be built over metros stations, railway stations, stadia, key buildings, and near highways for rapid evacuation in case of an emergency. MoCA, DGCA, AAI, and GA industry should work together to develop heli-taxi routes in high demand areas of India's congested metro cities.

GA aircraft are the biggest catalyst of regional connectivity. For Make in India to succeed, GA needs to be promoted in a big way so than investors, bankers, and executives can travel between the headquarters and the production and logistics centres seamlessly without wasting hours on the road.

3.5 Aeronautical Manufacturing

Due to several challenges and strategic priorities aerospace OEMs and large suppliers did not have a focused sourcing strategy for India, until recently. Only a handful of Indian players are supplying to OEMs. In the past, Indian companies have failed to attract a substantial volume of work at tier-1 and tier-2 systems, resulting in securing mostly low value-added component manufacturing jobs involving high components of labour.

Recently, with India's high demand for aircraft, strategic geographic location, rich pool of engineering expertise, and competitive labour cost, India has started to become an important part of the global footprint of leading OEMs like Airbus, Boeing, Lockheed Martin, Bombardier, etc.

Boeing has partnered with over 160 suppliers from India, with its annual sourcing from India standing at around US$1 billion (€886.91 million). Airbus has a total of 46 suppliers in India. Its sourcing from India in 2017 exceeded US$550 million (€487.80 million). Airbus plans to source products worth US$2 billion (€1.77 billion) annually from India by 2020.

Global original equipment manufacturers (OEMs) are also looking at developing a strong micro, small, and medium enterprises (MSME) base within India, so as to cater to the needs of their tier-1 suppliers and set up an aircraft manufacturing ecosystem within the country.

The Indian aero-manufacturing sector needs support from government and global collaboration in order to unlock its substantial potential.

NCAP 2016 lays special emphasis on promoting aero-manufacturing. It states that aero-manufacturing locations may be notified as SEZ. The same needs to be implemented on priority. Aeronautical research and

development (R&D) and manufacturing should also be given 'deemed' exports status for at least twenty years, extendable in future based on outcomes.

The Indian government has set up a task force led by the aviation minister to formulate a plan for the development of indigenous civilian aircraft, helicopters, and associated aviation equipment under the NCAD programme. The programme aims at promoting India as global hub for the manufacture, design and innovation in aeronautical manufacturing under the Make in India initiative.

The task force consists of over a hundred experts from HAL, NAL, ADA, and DRDO. A SPV will soon be set up for the project, with an initial investment of US$1.4 billion (€1.24 billion) The task force may identify the top five aeronautical technologies that India should achieve global leadership in. The government then needs to develop 3–4 focused aero-clusters for the identified technologies.

Due to the capital intensive nature of the sector, Indian MSME and component manufacturers are not able to invest in the required infrastructure to compete globally. MoCA should take the lead in forming common infrastructure that can be shared by the component manufacturers. This may include special process and testing facilities, warehouse for inventory storage, training centres, etc. These could be part of the proposed aero-clusters or existing ones based on a thorough feasibility analysis.

The government should consider allowing 100 per cent foreign direct investment (FDI) in defence aeronautical manufacturing through an automatic route for investments by OEMs and tier-1 manufacturers. This may encourage global players to set up manufacturing plants in India for the export market. Defence offsets should be used strategically as an enabler to promote civil aerospace manufacturing in the country. Higher offset multiplier should be provided for sourcing complex commercial aerospace components from Indian players and MSMEs.

The major challenge in India is shortage of skilled manpower. MoCA, academia, and industry needs to jointly set up an integrated aerospace skill development centres offering certification courses covering various aspects of aircraft manufacturing. These include R&D, prototyping, machining, wiring, surface treatments, composites, tooling, welding, assembly, etc. These centres could be located in or close to the aero-clusters.

3.6 Air Cargo

Air cargo throughput in India increased by 6 per cent to 3.56 million MT in FY18–19. International cargo contributes to 61 per cent of total air cargo volumes in India and grew at 2.6 per cent over FY17–18.

Economic growth, fleet enhancement by Indian carriers, boom in e-commerce and express deliveries, several pro-industry policy initiatives by the government and infrastructural investments have been some key growth drivers for this sector.

India's air cargo volume is significantly lower than top airports in the world. The Indian air cargo industry in the country faces many challenges. These include high dwell times, congested cargo terminals, sub-optimal use of belly cargo capacity, missing/damaged/non-traceable cargo, manual processing, etc. Key reasons include insufficient enabling infrastructure, complicated procedures, limited use of technology, and challenges on the human resource front.

Logistics costs in India comprise about 13–14 per cent of GDP as compared to 7–8 per cent in developed countries which has also hampered the growth of air cargo logistics industry.

According to ICRA, air cargo traffic in India is expected to grow by 60 per cent in FY 2018–2023 but infrastructure and procedural bottlenecks continue to be major constraints. Airports in India currently have a capacity to handle 4.63 million MT of air cargo per annum. Cargo handling capacity needs to increase by at least 2 million MT by FY2023.

Air cargo traffic is concentrated at the major airports, with six airports accounting for 87 per cent of the total cargo volume which is leading to terminal congestion at these airports. In a study commissioned by MoCA, reasons for high dwell time at these six leading airports were assessed and corrective actions were identified.

In 2017, the free period for air cargo was reduced from 72 hours to 48 hours. As per a recent assessment, dwell time for import and export cargo has been reduced by over 25 per cent at seven airports in India over the last three years. This needs to be brought down to low single digits by use of paperless processing, infrastructure improvements at the cargo terminals, and use of off-airport cargo processing.

India has a significant potential to become a transshipment hub, given its geographic location, global flight connections, and improved relations with its neighbouring countries. Yet, cumbersome customs, safety and security procedures for transshipment cargo have prevented full exploitation of these advantages. This needs to be addressed on priority. Seamless ramp to ramp transfers of transshipment cargo with due safeguards needs to be implemented followed by greater engagement with logistics companies in neighbouring countries.

There is a shortage of skilled manpower in the ground operations and security functions. Insufficient supporting infrastructure like truck docking bays, special facilities for temperature controlled goods, express freight, hazardous goods, etc., and seamless railroad connectivity to the hinterland continue to hurt.

The government needs to facilitate the development of cargo villages at all major airports. This would bring all government agencies, regulators, and service providers within the airport's cargo facility and help decongest the cargo terminals. Air Freight Stations (AFS) also need to be promoted for faster cargo processing at space-constrained airports.

The ACLPB needs to be strengthened further with additional staff that can undertake multiple initiatives. The ACLPB should also formulate KPI for various government and industry stakeholders.

The government should incentivize development of cargo handling and processing infrastructure in tier-2/tier-3 city airports to decentralize cargo operations at metro airports. Dedicated cargo airports can also be promoted to help decongest hub airports. Developing these airports in close proximity to industrial and logistics centres would allow for peak operation during night hours and enable good connectivity with transport infrastructure.

3.7 Remotely Piloted Aircraft

RPA, commonly known as drones are the next big revolution in aviation. While India is one of the fastest growing aviation markets in the world, RPA usage in India has been restricted to scattered operations and aerial photography due to legitimate concerns around privacy, safety, and national security.

Under current regulations, drone operations are permitted only on visual line-of-sight and NPNT basis, during daytime and at a maximum altitude of 400 feet. A relaxation of drone regulations is expected in late 2019, enabling beyond visual line of sight (BVLOS) operations, delivery of payloads and automation of the air traffic management to the extent possible. One pilot may be allowed to operate any number of RPAs.

The government acknowledges the huge potential of drones and plans to develop India as a drone hub of the world. It has set up a 13-member task force comprising government officials, academia and private sector CEOs to help it prepare a roadmap for the sector. The task force should develop a definitive strategy on how to leverage India's traditional strengths in innovation, software development, and entrepreneurships to develop a world-class RPA manufacturing industry in India. This will require close cooperation between the government, academia, financial institutions, and industry in a mission mode.

In order to support growth of the drone market in India, the government will also need to make several policy and regulatory changes. DGCA should establish a single window clearance system enabling online filing of applications for both Unique Identification Number (UIN) and unmanned aircraft operator permit (UAOP), so as to enable registration of RPAs in a time-bound manner.

Nano-drones, which do not require a UIN or UAOP under current regulations, are expected to be very popular for commercial and civilian operations. The MToW for nano-drones, currently at 250 grams, should be enhanced to at least 500 grams to cater to the base models of commercially available drones. The maximum AGL height allowed has been fixed at 200 feet for RPAs in micro and above categories and only 50 feet for RPAs falling under nano category. The government should consider enhancing the AGL limit to 500 feet, with provision for higher limits on a case by case basis.

The rising demand for RPAs in India may motivate international RPA manufacturers to start manufacturing in India. DGCA should work closely with Department of Industrial Policy and Promotion (DIPP) and the industry to make it easy and attractive for global players to Make in India.

MoCA should facilitate establishment of a large network of training schools to make training more accessible, affordable, and effective.

3.8 Aviation Financing

Over the last two decades, a large part of aircraft financing in India has been done through the operating lease model, and over 70 per cent of the private airlines' fleet today is on an operating lease basis. This trend is expected to continue.

Structuring an operating lease allows an airline to enjoy all the benefits of aircraft ownership for a fraction of the initial cash outlay. It keeps debt off the airline's books. The sale-and-lease-back (SLB) model allows the airline to make a profit on the aircraft sale value even before it flies. The airline can upgrade, replace or return the aircraft during the lease period.

Most of the leading global aircraft leasing companies are headquartered in Ireland. In the absence of a leasing industry in India, the country's large fleet of aircraft is susceptible to exchange rate fluctuations. With the gradual depreciation of the rupee, the cost of leasing in rupee terms will rise. Airlines may not be able to pass on the same to the passenger, squeezing their margins further. This is not sustainable in the long run.

There is also the risk that foreign lessors can be influenced by their governments to restrict the use of aircraft by their Indian lessees. These challenges will only increase with time, till India develops its own leasing industry. The domestic industry can be built by large Indian institutions on their own or in collaboration with global players, like in the case of insurance industry.

Establishing a domestic aircraft finance industry will require a long-term vision and significant policy reforms, especially on the taxation front. India will need to create a tax regime for aircraft leasing more attractive than that prevailing in leading jurisdictions like Ireland, Hong Kong, and Singapore. Key action steps include tax treaties with leading countries and zero rating of GST, corporate tax, stamp duty, and withholding taxes on aircraft leases. This will enable leading players to establish their presence in India.

3.9 Human Resource Development

The current direct employment in the aviation and aero-manufacturing sector is conservatively estimated to be around 200,000. Given the expected increase in air traffic by nearly six-fold, quadrupling of the aircraft fleet and doubling of the number of airports by 2040, the requirement for direct employees is expected to increase to roughly around one million.

India today has various aviation education institutes of repute. These include the Rajiv Gandhi National Aviation University (RGNAU) at Rae Bareli, the Indian Aviation Academy in Delhi, Civil Aviation Training College (CATC) at Allahabad and Hyderabad; Indira Gandhi Rashtriya Uran Akademi (IGRUA) at Rae Bareli, etc. According to industry sources, India has over 31 flying academies, six type-training facilities, 86 academies offering Aircraft Maintenance Engineering (AME) and over 150 cabin crew training institutes.

Yet, the quality of training infrastructure, training tools, and instructors at many flying academies and AME schools are far from perfect. Many Indian students go abroad for pilot training and come back for opportunities in India. Sub-optimal quality of training leads to airlines and MROs investing more time and money in upgrading their skill-sets.

Industry and academia will need to invest in a massive upgrade of the existing education and skill building infrastructure to prepare skilled human resources for the expected rapid growth, with support from central and state governments.

DGCA should consider evaluating how the training programmes in India can be brought at par with global norms without compromising on safety standards. In order to attract foreign investment and talent in aviation education, certificates issued by reputed flying academies in the developed world should be acceptable in India and the graduates thereof should be given faster clearances by DGCA.

MoCA should consider the option of allowing private players to set up Air Traffic Control Officers (ATCO) training facilities, similar to flying academies and engineering colleges. The schools shall be subject to supervision by AAI and DGCA. This may be started in a PPP mode first and thereafter be made fully open to private sector in the long run.

There are limited skilling opportunities for business operations and management personnel like route planners, flight dispatchers, revenue and yield managers, airport planners, and corporate managers. Specialized training programmes for these personnel is the need of the hour. There is also a strong need for a closer collaboration between the airline industry and AME schools, and to revise the curriculum and examination systems.

Currently there is no organization in India that provides specialized technical training in air transportation safety, security, and regulatory areas. DGCA should engage with global regulators and training institutes for preparing its in-house group of master trainers.

For consistent and sustainable long-term growth of the aviation sector, development of skilled manpower is of utmost importance. MoCA should consider setting up a high-level task force, led by a Joint Secretary, for making India an aviation education hub. The task force should have members from relevant ministries, regulators, aviation industry, and academia. The task force should develop a clear roadmap about key industry requirements, education infrastructure, funding strategy, and the timelines. The Task Force should report actions and outcomes to the aviation minister on a quarterly basis.

4. CONCLUSION

Indian aviation has shown exceptional growth in the recent past, and this is expected to continue in the future on the back of economic development, increasing affordability of air travel, and a supportive policy environment.

However, for India to become a global aviation hub, significant regulatory reforms and policy changes will be required. The Indian government, regulators, industry, academia, and other stakeholders will need to work in close collaboration. India will also need to work with aviation leaders across the globe for much needed knowledge transfer.

With proper focus on execution and implementation of the proposed improvements in infrastructure, skilling, and regulatory

mechanism, the Indian aviation market will be able to unlock its true potential.

As some of India's most important trading partners, European countries can play a significant role in the growth of the Indian aviation sector and development of India as a global aviation hub.

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EXECUTIVE SUMMARY

The banking sector in India has been witnessing phenomenal changes since liberalization of the economy and over the years, some of the largest banks in the world have set up their presence in India. The European banks operating in India supplement the strong economic partnership between India and Europe and support the business interests of Europe in India.

While acknowledging the efforts of the Indian government to bring in reforms for the banking sector, EBG would request that efforts may be directed towards addressing certain issues which still remain unresolved. In order to facilitate the government's efforts in addressing the issues faced by European banks in India, EBG has set out below the key regulatory and tax concerns of the European banks operating in India.

Regulatory/commercial considerations

This year, EBG proposes to identity and focus on the following issues:

1. Reworking the priority sector norms to align them with the overall status granted to foreign bank branches operating in India regardless of number of branches and scale of operations.
2. Dealing with the issue of expiring international investment agreements that India has executed with European countries.
3. Acknowledging the role of custodians in facilitating foreign portfolio investments, the rights, duties, and obligations cast on the custodians and freeing them from the risk or exposure to tax attributable to the foreign portfolio investors, recognizing that regulations should capture the risk of loss of revenue rather than placing it on the custodian who is only a facilitator.
4. Aligning the minimum capital requirements of Basel III for Common Equity Tier-1 with the Reserve Bank of India's (RBI's) requirements.
5. Deferring the implementation of the Large Exposures Framework with regard to inter-bank exposures.

Key tax considerations

The tax issues are summarized in detail in the paper. Some of these issues have been a challenge for foreign banks in India for a few years now and EBG would urge a speedy resolution to these if found appropriate in the context of the overall policy framework of the government.

1. INTRODUCTION

Based on the recent announcements made by the Indian finance minister in the Interim Budget 2019–20, EBG believes that this government attaches much importance to the banking and financial services sector in India. While several reforms have been announced for banks in the past few years, EBG believes that it is necessary to continually refine policies to improve the banking business. To achieve this goal, EBG is pleased to present this paper which discusses the key regulatory and tax issues which could act as a roadblock for the European banks operating in India.

2. GENERIC INDUSTRY ISSUES

2.1 Key regulatory issues

- Priority sector lending requirements.
- Issue in relation to expiry of guarantees.
- International investment treaties.
- Inconsistency in minimum capital requirements vis-à-vis Basel norms.
- Large Exposures Framework.
- Data localization and cross-border data transfers.

2.2 Key tax issues

- Tax issue relating to foreign portfolio investors.
- Availability of concessional tax rate of 5 per cent on interest income arising to Foreign Portfolio Investment.
- Interest paid by Indian branch of a foreign bank to its head office/overseas group offices.
- Tax regime for India-based fund managers.
- Tax treatment of interest income earned by non-banking financial companies on non-performing assets.
- Deduction for provision for non-performing assets.
- Withholding tax provisions on interest payments made to foreign banks.
- Tax issues in connection with conversion of Indian branches of foreign banks into subsidiaries.
- Thin capitalization norms.

3. KEY ISSUES AND RECOMMENDATIONS

3.1 Key Regulatory Issues

3.1.1 Priority sector lending requirements

Background

The Reserve Bank of India (RBI) revised the Priority Sector Lending (PSL) norms applicable to commercial banks operating in India in July 2012. The revised PSL norms place foreign banks with 20 or more branches in India at par with Indian banks. Such foreign banks were granted the flexibility to achieve these norms within a five-year period to end on 31 March 2018. Foreign banks with less than 20 branches were permitted to retain their original PSL obligations, with no sub-limits within the overall PSL norms.

The PSL guidelines were further modified on 23 April 2015 by RBI ('final PSL guidelines'). The following table (see pg 66) provides the changing scenario of PSL norms for foreign banks in India over the recent past.

Recommendations

EBG seeks to address the issue from three perspectives:

- In terms of the capabilities and global experience of EBG constituents in areas where we believe we add value to the Indian economy.
- Areas which we lack both global and domestic expertise which we believe we should be exempted from.
- Areas which require minor regulatory changes to increase the flow of credit to needy segments of the economy.

PSL Targets	PSL norms before July 2012	Revised PSL norms issued in July 2012 (banks with 20 or more branches)	Revised PSL norms issued in July 2012 (banks with less than 20 branches)	Revised PSL norms issued in March 2018 (banks with 20 or more branches)	Revised PSL norms issued in March 2018 (banks with less than 20 branches)
Overall PSL targets	32%	40%	32%	40%	40%
Agricultural lending	Nil	18%*	Nil	18% (8% Sub-target for small and marginal farmers)	Nil
Micro and small enterprises (MSE)	10%	Nil	Nil	7.5% sub-target for lending to micro enterprises	Nil
Export credit	12%	Nil	Nil	Nil	Nil
Weaker sections of society	Nil	10%	Nil	10%	Nil

* Within this, not more than 25 per cent should relate to indirect lending

EBG makes the following recommendations:

i. EBG recognizes the need for the approach adopted by the RBI and agrees that banks present in India should all in one way or another participate in reaching RBI's objectives. However, different banks have different expertise and capabilities. Accordingly, while all banks should be required to fulfil PSL targets, EBG recommends that the choice of achieving priority sector should be left to the banks discretion, with such discretion being exercised within a wider range of RBI approved PSL target segments.

ii. **Widen the definition of priority sector eligible categories**

The Government of India's de-recognition of exports as PSL eligible has limited avenues for foreign banks to fulfil their obligations.

EBG respectfully requests to review the current imperative priorities of the economy against the extant priority sector guidelines. EBG recommends that the components of priority sector for the purpose of achieving PSL targets should be widened to include:

a. **Infrastructure/renewable sector lending**

As per the PSL guidelines, bank loans up to a limit of ₹15 crore (€1.91 million) to borrowers for purposes like solar-based power generators, biomass-based power generators, wind mills, micro-hydel plants and for non-conventional energy-based public utilities, viz., street lighting systems, and remote village electrification are considered as PSL. Given the importance of the renewable energy sector and the fact that it is not viable to run a project in this sector with ₹15 crore (€1.91 million), EBG recommends an increase in the limits from ₹15 crore (€1.91 million) to ₹150 crore (€19.11 million).

b. The scope of PSL activities should be expanded to cover higher exposure to sectors such as service, warehousing, energy, and higher education which are already existing PSL areas.

c. Indirect lending to the agricultural sector, MSE advances, lending to weaker sections of the society without any specific sub-targets (for foreign banks with 20+ branches).

d. Lending to non-banking financial companies (NBFCs) and other eligible institutions for onward lending to priority sectors.

iii. The framework for *priority sector lending certificates (PSLCs) be widened to include RBI regulated NBFCs and micro finance institutions*. These would lead to a deepening of the marketplace and true price discovery.

iv. **A new PSLC category**

PSLC exports should be introduced to assist smaller banks with less than 20 branches meet the 40 per cent criteria. This allows larger banks to continue to originate export credit despite the reduced emphasis and allows foreign banks with less than 20 branches access to a market trading platform for meeting their obligations under 'exports'.

v. **Sub-target in small and marginal farmers lending targets**

A sub-target of 8 per cent of adjusted net bank credit (ANBC) for lending to small and marginal formers has been imposed for foreign banks with more than 20 branches. Foreign banks, including those with 20 or more branches, should be exempt from this sub-target of lending to small and marginal farmers. Agriculture is a new target segment and given the lack of expertise, geographic reach and credit experience, it has been extremely difficult for foreign banks to direct 18 per cent of their entire lending to this sector. The numbers sought to be achieved over the next two to four years constitute an inherent systemic risk. Foreign banks have no experience either in India or globally in lending directly to small and marginal farmers. We recommend that foreign banks including those with 20 or more branches be exempted from this mandatory lending to small and marginal farmers.

vi. **Targets for micro, small, and medium enterprises (MSMEs)**

a. MSMEs typically operate in industrial clusters. Such clusters are usually at non metro centres. Accessing these centres is difficult for foreign banks. Hence, we recommend the sub-target for lending to micro enterprises should not be imposed on foreign banks, including foreign banks with 20 plus branches.

b. The service sector toady is the largest contributor to the gross domestic product (GDP). With increasing urbanization this will only increase. Whilst rebalancing the economy towards manufacturing is an important goal, continuing growth of the services sector is equally critical. Hence the cap on credit limits to services sector of ₹10 crore (€1.27 million) should be removed.

vii. **Market structures: on-lending, securitization, and assignments**

Over a period of time, RBI has deemed on-lending to NBFCs involved in lending to the priority sector segments as being ineligible for PSL purposes. EBG believes that reintroduction of credit enhancement in assignment transactions can significantly boost flow of credit. A control mechanism to check PSL contribution and know your customer (KYC) policy adherence could be defined for this purpose. Separately, it is EBG's view that the interest rate cap should be delinked from the base rate of the investing/ purchasing bank to provide a level playing field for all banks. It is EBG's recommendation that the interest rate cap regulation should be withdrawn and free market risk-based pricing should be permitted.

viii. Based on the data published by RBI[1] overall weaker section achievement at banking system level has never crossed 10 per cent since 1991. Data for March 2015 indicates that only public sector unit (PSU) banks achieve their weaker

section targets (marginally above the target of 10 per cent). Private sector banks, which also use business correspondents extensively, have averaged at around 6 per cent on weaker section achievement. Average achievement for foreign banks with 20 or more branches for weaker sections is at 0.9 per cent of ANBC. Further, most of weaker section asset book at the banking industry level is done by lending to small and marginal farmers which requires deep rural penetration and such network is not accessible to foreign banks.

Hence to achieve weaker section numbers, foreign banks with 20 or more branches are required to buy small and marginal farmer PSLCs, resulting in indirect loading of small and marginal farmer targets as well. Since the banking system at an aggregate level does not have surplus in weaker section category, the availability of these PSLCs is currently less (with high cost) and there is no certainty of their continued availability.

In view of the above factors, achieving weaker section through self-origination or PSLCs is unlikely to be sustainable for foreign banks having 20 or more branches.

ix. **Quality activities undertaken by banks for CSR activities**

Specific to certain areas such as financial literacy and promoting financial inclusion as PSL, or alternately permit a set-off against the ANBC numbers which define the overall OSL targets.

x. Adapt the Inter-Bank Participation Certificate (IBPC) Scheme to *permit full participation benefits* for both originator and investor.

xi. Foreign banks to be allowed to maintain agricultural PSL numbers on year-end basis as against the quarterly average requirement.

xii. Banks to be allowed to generate PSL assets through fintech platforms; banks to be lending to fintechs who will be sourcing PSL eligible loans (MSME, agriculture) through their platforms, this category will be similar to direct lending to microfinance institutions.

3.1.2 Expiry of guarantees

Background

Section 28 of the Indian Contract Act, 1872 was amended in January 2013. Pursuant to this, a minimum claim period of one year is required to be made available to the beneficiary of a guarantee issued by a bank even if this is not required by the underlying contract between the beneficiary and applicant.

Issues

In the absence of a claim period, a strict legal interpretation suggests that the law of limitation would apply and the issuing bank could remain liable for a period of three years after expiry for private beneficiaries and for 30 years for government beneficiaries. If this is reflected in risk measurement, the tenors, risk weighted assets and capital requirements will all increase resulting in additional costs to the applicant and the bank.

This amendment appears to go beyond the commercial intent and is open to multiple interpretations. Therefore, it may be useful if a clarification is issued on the interpretation of the recent amendment.

3.1.3 International investment treaties

Background

International investment agreements (IIAs) ensure investors' compliance with internationally agreed standards of protection. From the point of view of the countries of origin of the investors such IIAs are important cornerstones to support the internationalization of their industries. Therefore, EBG member countries have linked certain support schemes linked to foreign direct investments to the existence of such IIAs. Likewise, the country that receives these investments generally benefits economically, socially as well as politically from such foreign investments making them aspirational for all signatories of IIAs.

Issues

Bilateral IIAs between India and certain EBG member states have either ended or are about to end in due course. With this EBG foresees a hampering of the investment appetite of European investors into India. Likewise, certain promotional schemes for foreign direct investors linked to the existence of IIAs will not be available to investors, making investments into India less attractive.

Recommendation

To ensure that banks can continue supporting financing foreign direct investments into India, EBG recommends extension of the IIAs.

3.1.4 Inconsistency in capital requirements

Background

The Basel Committee on Banking Supervision (BCBS) issued a comprehensive reform package entitled 'Basel III: A global regulatory framework for more resilient banks and banking systems' in December 2010, with the objective to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spill-over from the financial sector to the real economy. BCBS specifies the minimum capital requirements and its components which includes Common Equity Tier (CET), Capital Conservation Buffer, and Total Capital Ratio.

Issue

According to BCBS, the minimum CET 1 to risk weighted assets ratio required is 4.5 per cent. However, according to RBI, minimum CET 1 required is 5.5 per cent. While all the other capital requirements (Capital Conservation Buffer, Countercyclical Buffer, GSIB's additional capital) are synchronized with BCBS Norms, minimum CET alone has been a divergent. As RBI strives to be consistent with global practices, this divergence has not been capital efficient. For an exposure with similar characteristics, the capital set aside in India will be higher compared to other Basel compliant countries.

Recommendation

EBG recommends that the RBI requirement regarding CET 1 should be fully aligned with the Basel III capital requirement. Accordingly, the banks operating in India, including foreign banks should be required to meet the CET 1 at 4.5 per cent only. This will help all the banks to operate on par with their global peers.

3.1.5 Large Exposures Framework

Background

In order to align the exposure norms for Indian banks with the BCBS standards, RBI has laid down the guidelines on Large Exposures Framework (LEF) on 1 December 2016. The guidelines are aimed at significant tightening of norms pertaining to concentration risks of banks, especially in relation to large borrowers. The guidelines were set to come into effect from 1 April 2019.

Issues

The existing regulatory methodology prescribed under LEF for computing exposures [Exposure at Default (EAD)] on the off-balance sheet market traded exposures using the Current Exposure Method (CEM) as prescribed by the RBI has widely acknowledged shortcomings.

CEM does not take into account the benefits of portfolio diversification, hedging and other risk mitigation techniques. Using CEM alongside an advanced framework such as LEF may cause unintended consequences for banks resulting in banks having to limit their exposures because of overestimation of counterparty risk using the existing methodology as opposed to the intent of the LEF guidelines.

The single/group counterparty limits as per the LEF may therefore be too restrictive, as far as the off-balance sheet market traded exposures are concerned and are not conducive to the overall development of a liquid over-the-counter (OTC) derivatives market with adequate depth. This in turn will hinder banks' ability to manage/hedge their risks efficiently.

Recommendation

EBG recommends the following:

i. To postpone the implementation of LEF with regard to inter-bank exposures until the regulations on LEF and EAD computation are synchronized.

ii. To set higher limits for inter-bank exposures. Given the nature and size of interbank transactions, setting higher limits will be more practical to implement.

iii. To allow banks to exclude the inter-bank OTC derivatives exposures from the scope of these guidelines to enable market making entities to provide adequate liquidity and depth for such instruments and thereby managing their risks effectively. Liquid market benchmarks help in more transparent and efficient pricing and valuations of these instruments. In case the inter-bank OTC derivative exposures are to be included then we submit that exposure for banks should be restricted to net MTM (mark to market) with no element of Potential Future Exposure.

iv. Further, in case the exposure had to be worked with a Gross Positive MTM then the Gross CSA (Credit Support Annex) placed by the bank should be permissible as a deduction. CSA money placed by a bank should not be considered as exposure on the bank and the same is against the MTM due to the bank.

v. In the interim, allow banks to use netting for arriving at the counterparty exposure.

3.1.6 Data localization and cross-border data transfers

Background

In recent years, there has been a considerable growth in the payments ecosystem in the country. However, all payments system providers do not store the payments data in India. Therefore, RBI issued a circular no. RBI/2017-18/153 on 6 April 2018 requiring all the payment system providers to store the entire data relating to payments systems operated by them only in India. As per the said circular, this data should include the end to end transaction details/information collected/carried/processes as part of the message/payment instruction. Further, for the foreign leg of the transaction, the data, if any, can be stored in the foreign country, if required. Therefore, all foreign banks including European banks which provide payment services in India will be required to comply with the data storage requirements specified by the RBI. Further, those European banks which use the services of third parties for payment services like credit cards, internet banking, mobile payments, payment gateways, etc., will need to ensure that the third party service providers comply with the abovementioned RBI guidelines.

In addition, sections 40 and 41 of the Personal Data Protection Bill, 2018 (PDPB) outline restrictions and requirements around the location and transfer of personal and sensitive personal data.

On a perusal of the PDPB as well as the RBI circular on local storage of payments systems data, it follows that copies or originals of certain categories of data, as applicable, are required to be maintained by European banks only on servers physically located within India.

Issues

Data localization may result in significant costs and unintended consequences, like loss of time and resources in setting up new data centres, modifying the network architecture or using local cloud vendors. From the perspective that India is home to various outsourcing offices, it may not be logistically and legally possible for overseas entities to locate data within India due to logistic and legal impediments.

Data localization undermines the effectiveness of a financial institution's international risk monitoring programme. For example, compliance with anti-money laundering laws and sanctions requires a comprehensive and holistic approach, whereby quantification of risk encompasses a customer's entire relationship across a financial institution in a location agnostic manner. Aggregation of data on a client's activity across borders allows a holistic assessment of the said client's

global activity for better informed decision-making whereas creation of national silos of information prevents the seamlessness of such programmes, while, at the same time, negatively impacting seamlessness of user experience.

Recommendation

EBG recommends that PDPB should permit transfers of all kinds of data without the proposed limitations on categories of sensitive or critical personal data. The movement and storage of data across national borders is essential to providing cross-jurisdictional and core products and services to customers. It is also fundamental to manage risks across affiliates and borders, and comply with financial regulatory requirements across jurisdictions (including those related to KYC and anti-money laundering laws).

3.2 KEY TAX ISSUES

3.2.1 Tax issues relating to Foreign Portfolio Investors

Background

Foreign banks operating in India facilitate foreign investment by Foreign Portfolio Investors (FPIs) by acting as custodians (cash and securities) for the FPIs who invest into India. Prior to introduction of the Securities and Exchange Board of India's (SEBI's) FPI Regulations, 2014, the role of the custodian entailed provision of custodial services (such as maintaining accounts of securities, undertaking activities as a domestic depository, collecting the benefits or rights accruing to the client in respect of securities, keeping the client informed of the actions taken, maintaining and reconciling records, etc.). With the introduction of FPI Regulations, custodians are now notified Designated Depository Participants (DDP) with even more responsibilities (such as granting registration to FPIs surrender of registration, monitoring/clubbing of investment limits and other related responsibilities).

While on one hand, the local custodians are treated as extensions of SEBI and expected to administer the registration process for FPIs, on the other hand, their operations as a custodian expose them to tax challenges.

Given that the FPIs are taxpayers in India directly, there is complete KYC as per Indian regulations to be applied to such FPIs as per Indian regulations to be applied to such FPIs and the larger role of a DDP, it is important to release the custodians of the tax risks associated with discharging the custody function. This is also important given that the income that a DDP earns form activity of an FPI is very small relative to the potential tax exposure of the FPI that can devolve onto the DDP.

Issues

There could be several material tax considerations for foreign banks and on Indian subsidiaries of international broking businesses which transact extensively with FPIs:

i. There is an exposure under the Indian tax law that such entities could be held to be representative assesses of their non-resident clients [which will include their Foreign Institutional Investor (FII) clients]. As representative assessees, such entities could be held to be responsible for discharging any shortfall in tax payments due by their clients. Such entities are merely service providers and the fees that they may earn from providing services to their non-resident clients have no linkage with the possible tax exposure of their clients. Hence, if these entities are required to discharge the tax liability of their clients, it could result in a substantial tax burden;

ii. Further, an amendment to the Indian tax laws was made in FY2012–13 by virtue of which, the period for issue of notices for reopening tax scrutiny cases issued to representative assesses of non-resident taxpayers has been extended from two years to six years. This further enhances the exposure for such entities in relation to matters which the entities do not regard as justly being their responsibility.

Recommendation

Banking and broking services providers should not be held to be responsible for the tax liability of their non-resident clients. Such entities have no ability to determine the possible tax liability of their clients, and as such are in no position to exercise any diligence in this regard beyond placing reliance on undertakings provided by their clients and/or advice received from tax consultants. Under the circumstances, it is EBG's recommendation that a specific clarification should be provided so that banking and broking service providers are not held as representative assessees of their clients.

EBG recommends that a separate carve out be made for DDPs in respect of their FPIs from treatment as 'agents/representative assessees'.

3.2.2 Availability of concessional tax rate of 5 per cent on interest income arising to Foreign Portfolio Investment

Background

The Foreign Portfolio Investment route has become a popular mechanism for undertaking foreign investment as it allows foreign entities to acquire listed securities on Indian stock exchange and to subscribe to non-convertible debentures. List of instruments in which FPI can invest is provided in the Para 21(1) of the SEBI (FPI) Regulations, 2014.

To achieve economic development and smooth flow of funds into the economy, the Indian government has amended FPI regulation to expand the scope of permissible instruments which is illustrated as follows:

- To increase investments in the securitization sector and ease strain on the stressed banking system, FPIs are allowed to invest in security receipts issued by Asset Reconstruction Company. FPI are also permitted to invest in the Pass Through Securities issued by special purpose vehicle (SPVs).
- With a view to develop bond market, investment in unlisted debt instruments of Indian companies allowed for FPI apart from investment in debt securities of companies engaged in infrastructure sector.
- Moreover, to accelerate the demand for shorter maturity papers that matures within the span of twelve months' investment in treasury bills, commercial papers and certificate of deposits have been permitted for investment by FPI.

With a view to encourage greater offshore investment in the debt market by FPIs, concessional tax regime provided in the Section 115AD of Income Tax Act and consequential lower rate of tax deducted at source (TDS) @ 5 per cent as per section 194 LD of Income Tax Act on the interest earning from rupee denominated bond (RDB) and government securities (G-Sec) have been implemented from June 2013 onward.

The above mentioned concessional tax regime on selected investment instruments is favourable compare to most of tax treaty signed by India.

Issue

Non-commensurate expansion of tax friendly measures which is explained as follows:

1. On one hand, the Government of India is offering various investment avenues by allowing FPI investment in various instrument whereas on the other hand, concessional tax regime related to interest income, implemented from June 2013 onward, has not ballooned in the same proportions.
2. Interest earned on securities is taxable @ 20 per cent except interest on RDB and G-Sec and therefore concessional TDS rate @ 5 per cent is not available to various other debt instrument wherein FPI invests.
3. Moreover, as per Notification No. 56/2013 dated 29 July 2013 issued by the Central Board of Direct Taxes (CBDT) in this regard, the concessional tax rate is available only if the rate of interest on RDB is within 500 basis points of applicable base rate of

State Bank of India (SBI). Considering this condition, it is uncertain if the concessional tax rate of 5 per cent would be applicable for debentures, discounted securities, etc.

4. The higher rate of TDS of 20 per cent on interest income on various debt instruments like pass through certificate (PTC), unlisted non-convertible debenture, securities debt instrument, discounted instruments like treasury bill, commercial papers, certificate of deposit acts as a deterrent for FPIs as against the concessional TDS rate on selected instruments.

Recommendation

In order to remove above anomaly in the development in FPI regulation and corresponding applicable tax law, EBG recommends that the scope of concessional taxability of interest income and corresponding TDS of 5 per cent should be expanded to cover all interest earnings by FPI on security receipts, Pass Through Certificate and other permissible debt securities instruments and discounted instruments like treasury bill, commercial papers, and certificate of deposit.

3.2.3 Interest paid by Indian branch of a foreign bank to its head office/overseas group offices

Background

The Finance Act, 2015 amended the provisions of the Indian tax law to tax the interest that is paid by the Indian branch of a foreign bank to its head office/overseas group office, by treating the Indian bank branch (on the one hand) and its head office/overseas group office (on the other hand) as separate and independent entities.

Issue

If the interest payments by an Indian branch of a foreign bank to its head office/overseas branch offices are taxed, it is likely to have an adverse impact on foreign banks in India. Foreign banks may end up paying tax in India at a rate as high as 40 per cent (plus surcharge and education cess) on the interest that they earn form their Indian branch office, unless they try to seek relief under their respective tax treaties.

Recommendation

It is recommended that this amendment is withdrawn with retrospective effect.

3.2.4 Tax regime for India-based fund managers

Background

In certain cases, the presence of fund managers in India may be considered as constituting a permanent establishment (PE) for the offshore funds managed by such fund managers. This may create an additional exposure for the offshore fund and may increase its tax liability in India. Thus, to encourage fund managers to shift their base to India and to alleviate their concerns regarding additional tax consequences as result of this shift, the Finance Act, 2015 had clarified that management of an eligible offshore fund by an eligible fund manager in India shall not create a business connection for the eligible offshore fund in India, subject to certain conditions. Though some of the conditions were relaxed by the Finance Act, 2016, this was not sufficient impetus for the fund managers to move their base to India. Budget 2017 also addresses only one of the many concerns of the fund managers.

Issue

Of the conditions notified in order to be outside the purview of creating a business connection, several are impractical and onerous to comply with. For instance, 5 per cent limit on direct or indirect participation of non-residents in the corpus of the fund, requirement of members of the fund not being connected persons, limit on direct or indirect participation interest of the members in the fund, etc.

Recommendation

It is recommended that the conditions notified, in order to be outside the scope of creating

a business connection should be simplified. Further, the India-based fund managers should not be viewed as having a business connection or constituting a PE of the offshore fund in India as long as the offshore fund conducts all its activities in accordance with the applicable regulations of the home country and if the offshore fund adequately compensates the India-based fund manager on an arm's length basis.

3.2.5 Tax treatment of interest income earned by NBFCs on non-performing assets

Background

As per RBI directions, banks as well as NBFCs are required to recognize income from non-performing assets (NPAs) when such incomes are actually realised. Accordingly, under the Indian tax law, various specified banks, financial institutions and state financial corporations are permitted to offer to tax the interest income on NPAs on cash basis rather than accrual basis.

Issue

In accordance with the directions issued by RBI, NBFCs also follow prudential norms and like the aforementioned institutions, NBFCs are mandatorily required to defer income recognition in respect of their NPAs. However, under the Indian tax law, there is no provision which permits NBFCs to offer to tax the income from NPAs on cash basis. Therefore, even NBFCs registered with RBI should be allowed to recognize interest income on NPAs on cash basis, at par with banks.

Recommendation

The Indian government should allow NBFCs to offer to tax the interest income that they earn on NPAs on a cash basis rather than on accrual basis.

3.2.6 Deduction for provision for NPAs in the books of foreign banks

Background

The Indian tax law provides for deduction of provision for bad and doubtful debts of an amount not exceeding 8.5 per cent of total income computed before claiming deduction under Chapter VIA of the Income Tax Act, 1961 (IT Act) in the case of Indian banks.

Issue

In case of foreign banks, the deduction for provision for bad and doubtful debts is available only up to 5 per cent of the total income. The argument put forth for differential rates is that Indian banks are subject to PSL norms (such as lending to the agriculture and education sectors). However, it may be pointed out that foreign banks having 20 or more branches in India are subject to similar PSL norms as Indian banks. Further, foreign banks are already subject to a higher tax rate. Therefore, this is a case of discrimination against foreign banks.

Recommendation

It is suggested that foreign banks be brought at par with Indian banks and allowed a deduction of provision for NPAs at 8.5 per cent instead of the existing 5 per cent.

3.2.7 Non-applicability of withholding tax provisions on interest payments made to foreign banks

Background

Currently, a person responsible for making interest payments to an Indian bank is not required to withhold tax on such payments.

Issue

No such exemption is available with respect to interest payments made to foreign banks. Therefore, foreign banks are required to apply to the revenue authorities for a NIL withholding tax certificate on an annual basis, which increases their administrative burden.

Recommendation

It is recommended that an exemption from tax withholding be provided on interest payments made to foreign banks in order to provide a level playing field.

3.2.8 Tax issues in connection with conversion of Indian branches of foreign banks into wholly owned subsidiaries

Background

Pursuant to the RBI providing authorization for conversion of Indian branches of foreign banks into wholly owned subsidiaries (WOS), the Finance Act, 2012 has introduced an exemption from tax on capital gains arising on the conversion of a branch of a foreign bank into a WOS, provided the conversion is in accordance with the scheme framed by RBI in this regard. Further, the provisions relating to treatment of unabsorbed depreciation, set-off or carry forward of tax losses, tax credits in respect of tax paid, deemed income relating to certain companies and the computation of income in the name of the foreign company and the Indian WOS shall apply with such exceptions, modifications and adaptations as may be specified in the government's notification.

In this regard, a draft notification was issued in November 2017 for public comments, setting out the conditions subject to which the conversion of branch of a foreign bank into WOS would be exempt from tax. Subsequently, on 6 December 2018, a final notification was issued after some modifications to the draft notification. This notification also provides much needed clarity on issues connected with conversion such as eligibility for set off of carry forward losses, treatment of unabsorbed depreciation, tax credits of the branch, etc.

Issues

There are several issues linked with the conversion of a branch into a WOS which are still required to be clarified such as levy of GST on conversion of branch to a WOS, deduction for various conversion related expenditure, non-applicability of minimum alternate tax (MAT) and transfer pricing related provisions, to extend the tax neutrality to different modes of conversion, clarification on dual residency, etc.

Recommendation

EBG recommends the following:

i. Specific clarification to be incorporated in the notification or Act that the conditions specified in the notification to be made applicable 'only at the time of conversion' and there will not be any claw back or withdrawal of the capital gains exemption under section 115JG of the IT Act, at a later stage.

   Notwithstanding the above, in case conditions relating to claw back of the exemption are to be applied post conversion, then it should be clarified that the conditions will not be applicable to the following events:

   - Dilution (mandatory or otherwise) pursuant to the RBI guidelines/ approval.
   - Fresh issuance of shares by the subsidiary.
   - Mandatory restructuring (due to home country regulations).
   - Internal re-organization.

ii. Appropriate amendment in the Income Tax Act is required to extend the tax neutrality to conversion through any mode such as amalgamation, slump sale, demerger, etc., or any other mode of conversion as may be approved by RBI.

iii. Specific clarification to be incorporated that MAT under section 115JB will not be applicable in respect of gains, if any, in the books of account of branch on account of such conversion. Suitable amendments are required to be made in sections 115JB and 115JG.

iv. Specific deduction for all conversion related expenditures that may be incurred by the foreign bank under sections 35A, 35AB and 35D of the IT Act.

v. Specific clarification that deduction of expenses under sections 40(a)(i), 40(a)(ia) and 43B of the IT Act which are incurred by the branch but taxes on which are paid by the subsidiary or the expenses are paid by

the subsidiary, as the case may be, should be allowed to the subsidiary.

vi. Specific clarification to be incorporated that the transfer pricing provisions under section 92 of the IT Act are not applicable on such conversion and that an advance price agreement (APA) entered into by the branch should continue to be applicable to the subsidiary for the balance period of APA.

vii. Specific clarification is required for giving eligibility for exemptions/relief on conversion in case of integration of group entities in India and that the shareholder of the subsidiary company can be the parent company or the holding company of the parent entity or any other entity, under the scheme of conversion approved by RBI.

viii. Specific clarification is required to provide that the conversion will be governed by the conditions under the final notification and excluded from purview of definition of amalgamation under section 2(1B). Appropriate amendments will be required to be made in the sections 2(1B) and 115JG.

ix. In anticipation of the dual licensing, i.e. presence through both branch and subsidiary mode, a specific clarification is required that the tax neutrality and relief for conversion would be applicable to dual presence structures under a scheme approved by RBI.

x. While carry forward of provisions for bad and doubtful debts has been considered in the final notification, a specific provision is required so that benefit of write-off by subsidiary out of provisions created by the branch will be available to the subsidiary in accordance with the provisions of section 36(1)(vii).

xi. Specific clarification is required that the pre-condition under section 36(2) that 'the debt should represent money lent in the ordinary course of business by the taxpayer for purposes of claim of write-off' is not applicable to subsidiary created on conversion with respect to provisions created by the branch and subsequently written off by the subsidiary.

xii. Specific clarification is required to exclude reference to 'direct or indirect benefit or consideration' as it has varied interpretation and risk of potential litigation.

xiii. Specific clarification is required to exclude the conversion from purview of obtaining No Objection Certificate (NOC) under section 281 for transfer of assets from branch to subsidiary on conversion.

xiv. Specific clarification to be provided with respect to withholding tax exemption under section 195(3) to be extended for a limited period of a year post conversion to provide a reasonable timeframe to lay down appropriate systems and processes in place.

xv. Appropriate modifications be carried out in the tax systems to ensure smooth rollover from branch to subsidiary and timely tax compliances with increased focus on technology driven tax administration.

xvi. Certainty that GST will not be levied on the conversion of an Indian branch of a foreign bank to a WOS.

3.2.9 Thin capitalization norms

Background

In consonance with the OECD Base Erosion and Profit Shifting (BEPS) recommendations and in order to prevent multinational corporations (MNCs) from shifting profits to offshore group entities through excessive interest payments, thin capitalization provisions were introduced in the domestic tax law with effect from 1 April 2017. The said provisions are applicable to interest expenditure incurred in excess of INR 1 crore incurred by an Indian company or the Indian PE of a foreign company, on funds borrowed from a non-resident associated enterprise (AE) or on funds borrowed from third parties and guaranteed by an AE. Accordingly, interest on such borrowings, in excess of 30 per cent of earnings before interest, taxes,

depreciation, and amortization (EBITDA) would not be deductible in computing the taxable profits of the borrower.

In respect of funds borrowed from AEs, it is specifically stated that the restriction on deductibility of interest applies only in case of non-resident AEs. However, while referring to the funds borrowed from third parties and guaranteed by an AE, the law does not make any reference to the residential status either of the third parties or of the AE. Therefore, one may interpret that in case of interest on debt guaranteed by an AE, the restrictions on deduction for interest would apply even if the funds are borrowed from a resident.

As per the Explanatory Memorandum to the Finance Bill, 2017 wherein the thin capitalization provisions were introduced, the basic intention of bringing in these provisions was to prevent multinational enterprises (MNEs) from shifting their profits overseas through excessive interest payments, and thus to protect India's tax base.

In consonance with the aforesaid intention, these provisions are applicable only to funds borrowed from overseas and no restrictions should be imposed on funds borrowed from residents, since there is no erosion of the tax base in such cases.

However, the literal interpretation of the existing provisions of the law leads to an ambiguous result, whereby the funds borrowed from the Indian branches of foreign banks and guaranteed by an AE will be covered under the ambit of thin capitalization norms, since the Indian branches of foreign banks are non-resident in India. However, funds borrowed from resident banks and guaranteed by an AE will not be covered in this section. The said interpretation puts the Indian branches of foreign banks in an adverse position. Accordingly, in order to bring parity amongst Indian banks and the Indian branches of foreign banks and in line with the BEPS recommendations, these provisions should also not be made applicable to the funds borrowed from Indian branches of foreign banks (subjected to maximum tax rate in India) since there is no erosion of India's tax base in such cases.

Recommendation

In view of the above, EBG recommends that an amendment may be made in the law to exclude from the purview of thin capitalization provisions, debt guaranteed by AEs, which is provided by non-resident lenders having a PE in India. Alternatively, a new definition of lenders should be introduced to include only non-resident lenders (not having a PE in India through which the loan is given).

4. CONCLUSION

EBG believes that the Indian economy is on the growth trajectory in the years to come. Banks and financial institutions will certainly have a key role in facilitating growth of the economy. EBG looks forward to contributing actively in this process and is of the view that its recommendations as set out above, if implemented, will act as a catalyst in deepening the range of financial products and services available to customers in India, improving access to cost effective financial services thereby enhancing the competitiveness of Indian businesses, and in furthering the objectives of the government and the RBI of extending the reach of financial services across the economy.

Endnotes

1 Report of the Internal Working Group to Revisit the Existing Priority Sector Lending Guidelines, 2 March 2015; and Database on Indian Economy – https://dbie.rbi.org.in

Notes

CHEMICALS & PETROCHEMICALS

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EXECUTIVE SUMMARY

The global chemicals market is expected to grow at 5.5 per cent per annum to reach a market size of US$5.7 trillion (€5.05 trillion) by 2020. The global chemicals market is expected to keep growing as a result of increased urbanization and growing markets in developing countries such as India, Turkey, and Thailand. Countries with a mature market such as China, Australia, and Germany are also expected to see accelerated growth as they switch to higher value specialty and pharmaceutical chemicals.

The Indian chemicals market accounts for nearly 3 per cent of the global chemicals industry and has potential to reach US$226 million (€200.44 million) by FY 2020 growing at a compound annual growth rate (CAGR) of about 9 per cent and in an optimistic scenario, US$248 billion (€219.95 billion) at a CAGR of 11 per cent. The industry contributes about 2.11 per cent of India's gross domestic product (GDP). Some of the key growth drivers for Indian chemical industry are large population, huge domestic dependence on agriculture and strong exports, cost competitive manufacturing.

Government initiatives such as Make in India is encouraging companies to manufacture their products in India. This initiative reflects the attitudinal shift in India towards investors from a permit issuing authority to true business partner. The Make in India initiative is expected to boost several end user industries and thereby increasing domestic demand for high quality chemical products. The government has taken certain initiatives to encourage Indian chemicals manufacturing industry such as rationalisation of duty structure for feedstock, improvement of infrastructure, and focus on skill development. The government is also contemplating setting up of 'Reverse Special Economic Zones (SEZs)' in Mozambique, Iran, and Myanmar in order to facilitate import of cheap feedstock available in overseas markets.

The Indian chemicals industry should focus more on sustainability in chemical conversions. Efficient process engineering and latest developments in catalysis to be adopted in chemical plants through support from global companies. The government should focus on promoting compostable plastics which undergo degradation by biological processes and do not leave visible toxic residues.

The chemicals and petrochemicals industry continues to face conventional challenges such as inadequate availability of intermediates and feedstock, location and infrastructure, taxes and duties, uncompetitive domestic demand, R&D, fragmented capacities, skill development, and health and safety norms. The government's focus on the above key priority areas can pave way for development and success of chemicals and petrochemicals industry. This would also serve as an ideal Make in India opportunity and create considerable employment opportunities, direct and indirect, for our growing workforce. The chemicals and petrochemicals sector needs to enhance its public image by creating positive perception through public awareness. Support from the government is needed for this by showcasing the importance of the industry at various public forums.

A collaborative effort by the government and stakeholders to expand capacities and reduce dependency on imports is required to unlock the potential of the Indian chemicals industry.

1. INTRODUCTION

1.1 Market Description[1]

1.1.1 The Indian chemicals and petrochemicals industry is an integral constituent of India's commercial landscape providing key raw materials and intermediates, which are utilized by a host of downstream manufacturing companies across sectors. India is the seventh largest producer of chemicals worldwide and the third largest producer in Asia (after China and Japan) in terms of output.[2] The industry contributes about 2.11 per cent of India's gross domestic product (GDP).[3]

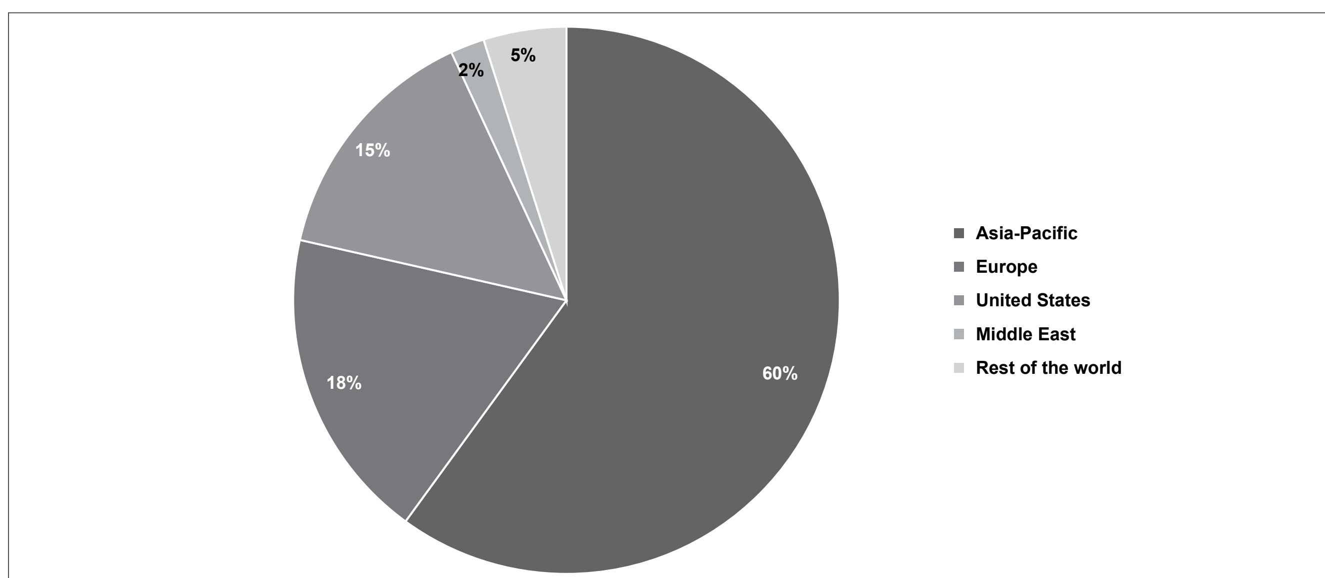
1.1.2 The global chemicals market was valued at US$4.3 trillion (€3.81 trillion) in 2015 and is expected to grow at 5.5 per cent per annum till 2020 to reach a market size of US$5.7 trillion (€5.05 trillion).[4] The Indian chemicals market accounts for nearly 3 per cent of the global chemicals industry, and is estimated at US$147 billion (€130.37 billion) in FY15[4] and US$139 billion (€123.28 billion) in FY16[3]. The industry has the potential to reach US$226 billion (€200.44 billion) by FY20 growing at a compound annual growth rate (CAGR) of about 9 per cent and in an optimistic scenario, US$248 billion (€219.95 billion) at a CAGR of 11 per cent.[4]

1.1.3 Commodity chemicals is the largest segment of the global chemicals market, accounting for 51.3 per cent of the market's total value. The commodity chemicals segment is expected to be the most lucrative in 2017, with total revenues of US$ 2.21 trillion (€1.96 trillion), equivalent to 51.3 per cent of the market's overall value. The speciality chemicals segment will contribute revenues of US$871.8 billion ($773.21 billion) in 2017, equating to 20.2 per cent of the market's aggregate value.[5]

1.1.4 The global chemicals market is expected to keep growing as a result of increased urbanization and growing markets in developing countries such as India, Turkey, and Thailand. Asia's large and growing middle-class demands better crop yields, more consumer goods and electronics, and improved water treatment, all of which involve the design of advanced, cost-efficient chemical systems. Countries with a mature market such as China, Australia, and Germany are also expected to see accelerated growth as they switch to higher value speciality and pharmaceutical chemicals.

1.1.5 The following chart shows geographical segmentation of the global chemicals market for 2017[6]:

Figure 1: Global chemicals market geography segmentation (2017)



1.1.6 The industry produces a wide range of chemical products. The key segments of the Indian chemicals and petrochemicals industry can be grouped into the following:

Fine and speciality chemicals: This downstream segment comprises technology intensive chemical plants that use basic chemicals as feedstock and are characterized by high value and low volume products. These operations require highly trained skill sets and heavy orientation to research and development (R&D) targeting specific consumer end user industries.

Bulk chemicals: This is the conventional, mature, and commoditized segment with differentiation on the basis of economies of scale, access to cheap feedstock volumes, and to markets. Such chemicals are manufactured on a large scale and act as inputs to the downstream industries. Bulk chemicals include basic organic and inorganic chemicals.

Petrochemicals: These are chemicals derived from petroleum and natural gas. Petrochemicals play a vital role in the economy by facilitating growth of various end user sectors including agriculture, infrastructure, healthcare, textiles, and consumer durables. The major segments of petrochemicals are basic petrochemicals and end-product petrochemicals.

Agrochemicals: These are chemicals meant to protect agricultural crops against insects and pests and include insecticides, fungicides, and herbicides. India is the fourth largest producer of agrochemicals after the United States, Japan, and China.[7]

In terms of market share, bulk chemicals form the largest segment followed by petrochemicals and speciality chemicals. Detailed breakdown of Indian chemical sales during FY15 are presented in Figure 2 (see page 83).

Chemical intermediates – which is between bulk and speciality chemicals – is an important sub-segment in the chemical industry and hence need to be separately mentioned.

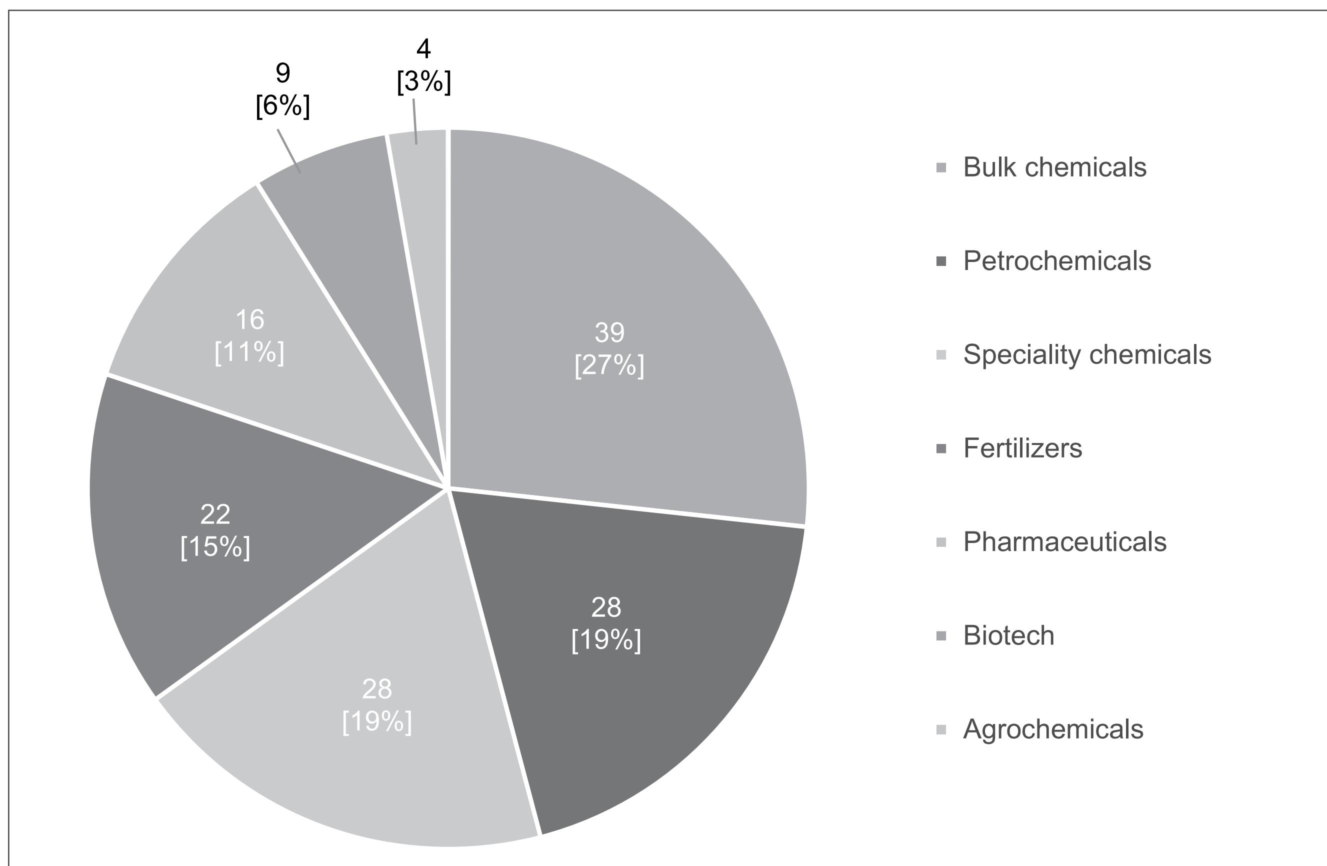
1.1.7 *Growth Drivers*[8]*:* Factors which drive the Indian chemical industry are:

- A large population, huge domestic market dependence on agriculture, and strong exports are the key growth drivers for the industry.
- A global shift towards Asia as the world's chemicals manufacturing hub.
- India's per capita consumption of chemicals in India is lower as compared to western countries, which provides immense scope and opportunities for new investments.
- Rise in GDP and purchasing power generates huge growth potential for the domestic market.
- A focus on new segments such as speciality and knowledge chemicals.
- Globally cost competitive manufacturing.
- Availability of skilled professionals with requisite technical knowledge including world-class engineering and strong research and development facilities.

1.1.8 *Future outlook*[9]*:* The bulk chemicals market has seen a subdued growth due to challenges in feedstock availability and is expected to grow at nearly 5 per cent per annum over the next five years. Petrochemicals market is expected to grow at a rate of around 9 per cent to reach US$44 billion (€39.02 billion) by FY20, on the back of increased polymer demand. The speciality chemicals market is expected to continue growing at around 13 per cent per annum to reach a market size of US$52 billion (€46.11 billion) by FY20. The agrochemicals market is expected to grow at 7.5 per cent per annum in next five years to reach US$6.3 billion (€5.58 billion) by FY20, the growth being primarily driven by increased planned expenditure and government focus on raising agricultural productivity.

1.1.9 *Export potential and investment regime for Indian chemical products:* The industry is well recognized globally for high quality products on a low manufacturing cost base. Globally, India ranks 14th in exports and 8th in imports of chemicals (excluding pharmaceuticals products).[10] While India remains a net importer of chemicals and petrochemicals, the share of these exports has increased to 10.6 per cent of the total national exports during FY16.[11]

Figure 2: Sector-wise breakdown of Indian chemical sales in FY15 (in $ billion)



Source: Handbook on Indian Chemical Industry – September 2016, FICCI

Further, exports during the first six months of FY17 (i.e. April to September, 2016) increased by 2.86 per cent, compared to exports during the same period in FY16.[12]

India is a predominant exporter of agrochemicals to the US, Europe, and Africa. Indian dyestuffs are also well received internationally, accounting for about 16 per cent of the world production of dyestuff and dye intermediaries, particularly reactive acid and direct dyes.[9]

The manufacture of most chemical products is de-licensed (with only certain items being covered under the compulsory licensing list because of their hazardous nature) and entrepreneurs need to submit only the Industrial Entrepreneurs Memorandum to the Department of Industrial Policy & Promotion (DIPP) to start chemical manufacturing. There are no quantitative or other restrictions on the import of chemicals except on a few chemicals which are covered under the obligations of international conventions.

1.1.11 In the chemicals and petrochemicals industry, 100 per cent foreign direct investment (FDI) is permissible under the automatic route, subject to certain exceptions. FDI in the sector witnessed inflows amounting to US$2.2 billion (€1.95 billion) during the two year period from April 2014 to March 2016, as compared to US$1.08 billion (€957.87 million) during the period April 2012 to March 2014 (an increase in FDI inflows by around 107 per cent). The sector attracted inflows amounting to US$532.48 million (€472.26 million) during April to September 2016.[9]

Increasing urbanization (at CAGR of nearly 2.1 per cent[13]), government focus on affordable housing and rising per capita disposable income (estimated at around US$1,768

[€1,568] during FY17 – an increase of 9.9 per cent from FY16[14]) is expected to fuel consumption and result in a strong growth outlook for several key end user industries such as construction, automotive, electronics, etc. This will positively impact growth in the industry, which is expected to surge at 9–11 per cent over the next five years.[15]

1.2 Recent Developments

1.2.1 Make in India initiative

Make in India is a government initiative to encourage companies to manufacture their products in India. The programme represents an attitudinal shift in how India relates to investors, not as a permit-issuing authority, but as a true business partner with a focused target across sectors. It is aimed at enhancing the Ease of Doing Business in India and is expected to attract capital and technological investment.

The Make in India initiative is expected to boost several end user industries and thereby propel domestic demand for high quality chemical products. With the Make in India programme gaining steam, investments, innovation, and infrastructure are going to be the major thrust areas for the chemicals industry. The government has taken certain initiatives to encourage Indian chemicals manufacturing industry such as rationalization of duty structure for feedstock, improvement of infrastructure, and focus on skill development. The government is also contemplating setting up of 'Reverse Special Economic Zones (RSEZs)' in Mozambique, Iran, and Myanmar in order to facilitate import of cheap feedstock available in overseas markets.[12]

India, with its skilled manpower and flourishing domestic demand, has the right ingredients to emerge as the global hub for 'zero defect, zero effect' chemical manufacturing. This would help in fulfilling the domestic demand and reduce dependence on imports of chemicals, provided the government undertakes specific tax, labour, and environmental regulatory reforms in a concerted manner to support the industry.

1.2.2 Goods and Services Tax (GST)

GST which is expected to be implemented during FY 2017–18 will change the entire indirect tax framework in the country. GST will subsume the major indirect taxes currently levied except customs duty, electricity duty, and stamp duty. It is expected that introduction of GST will result in increasing GDP of the country by around 1–2 per cent and provide a stimulus to the Indian industries. GST is likely to streamline compliances, rationalize duty structures, afford greater certainty and transparency in taxes, augment credit base, and remove existing inefficiencies.

The amendment to the Constitution in September 2016 has enabled GST to be levied on all supplies of goods and services made in the country except specific petroleum products, alcohol and electricity. The central government has introduced the final GST legislations in Parliament, and it is expected to be implemented from 1 July 2017 after both the central and state governments pass their respective GST legislations.

The GST is expected to reduce logistics costs by 10–15 per cent for the chemicals industry, thus directly adding to its bottomline.[16] However, certain petrochemicals may be kept outside the purview of GST, which will affect the seamless flow of input credits and result in increased tax burden for the industry.

1.2.3 Impact of demonetization

In November 2016, the central government announced demonetization of high denomination currency notes (of denomination ₹1,000 [€12.74] and ₹500 [€6.37]), in order to counter unaccounted money and counterfeiting of currency. While the long-term impact of demonetization cannot be accurately anticipated as of now, in the short term it has led to a cash crunch and slowdown in the economy, as India has a large informal sector which is mainly dependent on cash transactions. This is evident from the downward trajectory of GDP estimate for FY17 – from 7–7.75 per cent to 7.1 per cent and forecast for FY18 at under 7 per cent.[17]

As a result of the decreased liquidity and consumption, the end user industries such as automotive, textile, construction, and agriculture (in particular, agrochemicals) have been impacted, which has in turn led to a compressed demand for chemicals.

1.2.4 Draft National Chemical Policy

The erstwhile Planning Commission had in March 2011 constituted a working group on chemicals and petrochemicals that recommended formulating a 'National Chemical Policy'. The draft National Chemical Policy (which was first released in 2014) is being finalized based on inputs from various stakeholders. The policy focuses on providing an impetus to growth of the chemicals sector in India and identifying action points especially related to feedstock availability, Health, Safety, Security, and Environment (HSSE) and focus on R&D. However, the final National Chemical Policy is yet to be released, although three years have elapsed from issue of the draft policy.

1.2.5 Petroleum, Chemicals and Petrochemical Investment Regions (PCPIRs)

A PCPIR is a designated investment region catering to domestic as well as export requirements by providing 'state-of-the-art' infrastructure and common facilities. PCPIRs were initially approved in the four coastal states of Gujarat, Andhra Pradesh, Odisha, and Tamil Nadu. The anchor project in Odisha (Indian Oil's Paradip refinery) and polypropylene unit at Dahej have been commissioned.[18] ONGC Petro Additions Limited (OPAL) has inaugurated a grassroots integrated petrochemical complex located in Gujarat PCPIR at an investment of ₹30,000 crore (€3.82 billion)[19]. The Andhra Pradesh PCPIR and Tamil Nadu PCPIR are in different stages of planning and implementation.[20]

As on September 30, 2016, investments worth ₹172,000 crore (€21.91 billion) have been made in direct and indirect activities related to PCPIRs.[15] The state governments of Kerala, Karnataka, and Maharashtra have also submitted their proposal to set up a PCPIR.[21]

The government is also planning to set up petrochemical complexes in all 16 refineries of the country, and create downstream and processing industries to further add value to such petrochemical complexes.[22] In December 2016, a memorandum of understanding (MoU) was signed between the major national oil companies in India (Indian Oil, Bharat Petroleum, and Hindustan Petroleum) intending to set up the biggest oil refinery cum petrochemical complex in the state of Maharashtra.[23]

1.2.6 Plastic parks

In 2013, the government proposed to support the setting up of plastic parks for the promotion of downstream plastic processing industries. A scheme for setting up plastic parks, with requisite state-of-the-art infrastructure and enabling common facilities was formulated by the Department of Chemicals and Petrochemicals in order to synergize and consolidate capacities through cluster development. The objectives of the scheme, *inter alia*, are to increase competitiveness through R&D-led measures, increase investments in the sector, and achieve environmentally sustainable growth through innovative methods of waste management, recycling, etc.

The Scheme Steering Committee (SSC) had granted approval for the setting up of plastic parks in Assam, Odisha, Madhya Pradesh, and Tamil Nadu. The government also approved setting up of six additional plastic parks in December 2014 at an estimated cost of ₹405 crore (€51.60 million). In September 2015, 'in-principle' approval was also granted for establishment of eight new plastic parks.[24]

The funding of need-based plastic parks received the government's approval in March 2015. The government has agreed to grant funding of up to 50 per cent of the project cost, subject to a ceiling of ₹40 crore (€5.09 million) per project while the remaining project cost would be financed by the concerned state government and its agencies.

1.2.7 India as a global speciality chemical manufacturing hub

The speciality chemicals segment accounts for nearly 20 per cent of the Indian chemical industry and is estimated at ₹28 billion (€356.76 million) in FY15. The industry is expected to grow at a CAGR of 13 per cent to reach the market size of US$52 billion (€46.11 billion) by FY20.[25]

The fine and speciality chemicals segment can leverage from the growing demand from end user industries, strong governmental support for the establishment of common infrastructure clusters, existing production of base chemicals as raw materials and the focus on developing specialized intermediate producers to enable India to become a global manufacturing hub. There are several other factors facilitating this development:

i. Availability of qualified and skilled chemical engineers which constitute the backbone of this technology oriented segment.

ii. Robust domestic demand driven by high growth rates in key consumer industries (like automotive, construction, pharma, textiles, paints, etc.) as well as emerging demand across consumer industries for products with higher quality/increased performance (viz., home and personal care).

iii. Export-based growth potential in select segments such as agrochemicals and dyestuffs.

iv. Changes in customs and excise duty rates on certain inputs/raw materials to reduce costs and improve competitiveness of domestic industry.

v. Stagnation of Chinese chemical industry due to tightening pollution control, increasing labour costs, and impact of currency fluctuation.

vi. The government has recognized the immense potential and is focusing efforts on developing R&D capabilities, technical skill training, infrastructure upgradation, etc., to support the endeavour to create a global manufacturing hub.

1.2.8 Focus on green chemistry

Green chemistry is an area of high focus and priority for some of the largest global players. Tremendous efforts and progress is being made to establish green leadership and facilitate a reduction in the carbon footprint. There is increasing emphasis across the world, from governments to consumers and activists, to adopt environment friendly practices and products. Given that the output from the chemicals and petrochemicals sector pervades all kinds of products and uses, there is huge potential for the industry to contribute to green technologies and products supporting green practices and objectives.

There should be more focus on sustainability in chemical conversions. Efficient process engineering and latest developments in catalysis to be adopted in chemical plants through support from global companies such as BASF.

It is imperative for the agrochemicals industry to adopt green chemistry processes, develop new green products, and increase focus on educating farmers for increased productivity in order to achieve sustainable growth. However, the limited availability of green technologies in India and lack of intellectual property rights (IPR) protection acts as a barrier to the implementation of green chemistry.

There is a need for the government to incentivize R&D and address various issues faced by the industry in order to develop its strengths in this area. The Central Insecticides Board and Registration Committee, under the Ministry of Agriculture & Farmers' Welfare, responsible for registration of pesticides, should encourage eco-friendly practices by giving priority to registration of pesticides developed on the concept of green chemistry.

1.2.9 Emphasis on renewable feedstock

Availability of feedstock at competitive prices has been a key challenge faced by the Indian chemical industry. While globally a major portion of the olefins are utilized by the downstream industry, the olefins in India are primarily used to manufacture polyolefins. This increases the dependence of the Indian chemicals industry

on imported feedstock, especially the small and medium enterprises.

Considering India's limitation on availability of fossil fuel based feedstock, India may focus on replacing the same with plant sourced/ bio-based alternatives, which are abundantly available in India. Use of renewable feedstock would make the industry competitive and present local as well as international market opportunities. Further, backward integration opportunities can help domestic players to access supply of feedstock at stable prices.

1.2.10 Incentivizing compostable plastic

The government should focus on promoting compostable plastics which undergo degradation by biological processes and do not leave visible toxic residues. Usage of compostable plastics in place of existing conventional plastics for manufacturing carry bags and garbage bags will benefit the environment and enable circular economy. BASF, a leading speciality chemicals maker, has been promoting compostable waste bags made from bioplastic to manage organic waste in India.

In the recent Plastic Waste Management Rules notified in March 2016, the importance of compostable plastics has been emphasized to tackle the country's rampant plastic litter problem while improving consumer behaviour for better waste management.

Compostable polymers can play an important role in linking wet food waste back to agriculture through composting. It provides social, environmental, and technical benefits as it can be processed using existing infrastructure and doesn't require any additional investments. A customs duty exemption on compostable polymers can help reduce cost and promote usage of such products by brand owners and general public.

1.2.11 Large and specific demand from the domestic Indian user industries

India is being developed as a cost-efficient manufacturing hub across several industrial segments such as automotive and electronics. As a result, there is increasing demand from these industries for development of unique local products and solutions which can cater to both the domestic as well as international markets. In the automotive sector, demand is now being created for products and materials that will support the industry's objectives to be a low cost small car hub. Similarly, the growth in industries like construction (affordable housing projects, green buildings, setting up of Smart Cities), packaging (driven by the retail boom), and the renewable energy sector is also expected to create a demand for chemical companies. The country currently imports a large portion of its chemical requirements. Catering to the domestic demand in terms of import substitution and supplying new value-added chemicals (speciality and knowledge) presents a huge opportunity for the sector.

1.3 European Investment in India

European chemical players are looking at Asian markets as the next growth phase due to the high consumption base. Some of the European chemical companies present in India are:

1. BASF
2. Solvay – Rhodia
3. Syngenta

In addition to the above, about nine other European companies are active in this sector and are doing business in India.

2. GENERIC INDUSTRY CHALLENGES

2.1 Feedstock

Continuous availability of reliable and competitive feedstock is a key challenge to the growth of the Indian chemicals industry. The primary building blocks such as ethylene, propylene and butenes (relevant for speciality chemical products) are mostly consumed captively for commodity products (such as polyethylene, polypropylene, etc.) and hence are not accessible in the merchant market. In the absence of domestic feedstock, India

remains heavily reliant on import of feedstock, which is not a sustainable growth model.

Also, the rising global crude oil prices has adversely affected the availability of feedstock at competitive prices. Crude oil is a major cost driver in the petrochemical industry, as many of the key chemical building blocks (for example, aromatics, ethylene, and propylene) used for industry's products are directly produced from oil or its derivatives (for instance, naphtha and liquefied petroleum gas). Thus, volatility in oil prices has a direct impact on prices of feedstock, and consequently on the manufacturing cost of chemicals.

2.2 Location and Infrastructure

The major Indian chemical industries have been set up along the west coast in Gujarat, while the highest demand of chemicals is in southern and eastern India. This gives rise to logistical and transportation costs, thus increasing the overall cost of chemicals.[26] Lack of adequate infrastructure facilities including transportation facilities (such as roads, ports, railway, pipeline networks, etc.) pose a challenge for domestic manufacturers in procuring raw materials at a cost competitive price. This leads to a rise in the manufacturing cost and creates bottlenecks in growth and continuity of operations. Intermittent power supply also has an adverse effect on the energy intensive chemical industry.

2.3 Duties

Inverted duty tax structures affect the competitiveness of the industry. The government has attempted to rectify this through several proposals in the Finance Bill 2017 by reducing customs duty on o-xylene, 2-ethyl anthraquinone, medium quality terephthalic acid (MTA), qualified terephthalic acid (QTA), vinyl polyethylene glycol for use in manufacture of poly carboxylate ether and clay-2 powder (Alumax) for use in ceramic substrate for catalytic convertors.

However, compliance procedures and mechanisms for levy and refunds of cess and duties are quite onerous under the present regime. It is expected that while deciding the tax rates under GST, the government would avoid any credit accumulations on account of inverted duty structure. Further, in case there is credit accumulation on account of inverted duty structures, the model GST law provides for a refund of accumulated credit. The government should ensure that such refunds are granted expeditiously to the taxpayers so as to avoid blockage of working capital.

2.4 Uncompetitive Domestic Market

India has signed Free Trade Agreements (FTAs) with various countries agreeing to levy negligible import duty on various chemicals. Further, certain chemicals are placed in the Open General Licence of imports. These have resulted in increased imports of various chemicals, intermediaries and end products from low cost manufacturing hubs like China. Consequently, the domestic industry is rendered uncompetitive, especially the small and medium players, lacking economies of scale and cost efficiency.

2.5 Fragmented Capacities

Typically, fragmented and dispersed units are not in a position to enjoy economies of scale and face capital constraints due to sub optimal capacities, which impedes their growth options and further impacts the competitiveness across the value chain.

2.6 Investment in R&D

More resources and finances need to be invested on the R&D front. The lack of incentives for R&D has hampered the much needed investments in the segment.

2.7 Skill Development

There has been a dearth of talented manpower in the industry. Individuals entering the industry and institutions providing the training /degrees lack orientation to practical skill sets. The industry has an additional human resource

requirement of 1.72 million by 2022 from the existing employment base of 1.86 million in 2013.[27] Together with the government, the industry needs to take measures to attract, recruit and retain the right talent.

2.8 Health and Safety norms

Players in the chemicals and petrochemicals industry have often been lax in adopting established and proven health, safety, security and environment norms. This further impacts public perception linked to the sector and works negatively in terms of attracting requisite talent to work in the industry and results in higher risk of industrial accidents.

3. KEY ISSUES AND RECOMMENDATIONS

Issue/Objective: Developing India as a global hub in speciality chemicals and fulfilling the domestic demand

3.1 Issue: Feedstock Availability

Recommendations

The government's policies should focus on ensuring availability of competitive feedstock with relevant brownfield infrastructure to the industry. This is critical for domestic and international companies to invest in India. Some of these concerns are sought to be addressed in the draft National Chemical Policy. However, the delay in finalization of the same has impacted the industry.

The government should consider implementing the following recommendations:

1. Investments should be encouraged in areas where sustained feedstock supply is available.
2. Cluster approach should be followed to rationalize efforts in feedstock allocation with anchor units setup at PCPIRs.
3. Government to government contracts should be encouraged for locking in international feedstock supply.
4. Setting up of global scale plants for manufacture of base chemicals.
5. Grant of incentives to manufacturers for using bio-based/non-fossil fuel-based raw materials.

The industry should also explore alternate feedstock options such as olefins, coal-based feedstock, pet coke, shale gas, etc. Shale gas is an untapped resource in India and exploration of domestic shale gas can help in meeting India's growing energy demand. The chemical companies may also consider setting up gas cracker plants or investing in upcoming plants and securing off-take agreements in resource rich nations to secure cheap feedstock.

3.2 Issue: Inadequate Infrastructure

Recommendations

Domestic manufacturers face difficulties in procurement of raw materials at cost competitive prices due to poor infrastructure facilities at ports, railway depots, and poor pipeline connectivity. Further, intermittent power supply adversely affects the energy intensive chemical industry.

While there has been an increased focus towards infrastructure development, given the significant inadequacies, it will require time to overcome the shortfalls. Focused infrastructure development for the industry has been attempted through the setting up of clusters such as PCPIRs and in capacity building of existing identified chemical clusters across India (largely Gujarat and Maharashtra). It is imperative that enabling frameworks are developed for effective infrastructure creation in the PCPIRs and chemical clusters by providing specialized infrastructure required for the industry to facilitate co-location of players across the value chain, i.e. feedstock suppliers and downstream players. This could be done by creating a network of specialized and high-pressure pipelines and cryogenic storage containers, etc. Similarly, centralized effluent treatment units and air separation units in such clusters would help small players.

The supporting logistics infrastructure for the industry, namely construction of quality logistics and transportation facilities such as roads, railways, ports, and terminals handling chemicals and petrochemicals along with the requisite port-based logistics infrastructure, will be critical to ensure overall development. Concerted efforts should be continued by the government and private industry to close out the infrastructure gaps. The government may consider the public–private partnership (PPP) model for building necessary infrastructure, especially roads, and ports. India signed the historic deal with Iran and Afghanistan in May 2016 to develop and operate the Chabahar port in Iran and thereby establish a link from the Gujarat coast to the energy rich Central Asia. This will provide an impetus to the supply of feedstock as well as access to international markets. As per the terms of the agreement, India has to extend credit of US$150 million (€133.03 million) for development of phase one of the Chabahar port. However, the credit has not been disbursed yet by the Export–Import Bank of India, which is awaiting completion of an application from the Port and Maritime Organization of Iran.[28]

3.3 Issue: Inadequate Availability of Intermediates

One of the key concerns facing the Indian chemical industry today is the growing import dependence of key petrochemical intermediates – acrylic acid, propylene oxide, polyols, phenol, styrene, vinyl chloride, acetic acid, vinyl acetate, methyl methacrylate, etc. While the upstream refining and basic petrochemicals [propylene, ethylene] industry has grown rapidly in the last decade, and the downstream speciality chemicals industry also continues to deliver robust growth, petrochemical intermediates are proving to be a vital missing link for sustainable growth of the Indian chemical industry, with trade statistics showing an import dependency of close to 50 per cent. As demand for speciality chemicals grows, driven by growth in end-user industries such as construction, mining, consumer goods, etc., this import dependency will only become more acute, hampering downstream industries. It is imperative that the country focuses on building manufacturing infrastructure for petrochemical intermediates.

Recommendations

The technology to manufacture petrochemical intermediates is available with a select group of global chemical companies including BASF and forging successful partnerships has proven to be a challenge thus far. However, we believe the government can play a key role in facilitating this process by concerted action in the following priority areas:

1. Creating an integrated petrochemical intermediates master plan for India which would match feedstock availability with downstream and end-use demand for critical value chains.
2. Encouraging or mandating producers of petrochemical building blocks (propylene, ethylene) to make specified volumes available for petrochemical intermediates. Thus far, more than 90 per cent of the propylene and ethylene produced in India goes for manufacturing of bulk plastics, leaving only modest volumes available for higher value-added petrochemical intermediates.
3. Supporting investment in petrochemical intermediates by re-examining duty structures across the value chain.
4. Establishing petrochemical intermediate clusters as frontrunners in the national campaign to improve the Ease of Doing Business, by accelerating the simplification of key procedures such as land acquisition or environmental clearances.

The challenges of making this aspiration a reality are not unique to India. Other major chemical-producing economies such as China, the European Union, and Singapore have faced and resolved similar challenges. Hence, effective action on the above priority areas can pave the way for development of a successful petrochemicals intermediates

industry. This would also serve as an ideal Make in India opportunity and create considerable employment opportunities, direct and indirect, for our growing workforce.

3.4 Issue: Alignment of Taxes and Duties

Recommendations

Rationalization of taxes is of paramount importance in this sector. Inverted duty structures should be suitably rectified to bring players at par with global players and enhance competitiveness of output from India. While fixing GST rates for taxing goods and services, the government should ensure that should be no abnormalities on account of tax rates or inverted duty structure. Further, the government should also ensure that there is no additional cost on account of natural gas (which is a key input for chemical and petrochemical industry) being out of GST.

India has entered into FTAs with various countries for reducing customs duty on import of chemical products. The government should follow a balanced approach while entering into FTAs and review them regularly, so that industry players from signatory countries are mutually benefited.

The European Union has also expressed its will to move forward in the negotiations for a FTA or Bilateral Trade and Investment Agreement (BTIA) with India at the earliest. The government should endeavour to favourably conclude dialogue on such agreements.[29]

3.5 Issue: Dispersed and Uneconomical Capacities

Recommendations

The primary objective should be to set up state-of-the-art units with economies of scale so that they are competitive. Units with smaller capacities should be consolidated or ideally upgraded. The consolidation and relocation, if any, should take place in a manner that will shift downstream capacities closer to the anchor plants so that logistics become cost efficient and units are located in proximity to supporting infrastructure. The government could consider incentives to encourage such consolidation.

It is important to address the efficiency of some of these operating units. Technology selection and selection of key performance consumables is based on age old procedure of tendering evaluations. This entire system needs to be overhauled to a more value driven approach.

3.6 Issue: Ease of Doing Business

Recommendations

In a welcome initiative, the government introduced SWIFT (Single Window Interface for Facilitating Trade), enabling importers/exporters to file a common integrated declaration in place of various forms filed across agencies. Various other customs-related compliances were eased out to promote Ease of Doing Business.

The government should further expedite the simplification of procedural and compliance matters by consolidating/streamlining the myriad acts and rules pertaining to the chemicals and petrochemicals industry. The central government should also regularly interact and engage with the state governments for effective implementation of the initiatives.

3.7 Issue: Investments in R&D

Recommendations

It is imperative to look to strengthen connect between the industry and academia. The pedagogy and infrastructure should be adapted to make it more relevant to present era of industry needs. Academic research in India needs to be made more relevant for businesses and interface between academia and industry needs to be more broad-based.

It is imperative that R&D spend be increased so that new materials, products, and technologies are developed in line with the objectives to position India as a global speciality chemicals hub. The government should also incentivize R&D spend by way of tax breaks, soft loans,

subsidies, etc. The R&D spend by Indian companies has been limited and needs to be increased to 3–5 per cent of revenues. International collaborations with multinational chemical giants can provide an impetus in these efforts. The government can also facilitate indigenous R&D under a PPP model.

The draft National Chemical Policy proposes to set up a National Chemical Development Centre to promote R&D.[30] The National Chemical Laboratory (NCL), a constituent laboratory of the Council of Scientific and Industrial Research (CSIR), had earlier set up a NCL Innovation Park to support growth and expansion plans of research and knowledge based business entities. Further, BASF set up an Innovation Campus in Navi Mumbai, India in March 2017 with an investment of approximately €50 million that would employ up to 300 scientists. This was set up to research and innovate on a wide range of speciality chemicals covering areas such as personal and home care, process development, crop protection, etc.[31] BASF also inaugurated a new mobile emission catalysts site in Chennai, India on 2 March 2017 which would help the industry meet stringent emissions regulations including the proposed Bharat Stage-VI (Euro 6) norms.[32]

Effective implementation of the IPR framework to protect innovators and facilitate monetization of new materials and discoveries is also needed. In this regard, the government had released the National IPR policy in May 2016, with an objective to sustain entrepreneurship, stimulate innovation and provide further impetus to the Make in India initiative. However, the policy has received mixed reactions from the industry and experts on its ability to meet the stated objectives. The industry's concerns regarding lack of data protection remain unaddressed, impacting the development of the chemicals industry (agrochemicals in particular). The Pesticides Management Bill, 2008, introduced in the Parliament in 2008 proposes to provide data protection for registration of pesticides. However, the same has not yet received the approval of Parliament.

3.8 Issue: Human Resource Development

Recommendations

India has a large manpower pool. In order to create the pool of skill sets required by the industry, investments should be made in technical training infrastructure. It is also critical to attract talent into the chemicals and petrochemicals industry. The training agenda can be developed jointly as a public-private collaboration. The government is also focused on setting up skill development councils or centres as a medium to execute training plans. As an illustration, under the draft national chemical policy, the government has plans to set up chemical engineering education centres within leading universities and institutes.

The Ministry of Skill Development & Entrepreneurship had entered into three MOUs with the Ministry of Chemicals and Fertilizers to collaborate and collectively address the human resource requirement.[33] The government had also sanctioned additional 10 centres under the Central Institute of Plastics Engineering and Technology (CIPET) in different parts of the country. However, during FY16, only five new centres were set up. In April 2016, the government approved setting up of 11 new CIPETs including an Advanced Polymer Design and Development Research Laboratory of CIPET.[34]

3.9 Issue: Health, Safety, Security, and Environment (HSSE)

Recommendations

Safety management is one of the critical requirements within the sector to prevent disruption of operations and endangering of human lives, There have been initiatives to improve safety through setting up of systems and processes such as the Chemical Plant Safety and Security Rating System which aims to encourage the attainment of zero accidents and to incentivize the units to achieve best safety operational measures. Chemicals

and petrochemicals industry players must specifically invest and maintain best practices on HSSE. The government and public bodies must also incentivize units to adhere to safety requirements and abide by global standards. The government plans to set up a National Chemical Safety Centre and the National Bureau of Corrosion Control under the proposed national chemical policy to regulate and prevent corrosion.[35]

Strictness and honesty in enforcement of environmental standards is the key to enhancing the public image of the chemical industry.

3.10 Issue: On Negative Perceptions and Image

Recommendations

The chemicals and petrochemicals sector needs to enhance its public image by creating positive perception through public awareness. Support from the government is needed for this by showcasing the importance of the industry at various public forums. These efforts will also serve well in attracting skilled technical talent to the industry. This is vital for long-term growth as well as in conveying the importance of the industry within the national commercial landscape. A roadmap in this direction needs to be put in place.

4. CONCLUSION

The Indian chemicals and petrochemicals industry holds huge potential as the strong growth outlook of end user industries is expected to fuel the demand for chemical products. The industry offers several opportunities for both domestic and international chemical players

The government should focus on addressing industry concerns regarding infrastructure, feedstock supply, transfer of technology, and competitiveness of the domestic market on priority. A collaborative effort by the government and stakeholders to expand capacities and reduce dependency on imports is required to unlock the potential of the Indian chemicals industry. The European chemical players can consider fresh collaborations, investment/ merger, and acquisition opportunities and gain advantage from the strong industry outlook.

Endnotes

1 Year 2017 should be read as calendar year 2017, whereas FY17 should be read as financial year 2016–17

2 'Chemicals & Petrochemicals Sector – Achievements Report', dated 18 January 2017, Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry

3 Chemicals – India Brand Equity Foundation – January 2017

4 Handbook on Indian Chemical Industry – September 2016, FICCI

5 MarketLine Industry Profiles – Global Chemicals 2018

6 MarketLine Industry Profiles – Global Chemicals 2018

7 'Chemicals and Petrochemicals Statistics at a Glance 2016', Ministry of Chemicals & Fertilizers

8 http://www.makeinindia.com/sector/chemicals

9 Handbook on Indian Chemical Industry – September 2016, FICCI

10 Handbook on Indian Chemical Industry – September 2016, FICCI

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EXECUTIVE SUMMARY

The defence sector in India is strategically important for the country. In recent years, the defence sector has grown extensively at 10 per cent compound annual growth rate (CAGR) and the defence budget accounts to more than 1.5 per cent of the GDP. The government is looking at achieving a turnover of approximately US$24.2 billion (€21.46 billion) in military goods and services by 2025. In the coming years, the government targets to step up local sourcing to 70 per cent and reduce import dependency. The government has opened the defence sector for private and foreign players and plans to spend US$130 billion (€115.29 billion) on defence modernization. It has also taken initiatives to invite domestic and foreign players to collaborate with each other to establish supply chains and assembly of defence components, sub-systems and systems and platforms.

The government has integrated multiple strategies and initiatives to promote indigenization into the procurement process. Some of the important initiatives include the amendments to the Defence Procurement Procedure (DPP), 2016, draft amendments to Defence Offset Guidelines, revision of defence items list requiring industrial licence, proposed transformation of defence forces, Draft Defence Production policy, release of Aerospace and Defence Manufacturing Policy in Odisha, and release of UAV policy and drone ecosystem roadmap.

There are huge opportunities for foreign investments and many global aerospace and defence companies are looking at India as a potential low-cost manufacturing destination and a major defence market. However, the sector faces several challenges that needs to be addressed. The most critical challenges are the tax reforms and procurement delays. While many issues in the sector have already been addressed through the various policy initiatives, some outstanding issues need resolution by the government.

The key recommendations to strengthen India's defence preparedness and build a credible defence industrial base are to bring more flexibility in the offset policy, allow group companies or subsidiaries of foreign original equipment manufacturers (OEMs) to discharge offset obligations on the behalf of OEMs, expand the list of eligible services for discharge of offset obligations, undertake skill development projects in India, consider a pragmatic definition of 'value addition in India' and lay down a well-defined valuation methodology in DPP. The government should also provide clarity on the availability of tax exemption on royalties and fees for technical services contracts by non-residents (foreign OEMs) with defence public sector units (DPSUs); exemptions may also be extended to private companies and necessary guidelines issued to reduce tax litigation in cases where a permanent establishment (PE) of the non-resident has been alleged; this is to ensure certainty in tax outcome, thereby encouraging investment.

1. INTRODUCTION

1.1 Indian Defence Overview

In this chapter, we will present a comprehensive overview of the defence sector. Starting with a brief summary of the interim budget, we present key events and policy changes – both proposed and final. While the government has been driving an aggressive Make in India programme, there are several serious policy and procedural issues that constrain, on the one hand the domestic and foreign companies and OEMs from setting up domestic supply chains, and on the other, the government from getting the 'biggest bang for its buck' to achieve its objective of indigenization and import substitution. We therefore conclude with a discussion on these challenges and suggest key recommendations for change in policy and procedures. The Stockholm International Peace Research Institute (SIPRI) recently reported that India has overtaken Russia to be among the world's top-four military spenders in 2018. The report stated India's defence spending rose by 3.1 per cent to US$66.5 billion (€58.98 billion). The top three in the list include the United States, China, and Saudi Arabia followed by India and France. India has a land frontier of 15,106.7 km, a coastline of 7,516.6 km including island territories, airspace, exclusive economic zones (EEZs), and vital offshore installations to defend.

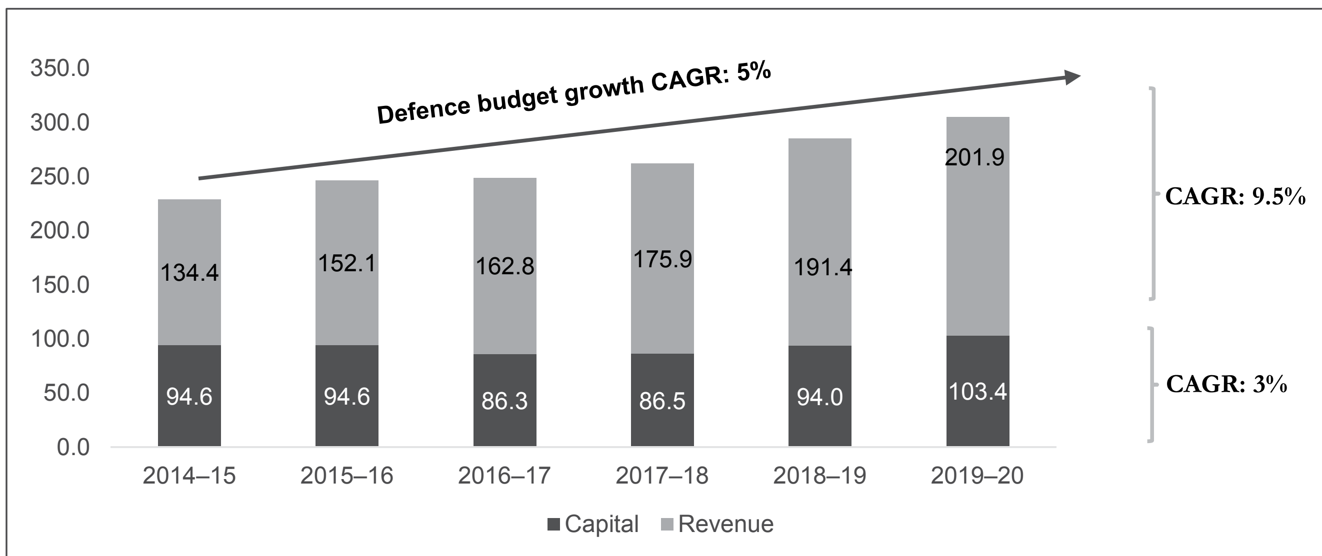
1.1.1 Defence budget analysis

The government has allocated more than $3 lakh crore (€38.22 billion) to meet the requirements of the modernization programmes of defence platforms. The interim defence budget for 2019–20 has seen an increase of 6.87 per cent over last year's budget and accounts for 9.3 per cent of the total budget allocation. However, it constitutes only 1.44 per cent of India's gross domestic product (GDP) and seems inadequate in view of the dire security-related hazards being faced in India and its neighbourhood. However, we are happy to note that unlike in previous years, when the capital allocated to the defence

Defence sector at a glance			
	2018–19	**2018–19**	**2019–20**
	(Budget estimate)	**(Revised estimate)**	**(Budget estimate)**
Interim defence budget (₹ crore)	282,733 (€36.02 bn)	285,423 (€36.36 bn)	305,296 (€38.90 bn)
Growth of defence budget (%)	7.7%*		6.9%**
Revenue expenditure (₹ crore)	188,723 (€24.04 bn)	191,431 (€24.39 bn)	201,902 (€25.72 bn)
Growth of revenue expenditure (%)	7.3%*		5.4%**
Share of revenue expenditure in defence budget (%)	67%	67%	66%
Capital expenditure (₹ crore)	94,011 (€11.97 bn)	93,992 (€11.97 bn)	103,394 (€13.97 bn)
Growth of capital expenditure (%)	8.6%*		10.0%**
Share of capital expenditure in defence budget (%)	33.3%	32.9%	33.8%

Note: bn=billion
** Growth rate in comparison to actuals for 2017–18*
*** Growth rate in comparison to revised estimates for 2018–19*

Figure 1: Defence budget comparison with the last five years (figures in ₹ thousand crore)



Source: Controller General of Defence Accounts
Note: Budget amount in ₹ has been converted to US$ figures at the average currency exchange rate in the respective years.

sector was not fully utilized, the Interim Budget 2019 revealed that the entire capital allocation of almost ₹94,000 crore (€11.97 billion) for last year was actually spent on making requisite acquisitions. Revenue expenditure continues to account for over 67 per cent of the defence budget, which is a matter of concern as it crowds out much needed capital investment required to undertake the modernization of the armed forces. We do see an increase in capital expenditure by 10 per cent in 2019–20, but with the Indian armed forces taking multiple initiatives to modernize its various functions and military units, the amount seems inadequate.

1.1.2 Key Interim Budget highlights

- India's defence budget has grown at a CAGR of 5 per cent over the last six years, whereas its revenue has grown by 9.5 per cent and capital by 3 per cent over the same time. In real, or inflated adjusted terms, the growth in the capital budget has been stagnant.
- The capital outlay of the Indian Air Force for 2019–20 is the highest among the three forces at ₹39,302 crore (€5.00 billion), compared to ₹24,811.61 crore (€3.16 billion) in the revised budget for 2018–19. Of the total capital outlay allocation, nearly two-thirds (₹24,807.19 crore [€3.16 billion]) will go into buying and upgrading aircraft and aero engines. The capital outlay for the Indian Army is ₹29,447 crore (€3.75 billion) of which ₹18,562.15 crore (€2.36 billion) will be used for procurement of equipment. The capital outlay of the Indian Navy is ₹23,156 crore (€2.95 billion), which will be spent to enhance its naval fleet (warships and submarines).
- The Interim Budget 2019 allocated ₹10,484 crore (€1.33 billion) to research and development (R&D), which is an increase of 8 per cent from last year's revised budget of ₹9,681 crore (€1.23 billion), to meet India's continued focus on indigenous defence manufacturing.
- The government continues to focus on modernization and enhancement of the operational capabilities of the defence forces by developing intrinsic defence production capabilities and promoting private investment in defence production. An additional allocation of ₹50 crore (€6.37 million) for Indian Army projects and ₹45 crore (€5.73 million) for the Indian Air Force has been made under the Make in India category.
- The government has increased its budget allocation of 14 per cent from ₹2,028 crore

(€258.40 million) to ₹2,321 crore (€295.73 million) for development of border roads under the Border Roads Organization (BRO).

1.2 Recent Developments

1.2.1 Amendments to Defence Procurement Procedure (DPP), 2016

The Defence Ministry has made certain amendments to the DPP 2016 through notice (MoD ID No. 1 (13)D(Acq)/16-Vol.III) dated 7 March 2019 to make the procedure more flexible and transparent and facilitate procurement of the operationally urgent requirements of the armed forces.

The amendments proposed in DPP were effective immediately.

Amendments such as inclusion of taxes in evaluation of commercial bids, allowing letter of credit (LC) through multiple banks and provisional acceptance of vendors' letters to their governments for export licences will provide flexibility to vendors and sellers and improve Ease of Doing Business with the Ministry of Defence (MoD). Moreover, provisions such as detailed calculation of late delivery and defining the date of delivery in standard contract documents (SCDs) will increase the transparency of the process. Inclusion of DPSUs and the private sector along with the Ordnance Factory Board (OFB) for cases relating to buyer nominated equipment (BNE) is a step taken toward providing a level playing field to all participants in the domestic defence ecosystem.

A significant amendment made in December 2018 was the provision made for benchmarking by a costing committee. According to the provision, concurrent benchmarking would be carried out by a costing committee headed by the Advisor (Cost) and the representatives of the Service Head Quarters (SHQ) Directorates on receipt of the SHQ's trial report. The benchmarking recommendations will be an input for the commercial negotiation committee (CNC) and is expected to result in increased transparency in pricing negotiations.

In order to further refine and simplify the procedures under DPP, to enhance efficiency and reducing timelines, government introduced the business process re-engineering (BPR) plan. Under BPR, government has introduced amendments in the following areas:

- RFP design and implementation
- Assessment criteria
- Bid evaluation
- Payment support
- Tax support
- Strategic partnership model
- Financial powers of SHQ and Defence Secretary

(a) ***Amendments proposed in December 2018***

- Amendment to 'repeat order' clauses: The acceptance of necessity (AON) for repeat orders must be obtained within five years of the date of completion of the warranty on final delivery against the previous contract.
- Reassessment of AoN cost on receipt of detailed project reports (DPRs) in Make in India cases: This enables transparency in pricing.
- Incorporation of 'denial clause' in request for proposals (RFP) and SCD: This empowers buyers and adds to risk to buyer or OEM.
- Conduct of benchmarking on receipt of trial report by SHQ: Benchmarking by the costing committee provides transparency in pricing mechanism.
- The reckoning date of the emergency response vehicle (ERV) for the option clause should be the last date for submission of commercial bids in original case.
- Details of independent monitors (IMs) are to be included in the RFP.
- The amendments seek to bring clarity on imposition of LD and constitution of professional officers valuation (POVs) in contract amendment cases.
- Additional bank guarantees (BGs) for essential parameters-B (EPB) have been eliminated and trials evaluated during the field evaluation trial (FET).

- An amendment has been made in Para 5(c) of Appx A of Chapter II (Defining Attributes of Buy and Make Category) in view of promulgation of the strategic partnership model.
- An amendment has been made in Para(a) (ii) of Appendix F to Schedule-I of Chapter IV.
- An amendment has been made to incorporate the applicability of the latest legislation, change, amendment or enforcement of any act, law, rules or regulations.

(b) ***Amendments proposed in March 2019***

- Revision of Evaluation criteria and price bid format (L1 determination): As per the amendments, all costs, taxes, and duties will be considered for evaluation of commercial bids.
- LC payment permitted through all banks authorized by the Reserve Bank of India (RBI) for government transactions: Going forward, a LC from any public or private sector Indian bank authorized for government transactions by RBI will be acceptable, compared to only the four public sector banks (State Bank of India/ Bank of Baroda/Canara Bank/Syndicate Bank) being allowed to conduct transaction before this.
- Date of delivery to be calculated from date of release of advance payment: Date of delivery has been defined in the SCD.
- Provisional acceptance of vendors' letters of application to their governments for export licence in lieu of export licence for release of advance payment in Buy (Global) cases: Vendors' letters to their governments for export licence, in lieu of export licence, in cases where an export licence needs to be submitted by a seller prior to release of advance payment has been provisionally provided.
- Exclusion of cost of BNE sourced from single vendor while determining L1 vendor: In addition to the OFB, DPSUs and the private sector have been named for provisions related to BNE.
- Amendment made in integrity pact bank guarantee (IPBG) amount: An IPBG table is added which provides transparency to bidders.
- Amendment made in provisions of the fast track procedure (Chapter V of DPP 2016): This provides clarity on the empowering committee's rules.
- Amplification or amendment made in Para 72 of Chapter II of DPP 2016: This states that the AoN will be valid for six months from the date of approval of the staff qualitative requirements (SQR).
- Approval of extension up to 15 days for submission of Technical Oversight Committee (ToC) Report by DG (Acq): Earlier, the Defence Secretary's consent was required, but now it is provided by the DG (Acq).
- CNC exempted from furnishing reasonability of cost certificate (RCC) for DPSU equipment already priced by committee constituted under orders of the Defence Minister.
- Amendment to undertaking from vendor on never having been debarred in the past: This provides transparency as the vendor needs to submit an undertaking.
- The AoN cost is to include all taxes and duties.
- Period of payment of guaranteed sum by banks in pre-contract integrity pact (PCIP) and IPBG is aligned.
- This incorporates full form of additional abbreviations.
- Amendment to increase effectiveness of liquidation damage (LD) clauses: Detailed calculation of LD on non-performance adds transparency to the process.
- Incorporation of revised financial powers of SHQ and Defence Secretary: Services Capital Acquisition Categorization Committee (SCAPCC) case evaluation cost limit increased from ₹150 crore (€19.11

million) to ₹300 crore (€38.22 million) and Defence Procurement Board's (DPB) case evaluation cost limited increased from ₹300 crore (€38.22 million) to ₹500 crore (€63.70 million).

(c) *Amendments proposed in April 2019*

- Guidelines issued for the capacity assessment of Indian shipbuilding entities participating to form joint ventures (JV) with international entities. Need for capacity assessment arises for determining the capability of an entity in undertaking shipbuilding projects as they get evaluated for RFPs.
- Assessment parameters include:
  - Technical capacity assessment: Requirement of warship construction licence (mandatory for CAT A, CAT B, CAT C not mandatory for CAT D, which are non-propelled yard crafts).
  - Financial assessment: Credit rating, average annual turnover, and working capital.

(d) *Key impact of the amendments*

- Streamline the defence procurement procedure to make it industry friendly.
- Ensures timely delivery of equipment to the armed forces.
- Helps micro and small enterprises (MSEs) and start-ups to explore new opportunities
- Creates a transparent system for both buyers and OEM's.
- Assist in avoiding the undue procedural delays and accelerate activities.
- Results in reduction of procurement timelines.

1.2.2 Amendments proposed in defence offset guidelines

Ministry of Defence has proposed modifications to offset guidelines to include additional avenues for offset discharge. Increase in the avenues of discharge will not only provide additional options to the industry for discharging offset obligations but also provide opportunities for the domestic aerospace and defence industry to benefit further from the offset policy. Amendments made to the defence offset guidelines are:

(a) *Investment in specified projects*

OEMs are be allowed to discharge their offset obligations by investing in certain specified projects to foster development of internationally competitive defence, aerospace, and internal security-related enterprises in the country.

Projects would include:

- Defence-related infrastructure projects such as testing labs, testing ranges and skill centres. Only the capital costs of these projects will be considered for discharge.
- Specified technology acquisition projects.
- Specified critical technology.

These projects will be executed through an implementing agency identified by the government that will be through a public sector entity including DRDO, DPSUs, OFB or through an SPV set up with or without industry participation for this purpose. The investment may be made by the vendor having discharge obligation, by any of its sister companies or affiliates. Offset discharge should be subject to physical completion of the project and verification of audited accounts of implementing agency clearing indicating that the investment has been made. Procurement of products or services arising out of the investment by the vendor will not be eligible for offset discharge.

Multipliers:

Avenue	Defence industry corridors	Other areas
Defence related infrastructure projects	3	2
Specified technology acquisition projects	4	3
Specified critical technology	5	5

(b) *Investment in defence manufacturing*

Equity investment in a company for setting up a manufacturing unit in defence, aerospace, and internal security. The investor will be eligible to returns on its investment as per law. The investment should be made by the vendor having offset obligation as per the contract or by such other vendors specified in the contract. Offset discharge should be subject to physical completion of the project and verification of audited accounts of the company setting up a manufacturing unit in defence, aerospace or internal security. Furthermore, procurement of products and services from the unit set up will not be eligible for offset discharge.

Multipliers:

Avenue	Defence industry corridors	Other areas
Investment in defence manufacturing	4	3

(c) *Investment in specified Securities and Exchange Board of India (SEBI) regulated funds for defence, aerospace, and internal security*

Investment in MoD-registered, professionally-managed and SEBI-regulated funds dedicated for development of start-ups and MSMEs of defence, aerospace, and internal security-related enterprises in the country. Investment in any such fund will be subject to a ceiling of 30 per cent of the fund corpus. The vendor contributing to a fund will be entitled for usual returns on its investment as per law. Offset discharge should be based on verification of transfer of funds from the vendor to the fund.

Multiplier:

Investment under this option will be eligible for a multiplier of 3.

(d) *Key impact*

It is promising to see that the government will allow multipliers ranging from two to five for the additional avenues. The proposed changes have permitted offset discharge by group and sister companies and affiliates only for investments in specified projects. However, the industry's demand to allow group companies to discharge the offset obligations for all avenues remains to be fulfilled. Not allowing offset credits for procurement from specified projects or projects with equity investments, is irrational. Besides in the case of specified technology acquisition projects, it contradicts the original policy where there is no such restriction for discharging obligations via foreign direct investment (FDI). In fact, the original policy gives offset credit for buyback. Moreover, OEMs must be incentivized for both investing in Indian companies as well as creating a market for them and buyback is the best way. So this restriction not only contradicts specific provisions of the existing policy, it goes contrary to its very spirit and objective of building an indigenous defence manufacturing base.

(e) *Offset-related penalties*

Recently, there have been a number of cases of offset-related penalties that have been imposed on several OEMs. The DPP provides for a disputes resolution system, which, *inter alia*, allows for resolution of disputes by way of arbitration. While the decision of the acquisition wing of the MoD is considered final, there are provisions in the main contract for dispute resolution through bilateral discussions and arbitration.

The defence ministry has imposed a penalty close to US$500,000 (€443,458) on an OEM for not fulfilling the quantum of offset obligations in India and thus violating the terms of the contract. The company was mandated to undertake offset obligations of US$32 million (€28.38 million) annually but failed to meet these during execution. Another OEM was penalized US$300,000 (€266.075) for not meeting offset obligations in India for a deal that was signed in 2011, and it is planning to wind its operations. Failure to comply with offset regulations has hit international OEMs hard and industry experts believe that there is a case for easing offset guidelines.

1.2.3 Revised list of defence items requiring industrial licence

The Ministry of Commerce and Industry released two revised and independent lists of defence items requiring an industry licence under the Industries (Development and Regulation) Act, 1951, and under the Arms Act, 1959. The first list pertains to defence aircraft, warships of all kind and allied items of defence equipment, which are covered under the Industries (Development and Regulation) Act, 1951. The second list covers tanks and other armoured fighting vehicles and arms and ammunitions and allied items of defence equipment, which are covered under the Arms Act, 1959. The list of defence items requiring industrial licences has been pruned by removing the requirement of licensing for 'parts and components of the equipment' from the 'defence aircraft' category, which is expected to facilitate the entry of small and medium enterprises (SMEs). This move will also help foreign OEMs looking to build the supply chain under the strategic partnership model. This move will provide boost to defence manufacturing. By definition, FDI policy in defence sector is applicable to the manufacturing units that are planning to produce items that require industrial licence. As components and sub components have been removed the licensing list, the foreign companies can now set up 100 per cent subsidiary in India or formulate a joint venture with majority control.

1.2.4 Remotely piloted aircraft /drone policy

On 27 August 2018, the Director General of Civil Aviation (DGCA) issued a policy for remotely piloted aircraft (RPA) or drones. It defined what will be classified as RPA, how they can be flown and the restrictions they will have to operate under. The new policy was effective from 1 December 2018. For both the private and government sectors, the drone policy presented a huge opportunity in India. As of now, it is a very restricted field and use of drones is restricted to areas like agriculture, forestry, power supply, geographical mapping, defence, e-commerce, and film shooting; however, over a period of time, more use cases are going to emerge.

(a) The key highlights of the policy

- Introduction of a digital sky platform
- Categorization of RPA
- Eligibility for ownership – requirements for issue of Unique Identification Number (UIN)
- Operation of drones – unmanned aircraft operator permit (UAOP)
- Security/safety requirements
- Remote pilot requirements
- Operating requirements
- Restrictions on operations
- Enforcement plan

1.2.5 Drone ecosystem policy roadmap

The draft Drone Ecosystem Policy Roadmap released by the DGCA in January 2019 focuses on factors such as the safety and security of drone applications, promotion of innovations and entrepreneurship, as well as tapping various business prospects. The Roadmap suggests development of designated 'drone corridors' for uninterrupted movement of drones as well as airworthiness standards that are independent of operational and environmental risks, limitations on the life-cycle of drones, and issues pertaining to obtaining 'Proof of Concept' licence to operate drones at night and professional certificates for operating independent drones.

(a) Proposed amendments to Civil Aviation Regulations (CAR) 1.0 towards CAR 2.0

(i) Design

The Roadmap mandates standards under which the privacy principles must be rooted into the functional design of the Unmanned Aircraft Systems (UAS). CAR 1.0 does not stipulate privacy standards that need to be complied with by RPA operators, although they are under an obligation to not compromise the privacy of any bodies. The design principles include Safety by Design, Security by Design, and Privacy by Design.

(ii) Infrastructure

Policy proposes development of infrastructure such as drone corridors and droneports, establishment of Digital Sky Service Providers (DSPs), and Unmanned Aircraft System Traffic Management (UASTM).

(iii) Freight capabilities

The draft policy is geared at exploring the commercial potential of drones, especially with respect to transport of temperature-sensitive commodities such as body organs, emergency or just-in-time deliveries of life-saving drugs or safe blood for transfusions, and collection of patients' specimens for time-sensitive testing in laboratories.

(iv) Air worthiness

The draft Drone Ecosystem Policy Roadmap recommends prescribing a maximum life cycle for each drone type and for operators to apply for re-certification at the end of a drone's life cycle. This is over and above the requirements for equipment and maintenance under CAR 1.0.

(v) FDI

The draft policy proposes 100 per cent FDI under the automatic route in UAS and Remotely Piloted Aircraft System (RPAS)-based commercial civil aviation services. Under CAR 1.0, there is no preference given to FDI.

(vi) Regulatory

The draft Drone Ecosystem Policy Roadmap endorses establishment of a Drone Directorate within the Directorate General of Civil Aviation (DGCA), as the needs of the nascent drone industry may differ from that in a mature civil aviation industry. The role of the Drone Directorate will be issuing the necessary guidelines, which would adapt to the changes being made in the global drone ecosystem.

(b) ***Key impact and our views on the drone policy***

As per the current regulations, the operation of drones falls under the purview of several regulators such as the DGCA, Directorate General of Foreign Trade, Ministry of Home Affairs (MHA), MoD, Indian Air Force, DoT (WPC), Bureau of Civil Aviation Security, Airport Authority of India (AAI) and the local police office. In our opinion, this could result in a cumbersome process and delays in decision-making. Hence, successful implementation of Digital Sky infrastructure will be critical to the success of the drone policy. It will be a one-stop platform for granting approvals, and enforcement agencies can efficiently monitor and legalise the operation of drones in India. With the establishment of a drone directorate, the industry will come out of the shadows of civil aviation and create a completely new ecosystem. And gradually, the industry will be able to refocus its interest towards exports and minimalistic foreign investments.

The Drone Ecosystem Policy Roadmap is a welcome initiative undertaken for India's infant drone industry. The Roadmap will be a benchmark to foster innovation in the UAS market by enabling commercial use of UAS, including autonomous UAS, and expanding its operability beyond the visual line of sight. Additionally, if the amendments are paid heed to, they will also provide a level playing field for foreign players interested in making investments in India and give a significant boost to the development of the UAV industry.

Suggestions

- *Accidents*: The policy is silent on the threats posed by two UAVs to each other in terms of loss of life or property that might result from any accident between two drones.
- *Quality standards*: The policy does not comment of the quality aspects of drones imported and there is no regulation on the import standardization. Also, there is a lack of policy on quality control of indigenously-manufactured drones and there is no focused regulations regarding domestically-produced drones.
- *Remote pilot*: The remote pilot experience bar of 18 years is quite high, as it will shadow

the emerging talents. The experience bar should to be categorized as per the drone categories.

- *Monitoring instruments*: As the nano-drones are exempted from UIN, monitoring mechanism is required to keep track of their movement. The mechanism also helps in monitoring the drones operated by non-governmental agencies and controlling the trespassing scenarios.

1.2.6 Aero India 2019

Organized by the Ministry of Defence and Ministry of Civil Aviation, the 12th International Aerospace and Defence Exhibition, Aero India 2019, was inaugurated by the Defence Minister on 20 February 2019 at the Air Force Station Yelahanka in Bengaluru. The theme of the exhibition was 'Runway to a Billion Opportunities'. The exhibition focused on displaying India's potential in the A&D sector and providing a platform for exploration and diversification of opportunities for stakeholders in the domestic industry.

Many opportunities were boosted due to the following:

- The government plans to spend US$130 billion (€115.29 billion) to modernize fleets across all the services in the next five to seven years.
- The government plans to acquire more than 100 multi-role fighter aircraft under the Make in India initiative.
- The need for life-cycle and obsolescence management technologies is rising with expanding defence assets.
- The aerospace and defence fair witnessed the participation of 549 companies (270 Indian companies and 279 companies from 51 countries). It saw the enthusiastic participation of industry players because of the government's incentives in terms of:
    - Ease of Doing Business
    - Setting up of defence investor cell
    - Easing export procedures
    - Infrastructural development
    - Fostering innovation

(a) ***Key highlights of Aero India 2019***

1. India Singapore Skilling Initiative
2. Signing of orders for BEL, BEML, and HAL
3. Thales to supply rocket launchers to HAL
4. Drone Olympics
5. Atmospheric water generator

(b) ***Key impact and our view on Aero India 2019***

This time, the participation from foreign vendors was less than the usual. There were 403 registered exhibitors, out of which 238 were Indian companies and 165 were foreign companies, which was relatively less from the last time. There were multiple factors for the low footfall, among which the last minute confusion on the venue resulted in reduced participation from foreign players, as they were not able to plan their logistics. Another factor that resulted in low participation was the reduced gap between the two major events that happened in India, i.e. DefExpo 2018 that happened in April and Aero India 2019 that happened in February. The companies usually spare a budget to participate in such big events and thus it effected the financial planning of the companies. The smaller companies were not able to participate in both the events and even the bigger players made token appearances for the sake of propriety. Also, for the first time ever, the Indian government imposed customs duty on the aircraft and equipment that were imported by exhibitors for display. This move was considered an embarrassment for the companies as it has never happened in any global events and resulted in confusion and chaos among the participants. Other factors such as the political controversy surrounding the acquisition of 36 Rafale jet fighters and the government's single-minded push on Make in India for defence sector resulted in low response to the aero show from global companies. At the end of the event, there were certain administrative glitches that brought in to focus the poor safety standards and raised the security concerns for the companies participating in the event.

1.2.7 Odisha Aerospace and Defence Manufacturing Policy, 2018

Chief Minister Naveen Patnaik launched the Odisha Aerospace and Defence Manufacturing Policy, 2018 on 3 November 2018. The policy intends to carry forward the process of industrialization by promoting aerospace and defence (A&D) manufacturing enterprises, generating employment opportunities, and increasing value addition. Odisha provides a robust ecosystem for manufacturers as it has one of the best test ranges of the world for testing of arms and ammunition. The Integrated Test Range (ITR) and Proof Experimental Establishment at Chandipur in the Balasore district of the state provides a ready ecosystem for testing military equipment. Odisha can focus on maintenance, repair, and overhaul not just for aerospace but also weapons. The engine manufacturing division of Hindustan Aeronautics Limited in Koraput and Ordnance Factory at Badmal provides a ready market for ancillary component suppliers to set up facilities in Odisha. Besides, Odisha has a long coastline and deep water ports at Paradip, Dhamara, and Gopalpur, which ensures substantial savings on logistics and transportation. Being the largest producer of aluminium, steel, and stainless steel in India, the state can provide A&D grade products for use in the industry.

Some of the salient features of the policy are:

- Subsidy of up to 50 per cent of the cost of land, building, plant and machinery for special purpose vehicle (SPV) and setting up the first state-of-the-art A&D park in the state. The ceiling is proposed to be ₹50 crore (€6.37 million) for a Common Facility Centre, ₹30 crore (€3.82 million) for a Technology Innovation Centre and ₹25 crore (€3.18 million) for a Testing Centre established with private participation.
- Capital grants of 50 per cent of the infrastructure cost limited to ₹10 crore (€1.27 million) for subsequent A&D parks.
- Capital subsidy of ₹100 crore (€12.74 million) for the first three OEMs setting manufacturing facilities in the state with an investment of at least ₹1,000 crore (€127.41 million) and generating domiciled employment of 1,000. In addition, for the first three OEMs, an interest subsidy up to a limit of ₹10 crore (€1.27 million) per annum and ₹5 crore (€637,088 million) per annum, based on an investment in plant and machinery for an amount higher than ₹500 crore (€63.70 million) and between ₹100 crore (€12.74 million) to ₹500 crore (€63.70 million), respectively. This provision will attract key players to set up units in the state, which in turn will provide impetus for further development of ancillary and downstream units in the state. Other units will be entitled to a 10 per cent capital subsidy up to ₹50 crore (€6.37 million) as per the policy.
- New A&D manufacturing units shall be entitled to an interest subsidy for timely payment at 5 per cent per annum on a term loan availed from public financial institutions/banks for a period of five years from the date of commencement of production subject to a total limit of ₹10 lakh (€12,741) for micro enterprises, ₹20 lakh (€25,483) for small enterprises, ₹40 lakh (€50,967) for medium enterprises and ₹1 crore (€127,417) for non-micro, small and medium enterprises MSME units. Besides, MSME units will be able to avail reimbursement of cost towards Employees' State Insurance (ESI) and Employee Provident Fund (EPF) for the employment of domiciled skilled and semi-skilled workers of the state.
- Other incentives such as land at concessional rate, exemption of premium for conversion of land and stamp duty, reimbursement state goods and services tax (SGST), etc., shall also be extended.
- Enterprises, which come up in industrially backward districts, namely Kandhamal, Gajapati, and Mayurbhanj, along with Kalahandi-Bolangir-Koraput (KBK) districts, will be extended additional incentives.

1.2.8 Transformation of defence forces

The Government of India has decided to transform Army Base Workshops (ABWs) presently being operated by the central government into the government-owned contractor-operated (GOCO) model. Located across the country, these ABWs are assigned the role of undertaking overhaul (OH) of specified weapons and support platforms in use by the Indian Army. The workshops are also involved in undertaking repair and OH of major assemblies, repairs of printed circuit boards (PCBs) and modules of various equipment held with the Indian Army. In some cases, spares are also being manufactured by these workshops.

The Indian armed forces are taking multiple initiatives such as the implementation of the GOCO model for its eight ABWs and deploying enterprise resource planning (ERP) solutions for various functions and military units, with the intent of improving their operational efficiency and combat capability. Four ABWs (506 ABW in Jabalpur, 508 ABW in Allahabad, 510 ABW in Meerut, and 512 ABW in Kirkee) will be corporatized based on the GOCO model by April this year. The remaining four workshops, including 505 ABW in Delhi, 507 ABW in Kankinari, 509 ABW in Agra, and 515 ABW in Bengaluru will follow suit by December. In addition, two Army ABWs in Udhampur (near Jammu) and Narangi (near Guwahati) are to be closed down by March this year. Under the provisions of the GOCO model, mooted in 2017, the infrastructure and facilities of ABWs will remain under the ownership of the government, while the contractors will be responsible for the day-to-day operations, plant maintenance and meeting targets. This is part of the government's plan to rationalise army manpower and reduce the 'tail', as recommended by the Lt Gen DB Shekatkar Committee.

(a) ***Key impact***

The implementation of GOCO model will enable cost efficiency, better quality of maintenance, timely delivery of items.

1.2.9 Draft Defence Production Policy 2018

In the budget speech for 2018, the government announced the release of Defence Production Policy in 2018 budget speech. Consequent to this, a draft DPP 2018 was prepared which provided a focused, structured, and significant thrust to development of defence design and production capabilities in the country. The policy had the following goals and objectives:

- To create an environment that encourages a dynamic, robust, and competitive defence industry as an important part of the Make in India initiative.
- To facilitate faster absorption of technology and create a tiered defence industrial ecosystem in the country.
- To reduce current dependence on imports and to achieve self-reliance in development and manufacture of following weapon systems/platforms latest by 2025: fighter aircraft, medium lift and utility helicopters, warships, land combat vehicles, autonomous weapon systems, missile systems, gun systems, small arms, ammunition and explosives, surveillance systems, electronic warfare (EW) systems, communication systems and night fighting enablers.
- To achieve a turnover of ₹170,000 crore (€21.66 billion) in defence goods and services by 2025 involving additional investment of nearly ₹70,000 crore (€8.91 billion) creating employment for nearly 2–3 million people.
- To achieve export of ₹35,000 crore (€4.45 billion) in defence goods and services by 2025.
- To turn Indian into a global leader in cyberspace and AI technologies.

In order to foster a competitive, innovative, and robust defence industry, there needs to be focus on certain activities:

- **Ease of Doing Business**
  - Promote Ease of Doing Business by enabling start-ups and MSMEs

to participate in transparent and fair manner, without restrictions of turnover.

- To undertake 'Competency Mapping' of private defence industry including MSMEs, to establish their core competence/ability to absorb various technologies.
- To develop Technology Perspective Capability Roadmap (TPCR), to lists out the platform/weapon systems being considered for procurement in the next 10-year timeframe.
- The Simplified Make-II process of DPP 2016 to be streamlined to make it easier for industry to enter in defence production sector.

- **Licensing process**
  - Licensing process for defence industries to be liberalized. The list of items requiring licences will be reviewed and pruned. Except a small negative list, other items will be taken out of purview of licensing.
  - All applications for licences will be disposed of in 30 days. No-objection certificates (NOCs)/comments from all agencies must necessarily be received within two weeks.
  - Favourable consideration will be given to the track record of companies for purpose of renewal or additional licence.
- **FDI**

  FDI regime in defence will be further liberalized, FDI up to 74 per cent under automatic route will be allowed in niche technology areas.
- **Offsets**
  - New investment-linked avenues for discharge of offset obligations will be made available which will also enable certainty and quick discharge of offsets.
  - The end-to-end offset process will be made digital to ensure speedy, transparent, and efficient management of offset obligations.
  - An offsets ombudsman will be set up to resolve issues arising from claims of offset in a fair, speedy, and transparent manner.
  - Indian offset partners will be encouraged to take up export of parts and accessories developed as part of offset process.
- **Tax**

  Tax regime will be rationalized to make domestic manufacturing attractive by ensuring there is no tax inversion.
- **Vendor development and outsourcing**

  OFB and DPSUs will focus on system integration, design, and development, and will actively engage domestic vendors in the private sector for other assembly work.
- **Infrastructure development**

  Setting up of defence industry corridors and testing infrastructure.
- **Boosting OFB and the public sector**

  Government will support infusion of new technology/machineries in OFB/DPSUs to enable them to take up advanced manufacturing/development of futuristic weapons and equipment. DPSUs/OFBs will set up export offices in countries with such potential with the objective of promoting exports actively.
- **Export promotion**

  Defence Expo and Aero Expo will be positioned as major global events to showcase India's capabilities in defence manufacturing, as also to encourage exports.
- **Innovation and R&D**
  - While promoting the public sector-based R&D ecosystem developed through DRDO labs, efforts will be to create an active and healthy innovation and R&D ecosystem for defence technologies in partnership with the industry.

    - R&D capability mapping to be done to identify defence related technologies. This mapping will cover DRDO labs, other public sector laboratories, academic institutions and industry.
    - Support will be given for speedily indigenizing components/sub-assemblies from foreign OEMs, which are used for manufacture of final products under licenced production in the country.
    - Centres of Excellence with industry participation and with government support, will be set up in niche areas to enable development of frontier technology areas with active involvement of academia and R&D institutions.
- **Start-ups**
    - Start-ups will be involved in the technology development in aerospace and defence sectors.
    - A scheme entitled Innovation for Defence Excellence (iDeX) will be formulated which will set up defence innovation hubs throughout the country to provide necessary incubation and infrastructure support to the start-up in defence area.
    - Government to come up with appropriate policy for start-up in strategic areas to monetize the newly developed technologies.
- **Aerospace**
    - Department of Defence Production (DDP) to consult all stakeholders and explore possibility of a setting up an autonomous National Aeronautical Commission, in line with nuclear or space commissions.
    - Automotive component manufacturers and other similarly relevant industries will be encouraged, through appropriate skill development and technology upgradation initiatives, to transition to aerospace component design and manufacturing.
    - Financial and fiscal incentives will be provided for promoting Maintenance, Repair, and Overhaul (MRO) in aerospace sector.
    - Global majors will be encouraged to set up manufacturing capabilities of their platforms in India, both to cater to domestic needs and export from India.
- **Electronics and cyberspace**
    - To leverage India's strength in IT/software area and a programme to incentivize development of specific technologies relating to cyberspace will be formulated.
    - A task force involving experts from industry, academia, DRDO, and the government has been set up to chalk out the strategic roadmap for defence in the area of artificial intelligence and robotics has been set up recently. Necessary mechanism will be set up to implement the recommendations.
    - DDP, MoD will be the nodal department for implementation DPP 2018.
    - Awards and recognition are currently available for DPSUs and OFBs. DDP will institute similar awards and recognition for well-performing private industry and start-ups.
    - The Government e-Marketplace (GeM) will be used for those items, which are repeatedly required for needs of the forces and for which adequate supplier base exists
    - State governments will be encouraged to come up with state-specific aerospace and defence related policies to attract investment in this sector. Some states have already taken the initiative in this regard.

(a) ***Key impact***

The Draft DPP will promote domestic production by public sector, private sector, and MSMEs. It will create a defence industrial ecosystem that encourages a dynamic, robust

and competitive defence industry and will facilitate faster absorption of technology.

2. KEY ISSUES AND RECOMMENDATIONS

While many issues have already been addressed to varying degrees, there are some outstanding issues, especially on some aspects of policy and taxation that need to be addressed by the government so as to better achieve the goal of indigenization.

2.1 DPP

- Indigenous content (IC) in indigenously designed, developed, and manufactured (IDDM) & Buy (Indian) cases: The level of IC sought in IDDM & Buy (Indian) cases can possibly be met for low technology systems, but is very difficult to achieve for high technology systems, especially at the FET stage. IC at FET should be reduced to 30 per cent and progressively enhanced to 40/60 per cent at project completion.
- FET timeline: DPP specifies commencement of FET at around ten months from issue of RFP. For large and complex systems, especially those which are not available off the shelf and need India specific enhancements, this timeline is too optimistic. OEM's inputs given at request for information (RFI) stage should be seriously considered and realistic timelines should be provided for commencing FET.
- The numbers of RFIs being issued is increasing and often, these are re-issued several times. The depth and the complexity of information requested is far beyond a RFI and they are more in the nature of a RFP. This creates an unnecessary burden and costs on potential bidders. We, therefore, recommend:
    - Restrict RFIs to those that will reach RFP stage.
    - RFI to be limited to simple products information and in principle compliance matrix to Make in India initiatives and DPP obligations.
    - Disclose the Service Capital Acquisition Plan (SCAP) and Annual Acquisition Plan (AAP) to major defence players in order to partner more effectively with the Indian industry to address the requirements.

2.2 Strategic Partnership Model

- List of segments under strategic partnership (SP) model include fighter aircraft, helicopters, submarines, and armoured fighting vehicles (AFV)/main battle tanks (MBT). SP model aims to create a vibrant defence manufacturing ecosystem in the country through joint ventures between Indian corporates and global defence companies.
- The MoD, India has approved the SP guidelines for naval utility helicopters. MoD should approve SP guidelines for fighters, submarines and AFVs/MBTs. It will give an opportunity to global OEMs to collaborate with the potential strategic partners in India.

2.3 Flexibility Required in Offsets Regime

- DPP 2013 and 2016 are much more flexible than earlier versions: they allow a larger number of avenues for discharging offsets and also allow multipliers. However, these provisions are not retrospective and since most ongoing contracts are under the highly restrictive DPP 2008, there are numerous challenges in actually discharging offset obligations and claiming credit.
- Due to the limited timeframe provided to fulfil offset obligations, global OEMs have found lesser reasons to invest in more sustainable, advanced, and long-term engineering and manufacturing projects within India.

- Need to create a skilled workforce, for advanced manufacturing/in India by allowing skill development for discharging offset obligation.
- Though flexibility to change IOPs has been retrospectively allowed last year, it is still time consuming for OEMs to get approval for change of the IOP (it can take up to six months), in case an IOP is unable to fulfil its commitment. It becomes even more difficult if the new IOP proposed was not on the list of IOPs originally approved. This process leads to greater compliance costs and creates a difficult execution environment for discharge of offset contracts. OEMs feel that they should have more flexibility to change IOPs.
- The offset credit mechanism for banking of offset claims is currently not time bound and highly inefficient and non-transparent. There are very few banking proposals that have been approved.
- Currently, only tier-I sub-vendors on the main platform are permitted to discharge offsets to the extent of their workshare (by value) on behalf of the prime vendor, thereby restricting its scope. Tier-II and tier-III sub-vendors are currently not permitted to discharge the offset obligations on behalf of OEMs.
- Group companies, sister concerns, and subsidiaries are not permitted to discharge offset obligations on behalf of the OEM without their being the part of the supply chain of the main platform/equipment being bought.
- Due to the limited timeframe provided to fulfil offset obligations, global OEMs have little incentive to invest in more sustainable, advanced, and long-term engineering and manufacturing projects within India. Flexibility in performance period will enable a more transparent and controlled programme management by the OEM. Hence, a further extension in the period of performance will encourage more complex collaboration in defence manufacturing and development.
- The offset policy is complex and requires further simplification in the implementation stage as the documents to be submitted to MoD are voluminous, without any scope of e-filing.
- Indian industry is not fully capable of furnishing the requisite raw materials for manufacture of high quality defence products, hence finds it difficult to support OEMs in meeting value addition requirements.
- The MoD may consider the introduction of a web-based platform for effective offsets management. The platform should be accessible by the MoD, OEMs, and IOPs to manage and track offsets projects to ensure that the commitments are met.
- OEMs have been facing challenges in transfer of technology (ToT) to DRDO on account of lack of laid down methodology for valuation of such ToT. Technology transfer or technology acquisition (TA) to DRDO are permissible methods for discharge of offsets. However, OEMs face challenges on two counts:
    - Many OEMs have found it difficult to reach an agreed position with DRDO on value of technology (IPR) proposed to be transferred, primarily due to absence of established methodology for valuation of technology.
    - Such TA by DRDO is restricted to only 30 per cent of value of offsets to be discharged. However, the actual value of technology proposed to be transferred far exceeds the 30 per cent threshold and any excess value due to this activity cannot be banked under the current provisions.

2.4 SCOMET – Practical Issues and Concerns in Filing Application with Ministry of Defence

The Directorate General of Foreign Trade (DGFT) vide public notice No.4/2015-20 dated

24 April 2017 has notified that the licensing authority for items covered in Category 6 in Appendix 3 to Schedule 2 of ITC(HS) is 'Department of Defence Production (DDP)'. Accordingly, export of items in Category 6 is governed by the standard operating procedure (SOP) issued by the DDP in the MoD. The SOP has been recently amended on 1 November 2018. The licensing authority for export of other items (i.e. other than Category 6, with few exceptions) will be Directorate General of Foreign Trade (DGFT).

The practical issues and concerns relating to filing application (under Category 6) with DDP are summarized below:

i. Licence is issued for confirmed purchase orders (POs) and not against Forecasted orders
   - In terms of the existing SOP, application for SCOMET licence is to be filed based on confirmed purchase orders. Accordingly, SCOMET licence(s) are not issued for forecasted/projected/contracted orders even if the same are certified by customers.
   - In large organizations this will pose challenges where customers issue monthly, quarterly, half yearly POs. In such cases, application for SCOMET licence will have to be filed monthly/quarterly/half-yearly depending on the frequency of POs leading to filing of multiple applications which involves additional time, effort and cost.
   - In this regard, it is requested to allow filing of application based on forecasted orders, provided the same is covered by end-user certificate issued by the customer. This will avoid filing of multiple applications.

ii. Guidance note on the items covered under SCOMET list:
   - The SCOMET list of items covered under various categories is not linked with the ITC-HSN code. Hence, it is very difficult for any company to freeze the relevant applicable category for making an application, besides other challenges relating to analysing whether products exported fall under the SCOMET list of items.
   - It is requested to provide a guidance note/write-up explaining the description of items specified in SCOMET list. This will guide the industry to make proper selection of the applicable category.

iii. E-filing of application along with all the enclosures:
   - Currently, the online application is to be filed on the website www.ddpmod.gov.in followed by submission of hard copies of all the documents. It is requested to make provision for uploading all the documents in the online module itself. The submission of hard copies may be stopped.
   - Alternatively, one common online platform may be provided for all the categories of items.

iv. Ease of operating the online module for filing the application:
   - The facility of uploading data in excel format is not available.
   - All data must be manually entered into the system which consumes considerable time and effort. Additionally, the server is not capable of taking substantial data at one time. Many technical issues are encountered at the time of making online application (such as frequent log-outs from the system, delay in saving the data, etc.). These issues needs to be addressed.

v. Standardization of procedure(s) in line with DGFT procedures:
   - The procedure prescribed by DGFT and MoD are not consistent and vary.
   - A standard procedure for all categories of items (whether covered under DGFT or under MoD purview) will help the industry follow a single unified

procedure instead of following two different procedures.

vi. Format and details to be captured in end user certificate (EUC):
    - EUC is a critical document for obtaining SCOMET licence.
    - The format of EUC prescribed by MoD differs with that of DGFT. It is requested to have uniformity in the format of EUC.
    - In few cases (such as Part-A: Export of munitions list items as in Appendix II), the EUC is required to be signed and stamped by the government of end user/ultimate end user country/ state which could be a difficult task. It is requested to relax this condition of obtaining signature from the government of end-user.

vii. Selection of more than one sub-category in the online application:
    - We understand that, there is no provision to select more than one sub-category in the online application module. This leads to filing of fresh application. It is requested to allow selection of multiple sub-categories covered under a single category in the online application module.

2.5 FDI

- FDI in defence of up to 74 per cent under automatic route should be permitted unconditionally.
- Additionally, the criteria for approving 100 per cent FDI should be made quantitative and measurable. Foreign OEMs in the proceedings for transfer of technology involving intellectual property (for example, high-tech jet engine systems), find the 49 per cent cap inadequate.

2.6 Taxation Regime

- The Indian tax regime is fairly complicated. While finalizing bids, OEMs need to consider multiple taxes likely to be applicable through the supply chain such as custom duty, GST, etc. Such taxes are not entirely creditable or capable of being passed on to MoD, leading to higher bid prices due to cascading effect and distortions in bid pricing due to tax reasons.

2.6.1 Direct tax

- From a direct tax standpoint, whilst royalties/fees for technical services earned by non-residents from notified defence projects entered into with the government of India are exempt from tax in India, similar exemptions are presently not available for defence contracts executed with DPSUs acting on behalf of the MoD/Government of India. Further, notification in the official gazette as required for availing of the tax exemption is presently a time-consuming process.
- Further, at times, the foreign company may receive income which could be other than royalties or fees for technical services, e.g. income from onshore supplies in connection with engineering, procurement, and construction (EPC) contracts involving both offshore and onshore elements, which as per the current provisions, may not eligible for tax exemption.
- Foreign defence entities desirous of establishing a presence in India generally set up a liaison office for identifying opportunities, developing relationships with potential customers and providing administrative support. Indian revenue authorities have been quite aggressive in alleging/assessing such liaisons and support offices as permanent establishments (PEs) of non-resident OEMs/contractors in India. This has often led to frivolous tax demands and more frequent long-drawn tax disputes.
- The Income Tax Act, 1961 provides for a deduction on any expenditure of a capital nature incurred wholly and exclusively for the purposes of any specified business carried on during the year. The Act also provides for 100 per cent deduction of

profits and gains to the persons engaged in the eligible business. The licenced manufacture and production of defence and aerospace equipment and parts thereof are not specifically included in specified business.

2.6.2 Indirect tax

- The government is looking to provide a level playing field to Indian private companies so as to incentivize domestic value addition and improve cost competitiveness of Indian companies. In this spirit, custom duty exemptions in relation to supplies to the MoD which were withdrawn earlier have been reserved status quo.
- Presently there is no GST exemption on MRO services of an aircraft undertaken in India. However, GST does not apply on MRO services undertaken outside India. Taxing of MRO services in India has resulted in increased cost for Indian private companies.
- Petroleum products (including ATF – aviation turbine fuel) have been kept outside the ambit of GST. ATF in India is 55–60 per cent costlier than the Gulf and Asian region.
- Presently, there is no exemption from levy of customs duty, GST in respect of supplies made under a defence project (except for training programmes where the entire expenditure is borne by the government). This leads to increase in overall cost of the procurements by the MoD and DPSUs. Several representations have been filed with the GST council for grant of exemption.

2.7 Key Recommendations

2.7.1 Regulatory

- Group companies or subsidiaries and tier 2-4 sub-vendors of foreign OEMs should be allowed to discharge offset obligations on the behalf of respective OEMs, without any pre-defined restrictions – by value of work share.
- Defence Offset Management Wing (DOMW) should be better empowered to take quick decisions.
- Flexibility in performance period will enable a more transparent and controlled programme management by the OEM offset obligor. Hence, a further extension in the period of performance will encourage more complex collaboration in defence manufacturing and development.
- The period of offset discharge has been fixed at the period of supply of the main equipment plus two years as per the DPP. OEMs believe that it should be determined on basis the mutual negotiations between MoD and OEM taking into account various factors such as contract type, period of implementation, time taken for IOP to build capabilities and meet quality requirements.
- Instead of committing fixed dollar/ percentage amounts to IOPs at the time of offset proposal submission, a more flexible approach that permits global OEMs to define offset amounts to be allocated to each IOP over the course of the programme may be adopted. This continuous feedback model will enable greater and more robust IOP engagement and will better benefit India’s industry across large, medium, and small-scale enterprise.
- The offset credit mechanism for banking of offset claims should be time bound and efficient and there should be a prescribed time limit for the DOMW for replying to questions.
- The MoD should expand the list of eligible services for discharge of offset obligations, to include assembly, integration and testing services; setting up testing infrastructure; undertaking skill development projects in India.
- In addition to the avenues for discharge of offset obligations mentioned, some additional avenues for discharge of offset obligations such as investment in specified projects along with mode of discharge.
- A pragmatic definition of ‘Value addition

in India' should be considered. It is recommended that the minimum value demanded from the Indian vendor in Buy (Global) category be the reference point for granting full offset credit to the foreign OEM, i.e. where value addition of 30 per cent is achieved, full offset credits should be granted against such products.

- A well-defined valuation methodology based on global standards may be laid down in the DPP for the cases involving TA to DRDO. Moreover, in case the value of technology proposed to be transferred exceeds the 30 per cent threshold, any excess value should be permitted to be banked.
- Provision for online filling of quarterly progress reports (QPRs).
- New investment linked avenues for discharge of offset obligations, which enable certainty and quick discharge of offsets is an excellent initiative.
- Avenues for discharge of offset obligations as per latest DPP should be applied retrospectively to programmes for which contracts have not been signed yet.
- Approved banked credits up to the date of contract signature should be allowed to be used towards discharge of offset obligation even though such credits were not part of initial offset proposal.
- 20 per cent limit of offset discharge through engineering, design, and development and software development should be enhanced.
- Valuation of ToT to industry: Offset credit for ToT to industry is only 10 per cent of buy back value. Therefore, presently only low level technology is generally given to industry via the offset route. Policy of offset credit for ToT to industry should be similar to TA by DRDO. An independent body should evaluate the ToT and offset credit given for full value with multipliers.

2.7.2 Direct tax

- Clarity is to be provided on the availability of tax exemption on royalties/fees for technical services contracts by non-residents (foreign OEMs) with DPSUs. Procedural delays in providing such tax exemptions may be looked into. In order to promote domestic manufacturing, such exemptions may also be extended to private companies as well.
- It is recommended that the provision of section 10(6C) be suitably amended to extend the exemption to other incomes which the foreign company may derive from the project in connection with security of India.
- Necessary guidelines should be issued to reduce tax litigation in cases where a PE of the non-resident has been alleged. This shall ensure certainty in tax outcome, thereby encouraging investment.
- In order to encourage the Make in India initiative and investments in the defence sector, it is recommended to extend capital expenditure deduction provided under section 35AD or deduction of profits from eligible business provided under Section 80-IB of the Act to the manufacture and production of defence and aerospace equipment and parts thereof.

2.7.3 Indirect tax

- With the withdrawal of exemptions, the cost of project has increased significantly. MoD should work with the Ministry of Finance to reinstate the exemptions and develop sector specific taxation heads which will not only help streamline defence purchases, but also improve costing estimates of products. MoD, being the sole buyer of defence products in India, will gain immensely if it can provide tax break to the suppliers.
- To improve cost competitiveness, GST exemption should be extended to MRO services undertaken in India.
- The cascading effect of ATF taxes have brought ruin to the A&D sector. To achieve cost efficiency ATF should be brought under the GST regime with a uniform rate across India.

Notes

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EXECUTIVE SUMMARY

The world over, non-banking financial entities complement the mainstream banking system in the process of financial intermediation. The shadow banking sector in India primarily includes non-banking financial companies (NBFCs) and collective investment vehicles such as money market funds, fixed income funds, real estate funds, and securitization-based credit intermediation like securitization vehicles and structured finance vehicles. Mutual funds, alternative investment funds and insurance companies also mobilize huge sums of money and support the investment flow of funds. India's financial system saw huge turmoil last year, especially due to non-performing assets (NPAs)/stressed assets of the public sector banks and the liquidity crisis of the NBFCs. The transition of credit intermediation from the banking sector to the non-banking sector, though welcome, calls for increased monitoring and prudential regulation.

The efficiency and competitiveness of the banking sector is likely to increase with entry of differentiated banks, posing some transitional challenges to the universal banks. The mutual funds market is expanding beyond the top 15 cities. Various initiatives by regulators to develop the corporate bond markets seem to be bearing fruit as reflected in increased issuance and turnover in the secondary market. Concerns arising from frauds and cyber-attacks remain elevated with the recent global ransomware attacks. Various responses by the regulators in this regard include setting up of an Inter-disciplinary Standing Committee on Cyber Security by the Reserve Bank of India (RBI).

The government seems to be committed to its target of increasing the inclusion of every household in the financial system so that the masses can get all the legitimate benefits arising out of the growth of the country and in turn, the funds mobilized from the people could also be brought in the formal channel thereby giving the economy of the country an extra thrust to lead the path of growth.

The advancements whether in the form of digitization or regulations result in expectations by European companies for further improvement by the Government of India to strengthen the financial sector. The European Business Group (EBG), through this paper and on behalf of European companies have highlighted issues and suggested recommendations so that the real issues are discussed and addressed in the right forum.

While the government initiatives are helping to move towards globalization and creating opportunities for becoming a developed nation—with focus on investment in infrastructure growth, education and healthcare schemes, finance, tax, and governance reforms promoting digital economy with incentives and rewards—it is imperative that the issues and recommendations mentioned in this paper are also discussed appropriately for inclusive growth.

1. INTRODUCTION

Macroeconomic developments in the year 2018 have been marked by swings. There was tremendous volatility in the capital markets due to multiple factors like frauds, defaults in repayments, liquidity risks, among others, impacting banks, NBFCs, mutual funds, etc. At the same time, 2018 was a remarkable implementation year in many ways as certain major reforms like goods and services tax (GST), the Real Estate (Regulation and Development) Act (RERA) and the Indian Bankruptcy Code (IBC) started showing its impact.

The World Bank released its latest Doing Business Report (DBR, 2019) in October 2018. India has recorded a jump of 23 positions against its rank of 100 in 2017 to be placed now at 77 rank among 190 countries assessed by the World Bank. India's leap of 23 ranks in the Ease of Doing Business ranking is significant considering that last year India had improved its rank by 30 places, a rare feat for any large and diverse country of the size of India. As a result of continued efforts by the government, India has improved its rank by 53 positions in the last two years and 65 positions in the last four years[1]. India is likely to grow at consistently higher rates (>7%) and retain its position as one of the fastest-growing economies until 2020[2].

India has a diversified financial sector expanding rapidly with the increase in demand for financial services and NBFCs have continuously played a critical role in encouraging growth of the Indian economy and have made commendable contribution towards the government's agenda of financial inclusion. They have been successful in filling the gap in offering credit to retail customers in underserved and unbanked areas by extending unsecured loans to first time borrowers. NBFCs' contribution and future potential in financing micro, small, and medium enterprises (MSMEs) has been duly recognized by the government as well.

It is a tough phase for the banking sector since the demand for banking services has increased following demonetization and it is hoped that the NBFC's will be able to ease the pressure on the mainstream banking system. The growth of technology has caused disruption in the financial system. The greater resilience and adaptability, coupled with some 'out of the box' thinking, have put the NBFC sector in a bright spot. This has resulted in a very welcome scenario where leading global financial institutions like the World Bank and investment funds (including pension funds) are also increasingly engaging and investing in the sector.

India has a diversified financial sector undergoing rapid expansion, both in terms of strong growth of existing financial services firms and new entities entering the market. The sector comprises commercial banks, insurance companies, NBFCs, co-operatives, pension funds, mutual funds, and other smaller financial entities. The banking regulator has allowed new entities such as payments banks to be created recently thereby adding to the types of entities operating in the sector. Outside the conventional banking mechanism, the country's financial services sector consists of the capital markets, insurance sector, mutual funds, and NBFCs.

The RBI has over the years encouraged greater use of electronic payments so as to achieve a 'less-cash' society. The objective has been to provide a payment system that combines the attributes of safety, security, and enhanced convenience and accessibility, leveraging technological solutions that enable faster processing. Affordability, interoperability, and customer awareness and protection have also been other focus areas. Banks have been the traditional gateway to payment services. However, with the fast pace of technological changes, this domain is no longer the monopoly of banks. Non-bank entities are cooperating as well as competing with banks, either as technology service providers to banks or by directly providing retail electronic payment services. The regulatory framework has also encouraged this enhanced participation of non-bank entities in the payments domain.

In recent years, a focused effort has been made to develop state-of-the-art national payments infrastructure and technology platforms, be it Immediate Payments Service (IMPS), Unified Payments Interface (UPI), Bharat Interface for Money (BHIM), Bharat Bill Pay System (BBPS), or Aadhaar-enabled Payment System (AePS). This has changed the retail payments scenario of the country. The total volume of retail electronic payments witnessed about nine-fold increase over the last five years.

Developments in the spheres of banking technology and trade finance have been commendable as well. Alternative models of lending and capital raising are coming up and have the potential to change the market dynamics of traditional lenders and the role of traditional intermediaries. Crowd-funding, which entails raising external finance from a large group of investors, is at a very nascent stage in India. The peer-to-peer (P2P) lending for which RBI has issued Master Direction in October 2017 has the potential to improve access to finance for small and medium enterprises. Eleven entities have been licenced to operate P2P platform. The RBI has also granted licences and permitted seven purely digital loan companies (NBFCs) to commence operations.

1.1 Market Description

1.1.1 NBFCs refers to financial intermediaries which offer various services that include equipment leasing, hire purchase, loans, investments, and chit fund activities. These entities play a vital role in offering credit to the unorganized sector and to the small borrowers at the local level.

NBFCs are categorized into two types on the basis of their liability structure: deposit-taking NBFCs (NBFCs-D) and non-deposit taking NBFCs (NBFCs-ND). At the end of September 2018, the number of NBFCs registered with the RBI declined to 10,190 from 11,522 as at March 2017[3].

1.1.2 India's share of world insurance market has grown to 2 per cent from 1.68 per cent. India climbs up two places to secure the 11th position in the global insurance market in terms of premium volume. In FY18, insurance industry grew at almost 12 per cent almost double the growth of the Indian economy which stood at 6.7 per cent[4].

The domestic insurance industry appears to be very vibrant. Government's policy of insuring the uninsured has gradually pushed insurance penetration in the country and proliferation of insurance schemes. India with 3.69 per cent penetration rate in 2017 in the insurance sector offers greater penetration potential when compared to global average of 6.2 per cent.

The future looks promising for the life insurance industry with several changes in regulatory framework which will lead to further change in the way the industry conducts its business and engages with its customers. Demographic factors such as growing middle class, young insurable population and growing awareness of the need for protection and retirement planning is expected to support the growth of Indian life insurance by 11 and general insurance by 15 per cent.

1.1.3 The Assets under Management (AuM) industry in India is among the fastest growing in the world. The AuM of the Indian microfinance industry has grown from ₹4.17 trillion (€53.13 billion) as on 31 March 2009 to ₹23.80 trillion (€303.35 billion) as on 31 March 2019, more than 5½ fold increase in a span of 10 years[5].

1.1.4 The number of listed companies on NSE and BSE increased from 6,445 in FY10 to 7,286 in December 2018. Indian stock markets, S&P Sensex and Nifty 50, rose 10–11 per cent in FY18. The number of companies listed on the NSE rose from 135 in 1995 to 1,923 by the end of December 2018. India has scored a perfect 10 in protecting shareholders' rights on the back of reforms implemented by the Securities and Exchange Board of India (SEBI) in World Bank's Ease of Doing Business 2018 report.

1.2 Recent Developments

1.2.1 NBFC default

During 2018, India's NBFC sector was roiled by a series of defaults by the Infrastructure

Leasing & Financial Services (IL&FS) group of companies. The IL&FS group defaulted on commercial paper (CP), which is an unsecured money market instrument issued in the form of a promissory note with a maximum validity of one year. Several corporates, mutual funds, and insurance companies have invested in CPs and non-convertible debentures (NCD) of the IL&FS group, and there is fear that in the wake of the default, their funds could be locked in IL&FS debt instruments, leading to a liquidity crunch. The situation has created a liquidity shortage of close to ₹1 lakh crore (€12.74 billion) in the system, and fears have intensified that the funding cost for NBFCs will zoom, and result in a sharp deterioration of their margins.

In the first half of 2018, the RBI proactively cancelled licence of 368 NBFC lenders, deeming them economically non-viable for failing to meet the requirement of net owned fund (NOF) of ₹2 crore (€254,835). This is more than double the number of cancellations in entire 2017. Recently, in the wake of the IL&FS crisis, news reports also indicate that the RBI may embark on a further clean-up of the sector, and resort to cancellation of NBFC licences and making it difficult for new entities to obtain NBFC licences[6].

1.2.2 NBFC liquidity crisis

Based on the risks of a few NBFC defaults, banks and mutual funds slowed down on further lending to NBFCs and recalled money which led to asset liability mismatch of NBFCs and further added to liquidity crisis. On the other hand, when the interest rates were rising, margins of NBFCs came under pressure and raising capital became tough. Anticipating further risks, banks and mutual funds started cutting exposure to NBFCs since April 2018 in the wake of the huge bad loans, which led to a drop in their exposure to the sector. This also created a ripple effect in capital markets as all NBFCs including housing finance companies (HFCs) started feeling the heat from investors. This also raised questions on few NBFCs having exposure to real estate and developers as the risk of default increased.

1.2.3 Liquidity measures by the RBI for NBFCs

a. In order to address liquidity issues for NBFCs, the RBI in last quarter of 2018 activated additional funding lines for NBFCs, including HFCs, by temporarily relaxing regulatory prescriptions so that banks can take higher exposure to them and also draw more liquidity under the 'liquidity coverage ratio'.

The twin moves could encourage banks to lend more to NBFCs. They are probably aimed at ensuring that NBFCs don't face any liquidity constraints in the wake of debt defaults by IL&FS and some of its arms and stem any spill over of the high real estate exposure of a few HFCs to other NBFCs. The RBI also upped the single-borrower exposure limit for NBFCs that do not finance infrastructure, from 10 per cent to 15 per cent of capital funds, up to 31 December. This relaxation enabled banks to temporarily take a higher loan exposure to NBFCs[7].

b. Co-origination of priority sector loans by banks and NBFCs: The RBI in September 2018 announced guidelines for co-origination of priority sector loans by banks and NBFCs with a view to enhancing flow of funds to the sector at competitive rates. As per the norms issued by the RBI for all scheduled commercial banks (excluding regional rural banks and small finance banks) and non-banking financial companies–non-deposit taking–systemically important (NBFC–ND–SIs), the sharing of risks and rewards between these entities should be in a manner that enables appropriate alignment of respective business objectives, as per their mutual agreement. The co-origination arrangement should entail joint contribution of credit by both lenders at the facility level.

NBFC-MFIs and mid-sized NBFCs focusing on the MSME segment are expected to be the key beneficiaries given their focus on customer segments which qualify for priority sector classification.

1.2.4 Increasing mergers and acquisitions and investment activities

There has been multiple mergers and acquisitions (M&A) deals in the financial

services sector which attracts attention. This demonstrates that the entire financial services sector is going through a consolidation phase. Few major deals to note were:

- The merger of three companies namely National Insurance Co. Ltd, United India Insurance Co. Ltd. and Oriental Insurance Co. Ltd.
- The merger of Vijaya Bank and Dena Bank with Bank of Baroda.
- The merger of Bharat Financial Inclusion Ltd with IndusInd Bank.
- The merger of Capital First with IDFC Bank.
- The merger proposal of Indiabulls Housing Finance Ltd with Lakshmi Vilas Bank, etc.
- Acquisition of government stake in Rural Electrification Corporation by Power Finance Corporation.

1.2.5 Insurance sector, growing market share of private players, and innovation

Over the years, share of private sector in life insurance segment has grown from around 2 per cent in FY03 to 31.8 per cent in FY19 (up to September 2018). In the non-life insurance segment, share of private sector increased to 46.6 per cent in FY18 from 14.5 per cent in FY04. To meet ever-increasing consumer demands, both life and non-life insurance companies have come up with new innovative products such as Unit Linked Insurance Plans, Cyber Insurance Policies, etc. New distribution channels like bancassurance, online distribution and NBFCs have widened their reach which has reduced costs[8].

1.2.6 In March 2018, the Indian government introduced the Fugitive Economic Offenders Bill 2018 to address the issue of such economic offenders avoiding criminal prosecution. The Bill defines a ‘fugitive economic offender’ as any individual against whom a warrant for arrest in relation to economic offences has been issued and who has left India to avoid criminal prosecution, or being abroad, refuses to return to India to face criminal prosecution.

1.2.7 The government has also proposed amendments in the Prevention of Money Laundering Act 2002 through the Finance Act 2018. The Act imposes an obligation on banking companies, financial institutions and intermediaries to verify the identity of clients, maintain records, and furnish information in a prescribed form to the concerned authorities under the Act. The Act is being amended to make it more effective and to reduce problems found by the concerned authorities while prosecuting cases under the Act.

1.2.8 In July 2018, SEBI issued Guidelines on Anti-Money Laundering and Combating the Financing of Terrorism Standards applicable to intermediaries registered under Section 12 of SEBI Act. The guidelines relate to the following: Policies and procedures to combat money laundering and terrorist financing, Client Due Diligence Procedures (CDD), record-keeping, retention of records, procedure for freezing of funds, financial assets or economic resources or related services, Reporting to Financial Intelligence Unit–India.

2. KEY TRENDS IN FINANCIAL SERVICES

NBFCs have been complementing banks as financial intermediaries by leveraging on their efficient and nimble operations and tailor-made products for niche areas. The need to strengthen their regulation and supervision has come to the fore in view of their rapid expansion in recent years. The RBI has been striving to harmonize regulatory requirements of various classes of NBFCs while putting in place specific policy measures for particular classes of NBFCs such as core investment companies and legacy NBFCs as needed.

2.1 Government-owned NBFCs

In 2017–18, the RBI aligned the regulatory requirements of government-owned NBFCs with those of privately-owned NBFCs. Government-owned NBFCs will have to adhere to all regulations on income recognition, provisioning norms, corporate governance, conduct of business regulations, deposit

directions and reserve funds by 31 March 2019. Asset classification norms have to be complied by 31 March 2020 and capital adequacy, leverage, exposure norms, and statutory provisions are to be phased in progressively by 31 March 2022[9].

2.2 Core Investment Companies

Core investment companies (CIC) registered as NBFCs primarily invest in group companies and do not carry out any other NBFC activity. They are required to invest up to 90 per cent of their net assets in equity shares, preference shares, bonds, debentures, debt or loans of group companies, while equity investments in group companies must constitute at least 60 per cent of net assets. In order to promote infrastructure development through investment in Infrastructure Investment Trusts (InvITs), core investment companies registered with the RBI as NBFCs were allowed to act as sponsors to InvIT issuances and to reckon holdings of InvIT units as part of the sub-limit of 60 per cent for equity investments in group companies. Exposures of core investment companies to InvITs are limited to their holdings as sponsors[10].

2.3 Consumer Protection – Ombudsman Scheme

The banking ombudsman scheme is a cost-free apex mechanism for expeditious resolution of complaints of bank consumers. On similar lines, the ombudsman scheme for NBFCs was launched by the RBI under Section 45L of the Reserve Bank of India Act, 1934 with effect from 23 February 2018. To begin with, it has been operationalized for all deposit-taking NBFCs (NBFCs-D). Offices of the NBFC Ombudsman have started functioning from Chennai, Kolkata, Mumbai, and New Delhi. Additionally, as the digital mode of financial transactions gain traction in the country, a dedicated ombudsman scheme for digital transactions will be implemented going forward[11].

2.4 Emergence of New-age Digital Lenders

The emergence of new-age digital lenders has further intensified the competition for NBFCs in the market. Primarily called FinTech companies, these digital lenders are attempting to gain a share of the lucrative opportunity in the Indian lending market through their mastery of data and technology. These start-ups conduct off-balance sheet and on-balance sheet lending, powered by innovative processes to deliver a captivating customer experience, quick turnaround time, reduced fees and increased transparency. The threat posed by such lenders is seen in the form of an estimated market share of nearly ₹70 trillion (€891.92 billion) over the next five years[12].

2.5 Embrace a New Attitude to Winning Over the Customer

'Customer is king' has never been truer than it is today. With lenders incorporating technology advances to penetrate underserved markets and differentiate in mature markets, customer expectations have evolved. The proliferation of new entrants with differentiated business models to serve customers is also increasing pressure on existing, incumbent NBFCs to increase customer focus. Customers now demand seamless, personalized, 24X7 interaction across multiple touch-points, customized to their needs. This will require NBFCs to embrace techniques to derive customer insight, such as customer personas and journey maps, enhance their understanding of customer behaviour and subsequently drive-up meaningful outcome.

Winning the customer experience race will require much more than just technology; it also mandates a new attitude to winning the customer. The world over, financial services are experiencing a moment of disruption. Multiple smaller players are working on specific problems in the life insurance value chain—from customer on-boarding and financial planning to customer servicing. These are driving the incumbents to change their conventional way

of thinking. These challengers have seen benefit in collaborating with the incumbents rather than trying to upend the business.

2.6 Know Your Customer – Moving from Segmentation to Micro-segmentation

Personalization of content has become ever important, especially in a time when customers are bombarded with a plethora of emails and SMS. Statistics show that more than 91 per cent of people unsubscribe to email communications, 44 per cent of direct emails go unopened and 60 per cent opt out of mobile notifications[13]. The primary cause of this remains a glut of unrelated and irrelevant messages, which turn off the customer's interest. When flooded with choice, customers focus only on those products or services that are most relevant to them. NBFCs must adopt a micro-segmentation approach in finding smaller sets of people to whom a specific product, service or a feature of a product could be vital. By incorporating marketing analytics, NBFCs can rapidly, dynamically, at massive scale, mine huge amounts of data, encompassing customer transactions, demographics and interactions as well as with data from external sources. In addition to identifying lucrative micro-segments and probability of purchase, NBFCs will be able to communicate effectively with customers and price loan products better to minimize customer drop-outs. Over time, such tools will also help NBFCs capitalize on opportunities for up-sell, cross-sell and re-sell, thereby, boosting the customer lifetime value.

2.7 Interim Union Budget 2019[14]

The Interim Union Budget for 2019 was presented to the parliament on 1 February 2019 as the General Elections was scheduled in April–May 2019. The Interim Budget aimed to provide benefits to the middle-class tax payers, especially the salary earners, pensioners and senior citizens. Few key features of the Interim Budget are:

a. Personal taxes

While there are no changes proposed in personal income tax rates and slabs, the government has made certain key proposals to provide relief to small taxpayers, especially to middle class and salaried earners in the form of:

- Rebate on tax for total income of up to ₹500,000 (€6,370) for individuals.
- Increase in standard deduction from ₹40,000 (€509) to ₹50,000 (€637) for salaried employees.
- Relief for owners of more than one house; second self-occupied house not to be subject to tax on deeming/notional basis; aggregate deduction of interest on home loan for self-occupied properties retained at ₹200,000 (€2,548).
- Prescribed monetary threshold for deduction of tax on interest from bank or Post Office deposits increased from ₹10,000 (€127) to ₹40,000 (€509).
- Proportionate exemption on long-term capital gains arising from proceeds of sale of residential house extended to purchase of two residential houses from one house, subject to:
  - Amount of capital gain not exceeding ₹2 crore (€254,835) [no monetary threshold continues for investment in one residential house].
  - One-time opportunity to claim such exemption.

b. Corporate taxes

- Domestic companies with a turnover not exceeding ₹250 crore (€31.85 million) during FY 2016–17 continue to enjoy a reduced tax rate of 25 per cent (increased by applicable surcharge and cess). The base year for this reduced tax rate is proposed to be extended to domestic companies with turnover not exceeding ₹250 crore (€31.85 million) for FY 2017–18.
- The provisions relating to tax deducted at source (TDS) on rental payments provide for a monetary threshold of ₹1.8

lakh (€2,293). This threshold has been enhanced to ₹2.4 lakh (€3,058).

- Certain key amendments have been proposed in the Interim Budget to provide relief and give impetus to the real estate sector, including the affordable housing market:
    - The provisions were introduced vide Finance Act 2017 to tax notional income on rentals from property held as stock-in-trade for a period beyond one year from the end of the financial year in which the certificate of completion of property was obtained. This period of holding is proposed to be increased to two years.
    - Under the present provisions, deduction on profits is available to developers who are engaged in developing and building affordable housing projects. One of the conditions, i.e. the time taken to seek approval for a project from the competent authority, is proposed to be extended to 31 March 2020.
    - The Government envisages a push towards technology-intensive tax assessments and return processing within the next two years. This is directed towards eliminating personal interface and bringing transparency.

c. Stamp Duty

The proposed amendments in stamp duty provisions are largely aimed at rationalizing the various stamp duty provisions as well as streamlining the stamp duty collection mechanism. It is intended to designate stock exchanges and depositories to collect stamp duty on sale or transfer of securities. Such collection will be transferred to the respective state government within the prescribed time. The amendments also propose changes to the rates of duties. It also appears that exemption of stamp duty on transfer of dematerialized shares is proposed to be done away with.

d. In summary

The thrust of this Budget was on social infrastructure, ease of living and technology led governance aimed at inclusive and equitable growth. The salaried class with taxable income of up to ₹5 lakh (€6,370.88) will have higher disposable incomes. Direct Benefit Transfer to farmers will support rural demand. The Pradhan Mantri Shram-Yogi Maandhan Yojana will provide social security to a large number of marginal wage earners in the country. The real estate sector will see more activity and the allied sectors of steel and cement will get a boost. The government's vision to create a tech-enabled tax system is a welcome initiative. In all, this Budget has set the tone for considerable future discourse.

3. ISSUES AND RECOMMENDATIONS

3.1 Prudential Ceilings for Exposure of Banks to NBFCs

NBFCs face a higher cost of borrowings which is eventually passed on to their borrowers in the form of higher interest on loans. It increases delinquencies and reduces profit margin which affects their credit rating with the banks in turn. It becomes a vicious circle as with a low credit rating, cost of funds goes up further.

The exposure (both lending and investment, including off balance sheet exposures) of a bank to a single NBFC/NBFC-AFC (Asset Financing Companies), which is not predominantly engaged in lending against collateral of gold jewellery, should not exceed 10 per cent/15 per cent respectively, of the bank's capital funds as per its last audited balance sheet.

Banks may, however, assume exposures on such a single NBFC/NBFC-AFC up to 15 per cent/20 per cent respectively of their capital funds provided the exposure in excess of 10 per cent/15 per cent respectively, is on account of funds on-lent by the NBFC/NBFC-AFC to the infrastructure sector.

Further, exposure of a bank to the NBFCs-IFCs (Infrastructure Finance Companies) should not exceed 15 per cent of its capital funds as per its last audited balance sheet, with a provision to increase it to 20 per cent if the same is on account of funds on-lent by the IFCs to the infrastructure sector[15].

To ease the fund-raising problem arising due to recent liquidity crisis, the RBI in Q4 2018 increased the single borrower exposure limit for NBFCs which do not finance infrastructure from 10 per cent to 15 per cent of capital funds, up to a limited period of 31 December 2018. Besides, on 2 November 2018, the RBI permitted banks to grant partial credit enhancement to bonds issued by non-deposit taking systemically important NBFCs (NBFCs-ND-SI) and HFCs registered with National Housing Bank (NHB) to improve their credit ratings and access to the bond market. While the move was welcome whole heartedly, but it benefitted for a limited time frame and eventually assisted limited sub-sectors within NBFC.

EBG recommends that schemes like these could be opened up for a larger period and serve wider sectors. Such a policy change could potentially encourage banks increase their lending to NBFCs. Further, the reduction of cost of funds, and expected boost in consumption on account of projected low inflation, could bring stability to the NBFC sector, particularly those that cater to the mass market.

3.2 Participation in Priority Sector Lending

India's approach to financial inclusion has been multi-pronged. One of its major corner-stones is the presence of stipulations on priority sector lending (PSL) by the commercial banks. For this purpose, priority sector includes the following categories, viz., agriculture; micro, small and medium enterprises; export credit; education; housing; social infrastructure; renewable energy; and others (like weaker section of the community). Indian commercial banks are required to lend 40 per cent of their credit to the priority sector. Even banks with 20 branches and above also have to achieve the 40 per cent total within a maximum period of five years over April 2013–March 2018 as per the action plans submitted by them and approved by RBI. However, NBFCs have been kept out of PSL initiative.

An important development during 2016-17 was the operationalization of the priority sector lending certificates (PSLCs) scheme in April 2016. This scheme allows a bank, to sell the over-achievement of its target in a particular sector through PSLCs to another bank, which can buy it to meet its target in that sector, while selling its own over-achievement of the target in another sector to another bank and so on. The RBI has provided a platform to enable trading in PSLCs through its core banking solution (CBS) portal (e-Kuber).

EBG strongly recommends to include NBFCs in this initiative if they get inexpensive funds from the banks to pass on the benefit to lowest end of the spectrum. This will not only aid the banks in meeting their targets but also have the ability to reach out to such low end of the borrower pyramid and manage the risk associated with such direct lending.

3.3 Restriction on NBFCs Accepting Public Deposits and Need to Open Avenues for Fund-raising by NBFCs

Over the past few months, certain isolated market events have significantly reduced the flow of funds from the institutional sources of funds. Banks became wary of lending to this sector. NBFCs have primarily depended on wholesale sources of funds for their business. A few NBFCs have the licence to accept public deposits, but the number of such entities, and the quantum accepted by them have been coming down over time. Given the lack of depth in the corporate bond market and the varying levels of interest among banks in extending loans to NBFCs (especially in situations similar to the present), there is a pressing need to expand the sources of funds for NBFCs.

There has been a growing demand that the RBI should allow systematically important non-deposit taking NBFCs (asset size ₹500 crore [€63.70 million] or above) should be granted deposit-taking licences upon their request and appropriate credentials underscoring their systemic importance in providing credit to geographies and customers where traditional banks still can't reach. It shall lower their dependency on banks for source of funds and also mitigate liquidity crisis. Further, it shall also help in lowering cost of funds for NBFCs and therefore enable cheaper borrowing to end customers and therefore further encouraging the objective of financial inclusion.

3.4 Simplification of KYC Requirements Especially for Small Ticket Loans and Microfinance

Current laws and regulations require same amount of effort for performing due diligence and KYC on the customers irrespective of ticket size of the loan. While the EBG fully supports the intent of the government in ensuring maximum transparency in the eco-system, however, for non-banking financial institutions (NBFIs) which are in retail lending space especially in low ticket loans, this is quite onerous as a lot of their customers are from low income group (and may not even have permanent account number [PAN] cards) which in effect supports the financial inclusion agenda of the government by including the underserved sections of the society. Further, unlike high ticket mortgage loans which entail a longer loan processing time and multiple verifications, for small ticket loans, a quicker processing time helps these organizations to keep their costs low and enable them to pass the benefit to the customers.

EBG, therefore, recommends that the requirement for performing due diligence procedures for customer on-boarding may be appropriately relaxed in case of loan transactions of individual customers below a certain reasonable limit as may be decided upon by the government. Reference may be drawn to the Section 114B of the Income Tax Act which provides monetary limit against transactions up to which PAN is not mandatory.

3.5 Barriers to Issue of Credit Cards by NBFCs

According to RBI's statistics[16], in November 2018, over 1 billion cards were issued in India. Only 40 million of the outstanding cards are credit cards, whereas there are approximately 400+ million consumer credit records with the bureau, according to estimates. Clearly, the credit cards market is significantly under-penetrated and one of the key reasons is the constrained universe of issuers that currently only comprises of banks (on automatic route). NBFCs are practically constrained from the credit card market on account of high access barriers, both for the issuance of 'general' credit cards and co-branded cards such as having net owned funds worth ₹100 crore (€12.74 million), other restrictions, etc. Furthermore, they are altogether foreclosed from issuing variants of other cards like charge cards, debit cards, and stored value cards.

In recent years, NBFCs have performed exceedingly well with respect to credit deployment. By leveraging technology, they have augmented their distribution powers to serve otherwise under-supplied segments thereby facilitating government's agenda of digitization. Through this initiative, NBFCs will be able to tap differentiated segment of prospective credit seekers who are new to the credit market thereby bring more and more people under formal economy.

Given the strong government focus on digitization and financial inclusion, EBG recommends entry barriers for NBFCs to enter into this segment be softened.

3.6 Issues Arising from Present Corporate Income Tax Regime

3.6.1 Earning on NPA's to be taxed on cash basis rather than accrual basis

In accordance with the directions issued by the RBI, the NBFCs are required to follow

prudential norms for accounting purposes which require them to defer income recognition in respect of their NPAs. However, in practice, the income tax authorities used to tax the interest component on accrual basis thereby burdening them with unnecessary tax implications.

The Budget 2017–18 has extended the provision of Section 43D of the Income Tax Act (taxing interest on receipt basis) to co-operative banks also (already available to scheduled commercial banks), but NBFCs have been kept out.

This has been a long standing demand from the NBFC's and the EBG strongly believes that this should be addressed to provide them a level playing field with banks, financial institutions and state financial corporations.

3.6.2 Tax deduction for provisions for bad and doubtful debts

Under the existing provisions u/s 36(1)(viia) in the I.T. Act, a provision for bad and doubtful debts made by banks and FIs is allowed as a deduction to the extent of 7.5 per cent from the gross total income. Alternatively, such banks and FIs have been given an option to claim a deduction in respect of any provision made for assets classified by the RBI as doubtful assets or loss assets to the extent of 10% of such assets. The Budget 2017–18 in a welcome move extended this benefit to NBFCs as well, however, the limit was capped at 5 per cent which needs to be looked into.

3.6.3 Treatment of special reserves under section 115JB of the Income Tax Act

NBFCs are statutorily required to transfer certain amount towards special reserve, debenture redemption reserve, create provision towards NPAs, diminution in the value of investments, etc., in accordance with the directions issued by RBI. However, the amount transferred towards these statutory reserves and provisions are required to be added back to the profits as per profit and loss account, as part of the adjustments required under Section 115JB of the Act. This translates into a higher taxes being paid by NBFCs even though they are mandatorily required to create reserves/ provisions as per the RBI directions. Thus, there is a case for the government to consider allowing NBFCs to claim deduction towards creation of such reserves/ provisions under Section 115JB of the Act.

3.6.4 Relaxation under section 194A of the Income Tax Act

Section 194A of the Income Tax Act provides for TDS at the rate of 10 per cent on payment of interest (excluding interest on securities) to a resident. Sub-section 3 of Sec. 194A provides for non-applicability of Sec. 194A in some cases which include banking companies to which Banking Regulation Act applies. However, such exemption has not been extended to NBFCs.

Since NBFCs are supplementing the banks and these entities are also regulated by the RBI, EBG recommends that these NBFCs should be treated at par with banks and the benefit of 'Nil TDS' should be extended to them as well.

3.6.5 Thin capitalization rules under Section 94B of the I.T. Act may impede NBFC operations

Section 94B, which was introduced from April 2017 states that where an Indian company, or a permanent establishment of a foreign company in India, being the borrower, incurs any expenditure by way of interest or of similar nature exceeding one crore rupees which is deductible in computing income chargeable under the head 'Profits and gains of business or profession' in respect of any debt issued by a non-resident, being an associated enterprise of such borrower, the interest shall not be deductible in computation of income under the said head to the extent that it arises from excess interest, as specified in sub-section (2).

The amendment was brought in the light of cross-border transaction where the profit is shifted to a lower tax jurisdiction, and the money is remitted in the form of a loan. The interests on the loans are then claimed as an expense and thereby, lowering the company's tax burden. However, as the status stands today, banks and insurance companies have been exempted from the provisions of this

section but NBFCs haven't been included in the exemption list. This places NFBC's at a disadvantageous position and the hardship results in restricting the growth of NBFC's especially who are in initial years of their business or not able to get funding from local banks at reasonable rate of interest due to any reason.

While the government has taken steps to bring parity between banks and NBFCs on the regulatory aspects, EBG strongly recommends that NBFCs be also included in exemption list to create a level playing field.

4. CONCLUSION

NBFCs have been complementing banks as financial intermediaries by leveraging on their efficient and nimble operations and tailor-made products for niche areas. Rising customer expectations and the proliferation of digital business models have accelerated the need for existing NBFC incumbents to transform their operations, while forcing new NBFC entrants to rethink their entry strategy. With recent events increasing the scrutiny on NBFCs and their operations, it is imperative for players to build robust risk and governance models as they grow their businesses.

The financial performance of NBFCs, including profitability, asset quality, and capital adequacy, improved during 2017–18 as they weathered the transient effects of demonetization and GST implementation. The move to allow NBFCs-ND-SI to co-originate priority sector loans with banks is expected to generate synergy. While in 2018–19, though concerns surrounding the sector due to debt defaults amidst temporary asset liability mismatches arose, the inherent strength of the sector, coupled with the RBI's continuing vigil on the regulatory and supervisory front, will ensure that the growth of the sector is sustained and liquidity fears are allayed.

Endnotes

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Notes

FMCG

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EXECUTIVE SUMMARY

This paper analyses the inherent challenges and opportunities in one of the biggest sectors of the Indian economy: fast moving consumer goods (FMCG). The Indian FMCG sector is expected to grow at a compound annual growth rate (CAGR) of 27.86 per cent, with an anticipated approximate turnover of US$103.7 billion (€91.97 billion) by 2020. The sector is broadly divided in the following categories – foods and beverages, healthcare, and household and personal care products. The urban and rural segmentation of revenues in the sector is at 55 per cent and 45 per cent respectively.

Growing awareness, easier access, and changing lifestyles are key growth drivers for the consumer market. The policies of the Government of India and the liberalized regulatory framework such as relaxation of licence rules, approval of 51 per cent foreign direct investment (FDI) in multi-brand and 100 per cent in single-brand retail, focus on physical and social infrastructure and digitization of government process and private transactions under the interim Union Budget 2019–20 are set to drive growth in the FMCG sector. These measures are also driving growth and opportunities in packaged food, dairy based products, food processing, and personal and oral care segments.

Besides the opportunities, the paper also discusses the challenges faced by players in the sector, and ideates on recommendations to resolve such challenges. Such challenges, *inter alia*, include those under the goods and services tax (GST) regime such as lack of sufficient budgetary support for units located in states like Uttarakhand, Himachal Pradesh, Jammu and Kashmir, and those in the Northeast in comparison to the erstwhile indirect tax law; lack of clarity in passing on profiteering benefits due to the extended supply chain that includes manufacturers, wholesalers, distributors and retailers; stringent regulations with higher penalties on advertisements under the Consumer Protection Bill, 2018; availability of fake/IPR infringing products, parallel imports, and counterfeits, etc. The paper also discusses some unique tax and regulatory changes impacting the sector.

In the above backdrop, the paper analyses and concludes that the FMCG sector is at the cusp of a growth trajectory for at least the next five years and this trajectory can further swing northwards if the issues discussed in the paper are either resolved, or certain inherent implementation issues are taken care of.

1. INTRODUCTION

1.1 Market Description

The FMCG sector is the fourth largest sector in the Indian economy, contributing about 2.4 per cent to India's gross domestic product (GDP). It generated revenues worth US$52.75 billion (€46.78 billion) in 2018 and is expected to touch US$103.7 billion (€91.97 billion) by 2020. The sector is expected to post a CAGR of 27.86 per cent in revenues.

Despite certain inherent challenges, the Indian retailing landscape continues to remain dynamic. India's twin growth engines, i.e. economic liberalization and demographic profile set it apart from other nations and presented a convincing business case for global retailers seeking to enter the market. Indeed, it is expected that India would be the third largest consumption economy in the world by 2025.

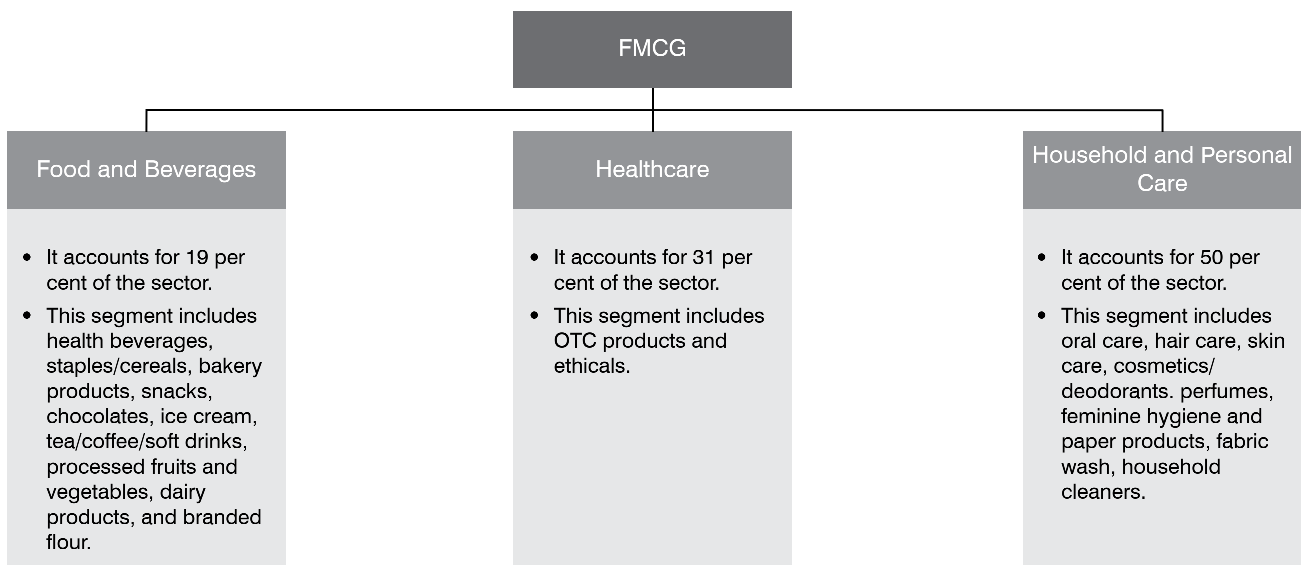
The FMCG sector can be broadly segmented as follows. Within the sector, the household and personal care segment is the leader with almost 50 per cent of the overall market, while healthcare at 31 per cent, and food and beverages at 19 per cent come next in the market share. Growing awareness, easier access, and changing lifestyles have been the key growth drivers for the sector.

The market reach of the FMCG sector has been growing significantly both in urban and rural India. While the urban segment is the larger contributor with around 55 per cent of total revenues (market size of around US$29 billion [€25.72 billion] in 2018), the rural segment is rapidly catching up and currently contributing around 45 per cent of total revenues (market size of around US$23.63 billion [€20.95 billion] in 2018). It is expected that the size of the rural segment is set to cross US$220 billion (€195.12 billion) by 2025. Notably, FMCG products account for close to 50 per cent of total rural spending.

2. INDUSTRY TRENDS AND MARKET OUTLOOK

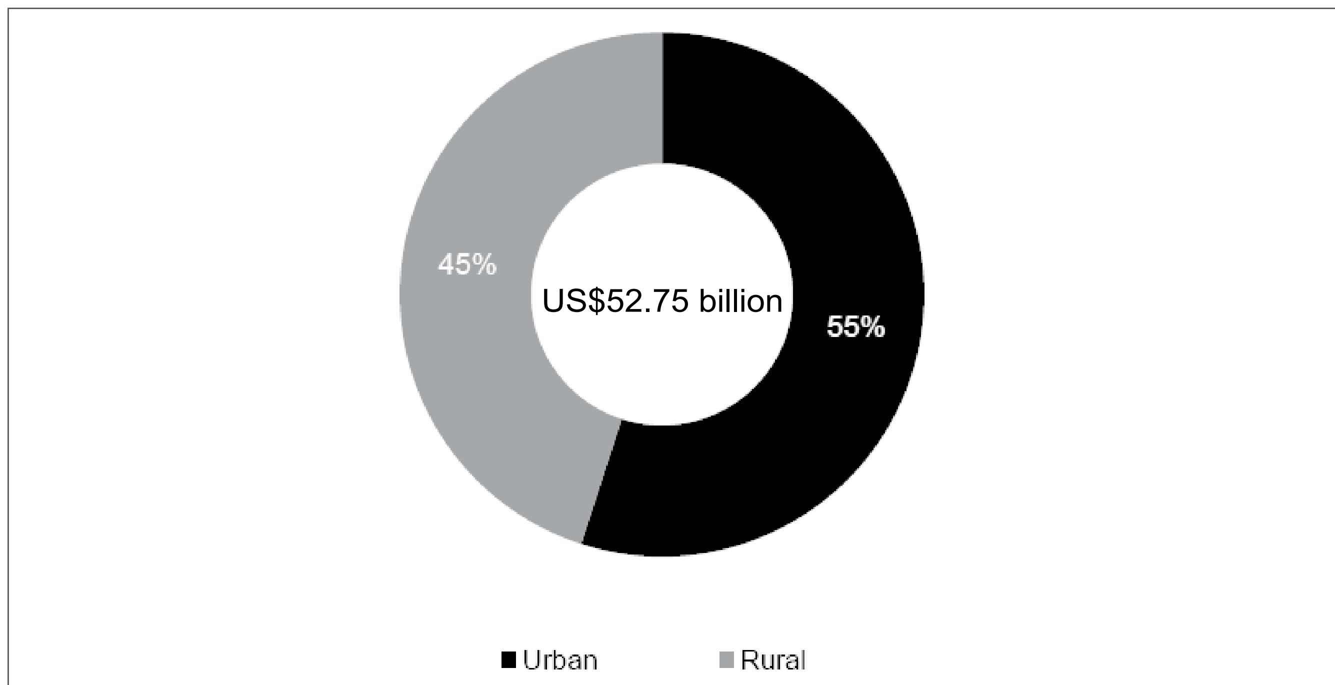
The FMCG sector has grown at an annual average of about 11 per cent over the last decade. Online portals are expected to play a key role for companies trying to enter the hinterlands. The internet has contributed in a big way, facilitating cheaper and more

Figure 1: FMCG sector segments



Source: India Brand Equity Foundation, April 2019
Notes: OTC is over the counter products; ethicals are a range of pharma products

Figure 2: Urban – rural industry breakup (FY 2017–18)



Source: India Brand Equity Foundation, April 2019
Note: US$52.75 billion (€46.78 billion)

convenient means to increase the reach of a business. There is rise in digital commerce. Internet users in India are likely to grow from 390 million to 850 million by 2025. Estimates suggest that by 2020, upto 40 per cent of FMCG consumption (US$45 billion or €39.91 billion) is likely to be digitally influenced. E-commerce is expected to contribute about 11 per cent of the entire FMCG sales by 2030. Digital influence is relevant for both mass and premium brands. Magnitude and shape of digital influence varies significantly based on 'intent' of consumption and 'degree' of category penetration. Interestingly, market leaders in offline may not necessarily be leaders in the digital space and *vice versa*.

Growing awareness, easier access, and changing lifestyles have been the key growth drivers for the consumer market. The Government of India's policies and regulatory frameworks such as relaxation of licence rules and approval of 51 per cent FDI in multi-brand and 100 per cent in single-brand retail are some of the major growth drivers for the consumer market.

While in 2018 the growth of the FMCG sector was 13.8 per cent, the growth for 2019 is pegged at a lower rate of 11–12 per cent as per recent estimates[1], however this sector continues to remain one of the largest contributors to the country's economy.

3. MARKET OPPORTUNITIES

3.1 Policy and Regulatory Framework

- Industrial licence is not required for almost all food and agro-processing industries, barring certain items such as beer, potable alcohol and wines, cane sugar, and hydrogenated animal fats and oils as well as items reserved for exclusive manufacture in the small-scale sector.
- The Government of India recognizes food processing and agro-industries as priority sectors (for lending purposes). It also provides subsidies and incentives to cold storage chains to enable optimal utilization of food produce in India by minimizing wastages.

- Food Security Bill would reduce prices of food grains for below poverty line (BPL) households, allowing them to spend resources on other goods and services, including FMCG products. This is expected to trigger higher consumption spends, particularly in rural India, which is an important market for most FMCG companies.
- Under the interim Union Budget 2019–20, the standard deduction of ₹40,000 (€510) has been increased to ₹50,000 (€638). This will increase the disposable income available with consumers.
- The interim Union Budget 2019–20 also envisions India to become a US$10 trillion (€8.86 trillion) economy in the next eight years. Implementing this vision will certainly impact the growth of the FMCG sector by contributing to the physical and social infrastructure. Focus on creating a Digital India by digitization of government process and private transactions will also directly benefit the FMCG sector.
- The Indian government approved 51 per cent FDI in multi-brand retail, 100 per cent FDI in the cash and carry segment and in single-brand retail. These measures will continue to boost the nascent organized retail market in the country.

3.2 Sectorial Opportunities in FMCG Industry

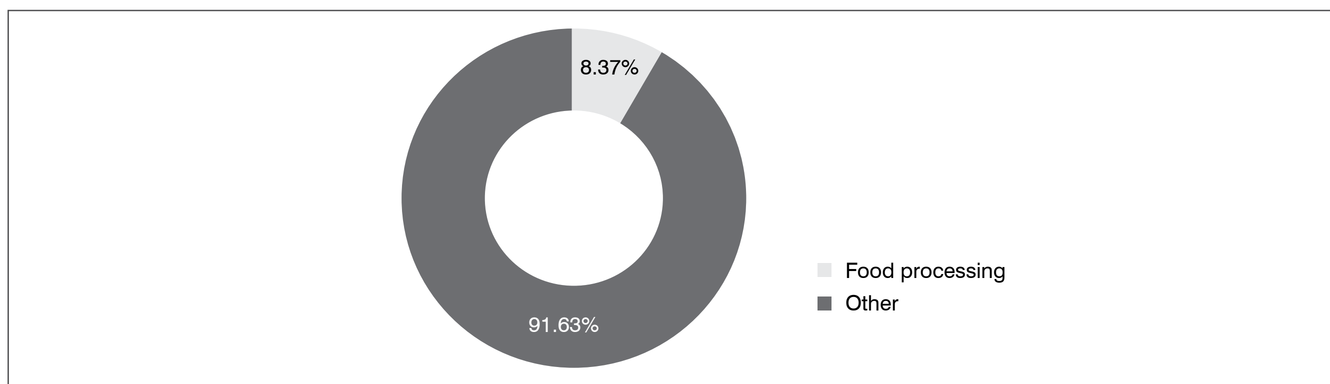
Major sectorial opportunities for FMCG sector are highlighted below:

- *Packaged food*: Only about 10–12 per cent of output processed is consumed in packaged form, thus highlighting the huge potential for expansion of this industry. The food packaging industry is India's fifth largest with a current worth of nearly US$40 billion (€35.47 billion). By 2020, it is expected to reach over $65 billion (€57.64 billion)[2]. A survey conducted by The Associated Chambers of Commerce of India (ASSOCHAM) revealed that 82 per cent of the workforce, in some of the key metros, prefer packaged food compared to eating outside food or at roadside eateries. Edible oils, dairy products, and alternatives provided strong tailwinds for overall packaged food in India, ensuring strong double-digit growth in 2018. Shifting from unbranded to branded packaged products was the clear highlight of the year, amid rising awareness of healthy living[3]. The Indian packaged food market is forecast to see a strong growth over 2016–21[4] driven by increasing product availability as a result of manufacturers' new product developments and greater penetration of smaller cities and rural areas.
- *Dairy-based products*: India is the largest milk producer in the world accounting for 19 per cent of the global market share[5]. Since the consumption is growing, many foreign companies are entering India with a variety of dairy products. However, there is scope for growth for other players as value-added products (butter, curd, paneer, ghee, yoghurt, etc.) form only 15–20 per cent of the total dairy production. Considering the higher purchasing power, higher awareness, and preference for tertiary processed milk products coupled with low availability, there is an opportunity to grow the spending on this category. India's demand for milk and milk products is increasing twice as fast as the production of milk. The dairy market in India reached a value of ₹9,168 billion (€116.8 billion) in 2018[6]. The market is also witnessing a consumer shift towards healthier products such as ultra-high temperature processing (UHT) milk, probiotic drinks and yoghurts, etc. The Interim Union Budget 2019 increased the outlay for Rashtriya Gokul Mission to ₹7.5 billion (€95.56 million) which will boost the milk productivity in India. It is projected that the market will reach a value of ₹21,971 billion (€279.94 billion) in 2024, exhibiting a CAGR of around 16 per cent during 2019–24.
- *Oral care*: The US$1.57 billion (€1.39 billion)[7] oral care industry, especially

toothpastes, remains under-penetrated in India with penetration rates of around 50–55 per cent. With rise in per capita incomes and awareness of oral hygiene, the growth potential is huge. Lower price and smaller packs are also likely to drive up potential trading. The oral care market in India is expected to grow at a CAGR of over 6 per cent during 2016–21[8].

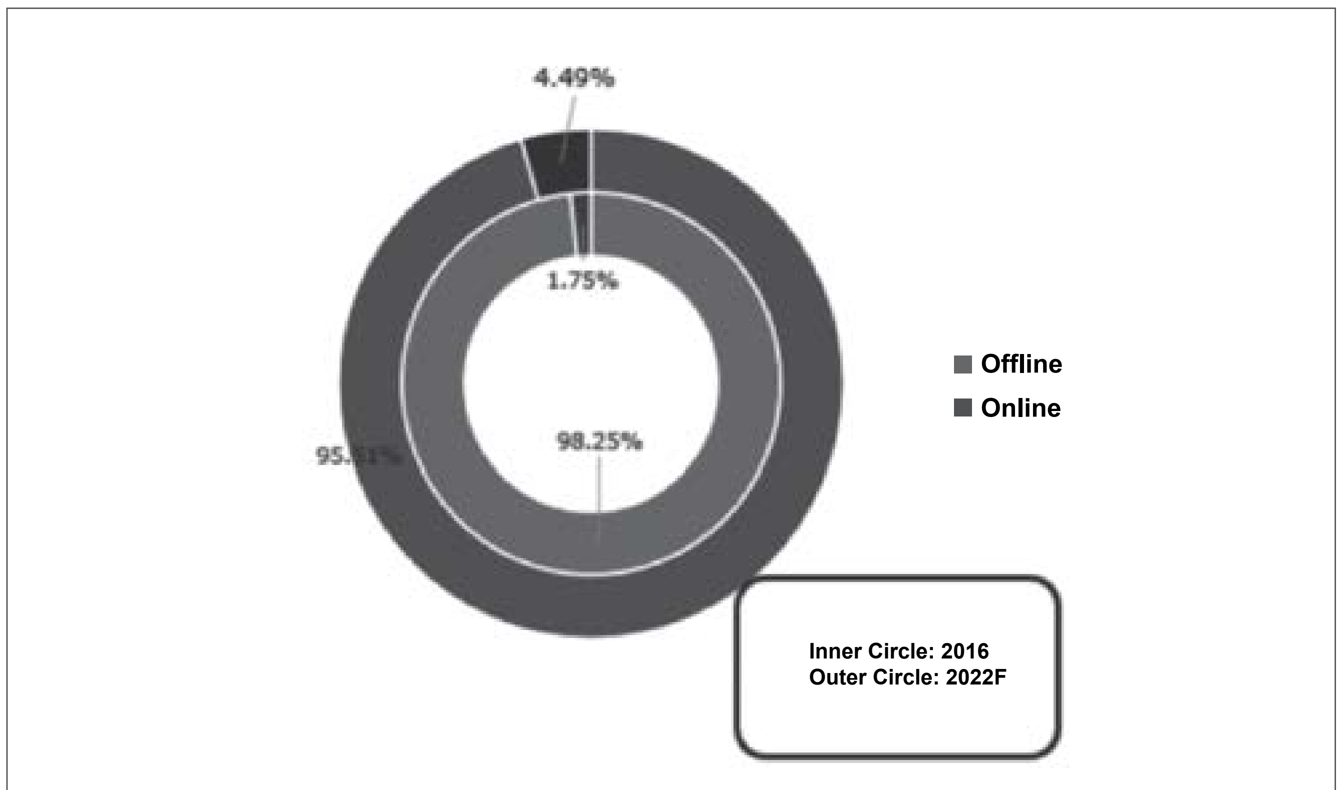
- *Food processing industry*: The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export, and expected growth.[9] It contributes around 9 per cent of manufacturing GDP[10] and 11 per cent of agriculture GDP, 13 per cent of India's exports and 6 per cent of total industrial investment.[11] The food processing industry is covered under the Make in India drive of the Indian government. Both domestic and global firms have been focusing on product innovation to cater to domestic tastes, while also introducing international flavours. The processed food market is expected to grow at a CAGR of 14 per cent to US$543 billion (€481.59 billion) by 2020 from US$322 billion (€285.58 billion) in 2016.[12] Underlying features of the policy which will directly benefit the industry are:
  - 42 mega food parks being set up with an allocated investment of ₹98 billion (€1.24 billion). The parks have around 1,200 developed plots with basic infrastructure enabled that entrepreneurs can lease for the setting up of food processing and ancillary units.
  - 138 cold chain projects are being set up to develop supply chain infrastructure.
  - Swiggy, a food delivery start-up owned by Bundl Technologies Private Limited, has US$1 billion (€886.91 million) in fresh capital in December 2018 and has raised nearly US$1.27 billion (€1.12 billion) so far. Zomato, a restaurant listings cum delivery platform, is the most-funded start-up in the food space, and has raised nearly US$217 million (€192.46 million) from Sequoia Capital, Temasek, Vy Capital, and InfoEdge.
  - Union Budget 2016–17 allowed 100 per cent FDI under automatic route in marketing of food products produced and manufactured in India.
- *Personal care*: Penetration of many product categories is still low. Even among those where the penetration is higher, per capita consumption is comparatively low, thereby

Figure 3: Contribution of food processing industry to India's GDP through manufacturing (FY16)



Source: Ministry of Food Processing Industries (MOFPI), TechSci Research
Note: (1) – Till December 2015, As per latest data available
For updated information, please visit www.ibef.org

Figure 4: India cosmeceutical, cosmetics and personal care market share, by distribution channel, by value, 2016 and 2022F



Source: TechSci Research

offering scope for high growth in future. The Indian personal care market is projected to grow at a CAGR of around 22 per cent during the period 2017–22.[13] Penetration of products such as hair oil and talcum powder is high in the country; however, some major products including ayurvedic oil, deodorants, and men's fairness creams recorded penetration of just 8 per cent, 8 per cent, and 4 per cent respectively in FY2016. This pace is expected to rise to approximately 40–45 per cent of the overall market by 2022. The beauty, cosmetics, and grooming market in India is expected to reach US$20 billion (€17.73 billion) by 2025 from US$6.5 billion (€5.76 billion) currently. As increasing number of customers are adopting the natural way of life, demand for ayurvedic and herbal products is expected to grow at a strong rate going forward. Growing demand for exclusive beauty products coupled with attractive offers, increased digital influence on the market, greater product authenticity, and supply chain reliability should drive rapid growth in personal care sector over the next few years.

4. RECENT DEVELOPMENTS

4.1 Consumers have started demanding customized products specifically tailored to their individual tastes and needs. The trend toward mass-customization of products is expected to intensify further.

4.2 Despite economic slowdown, consumers are willing to spend to buy premium goods at higher prices in the space of convenience, health, and wellness.

4.3 Availability of products has become way easier as internet and different channels of sales have made accessibility of desired products to customers more convenient at the required

time and place. Online grocery stores and online retail stores like Amazon, Flipkart, Grophers, etc., are making FMCG products more readily available.

4.4 Digital commerce is expected to play a big role in the near future as digitally influenced spend in FMCG is likely to rise to US$45 billion (€39.91 billion). Forty per cent of FMCG consumption is to be digitally influenced by 2020. Companies should invest in data-driven market and create/shape the digital strategy.

5. INDIAN COMPETITIVENESS AND COMPARISON WITH WORLD MARKETS

The following factors can make India a competitive market on the global stage.

5.1 Availability of Raw Materials

Owing to diverse agro-climatic conditions in India, there is a large raw material base suitable for food processing industries. India is the largest producer of spices and cashew and is the second largest producer of rice, wheat, sugarcane, milk, and fruits and vegetables and one of the largest producers of coconut and livestock. India also produces caustic soda and soda ash, which are required for the production of soaps and detergents. The availability of these raw materials gives India the geographical advantage.

5.2 Low-cost Labour Force

Low-cost labour gives India a competitive advantage. India's labour costs consistently rank among the lowest worldwide and are often cited as the country's principal advantage as a manufacturing base. According to the Bureau of Labour Statistics, average labour compensation (including pay, benefits, social insurance, and taxes) in India's organized manufacturing sector have only increased marginally in recent years, from US$0.68 (€0.60) per hour in 1999 to around US$1.50 (€1.33) per hour today. When compared with an average compensation of US$3.00 (€2.66) per hour in China's manufacturing sector (a 20 per cent year-on-year increase fuelled by an annual 13 per cent rise in China's minimum wage), India's labour cost advantage places the country in more direct competition with emerging manufacturing jurisdictions such as the Philippines and Vietnam over now-declining China, Thailand, and Malaysia. Many multinational corporations (MNCs) have established their plants in India to outsource for domestic and export markets, because of its wage arbitrage.

5.3 Demographic Dividend and Advantage

Demographic dividend: India's abundant labour force is English-speaking, young, skilled, and cost-efficient. Government has initiated Self Employment and Talent Utilization (SETU) scheme to boost young entrepreneurs. It has invested US$163.73 million (€145.21 million) for this scheme. Further have been initiated for incentivizing employers for employment generation such as Pradhan Mantri Rojgar Protsahan Yojana in 2016–17.

Demographic advantage: India is expected to rank amongst the world's top three growth economies and amongst the top three manufacturing destinations by 2020:

- Favourable demographic dividends for the next 2–3 decades. Sustained availability of quality workforce.
- Strong consumerism in the domestic market.
- Strong technical and engineering capabilities backed by top-notch scientific and technical institutes.

5.4 Growing Domestic Market

As income levels are rising, there is a clear upwards trend in the disposable income of people. With the rise in disposable incomes mid- and high-income consumers in urban areas have shifted their purchase trend

from essential to premium products. Rapid economic growth provides a large domestic market.

5.5 Infrastructure Investment Plans

India has seen a rise in investments in infrastructure space both from the government and from international investors. The Asian Infrastructure Investment Bank (AIIB) announced US$200 million (€177.38 million) investment into the National Investment and Infrastructure Fund (NIIF) in June 2018. About 91 mergers and acquisitions (M&A) deals worth US$5.4 billion (€4.78 billion) in 2017 were reached[14]. The Government of India is expected to invest highly in the infrastructure sector, mainly highways, renewable energy and urban transport, as announced in the interim Union Budget 2019–20. This will help to reduce inefficiencies in the supply chain.

6. KEY ISSUES FACED BY THE INDIAN FMCG INDUSTRY

6.1 Impact of Ban on Non-recyclable, Multi-layered Plastic (MLP) Material

In 2015, the Ministry of Environment, Forest and Climate Change circulated a draft of the Plastic Waste Management Rules, 2015, for public comments. The draft provided for a stoppage on the use of non-recyclable laminated plastics/metallic pouches, multilayered plastics in packaging within three year of the rules coming into effect. Despite opposition by the industry, after several rounds of consultations, the ministry notified the revised rules on 18 March 2016 and certain amendments were notified on 27 March 2018. These rules are aimed at ensuring proper plastic waste management right at the grassroots level by enhancing jurisdiction to rural areas and also increasing the responsibility of producers to ensure a collect back system of plastic waste by the producers/brand owners, collection of plastic waste management fee through pre-registration of the producers, importers of plastic carry bags/multilayered plastic (MLP), and vendors selling the same for establishing the waste management system.

These rules are difficult to comply as nearly 80 per cent of most FMCG products are packaged using such plastic material. According to a study by Central Pollution Control Board (CPCB) in 2018, India generates about 25,940 tonnes of plastic waste daily and the largest contributor is the packaging sector. However, only 60 per cent of the total waste generated is processed.

The following are the salient provisions of the rules:

- The rules provided for phasing out the non-recyclable MLP within two years. Rules define recycling as 'the process of transforming segregated plastic waste into a new product or raw material for producing new products.' Recoverable plastic waste has been included within the definition of recyclable materials. Hence, only plastic waste which would ultimately make its way to the landfill, as its RRI (recycle and recovery index) is 0, would have to be phased out. This requirement was watered down and in the 2018 amendment, 'non-recyclable multilayered plastic' was substituted with 'multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use'.
- Rule 6 places a responsibility on the local body to develop and set-up infrastructure for segregation, collection, storage, transportation, disposal, etc., of plastic waste, either on their own or by engaging agencies or producers. The local body can seek assistance of producers and the system has to be setup in one year from the notification. The rules now recognize recovery as a legitimate part of waste management.
- Rule 9 places an obligation on producers alone, to work out modalities for a waste collection system based on extended producers responsibility (EPR), and involving state urban development

departments, either individually or collectively, through their own distribution channels or through the local bodies. This was to be done within six months.

- The rules define EPR as 'the responsibility of a producer for the environmentally sound management of the product until the end of its life'. The definition of EPR is not very clear. No clarity is available regarding the methodology for discharge of this responsibility – whether financially, or through awareness generation among consumers or otherwise.
- The primary responsibility for collection of used multilayered plastic sachets or pouches or packaging is placed on producers, importers, and brand owners, who introduce the products into the market. A plan is required to be submitted to the state pollution boards within one year of the notification and has to be implemented within two years thereafter.
- Interestingly, FMCG is a small part of the overall plastic waste generated. Yet, this responsibility of collection of pouches, sachets or packaging is the only kind of plastic waste considered under Rule 9.
- 'Form I' to be used for registration of producers or brand owners is not aligned to the requirements of registration of producers and brand owners. It appears more to be for manufacturers.

Recommendations

Global Alliance for Incinerator Alternatives (GAIA), an international alliance of non-profits and grassroots groups in over 90 countries, undertook a study in May 2018 in 250 sites across 15 cities in India and found that 53 per cent of plastic waste in the cities was MLP. Moreover, FMCG leaders say they cannot do without MLP as an alternative is not yet available.

MLP being the most efficient way of packaging, the focus needs to be on deploying practical solutions of segregation and disposal of plastic waste rather than a complete ban or phasing of MLP packaging as proposed. In all developed jurisdictions of Europe and in the USA, there is no ban prescribed for MLP packaging. Instead, the focus is on efficient ways of disposal through the principle of EPR.

The government's decision to place responsibility for waste management on both the local bodies under Rule 6 and for collection on producers and brand owners under Rule 9, has created uncertainty around the responsibility for overall waste management. The industry needs a clear and uniform set of obligations across India. EPR in itself reflects a positive step towards the industry's participation in resolving national issues. The plain reading of the rules creates an environment of uncertainty as any local body may place different types of requirements from producers or brand owners. The Rules mandated companies to practice EPR and collect MLP that they have used to package their products. But they did not mandate a minimum percentage of the waste they must retrieve. Technically, companies can use MLP even if they retrieve just one per cent of what they sent in the market. Therefore, the government must consider a clearly defined, well-thought out and practical EPR mechanism, suited for India, with all affected stakeholders participating in its development. The obligations must be clear, well-defined and evenly spread across all industries, producers and brand owners. It should not be limited to just FMCG.

While some FMCG market leaders are contemplating solutions to the issue by pushing for recyclable plastics, they have suggested that they cannot do without MLP. Given that the Indian supply chain works in areas with sub-zero mercury level temperatures to areas with temperatures as high at 50 degree Celsius, and the moisture level in the air, MLP has been found to survive these varied climatic conditions and a replacement may be difficult to discover. The Central Pollution Control Board (CPCB) has hardened its stance on plastic packaging and asked 52 companies from nine industries to submit their EPR plan, in accordance with the Plastic Waste Management (PWM) Rules, 2016[15].

It is suggested that the Government of India looks at alignment between the central, state and local governments to strengthen the overall waste management system in India at the local body level by bringing in regulations. Under the Swachh Bharat campaign, initiatives should be taken to generate awareness among consumers to ensure that segregation of organic, recyclable, and other waste happens at the consumer level itself.

6.2 Amendments to the Legal Metrology (Packaged Commodities) Rules, 2011 (the PC Rules)

The Ministry of Consumer Affairs, Food and Public Distribution (MCFPD), amended the PC Rules vide notification dated 1 March 2018 by allowing manufacturers/packers/importers for putting stickers/tags/online printing, etc., upto 30 April 2018 for making the mandatory declarations required under the Legal Metrology (Packaged Commodities) Rules, 2011.

The MCFPD amended the definition of industrial and institutional consumers in the PC Rules vide Notification No. G.S.R. 385(E) dated May 14, 2015. Rule 3 of the PC Rules prescribes that the labelling norms (including the obligation to affix a maximum retail price (MRP) by a manufacturer or importer of packaged goods) do not apply to purchases made by an industrial or institutional consumer. The amendment has expanded the definition of industrial and institutional consumers, allowing such industries and institutions to procure packaged goods from an importer or a wholesale dealer; prior to such amendment, obligation to affix MRP was exempt only when the industrial/ institutional consumer directly purchased pre-packaged goods from the manufacturer. This amendment further provides that it is mandatory that all such packages must bear a declaration 'not for retail sale'.

PC Rules have been further amended to include e-commerce entities with effect from 1 January 2018. An entity undertaking ecommerce activity shall make declarations as specified under the rules on the digital and electronic network used for e-commerce transactions.

However, the month and year in which the commodity is manufactured or packed is not required to be declared. The amendments will require e-commerce entities to make exhaustive changes to their portals to ensure that relevant declarations as required under the Act and the Rules are duly declared. Thus, these amendments have been aimed to increase the accountability and transparency of online retail transactions, thereby boosting consumer confidence.

Recently, certain e-commerce companies have received legal notices from the Legal Metrology Division of the Consumer Affairs Department for not following the Packaged Commodity Rules 2017 amendments.

6.3 Impact of Government Regulation on Advertisements

The Consumer Protection Bill, 2018 was introduced in Lok Sabha by the Minister of Consumer Affairs, Food and Public Distribution on 5 January 2018. It was passed by the Lok Sabha on 20 December 2018 and now awaits approval of the Rajya Sabha to become a statute. The Bill replaces the Consumer Protection Act, 1986. A Consumer Protection Bill to replace the Act was introduced in 2015, but has been withdrawn post the introduction of the 2018 Bill. Key features of the 2018 Bill include the following[16]:

- *Definition of consumer*: A consumer is defined as a person who buys any good or avails a service for a consideration. It does not include a person who obtains goods for resale or goods or services for commercial purpose. It covers transactions through all modes including offline, and online through electronic means, teleshopping, multi-level marketing or direct selling.
- *Rights of consumers*: Six consumer rights have been defined in the Bill, including the right to: (i) be protected against marketing of goods and services which are hazardous

to life and property, (ii) be informed of the quality, quantity, potency, purity, standard, and price of goods or services, (iii) be assured of access to a variety of goods or services at competitive prices, and (iv) seek redressal against unfair or restrictive trade practices.

- *Central consumer protection authority*: The central government will set up a central consumer protection authority (CCPA) to promote, protect and enforce the rights of consumers. It will regulate matters related to violation of consumer rights, unfair trade practices, and misleading advertisements. The CCPA will have an investigation wing, headed by a director-general, which may conduct inquiry or investigation into such violations.
- CCPA will carry out the following functions, including: (i) inquiring into violations of consumer rights, investigating, and launching prosecution at the appropriate forum; (ii) passing orders to recall goods or withdraw services that are hazardous, reimbursement of the price paid, and discontinuation of the unfair trade practices, as defined in the bill; (iii) issuing directions to the concerned trader/manufacturer/endorser/advertiser/publisher to either discontinue a false or misleading advertisement, or modify it; (iv) imposing penalties, and; (v) issuing safety notices to consumers against dangerous or unsafe goods and services.
- *Penalties for misleading advertisement*: The CCPA may impose a penalty on a manufacturer or an endorser of up to ₹10 lakh (€12,741) for a false or misleading advertisement. In case of a subsequent offence, the fine may extend to ₹50 lakh (€63,708). The manufacturer can also be punished with imprisonment of up to two years which may extend to five years for every subsequent offence. However, an endorser will not be liable to a penalty if he exercises due diligence to verify the veracity of the claims in the advertisement regarding the endorsement.
- CCPA can also prohibit the endorser of a misleading advertisement from endorsing that particular product or service for a period of up to one year. For every subsequent offence, the period of prohibition may extend to three years. However, there are certain exceptions when an endorser will not be held liable for such a penalty.
- *Consumer disputes redressal commission*: Consumer disputes redressal commissions (CDRCs) will be set up at the district, state, and national levels. A consumer can file a complaint with CDRCs in relation to: (i) unfair or restrictive trade practices; (ii) defective goods or services; (iii) overcharging or deceptive charging; and (iv) the offering of goods or services for sale which may be hazardous to life and safety. Complaints against an unfair contract can be filed with only the state and national CDRCs. Appeals from a district CDRC will be heard by the state CDRC. Appeals from the state CDRC will be heard by the national CDRC. Final appeal will lie before the Supreme Court.
- *Jurisdiction of CDRCs*: The district CDRC will entertain complaints where value of goods and services does not exceed ₹1 crore (€127,417). The state CDRC will entertain complaints when the value is more than ₹1 crore (€127,417) but does not exceed ₹10 crore (€1.27 million). Complaints with value of goods and services over ₹10 crore (€1.27 million) will be entertained by the national CDRC.
- *Product liability:* Product liability means the liability of a product manufacturer, service provider or seller to compensate a consumer for any harm or injury caused by a defective good or deficient service. To claim compensation, a consumer has to prove any one of the conditions for defect or deficiency, as specified in the bill.

Issues

- The Consumer Protection Bill, 2018 provides that an endorser will not be liable to a penalty if he exercises due diligence to verify the veracity

of the claims in the advertisement regarding the endorsement. This provision provides a regulatory loophole and may enable celebrities to stay out of the purview of prescribed penalties while endorsing. On one hand, the Bill has penalty provisions for endorsers while on the other it gives them a getaway route. This could undermine the effectiveness of the provision since there is no specified parameter for what comprises 'due diligence'.

- In case of online sale of fake goods, the Consumer Protection Bill, 2018 does not affix a responsibility on the online e-platforms hosting sale of such goods.

  Section 79 of the Information Technology Act (IT Act) defines the word intermediary as 'any person who on behalf of another person stores or transmits that message or provides any service with respect to that message and includes telecom service providers, internet service providers, web-hosting service providers, search engines, online-payment sites, online auction sites, online marketplaces, and cyber cafes'.

  Intermediaries are not liable for any third party information, data, or communication link made available by them if their function is 'limited to providing access to a communication system over which information made available by third parties is transmitted or temporarily stored or hosted; the intermediary does not initiate the transmission, select the receiver of the transmission, and select or modify the information contained in the transmission; and the intermediary observes due diligence while discharging his duties under this law and also observes such other guidelines as the central government may prescribe in this behalf.

  Unfortunately, the proposed law does not have any provision to counteract Section 79. It is not effective as far as preventing this category of online fraud. Section 100 of the Bill provides that 'the provisions of this Act shall be in addition to and not in derogation of the provisions of any other law for the time being in force'. Section 101 empowers the central government to make rules, a step which could be taken to address this, but the rules cannot take precedence over the IT Act because the IT Act is a special law which will prevail over the general and prior law.

  Therefore, in effect, a consumer who is unaware of a fraud, and does not request a return within the time period specified in the online seller's trading policy, will have no recourse later.

6.4 Model Shops and Establishments Act Rollout

The Ministry of Labour and Employment rolled out the Model Shops and Establishments (Regulation of Employment and Conditions of Service) Bill, 2016 in July 2016 which may be adopted by different states.

- The Model Shops and Establishment Act would give a boost to employment opportunities with focus on opportunities to women as they would be permitted to work during night shifts with adequate safety and security provisions.
- It would provide the retailers a freedom to operate 365 days in a year and flexible opening/closing time of the establishment, no discrimination against women, online registration through a simplified procedure, etc.
- This will help boost sales for the FMCG sector which are typically operated under the brick-and-mortar store model. The states of Maharashtra and Gujarat have officially adopted the model bill and introduced the Shops and Establishments (Regulation of Employment and Conditions of Service) Act for their respective states with effect from 2 February 2018 and 1 May 2019 respectively.

6.5 Recent Updates from the GST Perspective in the FMCG Sector

- With the implementation of GST law, several taxes applicable on the FMCG sector like excise duty, VAT/central sales tax, entry tax, and service tax were subsumed within it with effect from 1 July 2017. Thus under the

GST regime, all transactions attract GST, consisting of a central GST and a state GST and an integrated GST, depending on nature of supply. Several products under the FMCG sector like shampoos, hair dyes, skincare products, cosmetic/perfumery products, etc., were subject to the highest tax slab of 28 per cent when GST was implemented. However, within a few months of implementation, the GST Council through a rationalization on 14 November 2017 placed a large number of such products of mass consumption under the 18 per cent tax bracket, lower than the tax rate under the erstwhile tax regime. Another rationalization in July 2018, which brought down the tax incidence on end customers further for FMCG products. Relevant to note that while rate reduction has been welcomed by the industry, it did lead to an issue with respect to changing of MRP (to factor the impact of rate reduction) on stock lying in distribution channels. While it is easy for manufacturers to affix the new MRP on products that are lying in the factory premises, it is difficult to do so for products that are already in the trade chain.

- A question that arises as a result of rate rationalization is whether companies in question have adequately passed on the benefit on account of tax reduction to end consumers. This is on account of the anti-profiteering provision, introduced as an anti-inflationary mechanism under section 171 of the Central Goods and Services Tax Act, 2017, which mandatorily requires reduction in prices, in case of reduction in output GST rate or an increase in input tax credit. There is lack of clarity on how to compute the benefit to be passed on to end customers, i.e. whether increase in quantity/grammage of products is allowable, in lieu of a specific price reduction. In fact it is still not clear whether companies need to determine the benefit to be passed on to consumers at an entity level, or a product level. Keeping these aspects in mind, FMCG companies have struggled with the methodology to be adopted for passing on the benefit to end consumers. This sector also faces major challenges in passing-on profiteering benefits due to the extended supply chain that includes manufacturers, wholesalers, distributors, and retailers. Apart from manufacturers, distributors, and retailers are also responsible for passing on the benefits to end customers. For manufacturers, it is also a herculean task to ensure that distributors, dealers, and retailers also re-visit pricing as per anti-profiteering norms and pass on benefit to end consumers, even though the products may have been procured by such distributors, dealers, and retailers, at the higher tax rate. In fact even in cases where goods are returned, it is not clear if the returned goods are to be considered in the profiteering computations.
- In light of the aforesaid GST rate cuts, there has been a surge in the complaints received by anti-profiteering authorities from customers, regarding companies not passing on adequate benefit of the GST rate cut. Absence of a clear mechanism has lead to use of arbitrary methodologies by the anti-profiteering authorities, and consequent prolonged litigations. Various orders have also been passed by the National Anti-profiteering Authority (NAA), particularly for FMCG sector companies. In most cases, NAA has strictly interpreted the term ‘commensurate reduction in price’ and has not accepted arguments of companies for increase in price due to change in cost or other commercial factors. Some orders of the NAA have specifically questioned methodologies adopted by companies, viz., not passing on the benefits at the product level and increasing the quantity of the product, without reducing the prices. With respect to the supply chain, it has been observed by NAA that distributors are obligated to pass benefits to retailers, regardless of whether the supplier/manufacturer has passed on benefits to such distributor. In fact, the NAA has undertaken investigations for subsequent periods and also included products that were not initially questioned by customers. Thus pressure has been mounted on companies to constantly re-visit prices with the evolving law, and pass on the benefit of rate reduction or input tax credit expansion to customers.

- Another issue that has affected FMCG businesses is the lack of sufficient budgetary support under the GST regime for units located in states like Uttarakhand, Himachal Pradesh, Jammu and Kashmir, and the Northeastern states. Under the erstwhile regime, several FMCG manufacturing concerns were set up in areas that enjoyed area based excise duty exemptions. However under the GST regime, there is no such *ab-initio* tax exemption available. In order to reduce the hardship of such units, budgetary support has been provided by the Department for Promotion of Industry and Internal Trade (DPIIT) to such units in area based exemptions, for residual periods, for which units would have operated under the area based exemption scheme. Such support is being provided by way of refund of GST limited to the share of central goods and services tax (CGST) and integrated goods and services tax (IGST) retained, after the devolution of taxes to the states. This only works out to 58 per cent of the CGST amount paid and 29 per cent of the IGST paid by such unit. SGST benefit under such scheme is available only in the state of Jammu and Kashmir. However, the amount of such refund is quite less in comparison to the erstwhile regime and it has contributed to financial difficulties faced by these units. Another area of plight is state incentives, which were provided to industrial units set up in specified areas. They have also been re-visited by the respective state governments and the scope of such benefits has also curtailed after the introduction of GST regime. Thus, further adding to the woes of the industry.
- An important issue affecting retail stores is related to sales boosted through hefty discounts and freebies such as buy-one-get-one free. In the recent past, circulars have been issued clarifying treatment of sales promotion schemes. It has been clarified that samples/gifts supplied free of cost would not qualify as a 'supply' for the purpose of levy of GST. Further, it has been clarified that 'buy one get one' scheme would not mean an individual supply of free goods, but a case of two or more individual supplies where a single price may be charged for the entire supply. In such cases input tax credit reversals would not be required. However, post-sale discounts still remain to be contentious issues. Specifically in the case of MRF Limited, an advance ruling was passed recently where input tax credit was restricted to the extent of invoice less post-sale discount, which was not pre-agreed or laid down in the agreement, due to lack of adequate documentation trail. In the recent past, FMCG distributors have been questioned by GST authorities as to why GST was not paid on post-sale discounts, treating the same to be services rendered by distributors to manufacturers.

Recommendations

- **Anti-profiteering**: It is recommended that guidelines are issued by the government at the earliest that clarify the methodology that needs to be adopted by FMCG companies for passing on the benefit to end customers. Specifications around whether pricing check has to be carried out across all intermediaries in the supply chain and whether it needs to be done at a product level would help companies.
- **Lack of sufficient budgetary support**: Since majority FMCG companies set up shop in excise-free areas, additional budgetary support must be provided to them in order to tide them over.
- **Clarification under discounts:** Clarification is required on treatment of post-sale discounts under GST laws as such discounts are quite prevalent in the FMCG sector, and at present are leading to heavy input credit.

6.6 Enforcement of Trademarks for Brand Protection Against Rampant Sale of Fakes, Trademark Infringements and Lookalikes

Trademark infringement and counterfeiting has become a ubiquitous problem growing at an exponential rate in India taking undue advantage of the consumer and trade.

Counterfeit products are a hazard and against the interest of the consumers, interest of the industry and also the government at large, due to loss of income to the exchequer through unaccounted sales, taxes, etc., of counterfeits. Industry estimates suggest that 7–10 per cent of all products sold in the ₹3 lakh crore (€38.22 billion) FMCG market in India are counterfeit. That's over ₹21,000–30,000 crore (€2.67–3.82 million) of loss in sales for branded products each year. This is despite strong laws to regulate the infringement of intellectual property (IP) rights.

In light of risks and protection of interests of all the stakeholders, it is important to provide the necessary support and infrastructure to the IP right holders to allow them to effectively fight counterfeit products and people involved. Counterfeiting has now become part of a complex and ever evolving organized crime network which requires swift and efficacious actions by the right holders and law enforcement officials on receipt of relevant information to ensure success of such actions against counterfeiters.

Section 115(4) of the Trade Marks Act, 1999 (TMA) mandates that an opinion from the Trademark Registry on the impugned trademark is required before an officer equal to the rank of a deputy superintendent of police takes cognizance and further actions, including search and seizure with respect to offences of applying and selling of goods with false trademarks, i.e. infringement and counterfeiting. This creates an impediment in taking timely actions allowing people ample time to get away. With such a prerequisite for the police, offences under TMA cannot be considered fully cognizable as intended, desired and required by the industry and IP holders. The opinion from the trademark registry as above takes considerable time due to lack of resources and department priorities impeding expedited actions against counterfeiters by the trademark proprietors and the police.

Trademark proprietors are using the judicial or copyright infringement route to take actions due to extreme delay in procuring such opinion for police actions under trademark law. This is not only increasing the burden of the judiciary but also makes the section in TMA otiose and irrelevant.

Using the copyright infringement route is also not viable because of the requirement of registration documents by the law enforcement officials. However, it is important to note that as copyright vests on creation and registration is not compulsory, documents of proprietorship are not available with copyright owners, making it difficult for the law enforcements officials to determine the rights and limiting actions against counterfeiters under copyright protection.

Trademark Rules 2002 have been replaced with Trademark Rules 2017. Applying for trademarks has been made easier by laying down the criteria for deciding whether a mark is a 'well-known' mark or not, such as mark is known and recognized by the relevant section of the public, duration/extent/geographical area of promotion of the mark, whether registration has been made, whether successful enforcement actions have been taken, etc.

According to the 2019 International IP Index by the US Chamber of Commerce's Global Intellectual Property Centre (GIPC), India's score has improved for the second consecutive year by eight places from 44 in 2018 to 36 in 2019. While broader challenges remain, the increase is a result of specific reforms that better align India's IP environment with the international IP system.[17] Challenges in the IP environment in India include, for instance[18], in the biopharmaceutical sector, 'Indian policy continued to breach international standards of the protection of innovation and patent rights, revoking patents generally accepted around the world and announcing that other patented medicines are being considered for compulsory licences.' The continued use of compulsory licences, revocation of patents, and weak legislative and enforcement mechanisms across all IP rights raise serious concerns about India's commitment to promoting innovation.

Recommendations

Trademarks are intellectual property that reflect the source of origin which is the primary issue in the case of counterfeited products whereas copyright is with respect to creative protection and complements the trademark law to fight against counterfeiters and infringers. Relying on copyright only rather than trademark also increases the possibility of misuse as copyright infringement is much more difficult to identify than trademark infringement due to the creative aspect involved. Therefore, mandating an opinion for action against trademark infringement as opposed to copyright infringement being fully cognizable, is discriminatory, irrational, and inequitable towards the industry.

In light of the of the time period lapsed since the law came into effect and its bleak relevance, the government should delete the requirement of an opinion as above and provide the right holders as well as the law enforcement officials to effectively enforce their rights and take appropriate actions against these offenders harming the public at large.

In April 2017, Ministry of Health and Family Welfare by way of a notification removed the requirement for companies to inform whether a drug is under patent or not at the time of filing for a manufacturing licence. This is a regressive step and against the IP Policy that calls for better centre and state coordination.

Till the introduction of the 2017 trademark rules, the declaration of mark to being a well-known mark was through judgments and observations made during court proceeding. Post release of the 'well-known' criteria mark by Trademark Rules 2017, whether the existence of a list of 'well-known' trademarks with the registrar mean an automatic recognition of those marks by the courts, and that the owner doesn't have to prove that his mark is reputed in any case of infringement and passing off of his registered mark in front of any court of law, is a question.

In summary, while it has become harder to obtain intellectual property rights (IPRs) in India, it continues to be difficult to enforce IPRs. The focus should therefore shift to enforcement of IPRs. It is also suggested that to speed up the adjudication processes, the central government should consider fast-track courts for IP enforcement cases.

6.7 Issues with Labelling of Cosmetics

In June 2014, the Ministry of Consumer Affairs issued a Notification under the Legal Metrology Act purporting to amend the Legal Metrology (Packaged Commodities) Rules 2011 by introducing Rule 6(8) which provides that '*Every package containing soap, shampoos, tooth pastes, and other cosmetics and toiletries shall bear at the top of its principal display panel a red or as the case may be, brown dot for products of non-vegetarian origin and a green dot products of vegetarian origin*'. This issue falls within the scope of the Drugs and Cosmetics Act, 1940 and thereby, beyond the jurisdiction of the Legal Metrology Act, 2009.

It has been confirmed by the Honourable Supreme Court of India, in the judgment pronounced in the matter of *Indian Soaps and Toiletries Makers Association v. Ozair Husain and Ors*[19], that the accurate law under which such a mandate can be provided is the Drugs and Cosmetics Act, 1940.

Further, there are several practical difficulties in complying with such a provision. Cosmetic products are complex and the formulations contain many ingredients. Many of these ingredients are prepared by processes involving multiple steps. Thus, the original chemical identity of the ingredient is lost. These processes are carried out irrespective of whether the material is of plant or animal origin. Consequently, if any of these ingredients are present in a formulation, it is not possible to determine if it is of animal or plant origin.

There are neither technical tests nor any methodology for a manufacturer to confirm whether its source ingredients are vegetarian or non-vegetarian. Each ingredient for a cosmetic, is sourced from various suppliers. The manufacturers would at best have to rely

solely on representations made by its various suppliers for the purposes of labelling. It is practically impossible for a manufacturer to actually be aware and comply with the labelling requirements. Further, they would be held responsible for any violation thereof if a product is mis-labelled and there would be no consequences on the suppliers.

In the absence of clear definitions, there is ambiguity in the definition and understanding of animal origin, like, for instance, honey, wax or silk essence, none of which is defined as either being from animal or from vegetarian origin.

The Indian Beauty and Hygiene Association challenged the notification before the Bombay High Court in 2014 and the matter is currently *sub judice*. The Honourable Court has directed that no coercive action should be taken for non-compliance with the notification during the pendency of the matter. Based on news reports, the government is set to amend the Drugs and Cosmetics Rules, 1945 or mandating that packages of cosmetics and toiletries such as shampoos, toothpastes and soaps should bear a red/brown dot for non-vegetarian origin and green dot for vegetarian. The move has been backed by the Department of Consumer Affairs, which in a recent representation to the Ministry of Health and Family Welfare asked the latter to make the declaration mandatory.

Recommendations

Considering the significant practical difficulties in implementing the notification and in light of the opinion of the Drug Testing and Advisory Board and the decision of the Honourable Supreme Court the Government of India should reconsider its stand and not amend the Drugs and Cosmetics Rules, 1945.

6.8 Issue of Draft Cosmetics Rules

At present, cosmetics are covered under the Drugs and Cosmetics Act but there were no separate regulations for cosmetics, allowing such products to often circumvent testing and other regulatory norms, as many other rules meant specifically for pharmaceuticals do not apply on cosmetics.

The Ministry of Health and Family Welfare (Ministry), through a notification dated 29 November 2018 has proposed the Cosmetic Rules, 2018, which are applicable to all cosmetics as mentioned under section 3(aaa) of the Drugs and Cosmetics Act,1940. These draft rules are open to suggestions or comments to be addressed by the ministry. The draft rules aim at expanding the regulations surrounding import/manufacturing/ labelling/other related activities related to cosmetics.

These draft rules, with the purpose of improved safety standards, require any cosmetic proposed to launch in India to seek approval with data on safety and effectiveness, all cosmetics will have to comply with Bureau of Indian Standards' packaging norms and cannot be tested on animals.

Recommendations

These draft rules introduce stringent regulations to make manufacturers and importers of cosmetics more accountable in India. These regulations will directly impact the cosmetics industry ushering in global best practices.

6.9 Parallel Imports and Counterfeits

Parallel import is a scenario where goods are brought in a jurisdiction without the permission of the brand owner (i.e. IP right holder). These goods are not counterfeit goods, but merely unauthorized imports from the brand owner's perspective. On account of the lower costs of the parallel importer (as there are no brand management and advertising costs), the products are available cheaper. The manufacturers, oppose this practice as it eats into their legitimate sales.

Further, owing to the unauthorized imports, there are instances where due to variance in product formulations (different countries may have a different product formulation which is suited best for its consumers), the consumer experience of a brand may be negatively

affected. In some industries, the authorized resellers may not be able to provide proper after-sales service or replacement.

Under the TMA, infringements of a registered trade mark under Section 29(1) covers imports or exports of goods. Imports of goods under Registered Trademarks require consent of registered proprietor of the trade mark before imports. Similar provisions exist under Indian Copyright Act, 1957, Patents Act, 1970 and Designs Act, 2000.

However, Circular No. 13/2012 dated 8 May 2012 issued by Central Board of Excise and Customs (CBEC) (the Circular) on parallel imports, states that parallel imports of branded goods are permitted under the TMA. The circular refers to section 30(3)(b) of the TMA without, in any manner, clarifying or interpreting this provision but merely reproducing it. It concludes that TMA permits parallel imports and on the basis of such conclusion, directs the field formation of the customs authorities across India to follow the circular. In the circular, the nodal authority namely DPIIT, being the administrative ministry concerned, has merely reproduced the section 30 of the TMA in its internal advice to customs. There is no clarification, express or implied, provided in the Circular, that 'no consent' of the registered proprietor is required before, or at time of importation of branded products. Under the TMA, registration is confined to territory of India only. The registration of a trade mark is territorial and not for markets beyond the territory of registration. Under Section 29, *inter alia*, a mark which is identical with a registered trade mark with respect to good for which it is registered, will be a case of infringement of trade mark if such identical mark is used by a person other than a registered trade mark proprietor. Under section 30(3)(b) of TMA, imports are subject to the same restriction. Any use of a registered trade mark by any person without the consent of the registered proprietor is treated as infringement. The intent of law cannot be to penalize the domestic infringers and let importers who infringe go free.

Since the issuance of impugned circular, custom authorities at seaports, airports, and inland container depot have stopped examination and inspection of containers that represent carrying imported goods that are freely importable including branded parallel imported goods. This has prompted the traders, importers to import counterfeit goods and there is a surge in sale of counterfeit goods in markets. While the circular seeks to address the parallel imports by issuing directions under the impugned circular, it had the effect of legitimizing counterfeit goods.

Recommendations

Counterfeit in FMCG industry, and more so in the cosmetic industry have become a major concern. Fake imported products are freely available at throwaway prices. Unless customs authorities carry out 100 per cent examination and intimate the right IP holders, this problem cannot be resolved. IP holders, are not being called upon to verify the suspected branded imported goods. Significant quantity of fake/counterfeit goods is entering into the country because right holder consent is not sought anymore.

Over the years FMCG companies including HUL, L'Oréal, Tommy Hilfiger, Lacoste, Calvin Klein, Levi's, and Superdry have filed petitions with courts and helped confiscate thousands of fake apparels through court-aided raids on warehouses, owned by either sellers or smaller niche fashion portals.[20]

Therefore, based on the present provisions of the TMA, it is suggested that a further clarification be issued by which the above position is suitably reflected. The CBEC should do the needful at the earliest by which it is clarified that consent of the right IP holder in each case of import under TMA will be required.

7. CONCLUSION

India represents a good opportunity for international retailers in single brand retail, cash and carry, and e-commerce, as the country appears to be on the cusp of a strong growth phase over next five years. The tipping

point for brick and mortar retail continues to be the opening up of FDI norms in multi-brand retail, a move that is not expected in the near-term. India has emerged as the top recipient of greenfield FDI inflows as per a trade review released by the Commonwealth in 2018. The 2017 Global Retail Development Index (GRDI) titled 'The Age of Focus' has placed India at the top position among 30 developing countries on Ease of Doing Business behind solid growth in retail sales and strong growth prospects for GDP[21]. GDP is expected to grow at approximately 7 per cent over the next two years making India the world fastest growing major developing market. Increase in the internet penetration and improvement in the physical infrastructure will make India an attractive place for investment, especially when some of the trade related difficulties based by the industry, and as discussed above are alleviated.

Endnotes

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HEALTHCARE

Indranil Mukherjee (B. Braun) – Chairman, Healthcare Sector Committee, Shirish Ghoge (Roche Diagnostics) – Vice Chairman, Healthcare Sector Committee and its Members

EXECUTIVE SUMMARY

Europe is India's largest trade partner and India is amongst the top 10 trade partners for Europe. Over the last decade, India–EU trade increased by 72 per cent with the EU continuing to be one of the largest sources of foreign direct investment (FDI) in India. As an example, the Smart City initiative in India also has many European government partners. There are more than 6,000 European companies operating in India employ about 6.7 million people, involving both direct and indirect investment, across sectors. The EU–India Trade Sub-Commission established under the 1994 Cooperation and Partnership Agreement between the EU and India; meets up annually to review multilateral obligations under the aegis of World Trade Organization (WTO). However, in the area of healthcare, there is significant untapped potential which can be developed for mutual benefit.

Prevention, diagnosis, treatment, and rehabilitation of illness and disease needs medical devices, which vary from simple to complex technologies and are a key component of improving efficiency in the delivery of healthcare. Advances in medical device and in-vitro diagnostics (IVD) technology are the next big disruption in healthcare, with life-changing impact on treatments and affordability for patients. This is also leading to an increased usage of medical devices, as a first-line treatment mode in tackling some of the most serious and debilitating health conditions of our time. With an increased preference for minimally invasive procedures and shorter length of hospital stay, new-age medical devices are becoming an integral part of healthcare delivery. Digitalization, while still a niche in the area of medical devices and largely limited to smart wearables, can have far-ranging impact in increased accessibility and relevance in the Indian context.

The medical device industry in India is a multi-product industry, offering a plethora of diverse products, ranging from low technology medical disposables, technology driven ophthalmic products, imaging, medical equipment, IVD, dental equipment, and high-end innovative class III devices such as drug eluting stents, emergency healthcare devices, robotics, etc.

India contributes significantly to the global pharmaceuticals and vaccines market, though it lags behind in the medical device segment. This is because local manufacturing is largely limited to the high volume and low-cost segment of medical consumables. To change the status to promote and develop local manufacturing capability in the low volume and high technology segment, policies need to be implemented, fostering an ecosystem to develop, innovative, and conduct high-end research and development (R&D) in medical device technology in India. Global investments in the medical device sector can help the shift of narrative from Make in India to Make from India and spur exports that help to accelerate India's position into the medical device value chain. Hence, it is pertinent to note that protectionist policies in local procurement or indigenous quality standards breed inefficiencies and will only serve to continue the domestic industry inertia, it is no longer enough to constantly cry foul on India's reliance on imports constituting a major share. India has abundant talent and knowhow and this should be leveraged into an advantage, with policy frameworks fostering industry–academia partnerships to scale up the local manufacturing capability in medical device and diagnostics and encourage global leaders to invest in India in this crucial segment.

The Indian medical device industry size is estimated to be US$5.2 billion (€4.61 billion) and poised for significant growth by 2025. During 2000 to 2014, FDIs in the medical device sector totalled an estimated US$70 million (€62.08 million) and changed significantly in 2015 with approval allowance of 100 per cent FDI under the automatic route, funnelling close to US$850 million (€753.88 million) during 2015 to 2018. Since then, new medical device manufacturing clusters have opened up in Andhra Pradesh, Tamil Nadu, Karnataka, and one upcoming in Telangana. However, in the last two years, FDI has sharply dwindled and significantly reduced with the background of price controls, lack of clarity, and inconsistency in implementation of multiple new regulations.

From being largely an unregulated market, the New Medical Device Rules, 2017 implemented from 2018, have been a welcome move to de-link medical devices regulations from drugs. The new regulations follow the GHTF (Global Harmonization Task Force) guidelines and risk-based classifications. A single

online portal ‘Sugam’ has helped to streamline the complex registration process and the Central Drugs Standard Control Organization (CDSCO) has done a commendable job. Inspections and audit by notified bodies is a step in the right direction to improve on the manufacturing quality for both local and imported products. While these have been progressive for the overall industry and to improve on quality, there is an inherent challenge under rules in the ambit of legal meteorology. A simple example is the worldwide use of symbols to denote manufacturing and expiry date which is aligned as per the parent Drugs and Cosmetics Act but not as per Legal Metrology. This dichotomy leads to challenges of interpretation and subjective assessment by individual authorities and derailing India off the global production and supply network.

Another area of concern is standards for medical devices. Wherever globally accepted international ISO standards are available, these should be harmonized into the BIS standards now being defined, to avoid redundancy and create trade barriers. Emphasis needs to go into creating the infrastructure to work more on enforcement and monitoring adherence rather than limited to creation of new standards. Multiplicity of different regulatory bodies makes implementation a tough ask and a bane that needs to be dispensed with.

Affordability in healthcare is a key concern in India and rightfully so, as we largely meet expenses out of pocket. However to address affordability only with price controls, without looking at the entire value chain of healthcare delivery, stifles only the manufacturer and industry. The DPCO (Drug Price Control Order), 1995, which enforced price control on bulk drugs led to a ripple effect of many pharmaceutical companies gradually moving out of production and consequently on the supply of formulations. This culminated with a higher import dependence of Bulk Drugs and API’s (Active Pharmaceutical Ingredients). A similar action in some medical devices implemented with a ‘one price fits all’ has had a bearish impact on FDI’s as mentioned earlier. The more critical point to moot is that there hasn’t been much gain for the end consumer ‘patient’ perspective as the pricing and affordability issue has a direct impact from the private sector of providers and the distribution chain, which did not pass on the benefits of a lower product procurement price.

‘Asymmetry of information’ as well as ‘infrastructure gap’ between public and private healthcare providers are reasons to evaluate why price control is not a solution. Globally, India has arrived as an information technology hub and is well-poised for the world of tomorrow. Harnessing this knowhow and to work on digitalization can help reduce the information asymmetry for patients. It is important to note that in the last five years, the government’s policy measures to bring increasing accountability in the public sector are steps in the right direction and need acceleration. The High Powered Committee Report on ‘Trade Margins’ authored by the DoP (Department of Pharmaceuticals) had done a comprehensive study and nuanced approach to address the issue of affordability. This needs to be implemented. Subsidiaries of global companies operating in India are not merely distributors but contribute to efficiency in the value chain through skill and competence-building activities, robust compliance infrastructure, pre- and after-sales service in case of equipment, and by bringing in state-of-the-art global technology.

The global IVD market is estimated to reach US$80 billion (€70.95 billion) in 2024. In 2018, the total value of Indian IVD market was US$2.1 billion (€1.86 billion). The Indian IVD market is forecasted to grow at a compound annual growth rate (CAGR) of 7–8 per cent from 2019 to 2023. IVD has witnessed several changes and additions in the recent past with a paradigm shift from traditional diagnostics to new generation diagnostics that work at the gene level. This change emerged with the inclusion of advanced technology, such as genetic testing, molecular diagnostics, polymerase chain reaction (PCR), and next-generation sequencing (NGS). Fast turnaround, reliability, user-friendliness, and predictability of predisposed diseases contribute to the growing relevance and acceptance of these new techniques.

Major factors driving growth in the Indian IVD market are the high prevalence of infectious diseases, rapid increase in chronic diseases, increasing use of point-of-care (PoC) diagnostics, rising awareness, and acceptance of personalized medicine and companion diagnostics. Patient awareness is a critical factor, along with an emerging focus on ‘wellness’, and an increasing demand for more information about predisposition to serious diseases.

Having evolved significantly in the last few years, the

Indian medical technology industry is witnessing a high growth trajectory. However, due to a number of ecosystem constraints, this industry sector has not been able to achieve its full potential as yet. Recent policy frameworks and various other fiscal initiatives promulgated by the government has created an enabling ecosystem to boost medical technology and create a predictable ecosystem to make India a powerhouse in this industry. It is expected that new rules would remove regulatory bottlenecks, facilitate Ease of Doing Business while ensuring availability of better medical devices for patient care and safety.

The industry firmly believes that the current regulatory, policy, and economic milieu envisages creation of a robust ecosystem for all stakeholders including innovators, manufacturers, suppliers, consumers, buyers, and regulators.

1. ISSUES/HEADWINDS

1.1 Trade Margin Rationalization

Medical devices usually go through several points of sale along the supply chain – from a distributor to a wholesaler to a retailer and a hospital – before they reach a consumer. Each point in the supply chain incurs various costs, such as freight, inventory carrying costs, rental, salaries, marketing and sales overheads, and service and statutory expenses of compliance.

Trade margin is the difference between Price to Trade (the price at which the manufacturer or marketing company sells the drug to the distributor or stockist) and the maximum retail price (MRP). The government's recognition of Trade Margin Rationalization (TMR) for medical devices as a fair and balanced approach to ensure reasonable prices to consumers is a welcome move for patients as well as the industry. Under the proposed TMR regime, manufacturers would be allowed to offer a limited price margin for the entire trade channel. Price to Trade is an important element in rationalizing trade margins and there should be an equitable framework for ascertaining the Price to Trade for both importers and local manufacturers.

For the calculations of TMR, Price at the First Point of Sale (distributor) should be used instead of landed cost. Use of landed costs in trade margin calculation does not incentivize efficiency. Landed costs depend on Transfer Price (price at which the devices are transferred internally between the parent company and its subsidiary) and is not comparable with the Price to Distributor, which is the market price.

Through the approach mentioned below, a level-playing field will emerge from this criterion while reducing the MRPs substantially.

As per the DoP report,

*Formula to arrive MRP = Price to Stockist (PTS) x $\left\{1 + \left(\frac{TM}{100-TM}\right)\right\}$ + Applicable GST

Where TM = Trade margin not exceeding 30

[e.g. If PTS = ₹100 (€1.27), then allowable MRP = ₹142.28 (€1.81) @ 30 per cent margin.]

Thus, an even-handed definition of Price to Trade for both domestic and imported manufacturers is fundamental for ensuring a fair market and appropriate investment climate, which are critical to advancing India's ambitious health, economic, development, and innovation goals.

TMR became a part of trade negotiation packages. Suitable application of the trade margin approach on medical devices is in principle to India. The National Pharmaceutical Pricing Authority (NPPA) has already brought out a notification relating to application of price margins on few non-scheduled cancer drugs as test case. After successful pilot, this will be applied on medical devices notified as drugs. Its operation parameters will be decided by NPPA.

1.2 Public Procurement Order

The public procurement order (PPO) on medical devices, May 2018, calls for certain percentage of local contents: medical disposables/consumables – 50 per cent, medical equipment, surgical instruments – 25 per cent, implants – 40 per cent, diagnostic reagents – 25 per cent. In practice, 85 per cent critical devices of Class C and Class D are imported, with hardly one/two being local manufacturers. The guidelines also state that the local content requirements would be increased in a phased manner over the course of three years. Local content will be computed on the basis of the cost of domestic components in the device compared to the total cost of the device.

The guidelines also state that preference will be given to local suppliers in terms of procurement. All local suppliers will be required to furnish a self-certification of use of local content prior to bidding for public contracts.

The possible challenges could be:

- Import substitution impractical:
  - Even developed countries depends on import. (China 70 per cent, Japan 50 per cent, USA 30 per cent.)
- PPO implication in tertiary/referral hospitals:
  - Patients will be denied the benefits of world-class technologies.
- Lowering of eligibility criteria for bidders:
  - Will lead to poor quality procurement from unreliable suppliers.

Suggestion: A neutral agency should judge the present status of local capacity in each category and define local content.

However, it could be noted that unlike several other sectors, medical devices are comprised of thousands of very varied products in engineering and design complexity. At present, India has got adequate manufacturing capabilities for products like syringes, cannulae, stop cocks, extension lines, blood bags, dressings, hospital furniture, and suction machines, but lacks the desired ecosystem for tech-intensive devices like heart–lung machines, pacemakers, complex catheters, etc.

A uniform 25–50 per cent local content ask, preceding any meaningful scaling up of the missing sophisticated component ecosystem will create a risk of ‘garage manufacturing’ with low-cost, low-quality, knocked-down, kits-based assembly. A pro-active policy formulation to regulate medical devices differently than drugs should permit free market dynamics to succeed and keep regulations simple, protecting consumers, and incentivizing Make in India.

Furthermore, many IVDs and devices need temperature control during its transportation. Under the circumstances to open and repack the products will affect the integrity of the product’s quality. It is therefore necessary that products requiring temperature-controlled environment are not included in the list of imported products requiring local content.

1.3 Pricing Policy

Pricing decisions/recommendations and health technology analysis (HTA) needs to be linked via a well-defined transparent process between the stakeholders including manufacturers, providers, payers, and patients to aid evidence-based clinical decision-making. However, pricing of coronary stents (DES/BMS) and knee implants in 2017 have not led to transfer of the reduced prices to the patients, as patients continue to pay similar prices of these medical procedures (e.g. percutaneous coronary intervention) as they were paying prior to the said price controls.

It also needs to be understood if the true benefits of the price cuts are ‘transferred’ to the patients by regular monitoring and reporting from the clinical care settings. One major issue is, while the government has not changed the list of essential drugs, it has invoked Para 19 of the Drugs (Price Control) Order, 2013 (DPCO 2013), which gives the regulator power to control prices of drugs that are not under the National List of Essential Medicines (NLEM). Furthermore, as it is estimated that

price control regime may get even more broad-based and more medical devices such as hospital consumables may come under the ambit of price control. However, it needs to be borne in mind that price-controlled environment would reduce the introduction of cutting-edge medical innovation in the Indian care settings, and future patients would have to forego the health gains that would have come from these foregone innovations. Price controls without robust calculative framework may create economic distortions and ripple effects that impose invisible costs elsewhere in the commercialization value chain or clinical care outcomes. Furthermore, imposing price cuts squeezes the cost bubble towards some other cost driver of the medical procedure leading to cost-shifting that raises the prices of other elements of the clinical care pathway.

Regulators could retool the healthcare access programmes to encourage greater competition among providers and insurers based on real health outcomes. Ground level efficiency in-patient care, instead of sub-optimal price controls will ensure maximum value healthcare expenditure without dampening innovation.

1.4 Legal Metrology

Mandating regulated medical devices to comply with Legal Metrology labelling requirements is another challenge. Regulated medical devices, treated as drugs, were exempted from Legal Metrology since inception and like drugs were supposed to follow the labelling requirements of Drugs and Cosmetics Act/Medical Device Rules/DPCO 2013. Off late the exemption is removed, resulting in legal metrology inspectors claiming that globally accepted symbols of DOM/DOE are not accepted.

The amendment to Legal Metrology (LM) Rules is not without grey areas. In our view, the biggest grey area is the use of expression ‘not for commercial or trade purpose’ in the definition of ‘institutional consumer’. In case the sale of pre-packaged goods is to institutional consumer, LM Rules are not required to be complied with. In case of such sales, the LM Rules require manufacture, importer or packer to label the pre-packaged goods with the declaration – ‘not for retail sale’. The exemption is significant because it reduces the administrative cost of labelling as well as the probability of occurrence of non-compliance, given that there is little to be declared on the label.

1.5 Overcharging Demand Notices to Companies

Many medical technology companies have received overcharging notices from NPPA directing to pay overcharge amount for increasing prices by more than 10 per cent per annum during 2014 to 2016. Medical devices are different from drugs in respect of nature, mechanism of action, manufacturing, quality control, and mode of administration. The impact of these notices may have detrimental impact on the business climate and health economic milieu leading to severe dampening of the medical technology company initiatives and inadequate patient outcomes.

The government should reconsider and withdraw the penalty amount which has been imposed on medical technology companies through the overcharge notices. The Annual Report 2017–18 of the DoP laid down in Parliament, also states that medical devices are very different from drugs. Since the scope of DPCO 2013 is restricted to ‘formulations’ as defined in Para 2 (1) (i), which means a medicine processed out of or containing in one or more drugs, notified medical devices, can under no circumstances be considered as a medicine, under the circular of NPPA dated 15 February 2015, as it does not fall within the definition of ‘formulation’ and consequently considering it as a non-scheduled formation is contrary to DPCO 2013 and NPPP 2012.

1.6 Regulation of Roadmap of Medical Devices

If all medical devices are brought into regulatory control, CDSCO will have to

increase their workforce to ensure efficient and transparent regulatory services. This needs to be done in a phased manner whereby the registration of the non-regulated medical devices as well as class A, B, C, D devices should be done in appropriate timelines of 18 months and more.

1.7 Quality Control Order

BIS under the directions of NITI Aayog has been working to develop Indian standards for a list of commonly procured medical devices by the Ministry of Health and Family Welfare (MoHFW). Quality control orders (QCO) have been issued by DoP for six products which will mandate certification of those products by BIS and testing in India. Mere conformation with BIS standards does not prove efficacy and safety of device. The draft QCO's would mandate conformity to an array of domestic standards, some of which are outdated and do not reflect the latest scientific methodologies in practice. There is no reason to do this since international consensus standards representing state-of-the-art methods already exist. Requiring conformance to a domestic standard that may deviate from global norms set by bodies such as ISO and IEC creates confusion by introducing inconsistent requirements and has the potential to delay access to medical technology. The draft QCOs would also require mandatory in-country certification by BIS for the listed devices, including testing of the medical devices in BIS-approved laboratories. These kinds of duplicative testing requirements only delay the time to market the medical technologies and add to the cost of the medical device without creating additional value.

We believe that it is important to note that these QCOs are not a suitable substitute for a comprehensive approval or clearance by global regulators such as CDSCO, PMDA, FDA, and EU. To gain regulatory approval or clearance, a device manufacturer generally will need to conduct extensive testing to support the device, including, as applicable, clinical evaluations, biocompatibility studies, sterilization studies, shelf-life studies, mechanical testing, design verification, and validation. To ensure that patients are receiving quality medical devices that meet the highest safety standards, there must be an understanding about the difference between the conformance with certain standards versus products that have met all the necessary requirements for regulatory health authority clearance or approval. We strongly suggest that to ensure that Indian patients are receiving quality medical devices that meet the highest safety standards, all medical technologies should eventually be regulated by the health ministry (CDSCO) in accordance with the Medical Device Rules 2017. Multiple agencies regulating medical devices is not a solution.

1.8 Compensation for Faulty Medical Devices

On the question of government's provision of compensation in case of injury or death due to any medical device found malfunctioning, the industry argues that the compensation for severe adverse events (SAE) should be on a case-to-case basis and upto the extent of injury, irrespective of the risk-class of medical device. The manufacturer of medical device *should not be liable for compensation* if the risk of adverse event is mentioned in IFU (Instructions for Use) and incidences of SAE matches with the IFU and the patient has already consented to the risk associated with it for non-regulated devices. In case of regulated device, if the risk benefit ratio is already approved by regulators and the clinician/treating hospital or the patient has not followed the IFU and/or not trained in the device, the manufacturer should not be held liable for the injury. Also the compensation should be approved only in case of SUSAR (Suspected Unexpected Severe Adverse Effect Reaction) after diligent, transparent, and fair evaluation of clinical circumstances. A detailed process/SOP should be developed by regulators defining the roles and responsibilities of all stakeholders including patients, doctors, hospitals, regulators, manufacturers, and investigators.

1.9 Uniform Code for Pharmaceutical Marketing Practices

In December 2014, the DoP issued a voluntary uniform code for pharmaceutical marketing practices. Due to industry confusion, the same agency issued a clarification in March of 2015 saying that the code applied to medical devices. The code includes a number of unilateral provisions that would constrain any genuine and complaint abilities of companies to interact with healthcare providers. It would also be important to align the Uniform Code for Pharmaceutical Marketing Practices (UCPMP) with the professional conduct, etiquette and ethics code of the Indian Medical Council for doctors to abide with in their relationship with industry. The voluntary code on its own may be weak to deter unethical practices and hence should be enforced under the Drugs and Cosmetics Act or Medical Devices Act when this is realized.

2. PROBABLE OPPORTUNITIES/ TAILWIND

2.1 Ayushman Bharat Pradhan Mantri Jan Arogya Yojna (AB–PMJAY)

In-patient hospitalization expenditure in India has increased nearly 300 per cent in the last last ten years. More than 80 per cent of the expenditure are met out of pocket (OOP). Rural households primarily depended on their ‘household income/savings’ (68 per cent) and on ‘borrowings’ (25 per cent), the urban households relied much more on their ‘income/saving’ (75 per cent) for financing expenditure on hospitalizations, and on (18 per cent) borrowings. OOP expenditure in India is over 60 per cent which leads to nearly 6 million families getting into poverty due to catastrophic health expenditures.

Public spending on healthcare in India is amongst the lowest in the world at just over 1 per cent of gross domestic product (GDP), and the Indian health system is characterized by substantial shortcomings relating to workforce, infrastructure, quality, and availability of services. To mitigate this condition, the government has launched of Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).

It has two pillars: health insurance covering up to ₹5 lakh (€6,370) of care per family per year for the poorest 500 million people (regardless of preexisting conditions). The target beneficiaries of the proposed scheme will be more than 10 crore (100 million) families belonging to poor and vulnerable population based on SECC (Socio-Economic Caste Census) database. There is no limit on family size. AB-NHPM will subsume the on-going centrally sponsored schemes – Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS). Under AB-PMJAY, 1,353 surgical and critical care procedures are to be covered.

The second objective of AB-PMJAY is investment in primary care by transforming existing facilities into 150,000 new Health and Wellness Centres (HWCs) that provide comprehensive primary care and 160 district hospitals to be upgraded to medical college/ tertiary centre.

AB-PMJAY will be the main vehicle for the Universal Health Coverage and will focus on strengthening the public health systems, particularly in high priority districts that include aspirational districts. The salient features of the National Health Mission (NHM) will shift from selective to comprehensive primary healthcare that includes care for common non-communicable diseases, geriatric healthcare, palliative care, and rehabilitative care services, etc., through strengthening of the sub-centres and primary health centres (PHCs) as well as HWCs.

A successful implementation will require a parallel concerted push towards robust quality assurance, appropriate clinical governance, and evidence-based referral pathways in both public and private healthcare providers.

Another aspect which could lead to optimal implementation of AB-PMJAY is data-related initiatives. Investments in collecting data as

electronic records that systematically measure quality are part of the solution, but we believe that a national programme that defines and tracks quality across the spectrum of care is crucial. Beyond the health benefits of improving quality, such programmes build trust, encouraging people to return. Without deliberate attention to and action on quality, it's unlikely that the reform will lead to better health outcomes.

If the government invests heavily in evaluations, testing new approaches, listening intently to states, it can ensure optimal patient benefit.

2.2 Make in India

Building appropriate infrastructure, supported by lucrative policy framework, which would create a stable environment and encourage many foreign medical technology companies to manufacture in India.

India is self-reliant in medical consumables like syringes, needles, etc. Several Indian manufacturers have capabilities to manufacture low–value–low-risk–high-volume products (Class A and Class B devices) but for high value–high-risk (Class C and Class D devices), we hardly have one local player which leads to monopolistic environment leading to cost escalation.

2.3 Health Technology Assessment

Health Technology Assessment (HTA) is a quintessential tool to evaluate the value of novel interventions and health technologies executed by robust evidence synthesis and reproducible economic evaluation. It has various dimensions of objectives as mentioned in table below.

2.3.1 Progress of HTA in India by GoI

In India, the policy decision-making process in healthcare is complex due to multiplicity of organizations, with overlapping mandates. To bridge this gap, the Government of India has taken commendable steps in the recent past through the establishment of the Health Technology Assessment Board (HTAB) as a part

Overview of health technology assessment requirements and stakeholders				
	Registrations	**Reimbursements**	**Local listing**	**Patient access**
Consideration	Submission Product-evaluation/type testing Product approval	National price guides Coding Clinical indications, conditions and limitation of use	Local pricing Hospital listing and clinical protocols Payment methods and options	Clinical indications Financing Patient affordability
Information consideration required	Clinical data/ studies Effectiveness, safety data Technical specifications	Budget impact analyses Cost effectiveness/cost benefits study Value-based outcomes Quality of life analyses Epidemiology data	Price/volume analyses Financial considerations, Discounts, rebates, incentives Services and technical support	Therapeutic benefits Economic assessment/ affordability Cost of therapy Sources of financing
Stakeholders	Ministry of Health Regulatory authorities Key Opinion Leaders (KOLs, primary investigators)	Reimbursement bodies/ agencies HTAs KOLs	Provincial governments Hospital administrations and procurement KOLs Key departments and end users	Reimbursement agencies and intermediaries Industry (medical product, manufacturers, private insurance) Non-profit organizations (patient groups, NGOs)

of Department of Health Research, MoHFW. It aims to reduce the cost and variations in-patient care, expenditure on medical equipment in directly affecting the cost of patient care, overall cost of medical treatment, reduction in OOP expenditure of patients and streamline the medical reimbursement procedures for effective implementation of the Universal Coverage Programme. The Department of Health Research has also set up a health technology assessment body named Health Technology Assessment in India (HTAIn) to carry out economic evaluations all kinds of medical technologies. HTA is also carried out by hospitals and industry to establish the value of novel medical technologies including drugs, devices, equipment, and public health programmes. HTAIn also allows the industry representatives to register themselves as stakeholders and attend some invited meetings within the aegis of Department of Health Research.

2.3.2 Progress of HTAIn by healthcare providers and manufacturers

The Indian medical technology industry is committed to provide healthcare solutions with robust health economic data underlying the value of the products. The industry has submitted evidence-based requisitions to the HTA evaluations performed by HTAIn. The industry requests to be more participative in HTA analysis undertaken by HTAIn, owing to the expertise and experience available in the industry to work with HTAIn. Industry should be considered as a working partner instead of a stakeholder. More transparent and frequent interactions between HTAIn and industry associations would bolster robust clinical evaluations and better clinical outcomes for patients.

2.3.3 Dangers of incorrect usage of HTA

- **Use of HTA primarily for justification of price cuts:** HTA is not a tool for price cuts. If the sole objective of HTA exercise is price cuts, then the entire purpose of evidence generation and value assessment through health economic evaluations would be defeated.
- **Absence of national HTA regulations and opaque analytic procedure:** Different procedures and in-silo approach in health economics can lead to drastically different results for the same decision problem.
- **Ambiguous willingness to pay threshold (WTP):** The WTP threshold for India is not yet known/published. Thus, the cost effectiveness of a drug/device cannot be established and if it is based on assumptions, incorrect results may be obtained.

2.3.4 Challenges for HTA in India

- No actuarial database is available to yield a probability distribution of the expected number of different health episodes requiring different treatments at varying costs. Without such a database, insurance agencies cannot estimate the required premium to adequately cover the pooled risk – the ultimate cost of the therapy. Thus, a nationwide costing study/related exercises that lead to a national costing database needs to be undertaken in liaison with the industry/ industry associations. It is important, as both HTAIn and industry to perform health economic decision analytic model based analyses will use these costs.
- The industry requests to be more participative in HTA analysis undertaken by HTAIn, owing to the expertise and experience available in the industry to work with HTAIn. Industry could be considered as a working knowledge partner instead of a stakeholder.
- HTAIn to kindly roll out a guidance document bearing a granular methodological framework for India-specific HTA analysis. These need to specify how drugs and devices/equipment should be evaluated.
- HTAIn to kindly recommend a willingness to pay threshold so that models developed by industry and HTAIn have methodological uniformity.

- HTA reports must include sections on protocol development for the project, health systems integration model, medical ethics, and involvement of patient representatives to reflect overall health impact of an intervention instead of only cost-effectiveness, equity, and deciding a price point of a product.
- Pricing decisions/recommendations and HTA analysis need to be linked via a consultative process between the stakeholders including manufacturers, providers, payers, and patients. Globally practiced pricing models, which advocate value-based pricing/price of innovation/ international reference pricing to be kindly incorporated instead of direct extrapolations from a cost-effectiveness model.

3. IN-VITRO DIAGNOSTICS

The in-vitro diagnostics (IVD) market is broadly divided into equipment, analysers, reagents, software, and services. The service sector is largely unorganized with a large presence of players located at the regional or city level. The Indian diagnostics market has been growing rapidly in recent years because of rising awareness for healthcare, demand for good quality diagnostics, advances in technology and automation of equipment, resulting in reducing the turnaround time for reports and providing quicker diagnosis.

Lifestyle and communicable diseases are no longer restricted to urban centres, but are spreading to rural areas as well. The improving corporate hospital infrastructure and installation of automated and semi-automated biochemistry, immunology, haematology, and bacteriology equipment have enabled the market to achieve this healthy double-digit growth rate. While the entire healthcare industry in India is growing 13–15 per cent annually, the Indian laboratory industry is growing at the rate of 20–25 per cent; with the molecular diagnostics segment growing at 25 per cent. The molecular diagnostics products market is expanding rapidly as they possess higher precision and allow for speedy detection of infectious diseases and genetic disorders at an early stage of development.

The disposable/reagents segment led the Indian IVD market with approximately 70 per cent market share in 2018. This share is expected to further increase over the years, due to the emergence of Point of Care (PoC) testing and the growing demand for portable diagnostic instruments. In addition, India has drafted the first National Essential Diagnostics List (NEDL) – a country-specific set of tests for detecting common morbid conditions and priority diseases. This follows the first ever Essential Diagnostics List published by WHO in May 2018.

Currently, traditional prenatal screening and diagnosis methods dominate the Indian market with amniocentesis, and chorionic villi sampling having a market size of over 60 per cent. However, both these techniques, being invasive pose some risk to the developing foetus, which is why many conceiving mothers do not prefer these methods. This has led to a dire need for non-invasive techniques, which can detect foetal problems in early stages of pregnancy. Blood tests for select trisomy based on detecting cell-free placental DNA present in maternal blood, also known as non-invasive prenatal testing (NIPT), have already become available across major tier-I and tier-II cities in India. NIPT has also become a highly preferred technique by doctors who consider it to be a safer, faster, reliable, and less tedious method that is superior to traditional techniques like chorionic villi sampling and amniocentesis.

For diagnostic laboratories the main drivers are likely to be a focus on preventive healthcare, shorter turnaround time through automation, next-generation logistics network, value-added services like the application of artificial intelligence (AI) for qualifying lab reports, a home collection of samples, and establishing a connect with customers through handheld devices.

Highlighting the critical need for inclusion of diagnostics in a recent op ed in STAT, Dr Madhukar Pai, Canada Research Chair in Epidemiology & Global Health; Director, McGill Global Health Programs; Director, McGill International TB Centre says:

‘As countries make progress toward universal health coverage and design and deliver their essential health benefits packages, diagnostics must be included as a key component of such packages. Why? Because most diseases or conditions cannot be correctly managed without a clear diagnosis. High-quality healthcare begins with seeking care, followed by a diagnosis that leads to appropriate therapy. Individual disease and outbreaks can’t be stopped if the cause is not identified early.’

In the absence of laboratory support, healthcare providers have no choice but to resort to empirical and syndromic treatment. In several countries, ‘mystery patient’ studies that used trained actors to simulate various diseases have shown that primary care providers make correct diagnoses in *less than one-third of patients* who present with typical symptoms of angina, tuberculosis, asthma, diarrhoea, and pneumonia. Such studies have also shown high use of broad-spectrum antibiotics. It is no surprise that *antimicrobial resistance* has emerged as a huge global health problem.

Even when diagnostic tests are available, health systems are often unable to effectively leverage them. Studies on cascade of care models clearly demonstrate that diagnosis is the biggest gap in the continuum of care.

To address this massive gap, countries need to invest in tiered, connected, integrated laboratory networks, procure quality diagnostics, and train laboratory professionals to assess results. We must *reject the mindset* that simple, rapid tests and syndromic treatments are ‘enough for poor countries. All patients, rich or poor, deserve to know their diagnosis.’

Infection is and continues to be a top public health challenge in India. Moreover, the growing rate of chronic diseases such as diabetes, heart failure, and colon cancer, increasing demand for personalized medicine, expanding geriatric population base, and are all factors that make diagnostics a crucial tool in the patient treatment process.

Traditionally, infectious diseases at the community as well as at the institutional levels have been managed by clinical professionals and specialities. In this scenario, laboratory medicine plays a pre-eminent part in the process, working effectively to produce quality information, with systems and personnel dedicated to the service of patients and infectious disease management. IVDs provide the ‘evidence’, the clearer understanding of precisely what the patient is suffering from to support clinical decisions for targeted patient therapy. Helping clinicians to determine the most impactful treatment or intervention, ranging from managing glucose or cholesterol levels to detecting genetic conditions of a patient. In most situations, an early diagnosis can provide better long term outcomes, by highlighting a need for specific treatment or lifestyle changes. In some life threatening cases, such as sepsis and certain cancers the information from a diagnostic test can help prevent premature death.

IVDs have a vital role in the management of both chronic and acute conditions. Clinicians managing patients with cardiovascular disease, diabetes, and respiratory disorders or sepsis depend on diagnostics to monitor and control disease progression. It also plays a crucial role to tackle emerging challenges such as antimicrobial resistance (AMR) which is increasingly becoming a public health problem globally and in India with potentially catastrophic consequences in terms of mortality.

IVD is no longer just about the detection of diseases. It plays a pivotal role across the entire healthcare continuum from screening, diagnosis and prognosis to patient stratification and treatment monitoring. IVD companies, laboratory service providers, pathologists, microbiologists are playing a very crucial role via their diagnosis acumen to enhance clinical practice and quality of care, and ultimately

improve patient outcomes. IVD also plays a significant role in shaping the transformation of the healthcare industry to value-based care. With enhanced and evolving IVD tools the importance of diagnostics in-patient care will continue to grow.

Unfortunately, IVDs still one of the most undervalued and by far most under-utilized segments in the healthcare system. While the use of diagnostics positively influences 60–70 per cent of clinical decision, it represents not more than 5 per cent of healthcare spend. Used appropriately and in a timely manner IVDs can provide one of the greatest improved patient care and cost-savings opportunities. As time to result, targeted treatment, cost saving and shorter hospital stays contribute to a more efficient system.

Post implementation of medical devices rules by CDSCO it is anticipated that it might boost manufacturing and availability of state-of-the-art diagnostics for the patients. Moreover, the regulations would help in streamlining and harmonizing which might attract foreign direct investment and joint ventures in IVD. The single window clearance is still a far reality and Ease of Doing Business needs more attention. Apart from these, the sector requires R&D incentives, tax holiday and inverted duty benefits for major IVD players to invest in the sector.

India poised to be the first country to publish the draft list of NEDL by Indian Council of Medical Research (ICMR) in December 2018, which currently at the consultation stage at the MoHFW for implementation. NEDL implementation by India is going to be an example for the whole world especially for the low- and middle-income countries.

NEDL might help the availability of basic diagnostics and radiological tests at the PHC and district hospital would give accessibility of these basic and specialized tests and help the clinicians to take informed decision and reduce the overall healthcare costs. NEDL would also benefit the HWCs, which subsequently reduce the burden on tertiary care hospitals. At this moment the diagnostics tests are OOP expenses which accounts for major expenditure for both in-patients and out-patients and generally out of coverage by the insurance.

For governments, appropriate use of IVDs will mean cost savings at a national level that allows resources to be allocated elsewhere. For a patient – access to the right treatment at the right time. Diagnostics also play an important role in public health programmes, such as population screening for communicable diseases.

The IVD industry is well placed to build on and expand innovative developments and create new opportunities to deliver solutions that diagnose needs and inform care decisions, improve care delivery, and enable more comprehensive care management.

Innovative clinical diagnostics tests and technologies are the foundation for evidence-based medicine, allowing for early intervention that improves patients' health outcomes, often lowering costs for the broader health system. A modernized and predictable, risk-based, diagnostics regulatory framework would speed the pace and reach of cutting-edge diagnostics, allowing patients to benefit more broadly and rapidly from breakthrough diagnostic technologies.

4. CRITICAL CHALLENGES, NEEDS, AND URGENT REQUIREMENTS

1. A draft Medical Devices Act, including IVD, has been prepared, but not finalized. It is critical to invite healthcare, medical device, medical equipment, and IVD companies inputs on the final version of the proposed Act followed by adoption and implementation to ensure clarity. Oversight of the Act to be under the domain of the CDSCO (or a similar body) in view of their in depth understanding of the subject.
2. In India healthcare and more specifically IVDs is OOP expense, which means a majority of the population pays for their

diagnostic tests. Though the government has launched an excellent programme through the Ayushman Bharat initiative, the public sector/some private organizations sponsor healthcare expenses for their employees and family, there is a need to expand coverage under Ayushman Bharat, introduction of affordable national insurance system or a system of reimbursement.

3. In AB-PMJAY, the present package rates are significantly less than market price and may pose challenges in synchronous and universal implementation of the scheme. Moreover, absence of diagnosis related groups (DRGs) could make introduction of innovative technology in AB-PMJAY difficult. There is a need to have separate rates for medical devices and medical procedures (similar to CGHS) for greater participation by medical technology companies for benefit of the people.
4. If TMR is extended for other categories of devices, will severely hamper launch of innovative devices. Further, the calculation of the TMR should be calculated from PTT onwards only and not from landing cost.
5. Any attempt to implement the PPO rule will be disruptive to patient treatment and/or will result in procurement of devices with monopolistic cost escalation of the devices. This will also deny the patients treated in government hospitals from the benefits of world class consumables, equipment's and implants of latest technologies.
6. Medical devices should be exempted from legal metrology (LM) as in the past. All medical devices comply with the principal Act (D & C) Act 1940. Having another parallel Act of LM will complicate the labelling and create confusion. Further LM should not disregard the globally acceptable symbols of DOM/DOE. Also inserting information in a particular font size inserting will make the country specific labels too big which may affect sterility and hide information.
7. The challenge for the regulation of roadmap of medical devices would be the Sugam online portal as well as document requirement guidelines. Regulating the products class wise would be preferable instead of regulating everything as this may lose visibility on high risk products.
8. The country faces a scarcity of trained personnel equipped to operate and interpret newly developed solutions available in the market. In addition, we are facing a significant gap in expertise to treat patients with new medical devices and run laboratories. Skill development and increasing automation have to be mandated, with funds being made available, to address these issues.
9. Taxation and customs duty for medical devices and diagnostics products are high varying between 5 per cent to 28 per cent, leading to a higher price for life saving tests. This needs to be rationalized and customs duty reduced. Further customs duty on spare parts is even higher and has to be reduced.
10. While the NEDL list has been developed there is a need to finalize and circulate the list to all healthcare providers in order to ensure efficient implementation.
11. Awareness and acceptance of the need for quality diagnostics among government, policy makers, clinicians, hospital administrators and patients is a crucial element of the mix. Lack of awareness often leads to under or no use of the tools available. A focused and well-coordinated programme is required urgently at the national level.

In conclusion, medical devices and equipment's along with IVDs are one of the most powerful weapons of defence and offence against disease and better health for all. The time for widespread adoption is now.

We expect to seek a stable policy environment in India, both on the regulatory and pricing front, so that the companies can then focus on 'serving patients'.

ICT

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EXECUTIVE SUMMARY

Direct tax

The Interim Finance Budget 2019 has not made any announcements in relation to the income tax benefits for corporates. The full Budget is expected to bring rationalization in various areas such as equalization levy, rationalization of rate of taxes for small and medium industries (SMEs), etc.

The following areas are required to be addressed in the Budget:

- Harmonization of capital gain tax rates for start-up entities.
- Extension of sunset clause under section 10AA of the Income Tax Act, 1961 (IT Act).
- Rationalization of TDS mechanism on service charges retained by e-commerce companies.
- Tax credit of equalization levy (EL) available to a foreign company in home country.
- Clarity on secondment of employees by a foreign company resulting in constitution of permanent establishment (PE).
- Benefit of carry forward losses for IT-sector companies.
- Initiation of penalty proceedings under section 271(1)(c)/271C of the IT Act.
- Amendment to Indirect Transfer Rules.

Indirect tax

There have been no announcements in the Budget from an indirect tax perspective on account of the following:

- The Interim Budget 2019 was the last for the elected Government of India before heading into the general elections. Accordingly, the Government of India adopted an approach of not making any changes on the indirect tax front.
- All goods and sales tax (GST) related amendment-making powers are with the GST Council.

While there may not have been any changes in the Budget, the GST Council has made several announcements in the last 21 months addressing substantive/legal as well as procedural issues for smooth implementation of GST. The active involvement of the GST Council to iron out issues under GST has been well received and appreciated by the industry. However, there may still be a few areas (at present) that need to be addressed, which include:

- Allow refund of GST paid on capital goods when used in export/zero-rated supplies.
- Employee benefit expenses should be out of GST.
- Issue suitable clarification on requirement to cross charge salary cost of employees at head office to branch offices.

1. INTRODUCTION

Information Technology (IT) and Information Technology Enabled Services (ITeS) including Business Process Management (BPM).[1]

1.1 Market Description

The global sourcing market in India continues to grow at a higher pace compared to the IT–BPM industry. India is the leading sourcing destination across the world, accounting for approximately 55 per cent market share of the US$185–190 billion (€164.07–168.51 billion) global services sourcing business in 2017–18. Indian IT and ITeS companies have set up over 1,000 global delivery centres in about 80 countries across the world.

India has become the digital capabilities hub of the world with around 75 per cent of global digital talent present in the country. India's IT and ITeS industry grew to US$181 billion (€160.53 billion) in 2018–19. Exports from the industry increased to US$137 billion (€121.50 billion) in FY19 while domestic revenues (including hardware) advanced to US$44 billion (€39.02 billion). Spending on IT in India is expected to grow over 9 per cent to reach US$87.1 billion (€77.25 billion) in 2018. Revenue from digital segment is expected to comprise 38 per cent of the forecasted US$350 billion (€310.42 billion) industry revenue by 2025.

Indian IT's core competencies and strengths have attracted significant investments from major countries. Having proven its capabilities in delivering both onshore and offshore services to global clients, leading Indian IT firms are diversifying their offerings and showcasing leading ideas in blockchain and artificial intelligence to clients using innovation hubs and research and development centres in order to create differentiated offerings and new opportunities.

1.1.1 IT hardware[2]

Demand for electronic products in India is poised for significant growth in the next few years, driven by a strong economic outlook. The Indian electronics and hardware market grew by 8.6 per cent year-on-year (YoY) to reach US$75 billion (€66.51 billion) in 2015, driven by rising local demand and growing disposable incomes. It is expected to grow at a compound annual growth rate (CAGR) of 13–16 per cent during 2013–18 to reach US$112–130 billion (€99.33–115.29 billion) by 2018.

Though India's electronics and hardware industry is growing at a robust rate, a majority of the demand is met through imports. Around 50–60 per cent of the demand for electronic products is fulfilled through imports, while nearly 70–80 per cent of the electronic components market is imports dependent. In order to curb imports, the Government of India has identified and treated the electronics sector as a priority under its Make in India programme. This scheme promotes manufacturing in India to boost job creation and skill enhancement, facilitate investment, foster innovation, protect intellectual property, and build a best-in-class manufacturing infrastructure/landscape in the country. This has resulted in various Indian and global manufacturers announcing their expansion plans.

1.1.2 Telecommunications[3]

India is currently the world's second-largest telecommunications market with a subscriber base of 1.20 billion and has registered strong growth in the past decade and half. The Indian mobile economy is growing rapidly and will contribute substantially to India's gross domestic product (GDP), according to a report prepared by GSM Association (GSMA) in collaboration with the Boston Consulting Group (BCG). As of January 2019, India has witnessed a 165 per cent growth in app downloads in the past two years.

The liberal and reformist policies of the Government of India have been instrumental, along with strong consumer demand, in the rapid growth in the Indian telecom sector. The Government of India has enabled easy market access to telecom equipment and a fair and proactive regulatory framework that has ensured availability of telecom services to consumers at affordable prices. The

deregulation of foreign direct investment (FDI) norms has made the sector one of the fastest growing and a top five employment opportunity generator in the country.

With 560.01 million internet subscribers, as of September 2018, India ranks as the world's second largest market in terms of total internet users. Further, India is also the world's second largest telecommunications market with 1,197.87 million subscribers, as of December 2018 and of importance to note, in 2017 India surpassed the United States of America (USA) to become the second largest market in terms of number of app downloads. The country remained as the world's fastest growing market for Google Play downloads in the second and third quarters of 2018. Over the next five years, rise in mobile-phone penetration and decline in data costs will add 500 million new internet users in India, creating opportunities for new businesses.

1.1.3 R&D and innovation[4]

The research ecosystem in India presents a significant opportunity for multinational corporations across the world due to its intellectual capital available in the country. Legions of Indian engineers working across the globe highlight the highly trained manpower available at competitive costs. Consequently, several multinational corporations (MNCs) have shifted or are shifting their research and development (R&D) base to India. These R&D bases either develop products to serve the local market or help the parent company overseas deliver new innovative generation of products faster to the markets across the world.

India's engineering R&D (ER&D) globalization and services market reached US$22.3 billion (€19.77 billion) in 2016 and is set to rise to US$38 billion (€33.70 billion). India accounted for 40 per cent (US$13.4 billion [€11.88 billion]) of the total US$34 billion (€30.15 billion) of globalized engineering and R&D in 2016. India has a total of 25 innovation centres in the country and has been ranked as the top innovation destination in Asia and second in the world for new innovation centres. The country accounts for 27 per cent of Asia's new innovation centres. India moved up to the 60th position in the 10th edition of Global Innovation Index (GII) in 2017 and will likely get into the list of the top 25 nations in the next 10 years.

India ranks second amongst the countries with highest increase in contribution to high-quality scientific research. India-based R&D services companies, which account for almost 22 per cent of the global addressed market, grew much faster at 12.67 per cent.

The market for ER&D companies in India is mainly structured across pure play PES companies such as Cyient, QuEST, eInfochips and the larger IT companies with a PES play such as Wipro, TCS, HCL. India's ER&D services market is expected to reach US$15–17 billion (€13.30–15.07 billion) by 2020 and North America continues to be the largest market contributing to 55 per cent of revenues.

With the Government of India's support, the R&D sector in India is all set to witness some robust growth in the coming years. India is also expected to witness strong growth in its agriculture and pharmaceutical sectors as the Indian government is investing large sums to set up dedicated research centres for R&D in these sectors. The Indian IT industry is also expected to add to the development of the R&D sector.

1.2 Recent Developments

The last couple of years have seen invigorated efforts in measures by the Indian government to encourage and promote the ICT sector in the country. Some of the key initiatives include the following:

1.2.1 National programme on artificial intelligence

In the Interim Budget 2019–20, the Government of India announced plans to launch a national programme on artificial intelligence and setting up of a National Artificial Intelligence Portal. The Finance Minister in his budget speech announced that nine priority areas had been identified.

1.2.2 Digital India

The vision of the Digital India programme is to transform India into a digitally empowered society and knowledge economy. The Digital India programme is centred on three key vision areas, i.e. Digital Infrastructure as a Utility to Every Citizen, Governance and Services on Demand, and Digital Empowerment of Citizens.

The Finance Minister in his budget speech announced that India is now leading the world in the consumption of mobile data. Monthly consumption of mobile data increased by over 50 times in the last five years. The cost of data and voice calls in India is now possibly the lowest in the world. More than 3 lakh Common Service Centres (CSCs) employing about 12 lakh people, are digitally delivering several services to the citizens. The CSCs are expanding their services and also creating digital infrastructure in the villages, including connectivity, to convert the villages into Digital Villages. The Government of India will make 1 lakh villages into Digital Villages over the next five years[5].

The Government of India is planning to launch an initiative to bring ‘digital boards’ as a part of a larger initiative, promising an investment of ₹90 billion (€1.14 billion) in state-run schools and colleges.

In the Union Budget, 2018–19, the Indian government had allocated ₹3,073 crore (€391.55 million) for the Digital India programme. As per the Budget implementation report, on 06.12.2018, the Government of India approved the National Mission on Interdisciplinary Cyber-Physical Systems (NMICPS) at a total outlay of ₹3,660 crore (€466.34 million) for a period of five years[6].

1.2.3 Startup India

Startup India is a flagship initiative of the Government of India, intended to build a strong ecosystem that is conducive for the growth of start-up businesses, to drive sustainable economic growth, and generate large-scale employment opportunities.

On 19 February 2019, the Finance Minister announced that to provide relief to and boost investments into start-ups in India, the Indian government has decided to widen the definition of ‘start-up’ and simplify the process of getting approval for exemption.

The key modifications *inter alia* suggested by the Finance Minister include the following:

- An eligible entity shall now be considered to be a start-up for up to ten years from the date of incorporation/registration as against the existing duration of seven years.
- An entity will also be considered a start-up if its turnover for any of the financial years since its incorporation or registration does not exceed ₹100 crore (€12.74 million) as against the existing limit of ₹25 crore (€3.18 million).
- Consideration received by eligible startups for shares issued or proposed to be issued by all investors shall be exempt up to an aggregate limit of ₹25 crore (€3.18 million).

1.2.4 Make in India[7]

India’s IT & BPM sector can benefit from the policies and infrastructure provided by the Make in India initiative. Under Make in India, mobile and parts manufacturing companies have increased from two to more than 268 providing huge job opportunities. Through this initiative the Centre of Excellence for Internet of Things has been set up in Bengaluru. It has a capacity to incubate 40 start-ups and focuses on building solutions for applications such as agriculture, automobile, telecom, healthcare, and consumer goods. The Indian government’s IT/ITeS Sector Skill Council (SSC) is facilitating the expansion of the skilled workforce with the help of National Association of Software and Services Companies (NASSCOM). The Government of India has also been promoting regulatory support to protect intellectual property and strengthen cyber security laws among other things. The key six sectors which is boosting Make in India are the automotive sector,

electronics system design and manufacturing, renewable energy, roads and highways, pharmaceuticals, and food processing[8].

1.2.5 Union Interim Budget 2019 announcements

From a tax and regulatory perspective, Union Interim Budget 2019 has not proposed any amendments directly impacting the ICT industry.

2. ISSUES AND SUGGESTIONS

2.1 Corporate Taxation

2.1.1 Harmonization of tax rates for start-up and SME companies

Issues

- The provisions of the IT Act do not specifically provide any exemption for taxability of the capital gains earned by the investors of a start-up companies.
- The rate of taxation is similar to all other investors and the long-term capital gain (LTCG) is taxed at 20 per cent and the short-term capital gain (STCG) is taxed at the slab rates.
- The investors are interested in deploying funds into new companies and ventures and also the investment made at the earlier stage are subject to higher risk.

Recommendations

- Considering the risk appetite of angel investors investing in early stage companies, LTCG arising from sale of shares of unlisted companies should be made exempt from tax (similar to erstwhile exemption under section 10(38) of the IT Act and reduction of tax rate of STCG to 15 per cent instead of slab rates of tax applicable on all STCG.
- Eligible investors could also be defined under the Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012 of a particular category of investors.
- The above amendment would be critical for encouraging the new investors, leading to creation and growth of new start-up companies.

2.1.2 Extension of time limit for claim of deduction under section 10AA of the IT Act

Issues

- The current provisions of the IT Act restricts the claim of deduction under section 10AA of the Act for the units which had commenced operations in the Special Economic Zone (SEZ) prior to 1 April 2020.
- The contribution of SEZ would reduce comparatively due to non-availability of the deduction of the claim under the IT Act.

Recommendations

- The sunset clause under Section 10AA of IT Act to be extended for IT and ITeS sectors for a period of ten years, as the sector has potential for employment generation and foreign exchange earnings and accordingly the benefit of SEZ scheme should be extended beyond 31 March 2020.
- The amendment would increase the contribution of SEZ's to the Indian economy and would encourage large players to concentrate their expansion plan in SEZ as the same provides for reduced tax pay out due to the benefits provided under the SEZ policy.

2.1.3 Rationalization of TDS mechanism on service charges retained by e-commerce companies

Issues

- In the growing IT sector and post demonetization, electronic payments have extensively grown to a greater extent in the e-commerce segment and there are various ambiguities with respect to applicability of withholding tax provisions on the transactions entered by the companies such as applicability of withholding tax provisions on payment gateway charges.

- In the current scenario, various litigations prevail on the withholding tax provisions on payment made to payment gateway and other digital payment service providers.

Recommendations

- It is recommended to bring in a clarification on applicability of withholding tax provisions on payment gateways specifically in cases were the services are rendered other than by a bank. Also, such payment also ought not to be classified as Fees for Technical Services (FTS) as it is a standard service offered by payment gateways and a clear rule to be issued stating that such payments ought not to suffer TDS.
- The amendment would bring a great change as the sector is in the early stage of growth and facilitate rapid growth in e-commerce business.

2.1.4 Tax credit of EL available to foreign companies in home country

Issues

- In the present scenario, all the IT companies are subject to the deduction of equalization levy on payment made to the non-residents in relation to specified e-commerce transactions.
- The double taxation avoidance agreements entered by India with the country of residence of such non-residents does not support the claim of such credit against its income tax liability in its home country. The same has been leading to double taxation of the income in the hands of the non-residents on such income.

Recommendations

- It is recommended that the government enters into agreements for credit with other countries for the allowability of the EL as credit on such income taxable in the country of residence.
- The same would contribute to Ease of Doing Business for the recipient foreign company in India.

2.1.5 Clarity on constitution of service permanent establishment in India

Issues

- In the current business scenario, all the agreements entered into by an Indian company with a foreign company for secondment of employees is disputed by the income tax authorities stating that the same would constitute PE of the foreign company in India.
- Such litigations are restricting the foreign companies in deploying expatriates in the operations of the Indian company, and also in promotion of business in India through foreign investments.

Recommendations

- The government would require to bring in the clarification stating that where a secondment is purely for the benefit of the Indian company and the complete costs of the assignee is effectively borne by the Indian company, it should not constitute a service PE for the foreign company in India.
- Clarification to be brought in place to the effect that in the aforesaid scenario, reimbursement of the salary cost by the Indian company would not constitute any technical services and shall not be treated as fees for technical services.

2.1.6 Extension of benefit of carry forward of losses under section 72A of the IT Act

Issues

- In the current developing economy, many IT companies are proposing to expand their businesses through mergers with other companies in similar sector.
- However, the IT Act does not provide the benefit of carry forward of losses on mergers under Section 72A of the IT Act for IT service companies.
- The above restriction, does not provide a roadmap for encouraging the investments and mergers in the IT sector.

Recommendation

- The government should extend the benefit of carry forward of losses on mergers under Section 72A of the IT Act for IT sector companies. In order to encourage the growth in the sector, the existing beneficial provision of Section 72A of the IT Act (which are restricted to manufacturing companies (including manufacture of computer software) should be broad based and be extended to all IT services companies.

2.1.7 Initiation of penalty proceedings under section 271 (1)(c) and 271C of the IT Act

Issue

- The income tax authorities are increasingly initiating penalty proceedings mechanically under Section 271(1)(c) of the IT Act in respect of all additions made in the assessment order, irrespective of the favourable orders of the higher judicial forums supporting the contentions of the company.

Recommendations

- Guidelines should be issued advising the field officers that penalty proceedings should be initiated only in rare circumstances involving deliberate suppression of material facts that have a bearing on the assessment proceedings, etc.
- Interpretation issues or tax positions supported by decision of any appeal forum from Income Tax Appellate Tribunal and above should be kept outside the ambit of the penalty proceedings.

2.1.8 Amendments to 'indirect transfer' rules

Issues

- The Finance Act 2017 had introduced provisions to exempt non-residents who, directly or indirectly, hold shares or interest in Category 1 and Category II foreign portfolio investors (FPIs) registered with the SEBI under the SEBI (FPI) Regulations 2014 from applicability of the 'indirect transfer' provisions which is brought in retrospectively from Assessment Year, 2012–13.
- However, there is ambiguity with regard to 'indirect transfer' valuation rules that specify the manner in which fair market value (FMV) of assets of foreign company with underlying assets in India is to be computed. The rules also prescribe the information and documentation required to be maintained and furnished to the tax authorities by an Indian entity whose shares are indirectly transferred. Concerns that arise are as follows:
  - Conflict with Explanation 6 to section 9(1)(i) of the Act in the context of non-reduction of liabilities in respect of the shares deemed to be situated in India.
  - No clarity in relation to computation of income.
  - Non-availability of definition of 'liabilities' in the rules.
  - Treatment of convertible instruments like preference shares.
  - Availability of Double Taxation Avoidance Agreement (DTAA) benefits.

Recommendations

- Clarity on the term liabilities under the rules by providing specific guidance on whether operating liabilities (like current liabilities), preference share capital will be considered as liabilities in the computation of FMV.
- Clarification on reporting requirements in cases where treaty exemption is applicable.
- Clarity on filing Form 49D is required by the Indian company when there is no income accruing/arising in India on account of the indirect transfer.
- Provide specific exemptions from the indirect transfer rules for intra-group transfers, especially when the merger/amalgamation is between two foreign companies outside India.

2.2 GST-related Issues

2.2.1 Issues with respect to refund of GST paid on capital goods when used in export/zero-rated supplies

Issues

- Refund of GST paid on capital goods where the same is used in export/zero-rated supplies is not available under the GST regime.
- The first proviso of Section 54(3) of the CGST Act provides two instances where refund can be claimed:
  a. Zero-rated supplies made without payment of tax; and
  b. Inverted duty structure.
- Further, as per explanation to Section 54, 'refund' includes refund of tax paid on zero-rated supplies of goods or services or both or on inputs or input services used in making such zero-rated supplies, or refund of tax on the supply of goods regarded as deemed exports, or refund of unutilized input tax credit.
- This, therefore, on the basis of the above, the provision suggests that refund would not be available in respect of capital goods.

Recommendations

- Capital goods form a large part of investment for businesses and a situation of restricting refunds only to inputs and input services and not to capital goods leads spike in pricing, cash crunch, and blockage of working capital.
- Therefore, it is recommended that refund of input tax credit on capital goods should therefore be permitted by way of an amendment to the provision.
- Where allowing of refunds is seen as difficult in one shot owing to the quantum involved in case of capital goods, the amended provision may also prescribe a staggered manner of refund to be granted.

2.2.2 Employee benefit expenses should be out of GST

Issues

- There are multiple facilities/services that companies provide for employees which are either subsidized or a pass through in terms of cost. There is no profit earned by companies from making such supplies to employees and are more in the nature of employee benefits which may or may not be included as part of the employee contract.
- In this regard, Schedule I of the CGST Act provides that gifts exceeding ₹50,000 (€637.08) in a financial year by an employer to an employee shall be treated as a supply of goods or services. It is relevant to note that companies also do not claim credit of tax costs incurred on such facilities/services. Accordingly, the companies should be seen as the end consumer in the supply chain and there should be no further supply to the employee.

Recommendations

- Accordingly, it is recommended that Proviso to Schedule I of the CGST Act be removed as where the no further recovery is being made to the employees, then the company should be treated as the end customer.
- Further, where recoveries are being made from the employees, the same would automatically amount to supply on which GST would be levied appropriately.

2.2.3 Suitable clarification be issued on requirement to cross charge salary cost of employees at head office

Issues

- Advance ruling issued by the Authority for Advance Rulings (AAR) in Karnataka in Columbia Asia Hospitals Private Limited [KAR ADRG 15 / 2018] it has been held that, activities performed by employees at head office (HO) office in course of or in relation to employment such as accounting, other administrative, and IT system maintenance for units located

in other states, shall be treated as 'supply' in terms of Entry 2 of Schedule I of CGST Act.

- In this regard, it is relevant to note that any company hiring an employee would always do so at an entity level. In other words, when a person is hired in a company, one cannot say that such person is an employee of the company to the limited extent of the state (or the GSTIN) in which he performs his employment duties.
- If the concept of 'employer–employee' relationship and the term 'distinct person' is supplied with such far-fetched meanings, the true intent of the law to keep certain transactions outside the ambit of GST and bring within its purview the transactions where there is an actual 'supply' fails.
- Further, in case where global CXO is appointed as an employee of the Indian entity, then the above interpretation would require dealers to pay GST on reverse charge basis as import of services in respect of the same. All the activities undertaken by the employee is on account of the employment contract.

Recommendation

- It is recommended that a clarification be issued that there would not be any GST on HO salary cost by deeming them as supplies to other units and the FAQs be amended to this extent as under no circumstance can a head office managing countrywide operations be construed as providing any 'supply'. The entire framework of GST would be incorrectly implemented if this were to be treated as a supply.

2.3 Customs-related Issues

2.3.1 Clarification with respect to concessional Basic Customs Duty (BCD) on telecommunication networking products and request for review of the product list

Issues

- The First Schedule to Customs Tariff Act, 1975 under Chapter 85 prescribes the tariff heads and rates for telecom products. Telecommunication networking equipment are classified under HSN 8517 62. Extract of tariff (as it reads today) is provided below for reference (see tables).
- Various notifications issued, granting and withdrawing exemptions under Customs Tariff Act has created an ambiguity on appropriate rate of BCD for items falling under 8517 62 90 and HSN 8517 69 90.
- Notification No 57, 2017 – Cus dated June 30,

Tariff item		Description	Standard rate
851762	—	**Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus:**	
8517 62 90	—	Other	20%*

**Tariff rate increased from 10 per cent to 20 per cent vide Finance Act, 2018*

Other telecommunication related equipment are classified as under:

Tariff item		Description	Standard rate
851769	—	**Other:**	
8517 69 90	—	Other	20%*

**Tariff rate increased from 10 per cent to 20 per cent vide Notification 74/ 2018 - Cus dated 11 October 2018*

Particulars	Effective rate
Following items, falling under 8517 62 90 and HSN 8517 69 90, not covered by notification* prescribing concessional rate: a. Wrist wearable devices b. Optical transport equipment c. Combination of one or more of Packet Optical Transport Product or Switch (POTP or POTS) d. Optical Transport Network (OTN) products e. IP Radios f. Soft switches and Voice over Internet Protocol (VoIP) equipment, namely, VoIP phones, media gateways, gateway controllers and session border controllers g. Carrier Ethernet Switch, Packet Transport Node (PTN) products, Multiprotocol Label Switching Transport Profile (MPLS-TP) products h. Multiple Input/Multiple Output (MIMO) and Long Term Evolution (LTE) products	20%
All other items falling under 8517 62 90 and HSN 8517 69 90	10%

** Notification No 57, 2017 – Cus dated 30 June 2017*

2017 as amended from time to time prescribes an effective rate of 10 per cent for items falling under 8517 62 90 and 8517 69 90. However, specific items have been excluded from the benefit of the concessional rate and therefore would attract rate of 20 per cent.

- In other words, the effective rate of items falling under 8517 62 90 and HSN 8517 69 90 is as under:

a. **Issues which require clarification from the Central Board of Indirect Taxes and Customs (CBIC)**

- The list of items mentioned in the notification (as shown in the table above) has led to many interpretational issues, specifically because telecom networking products including the following are classified under HSN 8517 62 90:
  - Access points
  - Network access controllers
  - Switches
  - Wireless modem support
  - Firewall appliances
  - Port serial control gateway
  - Integrated networking equipment
  - Fibre channels
  - Networking equipment and its accessories, etc.
- These items are closely related to the list of items mentioned in the notification. They in fact make-up the final products and assist in its intended use.
- The exclusion list seems to outline the technical nature of activities performed by the products or intended use and does not necessarily specify the products itself. This has led to a lot of debate and practical difficulties at the time of clearance of goods.
- There is therefore an ambiguity as to what specific products would be liable to a concessional rate of BCD at 10 per cent and those that would be liable at the full tariff rate of 20 per cent.
- Owing to this ambiguity, several companies have been in fact discharging the full rate of 20 per cent under protest.
- Further, there have been instances observed where customs ports have contrary interpretation in relation to applicability of concessional rate for the

Product	HSN	BCD rate for product	Interpretation
Ethernet switch (without carrier)	8517 62 90 (Classified at par with carrier ethernet switches)	10%	• Ethernet switches are different from carrier ethernet switches (which are classified under 8517 62 90 and attract at 20%). • Ethernet switches are used within enterprise for their internal information and communication Technology. Further, these are used for establishing local area network (LAN) connection to PC's, laptops, printers, and other IP-enabled end points which are part of the single business entity. • On contrary, carrier ethernet switches are used by telecommunications network providers/ internet service providers to provide ethernet services to their customers. • Therefore, ethernet switches (without carrier) are different from carrier ethernet switches and hence should not be classified under the exclusion part Notification No 57, 2017 – Cus. Consequently, ethernet switch (without carrier) would merit a BCD rate of 10% as per said Notification. • Our ask is that ethernet switches (without carrier) should not get classified as carrier ethernet switches falling under item (g) of exclusion list of Entry 20 of Notification 57/2017-Cus
Firewall and network security	8517 62 90 (Classified at par with gateway controllers)	10%	• Firewall and network security commonly used in ITA environment have been denied benefit of standard rate of 10% as these are treated to be par with gateway controllers. • It should be noted that firewall and network security are hardware/software appliance the blocks, filters, or restricts and to a degree directs network traffic. These are different from 'gateway controllers' whose primary task is to link two networks. • Firewall and network security, being telecom in nature should be provided benefit of standard rate of 10% as against the current rate of 20% paid by most companies. • Our ask therefore is to clarify that the firewall and network security should not get classified as 'gateway controllers' falling under item (f) of exclusion list of Entry 20 of Notification 57/2017-Cus.

same product. For example, a particular product would have been cleared at BCD rate of 10 per cent in Port A and at higher BCD rate of 20 per cent in Port B.

- The above issue has been explained by ambiguity faced by the industry in import of ethernet switches (without carrier) and firewall and network security usually found in the IT environment which would require immediate clarification by way of circular.
- Therefore, our request with respect to the above products, namely ethernet switch (non-carrier) and firewall and network security, is a clarification by way of a circular on applicability of concession rate for the said products, i.e. (a) ethernet switches, (b) firewall and network security.

b. **Issues which require amendment in Notification 57/2017-Cus**

- In addition to the confusion that the exclusion list has created, it is important to note that several of these items, such as routers, modems etc. are ITA products. However, they have been included in the exclusion part of Notification 57/2017-Cus thus attracting a higher rate of BCD at 20 per cent.
- Most of the ITA products mentioned in the Information Technology Agreement to which Indian is a signatory would attract *nil* rate of BCD. The list of such product in Annexure A and B of the ITA agreement also includes Telecom and IT products classified under 8517.
- Any duty levied on the ITA product would be a violation of the ITA entered in to by India.
- Overall, our request in relation to the above issue is to amend the Notification 57/2017-Cus to exclude all the ITA products (including VoIP), which would attract a nil rate of tax.

Recommendations

a. Issue of clarificatory circular with respect to Notification 57/2017-Cus

- To eliminate ambiguity mentioned in issue (a) above, we request the CBIC to revisit the exclusions in the entry 20 of the Notification and issue an clarification by way of circular which would provide specific list of products falling under HSN 8517 62 90 and 8517 69 90 (i.e. ethernet switches and firewall and network security) that would be eligible for concessional rate of 10 per cent.

b. Amendment to Notification 57/2017-Cus

- We request CBIC to amend the notification

Product	HSN	BCD rate for product	Interpretation
VoIP phones	8517 18 10 Telephone sets, including telephones for cellular networks or for other wireless networks	Nil	• VoIP phones or IP phones without web conferencing and video enabled facilities would be classified under and should attract *nil* rate of BCD in line with ITA. • On the contrary to the above, VoIP phones have been classified under 8517 69 90 in Notification 57/2017-Cus and more specifically been included in the exclusion part thereby providing for higher BCD rate of 20%. • Our ask in relation to VoIP phones is that these should not get classified under 8517 69 90 and a suitable amendment has to be made in the said Notification.

to remove ITA products from the exclusion part of the entry 20 of the Notification 57/2017-Customs and consequently, such ITA products should merit nil BCD rate.

2.3.2 Requirement for Special Valuation Branch order on import of ITA goods to be done away with

Issues

- ITA bound goods enjoys exemption from BCD vide exemption notification 25/2005 and 24/2005 - customs dated 1 March 2005.
- In light of IGST that can be levied on import transaction being creditable, an Special Valuation Branch (SVB) order issued under the customs valuation provisions would see no impact on the duty/tax payable by an importer to the exchequer as there would be no BCD payable and entire amount of IGST paid shall be available as credit to the importer.

Recommendation

- Given that there would be no revenue impact (BCD being 0) on ITA goods irrespective of the value adopted, as the credit shall be available to the importer, it is recommended that the requirement for obtaining SVB order in case of ITA goods should be done away with. This would also reduce the burden on the customs authorities and the focus could be on cases where import duties are involved.

2.3.3 Single adjudication authority for SVB matters

Issues

- Circular 5/2016- Customs dated 9 February 2016 provides for procedure for investigations of related party import cases and other cases by SVBs.
- Para 9.2 while dealing with final assessment of goods imported from related parties states: '… where imports have been cleared through multiple customs locations, the jurisdictional commissioner of the SVB shall, after issue of notice by the proper officers in the said locations, make a proposal addressed to the Commissioner (Customs), CBEC recommending appointment of Common adjudicating authority by the Board for purpose of passing order for finalization of provisional assessment.'
- While the said circular provides for common adjudication authority for the finalization of the provisional assessment, practically this has not been fully implemented and the final assessments have been carried by the respective locations.
- Decentralized and multiple adjudications for a SVB holder leads to various hardships such as contrary valuation for the same products imported from same related parties, duplication of efforts, etc.

Recommendation

- We request CBIC to issue circular for mandatory implementation of procedure provided by Para 9.2 of Circular 5/2016-Cus in relation to common adjudicating authority for imports made in multiple locations.

3. CONCLUSION

India is an emerging economic powerhouse. It is a growing domestic market and an expanding export hub for information technology and innovation activities. Therefore, it needs to address the issues articulated above to ensure sustained growth and success in the absence of which it would become extremely challenging to do business. Furthermore, European businesses would face a hard time in doing business and bringing in fresh investments in these sectors into India. Specific plans for each sector need to be made and chinks in the economy need to be ironed out to ensure that India continues to remain a sought after investment destination and also render Indian ICT exports competitive in the international arena.

Endnotes

1 https://www.ibef.org/industry/information-technology-india.aspx

2 https://www.ey.com/in/en/industries/technology/ey-pushing-make-in-india-agenda-in-electronics-and-hardware

3 https://www.ibef.org/industry/telecommunications.aspx

4 https://www.ibef.org/industry/research-development-india.aspx

5 https://www.indiabudget.gov.in/ub2019-20/bs/bs.pdf

6 https://www.indiabudget.gov.in/ub2019-20/impbud/impbud.pdf

7 http://www.makeinindia.com/article/-/v/sector-survey-it-bpm

8 http://www.makeinindia.com/article/-/v/6-superstar-sectors-boosting-make-in-india

Notes

INFRASTRUCTURE

Acknowledgements: Mr. Cesare Saccani (President, IICCI) – Chairman, Infrastructure Sector Committee & its Members

Knowledge Partner: The Indo Italian Chamber of Commerce and Industry (IICCI)

EXECUTIVE SUMMARY

- The Indian economy has experienced robust growth in the past decade and is expected to be one of the fastest growing economies in the coming years.
- The infrastructure sector is a key driver of the Indian economy and is one of the largest receivers of foreign direct investment (FDI) inflows to India.
- Since the last few years, there has been a significant push from the government, which has been providing financial support (budgetary allocation of US$63 billion [€55.87 billion] for 2019–20) and implementing initiatives to give a boost to the sector.
- The private sector is emerging as a key player across various infrastructure segments, ranging from roads and communications to power and airports. In 2018, infrastructure sector in India witnessed private equity and venture capital investments worth US$1.97 billion (€1.74 billion).
- The eight core infrastructure industries include coal, crude oil, natural gas, refinery products, fertilizers, steel, cement, and electricity saw a cumulative growth of the index of 4.3 per cent year-on-year in April–February 2018–19.
- The infrastructure requirement by India for sustainable development is US$780 billion (€691.79 billion) by 2022.
- During 2017–18, there was double-digit growth in highway construction with the daily rate of construction picking up by 25–30 per cent. The rate of awards also shot up although they had receded in the last six months due to elections in India.
- The innovative hybrid annuity model (HAM), the toll-operate-transfer (TOT) model and the conceptualization of the Bharatmala programme have helped turn things around while many cash-strapped developers have successfully deleveraged by selling off assets. Meanwhile, technology induction such as the FASTag programme is achieving substantial growth in penetration.
- Bharatmala indicates that the already substantial opportunities in the sector could scale up by another dimension. Given programmes such as Bharatmala, Setu Bharatam, and Char Dham Connectivity and the proposed economic corridors, some ₹7 trillion (€89.19 billion) could be absorbed in investments over the next five years.
- The transport and logistics segment grew significantly in FY18, with disruptive technologies such as cloud-based systems, robotics for various value-added services, Internet of Things (IoT) and big data analytics contributing to its growth. Improved logistics with India’s ranking of 44th out of 167 countries in World Bank’s Logistics Performance Index (LPI) 2018.
- Maritime sector’s fortunes ebb and surge with trade activity. Global trade has been slow for the past several years and that has adversely affected growth. The Indian ports and shipping sector has seen slow growth as a result. While there is hope of a revival in iron ore exports, as well as an increase in the import of crude and related products, the policy emphasis and implementation on developing coastal trade and cruise tourism, and other policy measures to increase capacity and improve efficiencies in the sector.
- Good revenue growth for Indian railways and 22 metro rail projects underway across India. The accident record has improved but it still leaves a lot to be desired. Apart from enhanced targets for doubling lines, gauge conversions, etc., major projects like the dedicated freight corridor, the expansions in the Northeast and the planned network of high-speed lines should eventually lead to volume expansions.
- With initiatives like ‘Housing for All’ and ‘Smart Cities Mission’ the Government of India is working on reducing bottlenecks and impeding growth in the infrastructure sector.
- Hence there are ample opportunities in the

sub-sectors of infrastructure but a lot is left to desired with several issues that plague the sector:

- Delays and time overrun: projects from railways (77/371); roads (100/607), urban development (19/58) for data available as of November 2018.
- Age-old problems persist in clearing bottlenecks such as land acquisition, clearances, and approvals along with resolution of disputes and arbitration.
- Projects face inordinate delays due to difficulties in securing project finance, political, and social friction, delays in securing environmental clearances, policy ambiguities, poor health of sponsors, problem of stressed assets, and reluctance of banks in providing credit.
- The Indian contract law is well-placed and is capable of resolving all issues in its current form. Rather, the need of the hour is to ensure better implementation of the existing laws with a few amendments and the introduction of standardized contract agreements. These changes will require strong will on part of the government authorities. Better implementation of the current laws with the requisite amendments will help in alleviating most of the problems of the construction industry.
- The collapse of IL&FS set the alarm bells ringing. IL&FS is a major player in the sector as both a developer and financier, and this put many projects at risk. It also led to a sharp spike in bond market yields and led to renewed caution about infrastructure projects on the part of lenders leading to temporary disruptions in raising funds. There has also been a slowdown in tapping overseas sources due to weakness in the rupee.
- However, the sector seems to be on a much firmer footing, given the evolution of successful models, and with the BJP returning to power with a strong majority. Hence continuity with the Union transport minister being assured, road building activity is likely to see a graph of continuous acceleration with ambitious targets to construct 40 km per day and complete all current mega road development projects including the Delhi–Mumbai economic corridor.
- Lastly, it remains to be seen if the Prime Minister in his Modi 2.0 agenda follows through with key campaign promises of $1.44 trillion (€1.27 trillion) to build roads, railways, and other infrastructure, and give a boost to manufacturing as well as get on with the long-awaited land reforms.

1. INTRODUCTION

- India is expected to become the third largest construction market globally by 2022.
- Sectors like power transmission, roads and highways, and renewable energy will drive investments in the coming years.
- Development of world class infrastructure will lead to 9–10 per cent growth of the Indian economy.
- In the Union Budget 2019–20, the Government of India has given a massive push to the infrastructure sector by allocating US$63 billion (€55.87 billion) for the sector.
- Favourable valuation and earnings outlook make this sector an attractive opportunity.
- Only 24 per cent of the national highway network in India is four lane, therefore there is immense scope for improvement.
- The Regional Connectivity Scheme (RCS) gives opportunity for development of airports.
- **India's infrastructure development plan by 2022 *requires an investment of US$780 billion (€691.79 billion)* with a focus on seven sub-sectors. (See table)**

Infrastructure focus areas for India		
Sector	**Description**	**Investment (in US$)**
Smart Cities	Environmental renewal (greenfield and retrofitting) of 90 Indian cities by 2023	$31 billion (€27.49 billion) by 2023
Railways	Introduction of high-speed lines, traffic decongestion, safety, electrification, replacement and upgrading of rolling stock and stations, doubling of 18,000 km of tracks, third and fourth lines and conversion of 5,000 km of tracks into broad gauge	from $8 billion (€7.09 billion) in 2015 to $23 billion (€20.39 billion) allocated for 2019–20
Metro	25 projects approved for a total of 500 km of metro lines	$7.7 billion (€6.82 billion) in 2019–20
Highways	10,000 km of highways built in 2017-18, another 65,000 km by 2022	$13 billion (€11.52 billion) allocated for 2019–20
Airports	Vision 2040 to have 200 operational airports as against 106 at present and target of 1 billion passengers by 2040	$45 billion (€39.91 billion)
Renewables	175 GW by 2022 (100 GW solar, 60 GW wind)	$125 billion (€110.86 billion) by 2022
Ports	Develop 10 coastal economic regions with 6 new mega ports	$15 billion (€13.30 billion) by 2022

Growth Drivers

2. INVESTMENTS

- Infrastructure sector is one of the largest receivers of FDI inflows to India.
- Construction development sector and infrastructure activities sector received FDI inflows amounting to US$24.91 billion (€22.09 billion) and US$14.01 billion (€12.42 billion), respectively from April 2000 to December 2018.
- In June 2018, the Asian Infrastructure Investment Bank (AIIB) has announced US$200 million (€177.38 million) investment into the National Investment and Infrastructure Fund (NIIF).

- Japanese investment has played significant role in India's growth story. Japan has pledged investments of around US$35 billion (€31.04 billion) for the period of 2014–19 to boost India's manufacturing and infrastructure sectors.
- Between January 2018 and January 2019, multilateral agencies granted funds worth $7 billion (€6.20 billion) for various water supply and sewerage projects.
- As of October 2018, the US government's Overseas Private Investment Corporation (OPIC) is planning to invest in India's infrastructure, ports, and solar energy sectors.
- Increasing impetus to develop infrastructure in the country is attracting the major global players like China Harbour Engineering and Mizuho Financial Group.

3. INFRASTRUCTURE SUB-SECTORS, ISSUES, AND RECOMMENDATIONS ISSUES

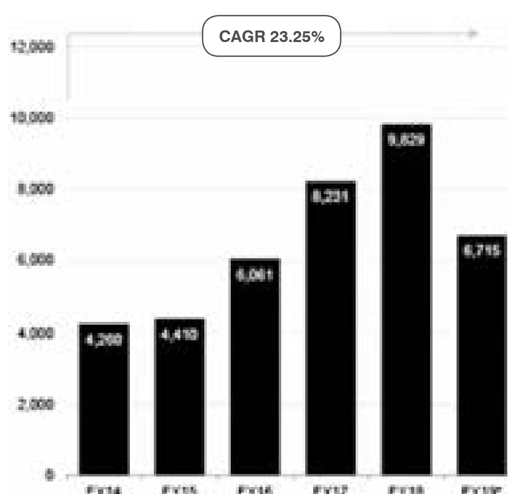
3.1 Transport and Logistics

3.1.1 Roads and bridges

India has:

- 2nd longest road network (5.4 million km).
- 26 km construction, per day.

Figure 1: Highway construction in India (km)



Source: IBEF

- 65 per cent of freight traffic and 85 per cent of passengers are transported on the road.
- US$107 billion (€94.90 billion) for construction of 83,000 km of road for the next five years.
- Expenditure includes the Bharatmala project, one of the largest highway construction projects in India (US$83.25 billion [€73.83 billion]) as well as Setu Bharatam, Char Dham connectivity, and economy corridors.
- US$22 billion (€19.51 billion) will be earmarked for road development in the Northeast to improve connectivity with Bangladesh, Nepal, and Myanmar.
- The hybrid annuity model (HAM) has become popular because the government ensures that it obtains requisite clearances prior to project award.
- The toll-operate-transfer (TOT) model is attractive since there is low (or zero) construction risk, relatively stable cash flows, a long concession period and revenue optimization via O&M on offered stretches.

Issues

- Age-old problems persist in clearing bottlenecks such as land acquisition, clearances, and approvals along with resolution of disputes and arbitration.
- Rising price of raw materials such as sand and aggregates.
- Quality of consultancy available, sub-contractor capacity, the quality of independent engineers is not up to the mark.
- There is need for earthmoving machinery (excavators, cutters, moles, etc.).

Recommendations

- There is a need for skill development and training in order to better the quality of design and safety consultants available in the sector that can be carried out by accredited certification agencies along with an emphasis on use of certified building and construction materials.

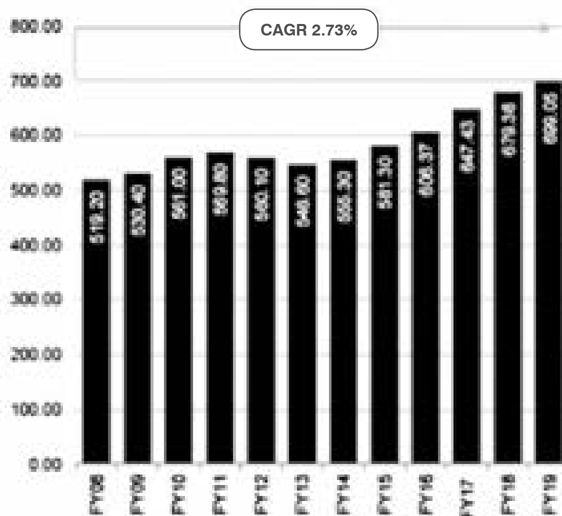
- Proper project preparation and due diligence are the much-needed steps to guarantee that only feasible projects are put on the block.
- At the time of preparing detailed project reports, National Highways Authority of India (NHAI) should allocate land for surplus cut soil to ease the execution process.
- With long term benefits in mind, operational FASTags should be linked to insurance premiums of cars to increase electronic toll collection penetration.

3.1.2 Ports

India is:

- 16th in world with 7,517 km coastline length.

Figure 2: Cargo traffic at major ports (million tonnes)



Source: IBEF

- 12 large ports and 200 intermediate and small ports.
- 70 per cent by value and 95 per cent of trade by volume is done through maritime transport.
- 679 million tonnes cargo traffic in 2018.
- Government plans to develop 10 coastal economic regions as part of the Sagarmala project, with six new megaports developed in the country. The areas would be converted into production centres, supported by port modernization projects, and could cover 300–500 km of coastline.
- US$15 billion (€13.30 billion) investments planned by the Ministry of Shipping via National Maritime Development Policy.

Issues

- One of the foremost issues is that major and non-major ports fall under diverse administrations making the coordination between ports problematic.
- Land acquisition and obtaining environmental clearances be challenging for new and/or non-major ports.
- Poor connectivity of major ports with industries by rail or roads being a major challenge, leads to time and cost overruns. Even though the NHAI has given a major push to port connectivity, many crucial projects suffer from implementation delays.
- Almost 25 per cent container cargo is transshipped through international transshipment ports due to the lack of infrastructure to handle larger vessels at the Indian ports.
- Barring a few exceptions like Jawaharlal Nehru Port Trust (JNPT), the dock capacity of most of the ports is considerably low, compared to top global ports.
- Drafts are a key limitation in the country because terminals and ports cannot cater to vessels beyond Panamax (draft over 13 metres) size, which are increasingly ruling global trade.
- Labour issues pose a major challenge in some of the older ports like excess manpower, lack of adequate training, deteriorating manpower quality, opposition to reforms, and various anti-competitive practices.
- Erratic accessibility of equipment to handle large volumes, deficient dredging capabilities, outdated navigational aids and IT systems, lack of proper equipment handling training and technical expertise, limited mechanization, procedural bottlenecks at various ports in the country are some of the challenges faced in this sector.

Recommendations

Immediate attention to infrastructure improvement:

- An efficient internal mode of transportation system is important for the success of ports and shipping sector. Thus, the timely completion of various projects in the logistics chain is critical to meet the heavy traffic.
- Create a traffic capacity of 3,200 million tonnes.
- De-bottlenecking existing ports and capacity improvement at existing ports.
- Dry docks needed to provide repair services.
- Port support services – operational and maintenance services such as pilotage, dredging, refuelling and supply of maritime goods such as barges and dredges.
- Exploring partnerships for technology and manpower with advanced maritime countries as maritime sector needs modernization and upgradation. This may be possible through collaborations and partnerships with successful maritime clusters in the field of ship design, automation and technology, along with training and development of manpower.
- Development of maritime clusters: These clusters usher in innovation, create employment opportunities and attract foreign investors. We should nurture such clusters and encourage ancillary industries and more indigenous components. Such clusters are likely to encourage public–private partnerships, which will be a key enabler in attracting new technology, encouraging strategic alliances and enhancing investments.
- The sector has many favourable factors for sustainable development, but eventually, it will depend on how the various participants leverage the opportunities available to them to transmute the sector into an engine of growth for the country.

3.1.3 Airports

The key twin drivers for construction opportunities in airports are the NABH [NextGen Airports for BHarat] Nirman initiative and Vision 2040 for the aviation sector.

Projected growth in airport infrastructure by 2040

	2018	2040
Operational airports	106 (as of March 8, 2019)	200
International airports	34	70
Cities with 3 operational airports	0	2
Cities with 2 operational airports	0	31
Airports handling over 10 million passengers annually	7	47
Airports handling over 1 million passengers annually	37	84
Land area under airports (acres)	90,000	240,000
Cumulative cost of land acquisition and multimodal connectivity ($ billion)	NA	30-50
Cumulative capex for airport ($ billion)	NA	40-50
Total capex – land plus airport development ($ billion)	NA	70-100
Direct employment at airports – airport, retail and security ('000)	46	80

Source: Vision 2040, Ministry of Civil Aviation

- India's domestic air passenger traffic is expected to grow at an average compound annual growth rate of 8.5 per cent till 2040, taking the sector close to the target of 1 billion passengers by 2040.
- Based on the projected growth in traffic, India will require capacity augmentation at brownfield airports as well as setting up of new greenfield airports.
- Vision 2040 aims to have 200 operational airports by 2040, compared to just 70 in 2016.
- The Regional Connectivity Scheme contributed to the increase in operational capacity.
- The three key aspects of NABH Nirman are fair and equitable land acquisition, a long-term master plan for airport and regional development and balanced economics for all stakeholders.

Issues

- Despite a separate policy being in place for greenfield airports, most of them have faced inordinate delays due to land acquisition issues, difficulties in securing project finance, political and social friction, delays in securing environmental clearances, policy ambiguities, etc.
- The public–private partnership (PPP) model has not been quite successful for infrastructure sectors (including airports) due to land acquisition issues, delays in clearances, poor health of sponsors, problem of stressed assets and reluctance of banks in providing credit.

Recommendations

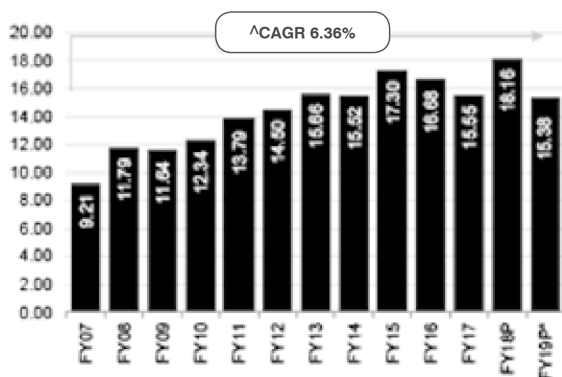
- Timely creation of capacity, modification of existing policies and regulatory frameworks in line with changing requirements, and close coordination between the central and state governments are the need of the hour to capitalize on growth opportunities in the airport sector by all stakeholders including construction companies.

3.1.4 Railways

India is:

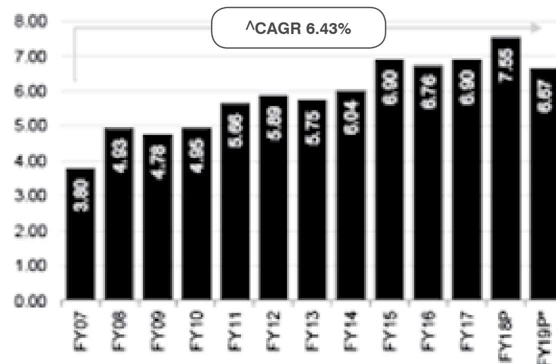
- 4th largest in the world, with length of 115,000 km, Indian railway network is the main artery of the country.

Figure 3: Earnings from freight (in US$ billion)



- The goal is to triple Indian freight traffic from the current 1.1 billion tonnes to 3.3 billion tonnes by 2030.
- Indian railways will invest $545 billion (€483.37 billion) by 2032 to increase capacity
- An investment is also planned to adopt the European Train Control System for the development of the infrastructure complex.
- A new 'Online Vendor Registration System' was launched by Research Designs & Standards Organization (Indian Railways) to have transparent digital systems and procedures.
- The modernization of 236 stations, the construction of new terminals, the development of a high-speed network, and the construction of 25,000 km of railways by the end of 2020 are expected.

Figure 4: Passenger earnings (in US$ billion)



- For a number of years now, India has envisioned a high speed rail (HSR) network. While, initially, the progress was abysmally slow, the government has more recently made rapid strides towards achieving this vision.
- High speed/semi-high speed connectivity: Mumbai–Ahmedabad, Delhi–Agra and Delhi–Chandigarh: capital expenditure $30 billion (€26.60 billion).
- Dedicated Freight Corridor (East – 1,856 km: from Punjab to Bengal; West – 1,504 km Uttar Pradesh to Maharashtra)/US$51 billion (€45.23 billion).
- Financial and technical assistance from countries such as Japan, France, and Spain has provided the much-needed push to HSR development in the country.
- Indian Railways (IR) is the country's biggest energy consumer, using about 18.98 billion units (BUs) of power. Energy is the second biggest expenditure item for the organization, accounting for about 23 per cent of its ordinary working expenses.
- In order to reduce its fuel expenditure, IR has prepared an action plan to electrify 38,000 route kilometres (rkm) in the five years 2017–18 to 2021–22 for achieving 100 per cent electrification on all broad gauge routes.

Issues

- Age-old issues such as land acquisition persist along with local opposition, resettlement

and rehabilitation (R&R) of project-affected people, the unwillingness to adopt modern technologies, huge costs of construction continue to adversely impact project implementation.

- Moreover, environmental degradation along the HSR routes, R&R of project-affected people and regionally imbalanced development are perceived to be other potential pitfalls of HSR development in the country.
- Urgent need of Indian Railways to be fully electrified.

Recommendations

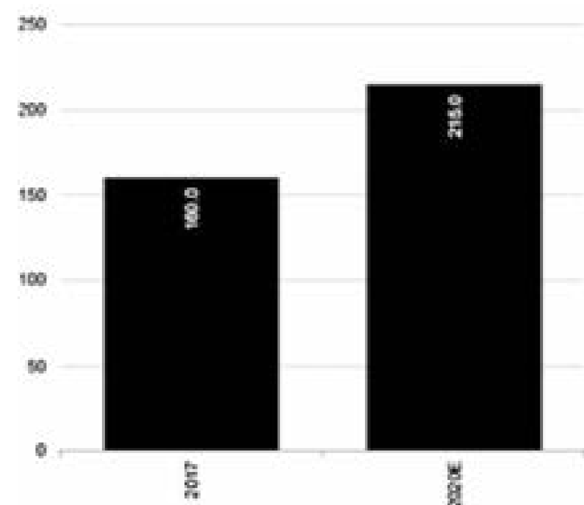
- Issues need to be dealt with targeted corrective policy and action should be taken in a time-bound manner to deal and ensure timely and effective implementation of the project.
- The annual electrification targets for 2018–19, 2019–20, and 2020–21 are 6,000 rkm, 7,000 rkm and 10,500 rkm respectively should be adhered too.
- IR's power requirements, even after taking efficiency measures, will triple by 2030 to 49 BUs. To meet its increasing energy requirements, feasibility should be carried out for using alternative fuels such as bio-diesel, compressed natural gas and liquefied natural gas. It will also need to take up more renewable energy projects.
- That said, in the long run, IR will need to invest in the training and capacity building of personnel to implement new initiatives and measures.
- Thus, IR's energy requirements and plans present significant opportunities for power producers, renewable energy developers, technology providers, and manufacturers of rolling stock and electrical equipment.

3.1.5. Logistics sector

The Indian logistics sector provides livelihood to 22 million-plus people and improving the sector would facilitate a 10 per cent decrease in indirect logistics cost, leading to a growth of 5–8 per cent in exports. It is estimated that the worth of Indian logistics market would be around US$215 billion (€190.68 billion) in next two years compared to about US$160 billion (€141.90 billion) currently. The boom in next couple of years is expected largely due to the implementation of the goods and services tax (GST).

Leasing activity in the Indian logistics sector reached an all-time high of 17 million sq. ft in 2017. To cater to this demand, the number of newly-constructed warehousing units should increase by 25 per cent CAGR until 2021. This growth will be seen around the densely populated metros and Tier-1 cities and presents an opportunity for both real estate funds as well as developers.

Figure 5: Logistics market size (in US$ billion)



Among challenges that beset the Indian logistics industry, the foremost is it being largely in the unorganized realm. The other challenges hindering its growth include high cost, underdeveloped material handling infrastructure, fragmented warehousing, presence of multiple regulatory and policy-making entities, lack of seamless movement of goods across modes, and poor integration with modern information technology. These challenges, particularly the ones pertaining to procedural complexities, redundant documentations and involvement of several agencies at our ports and borders, severely dent our performance in international trade, resulting into about 70 per cent of the delays.

The need of the hour is to formulate an integrated logistics policy. The integrated logistics policy could go a long way in streamlining and consolidating multidepartment requirements, besides facilitating corrective action, effective monitoring, and prompt grievance redressal. In an integrated manner to achieve the same by harnessing the potential of emerging technologies, bringing in investment, creating human capital, removing bottlenecks, improving intermodal transport mix, automation, single window clearance system, and simplifying procedures.

Along with it, a mechanism needs to be created to measure the sector's performance at regular intervals against the set benchmarks, thus, providing evidences to the policymakers so that a favourable policy environment is created.

3.2 Smart Cities

3.2.1 Smart Cities

- The 'Housing for All' programme aims to build 20 million urban homes and 30 million rural homes by 2022.
- Government investments have led to the approval or construction of 3.9 million homes so far.
- City renewal programme and smart solution application.
- Environmental regeneration (greenfield and retrofitting) of 100 Indian cities by 2023.
- Total cost of projects: US$70 billion (€62.08 billion).
- Impact on the total urban population: 99,486,840.

Issues and Recommendations

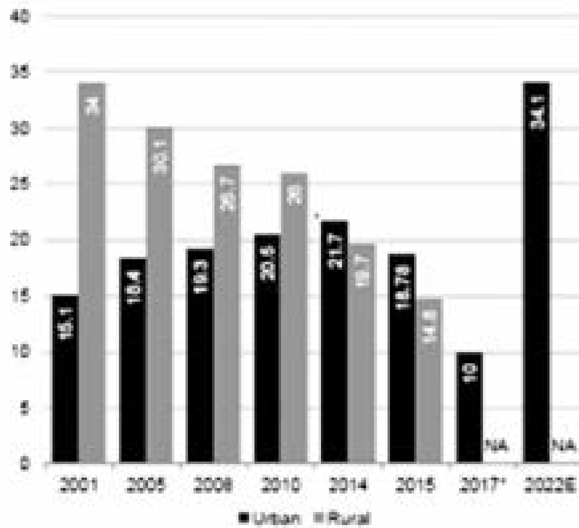
- When the Indian government announced its Smart Cities Mission in June 2015, the move was cheered and seen with scepticism in equal parts.
- On the one hand, the programme was hailed as one that would usher in an 'urban renaissance' by promoting sustainable and inclusive urban development and drive economic growth. On the other, there was serious apprehension about India's readiness to build technology-enhanced infrastructure that would address the structural inequalities and inadequacies in the cities.
- Four years hence while it is difficult to announce a judgment on the success of the mission, it is clear that the programme is still work in progress.
- According to the Ministry of Housing and Urban Affairs, as of December 2018, almost two-thirds of the projects envisaged under the programme have either not started or are at the tender-issuing stage.
- While projects worth US$30 billion (€26.60 billion) on for 100 Smart Cities were included in the original proposals, only 1,675 projects worth US$8 billion (€7.09 billion) have been implemented so far.
- Innovative technology-led initiatives are being implemented across cities. Some cities such as Ahmedabad, Hyderabad, Surat, Coimbatore, Bengaluru, Mangaluru, Delhi, Mumbai, and Chennai have launched initiatives for the deployment of advanced communications systems, intelligent transit management systems, smart meters, GIS and GPRS for solid waste management, online billing systems, mobile-based complaint redressal systems, etc. Ten cities have commissioned integrated command and control centres (ICCs) to provide a single interface for multiple solutions.
- That said, in a mission of this scale – with 100 cities across states that are diverse in every way – there are bound to be delays and cost escalations. Industry experts contend that globally, it has taken around 15 years to transform cities into Smart Cities. This explains why, despite the sluggish implementation, the euphoria surrounding Smart Cities, particularly how these will change the way urban India lives, refuses to die down.

3.2.2 Real estate and building construction

- The urban housing shortage in India is estimated at around 10 million units which is being addressed through Pradhan

Mantri Awas Yojana (PMAY)-Urban, under which more than 6.85 million houses have been sanctioned upto December 2018.

Figure 6: Urban–rural housing shortage (million)



- Real estate sector in India is expected to reach a market size of US$1 trillion (€886.91 billion) by 2030 from US$120 billion (€106.43 billion) in 2017.
- Increasing share of real state in the GDP would be supported by increasing industrial activity, improving income level and urbanization.
- Mumbai and Bengaluru have been rated as the top real investment destinations in Asia.

3.2.3 Affordable housing

- The inward migration of people from rural and semi-urban areas to urban areas is continually exacerbating the housing shortage situation in cities. The fact that majority of these migrants hail from lower income groups, brings the need for affordable housing into the limelight. The affordable housing sector, in its current state – a shortage of 10 million houses (urban areas), is in no way equipped to cater to the burgeoning demand.
- The PMAY-Urban, launched in 2015 aims to address the challenge of housing shortage amongst low-income groups in cities and envisages building of 20 million houses by 2022. A rural component has also been added to PMAY, which aims at building/ upgrading 10 million houses by 2019.
- The private participation narrative in the affordable housing space is also changing favourably. A large number of developers are making inroads into this segment and are finding it lucrative. One of the biggest policy impetus for private developers came through the formulation of a PPP policy in September 2017.
- The next few years until 2022 will be action packed for the affordable housing space. Policy impetus coupled with various affordable housing schemes by state governments and active private sector participation will result in tailwinds for the sector, making 'Housing for All' a commercially viable opportunity.
- The government has also laid significant emphasis on the adoption of prefabricated and 3D construction technology to boost speedy, safe and sustainable construction.
- Currently, around 125,000 houses in the country are being constructed using prefabrication technology, with several companies using 3D software solutions in order to make precasting and fabrication more efficient. The Ministry of Housing and Urban Affairs (MoHUA) is also exploring the use of 3D construction technologies for building affordable houses in 25 cities in the country.

Recommendations

- Given the huge demand–supply gap, the housing segment provides significant market opportunities to all stakeholders in the construction sector in the next four to five years. This is also expected to drive the demand for low-cost construction materials and technologies. The technology sub-mission under the PMAY would also facilitate the adoption of modern, innovative, and green technologies and building materials for faster and better quality construction of houses.

Another segment which is expected to gain traction is prefabrication technology. This technology is expected to not only reduce construction time but also build more cost-effective houses. Together these initiatives are expected to help make affordable housing a reality and ensure that construction is done in a sustainable manner and at a low cost.

- Urgent need for land reforms, land initiatives, and land pooling.
- 3P to 4P approach with people involvement.

3.2.4 Water

- In India, almost one-third of the current population lives in cities and this will reach half the country's population in just a few decades. India houses about 17 per cent of the world's population and has only 4 per cent of global water resources. With increasing economic activities, population growth and rapid urbanization are exerting major pressure on water supply, water quality and public health.

Issues

- India is soon going to be confronted by a serious resource challenge. The available water resources have reduced over the years but the demand has escalated and is projected to overtake the availability very soon.
- Water demand will continue to grow and by the year 2025 it is expected to increase by over 20 per cent, fuelled by industrial requirements which are projected to double from 23.2 trillion litres per annum at present to 47 trillion litres per annum.
- Domestic demand is expected to grow by around 40 per cent from 41 trillion litres per annum to 55 trillion litres per annum while irrigation will require 14 per cent more water – 592 trillion litres per annum up from 517 trillion litres per annum currently.
- The Ministry of Water Resources, River Development and Ganga Rejuvenation predicts that per capita water availability will reduce by 36 per cent by 2025 and by about 60 per cent in 2050 from 2001 levels.
- While agriculture will remain the major water user, the challenges posed on water requirement by growing urbanization calls for a monumental shift in response from all stakeholders.
- Challenges are poor financial health of urban local bodies (ULBs), low level of private sector participation, shortage of skilled manpower, absence of accurate database with ULBs, and heavy dependence on public funds.

Recommendations

- In an increasingly complex water situation, the country's water utilities need to focus on ways to ensure more efficient water management and the adoption of new technologies for maintaining municipal water supply systems.
- Utilities will ultimately be more sustainable and competitive, which carefully and creatively use their water assets for strategic urban advantage.
- The introduction of the aforementioned measures and initiatives in the water and waste sector has largely been restricted to a few big cities. More recently though, smaller cities too have started adopting these measures to improve civic services.
- Therefore, concerted efforts have to be made to spread awareness about smart technologies and roll out financial support in the form of subsidies. Steps such as 90 per cent rebate on sewer charges for those using decentralized sewage treatment plants (STPs) as introduced by DJB can be replicated by other ULBs too for greater uptake. An enabling ecosystem has to be created wherein all the stakeholders collaborate to introduce such world-class technologies.
- The need for non-revenue water (NRW) management in Indian cities is important for the operational and financial health of water utilities. Cities such as Singapore, Manila, and Phnom Penh have successfully implemented water-loss management programmes to reduce NRW to below 20 per cent levels. Indian water utilities are struggling to provide clean drinking water due to ever-increasing

populations, expanding service areas, and high levels of water loss.

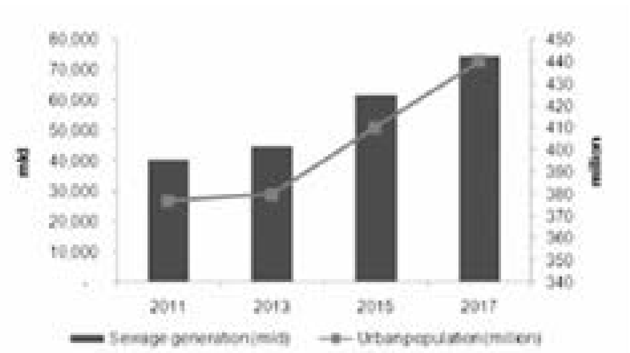
3.2.5 Solid waste management

- One of the prerequisites for building a Smart City is effective monitoring and management of solid waste.
- Unfortunately, most Indian cities fail to treat waste effectively as the existing solid waste management (SWM) infrastructure is inefficient and inadequate.
- With India flourishing economically, an increase in the purchasing power parity has led to more affordability, accessibility to resource use and a rapid surge in the waste volumes as well.
- Like many developing countries, India too is struggling with the straining waste management systems adversely impacting the ecological health.
- The total waste generation in India presently hovers around 60–65 MTs per annum, of which only 20 per cent is actually treated. Municipal solid waste (MSW) holds a significant chunk, 75 per cent of the total waste generated in the country of which only 25 per cent is scientifically processed. The remaining is either dumped in sanitary landfills or is crudely littered.
- Given the current urbanization growth levels in India, more population pressures on urban agglomerations is anticipated in coming years and so in the municipal waste generation volumes.
- Considering the current urban trends, it is not at all surprising to mention that the MSW quantum in India can see an increase of double the existing volumes by ten years down the line. In fact, it is projected to hover around 80 MTs by 2030, offering a business case of approximately US$20 billion (€17.73 billion).
- According to the Ministry of New and Renewable Energy (MNRE), 24.22 MW of power is currently being generated from waste and an additional 172 MW is being generated as off-grid captive energy.

3.2.6 Sewage collection

- Increasing municipal and industrial activities has resulted in significant increase in sewage generation in urban areas of the country.

Figure 7: Growth in sewage generation and urban population during 2011–17



- Between 2011 and 2017, the total sewage generated by Class I and Class II cities increased from 40,715 million litres per day (mld) in 2011 to 75,020 mld in 2017, recording a CAGR of 10.72 per cent.
- The country's sewage treatment capacity increased from 11,787 mld in 2009 to 26,066.31 mld in 2018 (as of July 2018). About 83 per cent is currently operational.
- In the last couple of years, the government has launched a number of programmes/ schemes for augmenting sewage treatment and collection infrastructure in the country. Ongoing schemes like development of 100 Smart Cities, the Atal Mission for Rejuvenation and Urban Transformation of 500 habitations, the Namami Gange Mission and the Swachh Bharat Mission are estimated to entail an investment of over 3 trillion.
- The progress under these schemes has been slow with majority of the projects currently in the bidding and planning stage.
- The new Environment (Protection) Rules, 2017 has relaxed the discharge standards for treated wastewater/sewage (for upcoming STPs).

- Given the financial constraints and inefficiencies of ULBs, the case for more PPP in the sector is strong. The Namami Gange programme has awarded two sewage treatment projects for Haridwar and Varanasi under the new Hybrid Annuity Model.
- A number of incentives and policy structures have been promulgated by the municipal agencies as well as state governments to encourage different stakeholders to recycle and reuse wastewater.
- A number of ULBs in India have started to deploy advanced sewage treatment technologies such as sequential batch reactor, moving bed biofilm reactor and moving bed bio-reactor to improve the quality of treated sewage and optimize O&M cost and land requirements.

Key benefits

Through these smart solutions, ULBs can improve their performance by expediting the waste collection process, ensuring real-time monitoring of vehicles and reducing the time that elapses between rerouting vehicles to waste bins by tracking vehicles that are closest to the point of collection. Further, installation of mobile applications for SWM empowers the end beneficiaries as it enables quick complaint and grievance redressal. Also, reliance on intelligent technologies reduces human intervention thereby eliminating the chance of error.

Issues

- The inefficiency in handling waste stems mainly from the inability of most cities to carry out proper segregation, transportation and storage of waste.
- Moreover, state governments lack expertise in using modern methods of waste treatment and also do not have the required resources for its execution.
- In most cities, collection services are not extended to unauthorized or remote settlements due to their inaccessibility or lack of capacity of inhabitants to pay for these services.
- The existing sewerage infrastructure is most cities is characterized by obsolete and faulty pipeline networks, insufficient treatment capacity, sub-optimal capacity utilization, etc.
- Poor financial health of ULBs is another major issue of concern. ULBs in India are primarily dependent on government funds for implementing sewerage projects. Their own revenues from user charges as well as other local taxes are not even sufficient to recover O&M expenses.
- Further, the lack of a fixed revenue stream is major constraint that limits private sector investments.
- The contracting process for most sewerage projects is considered to be very weak. The project documents are not standardized and leave a lot of room for ambiguity.
- Majority of the ULBs lack up-to-date and accurate data on key sewerage parameters, including generation, treatment, collection efficiency, and treatment capacity.
- One of the greatest hurdles to effective treatment of waste is the lack of proper waste disposal methods. Setting aside urban spaces for utilizing them as landfill sites is another formidable issue. With increasing urbanization, the lack of adequate space for dumping of waste has resulted in littering on streets. This has resulted in externalities such as health hazards.
- In addition, despite the introduction of many innovative WtE technologies like pyrolysis and plasma gasification technology for converting waste to energy, their uptake has been slow. It has been seen that ULBs lack expertise as their staff and engineers do not have the requisite training and knowledge. Moreover, these techniques are expensive as compared to conventional methods of incineration or combustion, which make them unattractive.

Recommendations

- Integration of smart technologies into waste management practices is the way ahead for cities to achieve the zero discharge status.
- Citizens too need to adopt waste segregation at source and use technologies such as mobile

applications to expedite waste management processes.

- Moreover, Smart Cities that have already launched initiatives must create greater awareness about the successful new methods and technologies to enable greater uptake in other cities.
- Though the initiatives taken by the government are laudable, policy and regulatory gaps still persist.
- The policy framework does not have the necessary clauses for financial penalties for non-compliance of the rules by a ULB. NITI Aayog has suggested exploring the possibility of setting up a central authority – the Waste to Energy Corporation of India (WECI) – for fast-tracking the setting up of WtE plants across Smart Cities. More such measures are needed for achieving the sustainable SWM goal. Moreover, expertise to at least make the right technology choices, if not develop new technology, is also the need of the hour.

[*Source*: Indiainfrastructure.com]

4. INFRA FINANCE AND ISSUES

At a critical stage, the infrastructure sector in India is faced with insurmountable challenges of acquiring funds for project development and management risking the projects with possible financing defaults. Challenges such as high cost of capital, obstacles in obtaining non-recourse funding and dearth of long-term funding sources are currently haunting the industry. Moreover, the banking sector is under major duress on account of non-performing assets (NPAs).

Emerging funding sources are slow to take off: Significant developments have taken place with respect to alternative sources of infrastructure financing – *infrastructure investment trusts (InvITs) proposed in 2013-14, infrastructure debt funds (IDFs) started in 2011–12 and National Investment and Infrastructure Fund (NIIF) activated in 2017 with Master Fund, Fund of Funds (FoF) and Strategic Fund. The NIIF has currently over US$3 billion (€2.66 billion) of committed capital and has a target of US$6 billion (€5.32 billion; 49% contribution by the government and rest to be raised from foreign and domestic investors).*

Most of these funds started out with a lot of enthusiasm, they are yet to make the intended impact. This is primarily attributed to the factors such as lack of enthusiasm among domestic investors to invest in them as well as lack of awareness about their future prospects. Nevertheless, considering the current situation of mounting NPAs with Indian banks, it becomes imperative for these funds to be more effective.

One of the biggest developments in the past 12–15 months was the signing of an MoU between NHAI and the State Bank of India for an unsecured loan worth US$4 billion (€3.54 billion). The loan will be provided for a period of 10 years with a three-year moratorium on repayments. It is notably the largest one-stroke loan to have been sanctioned to NHAI by any institution.

Meanwhile, the Life Insurance Corporation (LIC) bought bonds worth ₹20 billion (€254.83 million) in the first issuance of NHAI's 30–year bonds in 2018-19. NHAI also has plans to announce a buyback policy. Under the policy, the authority plans to buy back 20 national highway and 19 state highway projects spanning 3,160 km from private players.

In case of financing water and sanitation projects, funding comes from several different sources. Government funds have always been the main source of finance for water supply and sanitation projects in the country. These funds are extended in the form of budgetary support and grants, and through schemes such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), the Smart Cities Mission (SCM), the Swachh Bharat Mission (SBM) and the Namami Gange programme. Further, since municipal water supply is a state subject, most of the funding for such projects comes from the state government. Funds to ULBs are extended through state transfers and grants-in-aid. In addition, ULBs use their

own resources for meeting capital expenditure on urban water and sanitation infrastructure. Water and waste water projects in India also receive sizeable funding from international financing agencies such as the World Bank, the Asian Development Bank and the Japan International Cooperation Agency. These multilateral agencies provide financial support to the sector in the form of concessional/non-concessional loans, equity investments, grants and loan guarantees. Funds for water and related projects are also provided through financing institutions such as Housing and Urban Development Corporation Limited, India Infrastructure Finance Company Limited and Infrastructure Development Finance Company Limited.

In spite of this, the investment requirements of the water supply and sewerage sector are substantial, and the current level of investment leaves much to be desired. The fundamental problem lies in the lack of attractiveness of the sector due to various issues, owing to which private players have been cautious in investing their funds. The situation is further exacerbated by the poor financial health of ULBs that are still struggling to garner funds for meeting their expenditure requirements.

The time is ripe for the country to tap alternative sources of funding such as infrastructure investment trusts (InvITs), infrastructure debt funds (IDFs) and National Investment and Infrastructure Fund (NIIF). The Economic Survey also stressed the need to fill the infrastructure investment gap by financing from private investment, institutions dedicated for infrastructure financing like National Infrastructure Investment Bank (NIIB) and also global institutions like Asian Infrastructure Investment Bank (AIIB) and New Development Bank (erstwhile BRICS Bank).

Endnotes

1. PwC
2. Hindustan Times
3. Indian Infrastructure – August 2018
4. Economic Survey 2017–18
5. Enincon Consulting

LOGISTICS

Acknowledgements: Julian M Bevis (Maersk Group) –
Chairman, Logistics Sector Committee & its Members

EXECUTIVE SUMMARY

The logistics sector of the economy continues to receive much attention from the government, both centrally and in the states. The augmentation of physical infrastructure across most sectors continues, albeit developments are not always regular. In the sphere of procedural change, the country's Ease of Doing Business rating and cost of doing business continues to improve, which reflects great credit on efforts in the trade facilitation space. Here too though progress is not always uniform nor is it as swift as might be hoped for. The key point though is that the sector is now firmly seen as an essential element of the government's economic planning which is a marked and welcome change.

The challenges in the coming years remain much as before, albeit as said, material progress is being made. The principal focus areas must remain:

- The swift creation of scale in the provision of physical infrastructure across all modes. Without this focus future demand will be choked and consumers will not have adequate choice, thereby impeding the development of effective markets.
- Ensuring the provision of physical infrastructure; the provision of the right regulatory environment must remain a focus. Process simplification remains a major challenge and has to be applied uniformly.
- Across all modes, the provision of effective electronic communication, both domestically and internationally, is now entirely possible. This can obviate the necessity for paper and increase transparency.
- Wherever possible, regulation by market forces need to be espoused. The ports sector must move to market-driven pricing and in the rail sector, high freight charges needs to be addressed, initially by regulation but ultimately by proper competition.
- The road sector needs to be properly controlled. It remains inefficient, unsafe, and an industry that incurs high social costs. The goods and services tax (GST) has helped remove obstacles but more needs to be done to facilitate the free flow of goods.
- Across all sectors compliance standards in the industry remain low. Internationally more and more customers and indeed governments are looking to see positive change.
- Policy distortions such as the outdated marine cabotage regulations have been addressed but only in part, and domestic change also needs to be tackled.
- In the coming year the first stage of the Dedicated Freight Corridor (DFC) will start operations. This is a potential game-changer but the opportunity will not be fully taken advantage of, unless all users can achieve full access to the DFC's benefits both operationally and commercially.
- Safety across all sectors remains poor, particularly on the roads. While the focus on this area is increasing, the social and human cost remains unacceptable.
- The list of focus areas remains daunting but can be addressed and successfully dealt with if industry and the government can work together more effectively. While disparate views are perhaps inevitable given the scale of the industry, greater coherence and far less disunity are essential.

A great deal has been done in recent years and this is enormously praiseworthy. Much more can be done, though. Against the background of a new and reinvigorated government, combined with greater focus from industry, all this is achievable. The European Business Group (EBG) stands ready to play its part as a key facilitator of the work necessary to bring about such change.

1. INTRODUCTION

This is the sixth edition in the series that tries to summarize the issues that face European logistics providers operating in the Indian market.

As previously, the document does not try to prescribe solutions. Rather it attempts to formulate an agenda for discussion between logistics providers and the various stakeholders, be they government or others, whereby joint solutions can be reached.

Whatever else is said, two broad points needs to be emphasized. Firstly, the focus of the government on the sector is now considerable. This is much appreciated. The results of the focus that has been applied in recent years are now emerging and India is becoming more competitive in consequence. The second point is that the many initiatives that government has started needs inputs from industry. A greater effort from across the logistics sector is required if the government's efforts are to be fully supported.

While much has been done, there equally remains much to do. Logistics is a vital pillar of the economy and against a background wherein trade uncertainties appear to be increasing, this sector has to continue to look everywhere for ways whereby more efficiencies can be delivered.

The European logistics industry in India appreciates what has been delivered in recent years and remains committed to working, through EBG, and in partnership with the Government of India, to deliver a more effective and competitive logistics sector.

2. COMMON THEMES

There are a number of themes that are common to all sectors. It is acknowledged that these are broad points. It is nevertheless felt that they warrant restating.

2.1 Wherever possible, regulation by market forces must be preferred over regulatory mechanisms. This particularly applies to pricing in the logistics infrastructure sector.

2.2 It follows therefore that physical infrastructure must be created in sufficient scale to allow the operation of effective markets.

2.3 The various sectors of the logistics industry must be seen as interlinked. Ports, for example, cannot function without adequate inland connectivity.

2.4 Manufacturing and the employment it can generate will not develop unless supported by a competitive logistics industry. Infrastructure costs, e.g. in ports and airports must be aligned with regional competitors.

2.5 The creation of the logistics cell in the Ministry of Commerce has been of benefit. Further similar ministerial alignment would be beneficial.

2.6 Infrastructure provision is as much about physical capabilities as it is about the regulatory framework.

2.7 The logistics group believes that as far as possible all elements of the logistics industry needs to be privatized.

2.8 Regulatory processes continue to show regional variations. While it is acknowledged that this is not easy, such processes must be applied uniformly across the country.

2.9 Risk management processes needs to be implemented in the additional government agencies such as food standards that complement customs.

2.10 To deliver cost effectiveness, the costs to the trade needs to be reduced and to create employment, government and industry needs to work together to develop maritime and air transport hubs.

2.11 The rules governing the interaction between government and infrastructure operators, the so-called public–private partnership (PPP) model needs review to redress the balance of risk and reward which is currently skewed in favour of the government.

2.12 Skill shortages remain in the logistics sector and will likely grow. The operation of the Logistics Skill Council needs reinvigoration.

2.13 Across all sectors, while progress is being made to facilitate the generation of local user community systems, there remains work to

do. Further, the international dimensions of digitization needs attention to facilitate the international exchange of data.

2.14 Safety must be enhanced across the sector. At present, this falls short in terms of regulation and management attention. It is unfortunate that transport is delivered at such human cost.

3. ROAD TRANSPORT

3.1 The standard and extent of roads capable of supporting road freight transport remains poor.

3.2 While GST has been implemented, there remains a multiplicity of other agencies impeding the free movement of road transport.

3.3 There is no formal training of drivers and attendants.

3.4 Safety standards are low and there exist very few organized training programmes.

3.5 The multiplicity of regulations applicable to truck movement in India, coupled with random inspections on the road by different agencies responsible for implementing these regulations lead to multiple stoppages. Such stoppages, including those at checkpoints and entry-points could add up to as much as 10 to 14 hours per day for trucks in transit. It is suggested that tax-related check-posts are done away with in the post-GST regime and replaced with risk-management based flying squads for random inspections. The registration of information for intra-state movement is done through an automated system. All stops made by flying squads would have to be registered by the officials, and physical inspections if any, be undertaken on camera. All Regional Transport Office (RTO) inspections should also be made on-camera and all stoppages registered online by officers and made subject to the Right To Information (RTI) Act.

3.6 Road weight legislation has to be enforced nationally.

4. AIR FREIGHT TRANSPORT

4.1 There is an urgent need to implement comprehensive e-governance systems across the industry, supported by a robust electronic data interchange (EDI) customs system with adequate back-ups.

4.2 Implementation of cargo community systems at all airports and terminals capable of working without manual intervention.

4.3 Landing and navigation charges remain high thus adding to India's high logistics costs.

4.4 Sea–air, road–air freight development has been extremely limited.

4.5 24x7 availability of key officials.

4.8 Best practice sharing between airports needs to be adopted.

4.9 Royalties and service tax on all airport services is making air freight unnecessarily expensive.

4.10 The processes for part shipment of imports is a major issue and amendment processes take days.

4.11 Excess and over-carried cargo is an integral part of the business but the process of regularization is too slow.

4.12 Allow establishment of cargo 'villages' to allow build-up and handling of Unit Load Device (ULD) and pallets as per international practice.

4.13 Where air freight operators are able to build full ULDs, the practice of charging for full handling by the terminal operators needs to be curbed.

4.14 The practice whereby terminals operators and ground handlers are the same needs to be changed. Operators need to be given a choice.

5. CONTAINER SHIPPING

5.1 The development of port user community systems in all ports to serve all users and stakeholders is essential. These exist in almost every port in competitive markets and greatly facilitate the handling of transactions. We need to work with government to develop international solutions for the digital transmission of data.

5.2 The requirement of shipping lines to register with customs is superfluous and is an unnecessary burden on lines.

5.3 The exemption of vessel sharing agreement needs to be extended for five years failing which this internationally accepted best practice will have to cease which will add considerable and unnecessary additional costs for India's international trade.

5.4 In certain cases light dues collection is being duplicated, adding unnecessary costs.

5.5 The current rail pricing structure for containers remains an impediment. Railways must be able to compete effectively and to reverse the transfer of cargo to road.

5.6 The movement of containers across state boundaries will be facilitated by GST but the rules around taxation of the container itself are burdensome and needs to be changed.

5.7 Landside connectivity in many ports remains inadequate.

5.8 While the cabotage issue in respect of containers has been resolved which is a great step forward, it is essential that other agencies involved in transshipment also streamline their processes.

5.9 Landside and maritime connectivity remains poor in many ports.

5.10 Port costs are unnecessarily high.

5.11 The annual continuity bond process for the importation of containers require simplification.

5.12 The Export General Manifest (EGM) process should permit soft copy billing and the process of handling EGM for Inland Container Depots (ICDs) simplified.

5.13 The terminal load list should be considered as the EGM.

5.14 Shipping lines still have to submit 18 documents in hard copies of every vessel.

5.15 While lines now display their charges on websites, the intermediaries still do not. This needs to change.

5.16 Confirmation of data integrity in Port User Community systems is required from government. It is imperative that these systems are standardized across the country.

5.17 The supply chain management (SCMT) process still needs to be simplified.

5.18 Waterway movements need to be facilitated through addressing transit times, navigability on a 24-hour basis costs and operational issues.

5.19 Regional transit issue, particularly around the movement of Bangladesh and Nepal cargo over Indian infrastructure needs addressing.

6. PORTS AND TERMINAL SERVICES

6.1 Tariff Authority for Major Ports

The TAMP issue remains unresolved. While government intends to do away with the TAMP for new terminals, as far as existing terminals are concerned they will remain subject to pricing guidelines and tariff revision by an Authority. A way needs to be found whereby those terminals can be transitioned unconditionally to a more appropriate set of guidelines leading eventually to a fully market driven pricing regime.

6.2 Port User Community System

There must be established in all ports effective cargo community systems that enable access to and from all users of common data.

Currently very few EXIM transactions are automated. There is limited exchange of information and the users cannot extract information.

The system must permit a multidirectional interchange of information and must become the sole permitted means of communication for all cargo information for all stakeholders.

6.3 Improvement of PPP/MCA Model

The present PPP/MCA (Model Concession Agreement) model does not provide an adequate balance of risk and reward with the result that projects are often not financially rewarding.

6.4 Custodian Bond, Bank Guarantee and Insurance Norms for Custodian as per the 'Handling of Cargo in Customs Areas Regulations'

It is not necessary for terminals to take out insurance to cover customs duty when they already have insurance for the infrastructure and the value of cargo and containers. This is a practice that applies nowhere else in the world and could safely be dispensed with in India.

6.5 Cost Recoveries from Customs for Provision of Customs Officers

It is requested that Central Board of Excise and Customs (CBEC) stops collecting cost recovery charges from build, operate, transfer (BOT) terminals. This requirement has already been disallowed in some states and needs to be removed across the country.

6.6 Remote Clearance of Vessels by Immigration and Customs

The inward and outward clearance of vessels needs to be handled in advance and on line.

6.7 Allocating of Space in Ports for Testing laboratories for Animal/Plant Quarantine, Textile and FSSAI

While steps have apparently been taken to instruct major ports to allocate land and/or space within ports, little progress has been made, with the result that the delays incurred through the dispersal of these facilities continues.

6.8 Secure Improvements in the Physical and Regulatory Infrastructure Providing Connectivity Both for Landside and Marine

Ports act as nodal points for loading and unloading international and domestic coastal cargo. The evacuation of cargo from the ports of the hinterland and vice versa has a vital bearing on the logistics efficiency. The development of auxiliary port infrastructure such as roads, truck, bays, peripheral connectivity, and timely expansion of external facilities to deal with demand is often hampered since the responsibility for them lies with different authorities. Proper coordination will be given emphasis. Most of the ports including private terminals face the problem of landside evacuation due to shortage of rakes and rail lines. This is resulting in undue delays in clearance of cargoes adding to logistics inefficiencies and costs. Emphasis must be given to last linkages and addressing infrastructure deficiencies in respect of evacuation of cargo.

6.9 Create a More Constructive Legislative Environment Around Labour Issues and Ensure that ESMA Legislation Can Be Invoked Without Delay

While the Essential Services Maintenance Act (ESMA) exists on the statute books, it needs to be suitably amended and applied to prevent damaging labour stoppages.

6.10 Removal of the Cabotage Legislation That Inhibits the Development of Transshipment Hubs in India. For This to Be Effective There Must Be Changes in the Relevant Tax and Customs Legislation

The recent circular issued by Ministry of Shipping is welcomed. However, the removal of cabotage restrictions on a permanent basis needs to be announced as that will give confidence to international trade to participate in coastal movement in a big way. It goes without saying that Indian Flag and International Flag operators must be on an equal footing.

6.11 Relative Costs

It has been long the contention of the industry that marine costs levied by the major ports in India are unnecessarily high.

The consequences for India's relative competitiveness are self-evident.

6.12 Customs

Uniform application of customs rules both across ports and inland facilities.

6.13 Public–Private Partnership Policy

Many of India's 12 major ports and 200 non-major ports generally lack scale, draft, modern equipment, mechanization, and efficient cargo handling processes. It is imperative that modernization of the ports in the country is given thrust by encouraging

private sector participation in the port sector by introducing conducive policy changes and carrying out necessary structural reforms to drive private sector investments into ports. These include complete market freedom to fix charges, easy availability of financing, streamlined port procedures, and development of uniform customs procedures, etc. There is also an urgent need to develop berths at ports.

6.14 Environmental Issues

All major ports are in densely populated areas. Those ports spread beyond human habitation today will certainly be populated sooner than later. The way the bulk cargo was handled for the past 50 years was far from ideal. Environment is not an issue. Bulk can be handled in environment friendly ways. It calls for viability gap investment by government. If this is not addressed, viability of all ports handling bulk will be difficult impacting EXIM trade and logistics efficiencies.

6.15 Road connectivity both locally and in some cases over long distance is poor and needs prioritization.

6.16 Port-based industry development in hinterlands to be uniformly prioritized.

6.17 Transshipment permits for vessel transshipment is still being done manually. This should be handled electronically for example through the Indian Customs Electronic Commerce Gateway (ICEGATE).

6.18 Custodian file transfer protocol access (FTP) access for ICEGATE to receive simple mail transfer protocol (SMTP) messages should be made universally available.

6.19 SMTP processes currently hold up entire manifest for one error. There must be a process to allow override for correct data.

7. EXPRESS LOGISTICS

7.1 **Ensuring Appropriate Space is Set Aside for Dedicated and Exclusive Express Handling Facility for Express Operators in the Airport Premises with City and Airside Access for Express Operators with Own Aircraft**

Such space needs to take into consideration the unique needs of express, and is thus located next to aircraft parking and transit bays. Additional features required by express operators especially if India is to develop an express logistics regional hub are:

i. Self-ground handling for express companies with own aircraft.

ii. Customs is encouraged to give custodianship to express operators. Custodianship for express operator is essential for seamless operations leading to speed and security of operations.

7.2 Simplification of transshipment procedures.

8. RAILWAYS

8.1 Rail rates are high in absolute terms (as compared to other national rail networks) and relative to road, which is causing significant loss of traffic to rail. This has implications for the existing network, for the environment and quite possibly for the future of the DFC.

8.2 Railways have a significant land bank which could be utilized to release value and attract inward investments.

8.3 The restrictions on wagon maintenance by private rail operators needs to be relaxed as this is a disincentive for private operators.

8.4 There appears to be a preference for public sector units (PSUs) for rail projects. Private equity needs to be given consideration as well.

8.5 The completion of the Western and Eastern corridors of the DFC physical infrastructure and finalization on its pricing and operational model need to be prioritized. The east coast and cross links of the DFC need to be prioritized.

8.6 There is a need to run more scheduled trains to give certainty to the EXIM trade.

8.7 The restricted commodity list needs to be done away with.

8.8 Double stack trains can be used for four 20 feet container per wagon. This is possible and would bring traffic back to rail.

8.9 Issues around traction and crew shortages during peak periods remain.

8.10 There needs to be a greater degree of trade representation and consultation in railway decision-making.

8.11 There is a need to improve the utilization and effectiveness of railways owned container rail terminals by giving access to them by private rail operators.

8.12 Conversely, the utilization and effectiveness of the private freight terminals needs to be enhanced by allowing them to handle multiple train and traffic types.

8.13 The policy of penalizing rail operations for empty rake movement needs review.

8.14 Rail service reliability remains a major service concern.

8.15 The ability of Indian Railways and Concor to provide comprehensive tracking data on all containers moving throughout the network needs to be provided so that logistics providers may in turn advise their customers.

8.16 The DFC when it comes must be open to all operators and economies of scale passed on through appropriate pricing mechanisms.

9. TRADE FACILITATION

9.1 The logistics industry appreciates the recent initiatives towards developing an effective single-window and a single-common online declaration for customs and all allied agencies. It looks forward to further systemic reforms that would ensure zero downtime of the customs EDI and a paperless system that accepts scanned electronic copies. All documents required for clearance with digital signature. In addition, some other expectations of the logistics sector include:

i. Inclusion of a wide category of entities (ACP – accredited client programme, AEOs – authorized economic operator, Star Trading Houses, and large manufacturers) for the benefit of deferred duty payment (DDP) scheme announced by the Finance Minister in his Budget speech. Limiting this to just AEO and ACP category (even a reformed AEO category) would be self-defeating, and become a tool in the hands of a few AEO freight forwarders to develop their business. The obvious implications for rent-seeking and favours that would perpetuate the AEO programme would defeat the entire purpose of transparency. India's large manufacturers who are responsible member of global supply chains should be allowed to have this facility as a matter of course, whether or not they get AEO status or not.

9.2 Delays happen at assessment level where Assistant/Deputy Commissioner counter signature is required due to assessable value being greater then ₹1 lakh (€1,274). This delay is again due to the shortage of officers and the multiple tasks expected to be done by Assistant/Deputy Commissioner. It has been industry's long standing demand that the limits be re-defined in light of the fact that the purchasing power value of ₹1 lakh (€1,274) has declined substantially from the time this limit was first promulgated. AC/DC signature requirement should be applicable only to shipments with assessable value greater than ₹5 lakh (€6,370).

9.3 Listed below are 10 suggestions for making customs more effective. There is much detail behind these which can be provided on request.

i. Use simple language in notifications – notifying import duty is a crucial task of Customs. Yet, finding correct customs duty for a product is not easy.

ii. Use standard codes for the Duty Drawback scheme – the government has adopted the eight-digit ITC (HS) codes for exports-imports. But, the drawback scheme, the largest indirect tax refund scheme, uses only the first four of the ITC (HS) codes. For the next digits, it uses its own.

iii. Demystify products identified as 'Others' – a mobile phone is India's top electronic import item. Yet, it is covered under the description 'Others' in ITC (HS) schedule. The schedule covers over 2,300 entries that together cover over 25 per cent of India's imports as 'Others'.

iv. Make past tribunal decisions available online – importers and exporters can appeal to the tribunals against the decisions of Customs on issues like valuation, classification or penalties. Though tribunal orders are the public documents, these are not available in an online searchable database.

iv. Minimize customs processing at the port – all consignments which are given the green signal by Customs Risk Management System (RMS) should be allowed Direct Port Delivery (DPD) facility if customs duty is paid within 24 hours of container arriving in the terminal.

v. Allow Direct Port Entry (DPE) to all consignments – all firms with self-sealing permission by Customs are currently allowed DPE facility. For the remaining firms, Customs could consider developing on-site inspection and e-sealing facilities in all major ICDs, transport clusters and 'transport nagars'.

vii. Make RMS effective – Customs uses a sophisticated RMS. But many times, custom officers have reasons to reject RMS recommendations and go for inspection of the goods.

viii. Make inspections transparent – all physical inspection must happen under CCTV recording in designated inspection zones. And the record must be retained for adequate time and be made accessible to the consignee/consignor and their agent. All terminal operators/ICDs/CFS must be mandated to develop facilities sufficient to support this.

ix. Seek information, not documents – Custom's eSanchit system allows traders to upload scanned copies of documents. But a large number of uploads make the system slow. Also, information contained in the documents cannot be used by the system. Replace upload of documents with a digital entry of the required information.

x. Improve valuation – cases of under-invoicing of consumer and intermediate goods, especially those imported from Middle East, East, and South-East Asia is a concern. Setting a reference price for a festival and similar imports may be a good starting point.

Notes

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EXECUTIVE SUMMARY

India is the fifth largest economy in the world and likely to become the second largest economy in Asia-Pacific region by 2025. The energy sector is crucial to sustain and further improve the growth momentum of the economy.

India's energy demand increased to 754 million tonnes of oil equivalent (Mtoe) in 2017 and is projected to grow at 4.2 per cent per annum up to 2040 to reach roughly 1,928 Mtoe, underpinned by strong population growth and economic development.

While presently, India's primary energy basket is skewed towards fossil fuels, coal being the main source of energy, in the medium- to long-term, it is expected that dependence on renewable sources of energy and nuclear power too will increase manifold. It is projected that renewable energy consumption will surge from present ~20 Mtoe to ~300 Mtoe by 2040, concentrated mainly in the power sector and driven largely by growth in solar capacity.

India is the one of the largest importers of crude oil in the world with imports constituting more than 80 per cent of the total domestic oil consumption. India also was the fourth largest importer of liquefied natural gas (LNG) in 2017, accounting for 6.5 per cent of global imports. However, India has potential to meet a higher share of demand from domestic production of crude oil and natural gas.

The government has taken several policy as well as administrative measures in order to augment domestic oil and gas production and reduce dependency on imports. Some of the key developments include unveiling of the new Hydrocarbon Exploration & Licensing Policy (HELP); demand-based bidding under an Open Acreage Licensing Policy (OALP) instead of extant cyclical bidding rounds; shift from cost recovery model to a more progressive revenue sharing model; and grant of pricing and marketing freedom. A National Data Repository has also been set up to provide seamless access to India's Exploration and Production (E&P) seismic data to investors digitally, with a view to harness the potential of India's large basinal area. The government has also renewed its focus on expanding the city gas distribution (CGD) network in the country with successful auctions for CGD licence.

Key recommendations for the sector

1. The government should rationalize the sunset clause for tax holiday by phasing out deduction for production sharing contracts (PSCs) or revenue sharing contracts (RSCs) entered into on or after 1 April 2017, and not with respect to undertakings commencing commercial production after such date.

   Also, the meaning of the term 'mineral oil' needs to be clarified to include natural gas; eligible for a tax holiday.

2. In order to stimulate private investments in E&P operations, the government should extend adequate fiscal incentives such as providing 100 per cent deduction in respect of development and production costs under section 42 of the Income Tax Act, 1961 (IT Act), in accordance with provisions of the Model RSC. Alternatively, E&P projects may be included within the meaning of 'infrastructure facility' eligible for investment-linked deduction under section 35AD of the IT Act.

3. Taking into account that E&P projects are capital intensive and require significant financing, the government should exempt them from applicability of thin capitalization rules under 94B of the IT Act. Alternatively, a higher ratio (i.e. greater than 30 per cent) may be prescribed for such projects to ensure the limitation on interest deduction is triggered only in exceptional cases.

4. For encouraging foreign investments in the E&P space, it is recommended that the Reserve Bank of India (RBI) explicitly clarifies that 'Exploration, Mining, and Refinery' sector is to be regarded as 'infrastructure sector' for the purpose of investments via foreign venture capital investor (FVCI) route.

5. All petroleum products such as petrol, diesel, and natural gas should be brought under ambit of the goods and services tax (GST) regime to avoid cascading of taxes and balance the increased cost of production. Alternatively, the government should ensure that incidence of

GST flows seamlessly across the value chain by allowing a refund of non-creditable input taxes in the hands of the recipient.

The oil and gas industry has been at an inflection point for a couple of years now, marked by a spate of policy and regulatory reforms. The government's renewed vigour to enhance domestic production is an encouraging sign and is expected to catalyse large-scale private investments for new field discovery and enhanced recovery from already discovered hydrocarbon acreages. Downstream infrastructure is set for major capacity additions over next five to seven years, and this could well be a new sunrise sector for investors to look at in this space.

1. INTRODUCTION

1.1 Market Description

1.1.1 With an estimated gross domestic product (GDP) of US$2.97 trillion (€2.63 trillion) in the year 2019[1], India is the fifth largest economy in the world and likely to become the second largest economy in the Asia-Pacific region by 2025. The energy sector is crucial for sustaining and further improving the growth momentum of the economy.

1.1.2 India's energy consumption is projected to grow at 4.2 per cent per annum up to 2040, faster than all major economies of the world.[2]

1.1.3 While India's energy demand increased to 754 Mtoe in 2017, the per capita consumption of energy is still much lower than the world average due to a large population base. India's share of total global primary energy demand is set to roughly double to ~11 per cent by 2040, underpinned by strong population growth and economic development. The energy demand is expected to reach roughly 1,928 Mtoe by 2040.[3]

1.1.4 India's primary energy basket is skewed towards fossil fuels, coal being the main source of energy. Though the country's energy requirements in the medium to long run shall continue to be met predominantly by fossil fuel sources, i.e. coal and oil, dependence on renewable sources of energy and nuclear power too is expected to increase many folds. Renewable energy consumption will surge from ~20 Mtoe today to ~300 Mtoe by 2040 concentrated mainly in the power sector and driven largely by growth in solar capacity. Yet despite this growth in renewables, coal will continue to dominate India's power generation mix, accounting for 80 per cent of output by 2040[4]. The government has set a target of installed renewable energy capacity of 175 gigawatt (GW) by 2022, comprising 100 GW from solar, 60 GW from wind, 10 GW from biomass, and 5 GW from small hydropower.

1.1.5 In the primary energy space, the oil and gas industry is an important pillar and ranks amongst India's eight core industries. This industry is one of the highest contributors to the exchequer, by way of taxes, duties, levies, lease, licence fee, royalty, cess, and profit petroleum.

1.1.6 India's crude oil consumption during financial year (FY) 2017–18 (provisional) was 251.93 million metric tonnes (MMT), which was met by domestic production to the extent of 35.68 MMT and the balance by imports. India is one of the largest importers of crude oil in the world with imports constituting more than 80 per cent of the total domestic oil consumption. However, India has potential to meet a higher share of demand from domestic production with total crude oil reserves of 594.49 MMT as on 31 March 2018 (provisional).[5]

1.1.7 India's natural gas [including liquefied natural gas (LNG)] consumption during FY 2017–18 (provisional) was 52.83 billion cubic metre (BCM). Natural gas is majorly used in the fertilizers industry (30.38 per cent) followed by power generation (24.28 per cent)[6].

India increasingly relies on imported LNG and was the fourth largest LNG importer in 2017, accounting for 6.5 per cent of global

imports[7]. The domestic production of natural gas (including LNG) during FY 2017–18 (provisional) amounted to 32.65 BCM. However, India has potential to aid growing demand of natural gas of various sectors from domestic production, with total reserves of 1,339.57 BCM of natural gas as on 31 March 2018.[8]

1.1.8 In FY 2017–18, domestic production of petroleum products increased to 254.4 MMT (provisional) from 243.55 MMT during FY 2016–17. Further, total domestic consumption of petroleum products was 194.6 MMT during FY 2016–17 and 204.92 MMT during FY 2017–18 (provisional).[9]

1.1.9 While India is a net importer of crude oil, it is a net exporter of petroleum products with high speed diesel (HSD) and motor spirit contributing a major share to exports. Export of petroleum products rose from 65.51 MMT during FY 2016–17 to 66.76 MMT during FY 2017–18. Total export of petroleum products (in value term) rose from US$29 billion (€25.72 billion) in FY 2016–17 to US$ 35 billion (€31.04 billion) in FY 2017–18.[10]

1.1.10 India's economic growth is closely connected to energy demand. The need for oil and gas is projected to grow further, providing vast opportunities for investment. To meet this demand, the government has adopted various policies, such as allowing 100 per cent foreign direct investment (FDI) in many segments of the sector, such as natural gas, petroleum products, pipelines, and refineries (except for investment in public sector undertakings). This move, along with various others, has made the oil and gas sector in India a more viable place to invest. Today, India's oil and gas sector attracts both domestic and foreign investment, as seen by the presence of Indian and foreign companies such as Reliance Industries Ltd (RIL), Essar, BP, Shell, and Cairn. The cumulative foreign investment in the petroleum and natural gas sector between April 2000 and March 2019 stood at US$7.02 billion (€6.22 billion)[11].

1.2 Recent Developments – Policy Framework

The Prime Minister has set a target for reduction of 10 per cent in energy import dependency by 2022.[12] In this regard, the incumbent government has taken several policy as well as administrative measures in order to augment domestic oil and gas production and reduce dependency on imports, for meeting the energy requirements of the country. As a result of the radical policy changes, the government is expecting cumulative investments of ~US$40 billion (€35.47 billion) in the Indian exploration and production (E&P) sector in the short term (4–5 years)[13].

Key policy developments in the oil and gas space have been discussed below.

1.2.1 Hydrocarbon Exploration & Licensing Policy

To stimulate new exploration activity for oil, gas and other hydrocarbons, in March 2016, the Union Cabinet approved a new Hydrocarbon Exploration & Licensing Policy (HELP). As part of this change, the government endeavoured to make a policy shift from the extant PSC model, based on pre-tax investment multiple (PTIM) and cost recovery, to revenue sharing contract (RSC) model for licensing of hydrocarbon acreages. Under the new regime, the government will not be concerned with cost incurred by the explorer, and will instead receive a share of gross revenues from the sale of oil, gas, etc. Contracts for hydrocarbon acreages will be based on 'biddable revenue sharing' wherein bidders would quote revenue share in their bids, forming a key parameter for selection of the winning bid. The bidder giving highest net present value of revenue share to the government, as per transparent methodology, would be preferred under such parameter.

Key features of HELP are as follows:

a. Open Acreage Licensing Policy (OALP) – In OALP, a bidder can also apply to the government seeking exploration of any block, thereby not restricting exploration activity only to blocks put on tender by the government. For this purpose, the investor

will submit an expression of interest (EoI) for contracting the block/s of their choice, which will be subsequently awarded through bi-annual bid rounds.

b. Uniform licensing system covering exploration and production of all hydrocarbons, i.e. oil, gas, coal bed methane (CBM), etc., under a single licence and policy framework.

c. National Data Repository (NDR) – NDR under the aegis of Directorate General of Hydrocarbons (DGH) provides seamless access to India's E&P seismic data to investors through digital medium, with a view to harness the potential of India's large basinal area.

d. Pricing and marketing freedom for crude oil and natural gas produced under the new contractual and fiscal regime.

e. Concessional royalty regime[14] for deep water and ultra-deepwater areas; no royalty payable for the first 7 years and thereafter, a concessional royalty rate of 5 per cent for deep water areas and 2 per cent for ultra-deep water areas. For shallow water areas, royalty has been reduced from 10 per cent to 7.5 per cent. For onland fields, royalty rate to be 12.5 per cent and 10 per cent for oil and gas and CBM blocks respectively.

1.2.2 Discovered Small Field Policy (DSF Policy)

The government brought out the Discovered Small Field Policy, 2015, to early-monetize the already discovered hydrocarbon fields. Discovered fields are areas that were already discovered but could not be monetized due to various reasons such as isolated locations, small size of reserves, high development costs, technological constraints, fiscal regime, etc.

In May 2016, 67 discovered small fields were clubbed into 46 contract areas and were offered through an open and transparent international competitive bidding process under a new fiscal regime in the DSF Bidding Round 2016 (DSF Policy Bid Round-I). The new fiscal terms included revenue sharing arrangement with the government (instead of cost sharing), marketing and pricing freedom for both oil and gas, moderate royalty structure, waiver of oil cess, etc. Subsequently, the Cabinet Committee of Economic Affairs (CCEA) has approved award of contract in 31 contract areas. It is expected that locked hydrocarbon volume of 40 MMT of oil and 22 BCM of gas will be monetized over a period of 15 years.[15] The Empowered Committee of Secretaries (ECS) and Group of Ministers have approved award of 23 contract areas to highest ranked bidders on 1 March 2019.[16]

Subsequently, DSF Round II was introduced to extend the DSF Policy to identified discovered small fields/un-monetized discoveries for offer. It includes 16 onland and 21 offshore fields/discoveries. The discoveries are estimated to have 146 Mtoe of oil and oil equivalent gas in place.[17]

1.2.3 Creation of strategic crude oil reserves

Creation of strategic crude oil reserves is a significant step towards energy security of India and preventing supply disruptions, considering dependency on oil imports. In Phase I of the programme, storage facility at three locations, viz., Visakhapatnam, Mangalore, and Padur has been created. The Finance Minister in his Budget Speech of 2017 has proposed to set up caverns at two more locations, namely Chandikhole in Odisha and Bikaner in Rajasthan, to increase the strategic reserve capacity to 15.33 MMT.

To incentivize establishment of such reserves, the government vide Finance Act, 2016, had provided an income tax exemption to income earned by foreign companies on account of storage of crude oil in a facility in India and sale of crude oil therefrom to any person resident in India, subject to satisfaction of prescribed conditions. Further, Finance Act, 2017 has exempted income arising to foreign companies on sale of leftover stock of crude oil from the strategic petroleum reserves after expiry of the agreement/arrangement, subject to certain conditions. The Finance Act, 2018 further extended this exemption to income arising from sale of leftover stock of crude oil on termination of the agreement/arrangement in accordance with terms mentioned therein.

In January 2017, the government through Indian Strategic Petroleum Reserve Limited (ISPRL) has signed a definitive agreement for oil storage and management with Abu Dhabi National Oil Company (ADNOC) of the United Arab Emirates (UAE) for filling up one of the two caverns at Mangalore facility. Also, ISPRL has invited preliminary expression of interest from reputed international parties for filling up of the Padur facility.[18]

ADNOC and ISPRL have entered into an agreement for investment by ADNOC of about US$400 million (€354.76 million) by way of storing crude in the underground rock cavern in Mangalore of capacity 5.86 million barrels (0.81 MMT). The period of storage will be 3 years with an automatic extension of 2+2 years.[19]

1.2.4 Integrated public sector 'oil major'

The Finance Minister in his Budget speech of 2017 had proposed to create an integrated public sector 'oil major' through consolidation, merger or acquisition, to enable it to bear higher risks, avail economies of scale, take higher investment decisions, and create more value for the stakeholders. Such integrated oil major would be able to match performance of international and domestic private sector oil and gas companies.

In line with the above announcement, ONGC has acquired the government's equity shareholding of 51.11 per cent in Hindustan Petroleum Corporation Limited (HPCL) vide agreement dated 20 January 2018. Through this acquisition, ONGC will become India's first vertically integrated 'oil major' company, having presence across the entire value chain.[20] Certain public sector undertaking (PSU) oil refineries have also expressed their interest in acquisition of Gas Authority of India Limited (GAIL) to help add natural gas transportation and marketing business in their respective portfolio.[21]

1.2.5 City Gas Distribution (CGD)

In the year 2017–18, there has been a renewed focus by Petroleum and Natural Gas Regulatory Board (PNGRB) on expanding the CGD network in the country. A typical CGD network provides piped natural gas to households, commercial establishments and industries, and compressed natural gas (CNG) for vehicles. In addition to being environment friendly, CNG is also usually cheaper than LPG, petrol and diesel. At present, 91 geographical areas including major cities like New Delhi and Mumbai are operational. The existing network covers 19 per cent of India's population with 1,349 CNG stations.

In the year 2018–19, PNGRB successfully conducted the 9th and 10th round of auction for CGD licence. The 9th round received over 400 bids for 86 geographical areas covering 174 districts. Similarly, the 10th round of auction received 225 bids for 50 geographical areas covering 124 districts[22]. With successful implementation of these CGD networks, it is envisaged that more than 70 per cent of India's population will have access to natural gas against 19 per cent of population today. Over the next decade, it is estimated that natural gas demand will increase from 24 million metric standard cubic metres per day (MMSCMD) to ~60 MMSCMD[23].

1.2.6 Enhanced Oil Recovery (EOR)

In September 2018, the Government of India approved the policy framework to promote and incentivize enhanced recovery (ER) production methods to improve recovery from existing reserves. Use of ER methods have significant potential to increase production from the mature fields which are observing a natural decline in output. An additional increase of 5 per cent in recovery rate of original in place volume in oil production is envisaged to produce additional 120 MMT[24] oil in next two decades. Similarly, for gas, an additional 3 per cent improvement in recovery rate is estimated to add 52 BCM of gas in the same time. The strategic objective of this policy is to build a supportive eco-system to support E&P contractors to deploy EOR methods in the nomination fields.

1.2.7 Production Enhancement Contracts (PEC)

The government is also mulling over PEC to maximize production from existing fields

by encouraging infusion of world-class E&P technologies and practices in the mature domestic fields. India, at present has over 61,851 sq. km of area under nomination fields, which are reaching the maturity stage. The current production from these fields is estimated at 25.6 MMT oil and 24 BCM[25] gas. Introduction of PEC is envisaged to encourage private and foreign investments in these fields and adoption of best-in-class management practices which would aid in improving India's domestic production.

1.2.8 National Policy on Biofuels[26]

The government notified the National Policy on Biofuels, 2018 on 8 June 2018, which is expected to give boost to the biofuel programme of the country. The major features of the policy are as follows:

- Categorization of biofuels as 'Basic Biofuels', viz., first generation (1G) bioethanol and biodiesel and 'Advanced Biofuels' – second generation (2G) ethanol, bio-CNG, etc., to enable extension of appropriate financial and fiscal incentives under each category.
- Expanding the scope of raw material for ethanol production by allowing use of sugarcane juice, sugar containing materials like sugar beet, sweet sorghum, starch containing materials like corn, cassava, damaged food grains like wheat, broken rice, rotten potatoes, unfit for human consumption for ethanol production.
- The policy allows use of surplus food grains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee.
- With a thrust on Advanced Biofuels, the policy indicates a viability gap funding scheme for 2G ethanol bio-refineries of ₹5,000 crore (€637.09 million) in 6 years in addition to additional tax incentives, higher purchase price as compared to 1G biofuels.

1.2.9 Other developments

a. Gas Grid – The government is constructing 13,500[27] km of natural gas pipeline to supplement the existing transportation infrastructure.

- Pradhan Mantri Urja Ganga Project – The 2,665 km Jagdishpur–Haldia–Bokaro–Dhamra pipeline is being constructed and is estimated to be completed by December. It aims to connect five states in the hinterland namely Uttar Pradesh, Bihar, Jharkhand, Odisha, and West Bengal.
- Barauni–Guwahati pipeline – To extend the gas grid to the Northeast, a 729 km long pipeline is also under construction. It is estimated to be completed by December 2021.
- North East Region Gas Grid – Indradhanush Gas Grid Ltd, a JV by five oil and gas public sector companies is developing a gas grid for the Northeast with total length of 1,656 km pipeline.
- Kochi–Kottanad–Bengaluru–Mangalore Pipeline – GAIL is constructing a 872 km pipeline in Kerala and Tamil Nadu. It is in advanced stage of construction and is expected to be completed by 2019.

b. Ministry of Petroleum and Natural Gas (MoPNG) has collaborated with the Ministry of Skill Development and Entrepreneurship to address the skill development needs across the value chain of the sector. MoPNG has also set up the Hydrocarbons Sector Skill Council (HSSC) with participation from public and private enterprises to cater to rising skills of the industry.

c. The government has prepared a project to conduct 2D seismic surveys of all sedimentary basins of India to generate seismic data for initiating E&P activities.

d. Sustainable Alternative Towards Affordable Transportation Initiative – MoPNG has endeavoured to promote compressed bio gas (CBG) production and use by launching an initiative called Sustainable Alternative Towards Affordable Transportation (SATAT). SATAT aims to utilize more than 62 MMT of waste generated by producing CBG at various units across India. This initiative aims to foster CBG

entrepreneurs by providing guaranteed rate of return and assured offtake by oil marketing companies.

e. FDI in marketing of transport fuels (petrol, diesel, and aviation fuel) is also permitted[28] subject to an investment of ₹20 billion (€254.83 million) in E&P, refining, pipelines or terminals. With the intent to attract more investment in the fuel marketing and retailing, the government is also planning to relook at the norms for granting of marketing and distribution rights for liquid fuels (motor spirit, HSD and aviation fuel).

f. The government is also working on a policy framework to grant marketing rights for CNG as transportation fuel to private firms; it is proposed to lower the threshold investment limit to ₹5 billion (€63.70 million) as against ₹20 billion (€254.83 million) (required for retail fuel stations) in the draft proposal.

1.3 Recent Developments – Fiscal Framework

The Finance Minister presented the Interim Budget 2019 in the Parliament of India on 1 February 2019, proposing amendments to the Income Tax Act, 1961 (IT Act). The said proposals have come into force with effect from 1 April 2019 vide Finance Act, 2019. Recent announcements which may impact the oil and gas sector have been discussed below:

Income tax updates

1.3.1 The Finance Minister in his Budget speech stressed on the need to increase hydrocarbon production to reduce imports. On this front, the government is in the process of implementing suggestions of the high-level Inter-Ministerial Committee constituted by the government including transforming the system of bidding for exploration, changing from revenue sharing to exploration programme for Category II and III basins, etc.

1.3.2 Lower base tax rate of 25 per cent applicable to domestic companies having reported turnover of ₹2,500 million (€31.85 million) in FY 2017–18.

Indirect tax updates

1.3.3 Basic Excise Duty (BED) rates reduced as are in the table below.

2. KEY ISSUES AND RECOMMENDATIONS

2.1 Rationalization of Tax Holiday Provisions under Section 80-IB(9) of the IT Act

The government, vide Finance Act, 2016, has phased out tax holiday provisions under Section 80-IB(9) of the IT Act for E&P businesses commencing commercial production on or after 1 April 2017. However, there are certain legacy tax issues relating to the tax holiday provisions, which need to be resolved by the government, relevant for businesses still eligible for claiming the deduction.

Recommendations

The government should consider the following:

- Rationalization of the sunset clause for tax holiday: Phasing out the deduction should be with respect to PSCs (or RSCs) entered into on or after 1 April 2017, and not undertakings commencing commercial production after such date. This would

Basic excise duty reduced rates		
Product	**Previous rate**	**Reduced rate**
Unbranded motor spirit	₹4.48/litre	₹2.98/litre
Branded motor spirit	₹5.66/litre	₹4.16/litre
Unbranded HSD	₹6.33/litre	₹4.83/litre
Branded HSD	₹8.69/litre	₹7.19/litre

suitably address concerns of businesses which had entered into a PSC with the government on or before the cut-off date for sunset on tax holiday and after duly taking into consideration the tax holiday provisions.

- Clarify the meaning of the term ‘mineral oil’ to include natural gas [irrespective of the New Exploration Licensing Policy (NELP) rounds], eligible for tax holiday, in line with the judicial precedents[29] and assurance given by the Finance Minister in Parliament.
- Clarify that each oil well/cluster of oil wells would be considered as an ‘undertaking’ for the purpose of tax holiday, and not the contract area under the PSC.

2.2 Rationalization of Minimum Alternate Tax (MAT) Rate

The current MAT rate of ~ 20 per cent on ‘book profits’ acts as significant deterrent in the overall investment decision-making for high-risk and capital intensive upstream operations. The Finance Act, 2017 has allowed carry forward of MAT credit upto a period of 15 years (from 10 years earlier).

Recommendation

Given the high rate of MAT, purpose of extending tax incentive to E&P businesses is defeated and therefore, it is recommended that the government should consider a moderate rate of MAT for E&P operations considering long gestation period of the industry.

2.3 Rationalize/Extend Fiscal Incentives Under the IT Act to E&P Companies

Vide the Finance Act 2016, the government had announced phasing out of tax holiday provisions, including the ones for infrastructure sector under section 80-IA and for upstream operations under section 80-IB(9) of the IT Act. At the same time, the Finance Act 2016, extended investment-linked incentive, in the form of 100 per cent deduction of capital expenditure, to businesses in the nature of developing and/or operating and maintaining an infrastructure facility such as roads, highway projects, water supply/treatment projects, port/airport projects, etc., under section 35AD of the IT Act.

The above investment linked tax deduction has not been proposed in respect of E&P businesses. While the exploration and drilling costs are allowed to be deducted under section 42 of the IT Act, there is no provision for accelerated write-off of development and production costs.

Domestic E&P is crucial for the energy security of India and therefore, it is imperative to provide for adequate fiscal incentive for stimulating private investments in the oil and gas industry.

Recommendations

It is recommended that 100 per cent deduction for development and production costs should be allowed under section 42 of the IT Act. In this regard, it is relevant to note that the Model RSC published by the DGH has proposed to allow deduction of all expenditure incurred by a contractor on exploration, development, and production under section 42 of the IT Act.

Alternatively, E&P projects should be included within the meaning of ‘infrastructure facility’ eligible for investment-linked deduction in respect of development and production costs incurred in E&P operations.

2.4 Encouraging Financing of E&P Projects

Being highly leveraged, the project developers in the oil and gas sector rely on borrowed capital including overseas borrowing to fund their projects.

Vide Finance Act, 2017, the government has extended/provided the benefit of concessional tax withholding base rate of 5 per cent on External Commercial Borrowings (ECB) and masala bonds. On the flip side, the government has also introduced limit on interest deduction in line with recommendations of the OECD Base Erosion and Profit Shifting Action Plan

4. Such provisions are applicable to an Indian company or a permanent establishment of a foreign company incurring interest expenditure exceeding ₹10 million (€127,417) in respect of debt owed to a non-resident associated enterprise (AE) or to a non-AE (in respect of debt guaranteed by AE). Interest in excess of 30 per cent of earnings before interest, taxes, depreciation and amortization (EBITDA) or interest paid or payable to non-resident AE or to non-AE (in respect of debt guaranteed by AE), whichever is lower is proposed to be disallowed. Such interest expense to the extent disallowed is henceforth to be carried forward for 8 years for set off against business income of future years, to the extent of maximum allowable interest, i.e. 30 per cent of EBITDA. Considering debt-push down structure is common in oil and gas companies, disallowance of interest cost reckoned with respect to 30 per cent of rule could pose significant challenge for project entities as the effective post-tax cost of debt investments could soar.

Recommendations

Considering that E&P projects are capital intensive and require significant financing, the government should consider the following approaches:

- Exempting E&P projects from the applicability of thin capitalization rule under the IT Act. Such companies have large capital requirements and are highly leveraged due to commercial imperatives. Any limitation on deductibility of interest cost could significantly inhibit the commercial feasibility of projects in such sectors, which are otherwise crucial for a sustained economic growth.
- Alternately, introducing a much higher ratio (i.e. greater than 30 per cent) for such projects, to ensure the limitation on interest deduction is triggered only in exceptional cases, without rendering debt financing more expensive for the developers.
- In addition, removing the restrictions on number of years to carry forward interest disallowed under section 94B of the IT Act.

2.5 Clarify Permissibility of Investments via Foreign Venture Capital Investor (FVCI) Route in E&P Companies

In recent years, foreign investments in ‘infrastructure sector’ by a registered FVCI[30] has gained momentum and is fast emerging as an alternate to investments under extant FDI regime. This is primarily driven by the fact that it provides for a more liberalized investment framework; key relaxations are illustratively mentioned hereunder:

- Entry and exit pricing guidelines applicable under the FDI regime do not apply to investment by FVCIs.
- No ceiling on interest pay-outs.

‘Infrastructure sector’ for this purpose has the same meaning as given in the Harmonized Master List of Infrastructure sub-sectors approved by Government of India vide Notification F. No. 13/06/2009-INF dated 27 March 2012 as amended/updated from time to time. It may be noted that while for the purpose of ECB framework, ‘Exploration, Mining and Refinery’ sectors have been deemed included in the infrastructure sector, no such notification/ clarification has been issued for investments via FVCI route.

Recommendation

For encouraging foreign investments in the E&P space, it is recommended that the RBI explicitly clarifies that ‘Exploration, Mining, and Refinery’ sector is to be considered as ‘infrastructure sector’ for the purpose of investments via FVCI route.

2.6 Inclusion of Petro Products [LNG, HSD, Motor Spirit, Aviation Turbine Fuel (ATF) and Petroleum Crude] under Goods and Services Tax (GST) Purview

Petroleum products are inputs to many industries and commercial activities. GST being applicable on the final product and not on the petroleum products which are inputs

to the value chain defeats the purpose of GST.

Natural gas being a cleaner fuel and taking into account that loss of tax revenue should not be significant, the government must immediately put natural gas under the GST ambit.

Recommendation

All petroleum products such as petrol, diesel, and natural gas should be immediately brought under the ambit of the GST regime. Non-inclusion of the same has pushed up costs for the sector. No input credit is available on goods and services used for petroleum operations. Denial of credits has resulted in massive cascading impact and increased cost of production placing the domestic industry in a disadvantageous competitive position. This has an adverse impact on investments in this sector which is critical for energy self-sufficiency and import substitution.

Alternatively, ensure GST flow seamlessly across the value chain by creating a mechanism which allows a refund of the non-creditable input taxes in the hands of the recipient.

2.7 Reversal of Input Credit Relating to Non-GST Supplies be Made Nil

The provisions of the GST law require reversal of input tax credit in respect of exempted/non-taxable supplies. It would be unfair to compel a company to lose common credit merely because it has (non-GST) trade turnover, which would be more than the service income (regasification charges) due to the cost of the traded goods included in non-GST trade turnover. However, it is pertinent to note that the cost of traded LNG is not a value add to the trader and therefore, should be excluded from the definition of exempted turnover for reversals. In other words, only trading margin should be considered for reversals.

Recommendation

It is accordingly suggested that trading turnover the pertaining petroleum goods (being taxed separately) be excluded from the purview of total turnover under the GST laws for the reversal of credit. Alternatively, trading margins pertaining to the petroleum goods should only be included in the exempt and total turnover for reversals.

2.8 Clarification on Non-applicability of GST on Cash Calls Under Existing Regime and GST Regime

Circular No. 179/5/2014-ST dated 24 September 2014 was issued regarding applicability of service tax on cash calls. However, the said circular has kept the issue open for interpretation of service tax authorities. Given this, recently, oil and gas companies are burdened with demand of service tax on cash calls.

Recommendation

Clarification should be issued under GST regime that consortium and parties to consortium (which have executed a sharing agreement with the Government of India) are not distinct entities and cash calls are not consideration for services but only a contribution made by contractors. Thus, GST should not apply on such cash calls.

2.9 Exemption from Levy of GST on Transmission Charges Included in Sale Price of Gas

Presently, natural gas is sold to the customer including transportation to customer's premises as a bundled activity. The transmission charges form part of sale price of such gas and VAT is paid on the component of transportation charges (as it forms part of sale price of gas). Accordingly, GST should not be chargeable on the component of transmission charges. However, GST on the component of transmission charges is being demanded by local officers resulting in double taxation.

Recommendation

Accordingly, it is suggested that suitable clarification should be issued clarifying

that GST will not be payable on any activity associated with transaction of sale of petro-products (motor spirit, HSD, ATF, petroleum crude, and LNG) where the consideration for such an activity forms a part of the total sale price which attracts VAT/CST.

2.10 Valuation of Taxable Services for Naturally Evaporating Products Like LNG Should Be Clarified in Detail to Apply on the Charges for Conversion of the Delivered Product

Naturally volatile and evaporating products like gasoline or LNG are susceptible to continuous erosion of quantity in their natural state. LNG is liquefied natural gas compressed 600 times and remaining in liquid form only at temperatures of -160 degrees centigrade. Exposed to ambient conditions, the entire product evaporates on its own.

The usable form of LNG in its re-gasified state is natural gas. The process of regasification of LNG involves the passing of the liquid through heat exchangers, compressors, and pipelines in a controlled manner. Any repair to the regasification machinery in the normal course involves the venting of the liquid/gas contained therein to the atmosphere under regulated conditions. Due to the continuous nature of losses of the product that is inherent to its handling and processing, it is the norm worldwide to pre-agree on a percentage of such losses and consumption or usage of LNG/gas while contracting for the regasification of LNG. This is done with a view to allocate the risk of handling the product between parties and bring certainty to the contractually deliverable quantities and the ad valorem price per unit for the same.

Shortfalls and excess of actual losses over pre-agreed norms are compensated by the service provider or taken as part of stock and disposed of as per provisions of Generally Accepted Accounting Principles (GAAP), VAT, and income tax laws.

Recommendation

It should be clarified that the value of product lost or consumed during the process of regasification shall not be included in the charge levied for processing.

2.11 Exemption from GST on Import/ Domestic Procurement of Goods Required for Oil and Gas Exploration (Under Essentiality Certificate [EC])

BCD and customs cess continues to be exempted on import of goods required for oil and gas exploration subject to availability of EC in accordance with Notification No. 50/ 2017 – Customs dated 30 June 2017.

However, such imports attract integrated goods and services tax (IGST) at the rate of 5 per cent (Notification No. 03/2017 IGST (Rate) dated 28 June 2017) on the assessable value of goods subject to EC being made available to jurisdictional officer of the supplier, unless import is covered vide Notification No. 72/2017 – Customs (exemption from payment of IGST on import if IGST payable on lease charges).

Similar to Notification No. 03/2017 – IGST (Rate) and Notification No. 03/2017 central goods and services tax (CGST) (Rate) dated 28 June 2017, relevant state goods and services tax (SGST) notification provides that GST would be applicable at the rate of 5 per cent on goods subject to the availability of the EC.

Recommendations

The government should make a suitable amendment in Notification No. 03/2017 – IGST (Rate) and Notification No. 03/2017 – CGST (Rate) to provide for complete waiver of GST in line with circumstances that existed in the pre-GST regime such that burden to the oil and gas sector is reduced.

Further, exclusion of services from the exemption notification would be prejudicial to the interests of the oil industry and goes against the basic principle behind levy of GST.

It is suggested that the exemption notification in this regard be suitably amended thereby enlarging the scope of the items to all goods and services used for petroleum operations.

3. CONCLUSION

The oil and gas industry has been at an inflection point for a couple of years now, marked by a spate of policy and regulatory reforms. The government's renewed vigour for enhancing domestic production is an encouraging sign and is expected to catalyse large-scale private investments for new field discovery and enhanced recovery from already discovered hydrocarbon acreages. Downstream infrastructure is set for major capacity additions over the next five to seven years, and this could well be a new sunrise sector for investors to look at in this space.

Endnotes

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2 BP Energy Outlook 2019

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11 Fact sheet on FDI (From April 2000 to March 2019) by Department of Industrial Policy and Promotion (available at https://dipp.gov.in/sites/default/files/FDI_Factsheet_27May2019.pdf)

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14 Appendix K of the Model RSC published by the Directorate General of Hydrocarbons incorporates the proposed royalty rate regime

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25 Presentation by Director General of Hydrocarbon, Government of India

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27 Year End Report 2018 by Ministry of Petroleum & Natural Gas (http://pib.nic.in/newsite/PrintRelease.aspx?relid=186260)

28 Resolution dated 8 March 2002 by Ministry Of Petroleum & Natural Gas published in the Official Gazette of India

29 Niko Resources Ltd vs Union of India [2015] 374 ITR 369 (Guj)

30 FVCI investments are regulated by the Reserve Bank of India and Securities and Exchange Board of India (SEBI) pursuant to relevant regulations issued in this regard

Notes

PHARMACEUTICALS

Acknowledgements: Annaswamy Vaidheesh (GSK Pharmaceuticals, India) – Chairman, Pharmaceuticals Sector Committee & its Members

Knowledge Partner: Dr Ajay Sharma & Nitika Garg – OPPI

EXECUTIVE SUMMARY

The healthcare industry in India has continued to grow through 2017, despite a slew of challenges and turbulent regulatory environment. India's healthcare market may see a threefold jump in value terms to reach US$372 billion (€329.93 billion) by 2022. The market continues to grow at low double digits (13 per cent) led by a growth in volume, an improved case mix and price increases.

The government has released a Draft Pharmaceutical Policy (2017) that is comprehensive and covers all key aspects across the pharmaceutical value chain including research and development (R&D), sourcing and manufacturing plus distribution. With regards to the draft policy and with an objective for India's healthcare industry, the industry would like to draw the government's attention to four key areas:

- **Access to healthcare**: Promote government health reforms that improve patient access to innovative medicines, promote increased public financing, and establish a framework for expansion of private health insurance. With a view to move towards universal health coverage, the Union Budget 2018–19 has been positive for the healthcare sector with the launch of a one-of-its-kind, National Health Protection Scheme (NHPS) that promises to substantially increase provision of secondary and tertiary care services to the poor, through addressing shortage of manpower and availability of healthcare in rural areas. The government is also cognizant of the impact of medical inflation, reflected in an increased coverage amount per family to ₹5 lakh (€6,370.88) under the NHPS, compared to ₹30,000 (€382.25) under the Rashtriya Swasthya Bima Yojana (RSBY) scheme, with the increase in the amount exempt from tax for senior citizens for critical illnesses and deduction for medical insurance.
- **Intellectual property**: Reduce the risk of further negative intellectual property (IP) decisions and secure targeted improvements in India's IP laws and policies in the near-term, while laying the groundwork for a stable longer-term policy.
- **Regulatory**: Encourage government reforms to the regulatory regime that promote innovative clinical research and ensure manufacturing and approval of high quality medicines.
- **Ethics:** Pharmaceutical companies have been accused of enticements to secure prescriptions from the medical fraternity for a very long time. The government needs to instil confidence in the people by providing a stringent code which removes such unethical practices, if any, from the marketplace.
- The promise of an innovative biopharmaceutical industry in India will only be fulfilled if the government, along with all relevant stakeholders, can work to build, sustain and grow a scientific, economic, and policy ecosystem that promotes and rewards medical innovation in an environment that encompasses predictability, consistency, and sustainability in its policies. Investments in research and innovation are integral to the growth of a nation.
- Expansion of drugs under the Drug Price Control Orders (DPCO), price caps on stents and implants, procedure, or service pricing related discussions in West Bengal and Karnataka, and cases of healthcare services licences being cancelled adversely affected the sector during the year. The price-capping policy in medical devices that the government is focusing on is dynamically changing the environment of the industry leading to withdrawal of certain good quality medical devices from the market to lowering the scale of investments from multinational companies in our country.
- Uncertainty on manufacturing of pharmaceutical products in third party manufacturing/loan licensing, compulsory licensing are amongst many such issues that have been disrupting the industry dynamically.
- While, on one hand, the pharmaceutical industry (called a sunrise industry of the country) has witnessed some significant transformations, lack of predictability continues to remain a concern.
- In summary, the need of the hour is for augmenting the regulatory framework and strengthening the infrastructure keeping the patient at the centre of the healthcare ecosystem. That will make the government's overall healthcare plan successful.

1. INTRODUCTION

1.1 Opportunities and Challenges

The Government of India announced the National Health Policy in 2017. The overall objectives of the patient-centric policy are:

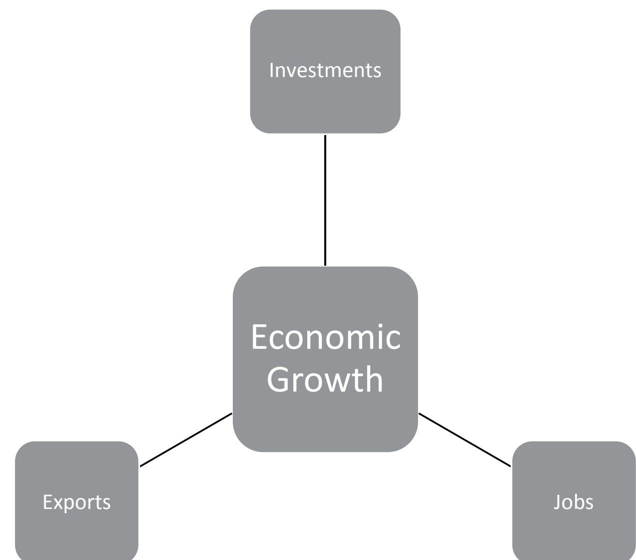
- Improving health status through concerted policy action in all sectors.
- Expansion of preventive, promotive, curative, palliative, and rehabilitative services provided through the public health sector with focus on quality. Attainment of the highest possible level of health and well-being for all at all ages, through a preventive and promotive healthcare orientation in all developmental policies.
- Universal access to good quality healthcare services increasing access, improving quality and lowering the cost of healthcare delivery.

The pharmaceutical companies that are members of the EBG Federation have lauded the government for the Draft National Health Policy. Members of EBG, through their activities in India, have been working to make these objectives a reality in India. Specific initiatives include:

- Innovative patient assistance programmes from companies such as Novartis, GSK, Novo Nordisk, and Roche, to enhance access to state-of-the-art drugs for oncology, diabetes, and auto-immune disorders.
- In-licensing arrangements from Roche with Curadev, an Indian start-up for immunotherapies.
- Arogya Parivar initiative from Novartis to make drugs available in rural areas.
- Investments by Sanofi Group and GSK in Indian vaccine manufacturing.

EBG members reiterate their commitment to work with the government in furthering these initiatives.

The Indian economy is forecast to grow at 7–per cent per annum. The Government of India has embarked upon an ambitious development agenda with a focus on inclusive growth. The Indian pharmaceutical industry is playing a key role in driving India's growth agenda.



- The annual turnover of the Indian pharmaceutical industry is estimated to be about ₹2,197,551 crore (€280 billion) for 2016–17. The share of export of bulk drugs, drug intermediates and drug formulations, biologicals is ₹1,076,182 crore (€137.12 billion) for 2016–17. The drugs and pharmaceuticals sector attracted cumulative foreign direct investment (FDI) inflows worth US$15.93 billion (€14.12 billion) between
- April 2000 and December 2018, according to data released by the Department for Promotion of Industry and Internal Trade (DPITT). In February 2019, the Indian pharmaceutical market grew by 10 per cent year-on-year.
- Between July–September 2018, Indian pharma sector witnessed 39 private equity (PE) investment deals worth US$217 million (€192.46 million). Investment (as percentage of sales) in R&D by Indian pharma companies increased from 5.3 per cent in FY12 to 8.5 per cent in FY18. In 2017, Indian pharmaceutical sector witnessed 46 merger and acquisition (M&A) deals worth US$1.47 billion (€1.30 billion). Indian companies received 304 abbreviated new drug application (ANDA) approvals from the US Food and Drug Administration (USFDA) in 2017. The country accounts for around 30 per cent (by volume) and about 10 per cent (value) in the US$70–80 billion (€62.08–70.95 million) US generics

market. The pharmaceutical sector was valued at US$33 billion (€29.26 billion) in 2017. The country's pharmaceutical industry is expected to expand at a CAGR of 22.4 per cent over 2015–20 to reach US$55 billion (€48.78 billion). India's pharmaceutical exports stood at US$17.27 billion (€15.31 billion) in FY18 and have reached US$15.52 billion (€13.76 billion) in FY19 (up to January 2019). Pharmaceutical exports include bulk drugs, intermediates, drug formulations, biologicals, Ayush and herbal products and surgicals.

India's domestic pharmaceutical market turnover reached ₹129,015 crore (€16.43 billion) in 2018, growing 9.4 per cent year-on-year (in ₹) from ₹116,389 crore (€14.83 billion) in 2017.

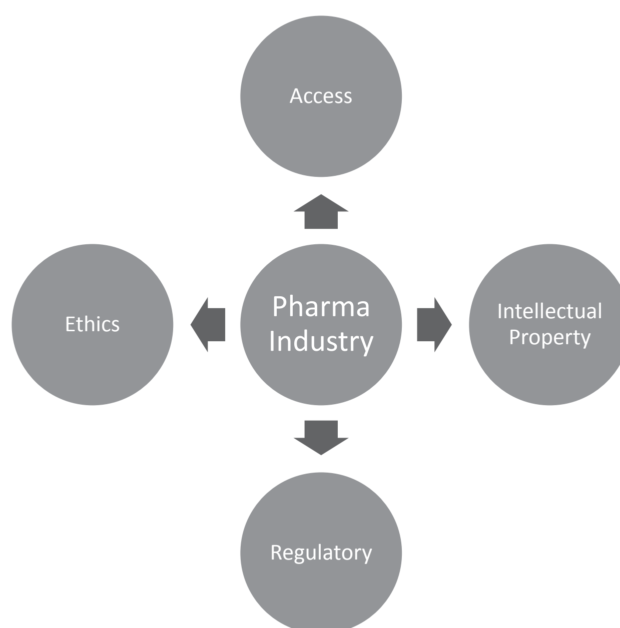
Nearly half of all vaccines delivered globally are manufactured in India. India is the world's largest supplier of vaccines, with 60 per cent of the world's vaccine production, and the largest provider (60 per cent) of anti-retroviral drugs make the sector an attractive proposition for global pharmaceutical companies.

The healthcare industry in India stood as the fourth largest employer in 2017 as the sector employed a total of 319,780 people. The pharmaceutical industry in India has also created 1 million new jobs in R&D and high-end manufacturing, which are key components of the government's Make in India initiative.

The Indian pharmaceutical industry has been a key player in reducing India's trade deficit. The industry has also played a key role in India's soft power diplomacy in Africa, Asia and Latin America by becoming the 'Pharmacy of the World'.

While the pharmaceutical industry has contributed significantly in India's nation-building efforts, it also faces unprecedented challenges. The industry is battling a perfect storm of fierce competition, shorter time-to-market, expiring patents, slowing sales growth, and declining profitability in developed markets together with pressures on cost and a complex regulatory environment. The next level of growth for the industry lies in sustaining and growing the generics market and promoting the industry to enter the innovative biopharmaceutical space.

However, the promise of an innovative biopharmaceutical industry in India will only be fulfilled if the government, along with all relevant stakeholders, can work to build, sustain and grow a scientific, economic, and policy ecosystem that promotes and rewards medical innovation in an environment that encompasses predictability, consistency, and sustainability in its policies. Investments in research and innovation are integral to the growth of a nation. The government has also released a Draft Pharmaceutical Policy, 2017 which is comprehensive and covers all the key aspects across the pharmaceutical value chain, key being R&D, sourcing and manufacturing plus distribution. The industry would like to draw the government's attention to four key areas:



1. **Access to healthcare:** Promote government health reforms that improve patient access to innovative medicines, promote increased public financing, and establish a framework for expansion of private health insurance.
2. **Intellectual property:** Reduce the risk of further negative IP decisions and secure targeted improvements in India's intellectual property laws and policies in the near-term, while laying the groundwork for a stable longer-term policy.
3. **Regulatory:** Encourage government reforms to the regulatory regime that promote innovative clinical research and ensure manufacturing and approval of high quality medicines.

4. **Ethics:** Pharmaceutical companies have been accused of enticements to secure prescriptions from the medical fraternity for a very long time. The government needs to instil confidence in the people by providing a stringent code which removes such unethical practices, if any, from the marketplace.

2. KEY INDUSTRY ISSUES

2.1 Access to Healthcare

The Indian government has issued National Health Policy (NHP), 2017 that calls for greater access for low-income patients. However, India's public spending on health is still below 1.5 per cent of GDP, one of the lowest expenditures in the world. Within such a limited budget, India spends ₹5,000 crore (€637.08 million) on medicines (both Centre and state purchases put together) from a total allocated healthcare budget of ₹36,000 crore (€4.58 billion). Also the overall penetration of health insurance is low. Coverage is limited to inpatient care and rarely extends to outpatient care or medicines. Out of pocket expenditure (OOPE) on health by households is 62.6 per cent. Of the 29 per cent of Indians covered by health insurance, 85 per cent are covered by social and state health initiatives, such as state-level employee insurance for industrial workers and the central government's healthcare plan.

In addition to the 'Asks' below, it would be worthwhile for the government to consider a tiered pricing model on a pilot basis to study the benefits of broadening access. Both central and state governments should allocate reasonable separate budgets for patients suffering from rare and orphan diseases where treatment options are limited and mean all the difference between life and death.

Issue	Short-Term Asks	Medium-Term Asks
Interim Budget 2018–19	In the 2017–18 Budget, the government announced introduction of a large-scale National Health Protection Scheme, Ayushman Bharat which aims to cover 500 million people of the country. The scheme envisages a ₹5 lakh (€6,370.88) health insurance cover for a family to pay for hospitalization and treatment in secondary and tertiary care facilities covering around 1,350 packages. While the industry fully supports the government in such an endeavour, a roadmap including the interaction of all the stakeholders, bringing in more supply chain efficiency and by bringing more hospitals under the scheme can help in disseminating the scheme benefits to all the households. The scheme should now cater to more and more people.	Increase GDP spend on healthcare to 2.5 per cent as envisaged in NHP 2017.
Price controls on patented medicines	Industry remains concerned that the threat of the existing recommendation (International Reference Pricing) represents an effort to reduce the benefits of patent protection, which will discriminate against importers and create an unviable government pricing framework and business environment. This recommendation should be scrapped.	For government purchases, the industry proposes health technology assessment as a tool to determine prices for patented products.

Issue	Short-Term Asks	Medium-Term Asks
Proposed Drug Price Control Order (DPCO) amendments	• Specific strength and specific dosages based on essentiality criteria as determined by the National List of Essential Medicines committee should only be the basis of addition or deletion of drugs from Schedule I. • Redressal body to be constituted for all orders passed by the National Pharmaceutical Pricing Authority (NPPA). • 10 per cent annual price revision growth rate to be continued for non-scheduled drug. • Implementation of price fixation orders should be effective on prospective batches and not retrospective.	Government should increase its share of essential medicine purchase rather than relying on price control mechanism alone.
	• Trade Margin Rationalization, if any must be done keeping price to stockiest as the base for all drugs irrespective of the source of origin of such drugs. • Clarifications provided on DPCO by Department of Pharmaceuticals (DoP) in the past (Revision of Schedule I to be done once in five years).	
Impediments to implementation of current DPCO 2013 provisions	Multiple issues exist with NPPA interpretation and implementation of orders passed by DPCO. Key issues are highlighted: • Delay in Implementation of Review Orders passed by DoP leads to depriving the industry of legitimate revenue and thus results in huge losses. • DPCO para 13 (1) provides for 45 days for implementation of notified prices. However, NPPA takes the view that notified price takes effect immediately. It is illogical to hold the manufacturers to be responsible for implementation of revised prices at 700,000 retail outlets from the very date of notification. • NPPA acts mechanically on the responses submitted by manufacturers in respect of overcharging notices. No reasoned orders are passed. Further NPPA insists on payment of interest from the date of overcharging in spite of effective court orders against such practice. This highly unstable environment leads to low confidence level to make investments, ultimately affecting consumers and economic activity and job creation. The industry suggests time bound implementation of orders passed by DPCO in addition to a clear time frame on response for applications submitted by the industry.	
Ban on fixed dose combinations (FDCs)	With further FDCs being examined, action should be taken thoughtfully and in the best interest of patients, with bans only against irrational combinations having concerns of safety. Industry should be given due opportunity to represent before all expert committees deciding on the issue.	

Issue	Short-Term Asks	Medium-Term Asks
Cap on margins of pharmaceutical distribution channels	The DoP has shared a proposal before the Ministry of Chemicals and Fertilizers to cap the trade margins based on the price/unit. The current proposal restricts trade margins to 30 per cent for products with price/ unit below ₹2 (€0.025) while trade margins range from 35–50 per cent for higher price/unit reducing with increase in price/unit. The move to cap trade margins might negatively impact the patients and industry by increasing the trade margins for higher priced products as against the current practice of 30 per cent leading to higher drug prices. It is advised to do a rigorous impact assessment before moving ahead on the proposal.	
Manufacturing of pharmaceutical products in third party manufacturing/ lone licensing	The draft pharmaceuticals policy indicates phase out of third party manufacturing while restricting lone licensing to 10 per cent of production only carried out in WHO's good manufacturing practice (GMP) compliant manufacturing facilities. This will significantly impact the small to medium enterprises (SMEs) that are engaged in such activity for the pharmaceutical companies along with impacting the agility of the sector that enables faster time to patients for critical medicines. The industry would urge re- consideration of the same and would request the government to take a more balanced view on this.	
Sourcing policy for government orders	The Draft Pharmaceuticals Policy has drafted two guidelines on the sourcing for government: • Government order procurement to be done only from formulations that are manufactured indigenously end-to-end. • GMP/GLP (good laboratory practice) manufacturing units only to be used for procurement against NRHM (National Rural Health Mission) funds. The industry supports the government in its direction towards encouraging the manufacturers to be GMP/GLP compliant. The industry would suggest procurement to be categorized into end-to-end indigenously manufactured and formulated indigenously based on the API (Active Pharmaceutical Ingredient) manufacturing capabilities in India. This will reduce the uncertainty of supply and prevent any possible shortages in government pharmacies.	
Preventive healthcare	Include more vaccines for preventive healthcare which should lead to reduction in the overall healthcare costs for government.	

2.2 Intellectual Property Protection

Despite a period of relative calm, there remains significant unpredictability in intellectual property (IP) in India. The government of Prime Minister Narendra Modi has sought to address IP-related criticisms, including through bilateral dialogue and policy deliberations on

a national IP policy, but no progress has been made in terms of meaningful policy changes to address the challenges. The ongoing threat of compulsory licences (CL) and the tendency to use Section 92 for CL, the lack of alignment between the Centre and states, and the continued denial of patent applications under Section 3(d) are potential areas where improvements are possible.

Issue	Short-Term Asks	Medium-Term Asks
Compulsory licences	• Government must give the patentee ample opportunity to meet the requirement of people living below poverty line. • Interpret 'reasonably affordable price' in Sec 84(1). • Recognize and consider efforts taken by companies to provide patient assistance programmes (PAPs). • Clarify that importation would satisfy working of patent in India. • Simplify Form 27 filing requirements.	• Amendments in Patent Act 1970 to remove language which creates ambiguity regarding whether importation amounts to working of patent, misuse of Section 84(1) which provides multiple triggers for issuance of CL, etc. • Define phrases like 'National Emergency', 'Extreme Urgency', etc. • Provide royalty which reflects true value of the IP.
Section 3(d) — 'enhanced efficacy'	• Issue guidance to specifically define what would constitute 'enhanced therapeutic efficacy' leaving it open to subjectivity and inconsistency. • Issue guidance to uniform application of Section 3(d) not in case of novel pharmaceutical compounds but only to new use of known compounds.	• Section 3(d) needs more clarity so that incremental innovation is encouraged which in turn will enhance the 'innovation ecosystem' in India. Pharmaceutical patent applications, like all other patent applications, should be granted as long as the applicant can demonstrate that the invention is new, involves an inventive step and is capable of industrial application. • Additional restrictions on patentability for pharmaceutical/biosciences must be done away with.
Patent decisions and enforcement	• Currently, there is no legal requirement for the Drug Controller General of India (DCGI) or the state regulatory authorities to verify or consider the status of any existing patents covering the drug. Therefore, an infringer can obtain marketing authorization from the DCGI or state regulator, as the case may be, for a generic version of a patented drug, forcing the patent holder to seek redress in India's court system to enforce a patent granted by India's central government.	• For effective and meaningful enforcement of patents, the Drug and Cosmetics Rules 1945 and corresponding Forms need to be amended to include a requirement for notification of patent status by the originator/new drug applicant and subsequent applicants not be given marketing approval for products covered by such a patent till the expiration of the patent term, unless consented to by the patent owner.

Issue	Short-Term Asks	Medium-Term Asks
	• Specifically, industry proposes that India adopts a notification system, which would be a mechanism whereby all information in respect of market authorization for a drug, new or otherwise, being sought from the Centre or the state drug regulators in India will be made available on the Central Drugs Standard Control Organization website in a transparent manner.	• Specialized fast track courts to settle patent related cases.

2.3 Drug Regulation, Clinical Trials, and Industrial Relations

Despite having many components to support an ecosystem for drug development, India attracts only 3 per cent of global R&D spending and 2 per cent of global clinical trials (CT). The Central Drugs Standard Control Organization (CDSCO) has issued the Clinical Trials Rules, 2019. It applies to all new drugs, investigational new drugs for human use, clinical trial, bioequivalence study, bioavailability study and Ethics Committee. The industry urges the government to streamline inconsistencies, if any, and provide clarity in respect of inherent ambiguities in the implementation of the new rules.

Issue	Short-Term Asks	Medium-Term Asks
Site registrations (registering multiple sites for the same product)	• It should be made clear that documents for registering multiple sites engaged in various steps with the manufacturing of the product is not necessary. Only the final site in product registration needs to accompany all the necessary documents along with a declaration of other sites involved.	• Registrar of Companies/import licence modifications in case of change of constitution of firm name/ownership should be further simplified without the need for repeat testing, for already registered product with the same CMC (chemistry, manufacturing, and control).
Guidelines on OTC (over the counter)	• The Drug Consultative Committee (DCC) is in the process of evaluating a draft OTC policy submitted prepared by its sub-committee. The industry supports such a move towards clarity on OTC category and would suggest that the policy enables greater access to patients without over-regulation in the category that could potentially impact the industry's interest in promoting this category.	• There is a need for robust OTC guidelines to improve access. The availability of OTC drugs can save health systems' valuable resources as well as consumers' time and money, especially for minor ailments. Further, OTC pathway will allow manufacturers to provide safety information and instructions specifically directed to patients on how to use OTC which effectively empowers consumers to take well-informed decisions enhancing

Issue	Short-Term Asks	Medium-Term Asks
	• Such a policy will enable greater self-medication while accounting for patient.	positive health outcomes.
Guidelines on Similar Biologics 2016 **(Process followed in releasing the guidelines is opaque. Need to involve all stakeholders)**	• Ensure that the guidelines are applied for giving approvals to biosimilars. • The government should ensure that 2016 guidelines are not diluted any further.	• There should be roll back to the 2012 guidelines. Rationale: • The standards for approval of similar biologics in India as laid down in Guidelines of 2012 have been diluted in 2016. Few examples of dilution: • Guidelines 2016 limits requirement of Phase III CT data to 100 patients for the purposes of obtaining a MA for a biosimilar. • Condition in 2012 guidelines which did not allow a biologic to qualify as reference biologic unless marketed for a minimum of 4 years has been removed in the 2016 guidelines. • Extrapolation of data generated in respect of a clinical indication permitted to other indications if reference biologic is approved for such additional indications in other countries.
Proposed amendment of Sales Promotion Employees (Conditions of Service) Rules, 2018	• The pharmaceutical industry has expressed its detailed concerns in respect of the amendments proposed as these will be challenging to implement and do not take into consideration the business realities of how sales promotion activities in the pharmaceutical sector are undertaken. We believe that our concerns in the proposed amendments need to be addressed to ensure a workable and sustainable business and investment environment in India in line with the endeavour of the government under the Ease of Doing Business initiative.	1. CHAPTER IB: Welfare Obligation in the Draft Rules • The draft rules on welfare obligations are not practical and cannot be implemented due to the nature of MRs job. Their work entails field responsibilities and providing the welfare benefits prescribed under Chapter IB is not practical and economically viable. These benefits, like in other labour welfare legislations, must be linked to the establishment and the minimum number of employees that an establishment employs.

Issue	Short-Term Asks	Medium-Term Asks
	• The government should appreciate that ‘sales promotion employee’ or ‘medical representatives (MRs)’ engage in promoting pharmaceutical products and it has been held that they cannot be considered ‘workmen’ since they are not performing manual, unskilled, skilled, clerical work which may deem a person performing such work as a ‘workman’. Further, MRs are well-qualified professionals exercising considerable independence and discretion to promote pharmaceutical products. Any legislation or amendments to the relevant rules should, therefore, be in line with this position taking into consideration the realities and practicalities and the very nature of the job being undertaken.	2. CHAPTER IIA: Working Hours i. Fixing working hours for promotional activities defeats the whole purpose of business promotion itself in the pharmaceutical field. Sales Promotion in pharmaceutical industry is primarily undertaken on the field and y directly interacting with the customers (i.e. doctors and distributors). Furthermore, promotion by advertisements in the media are restricted. Fixing of work hours are therefore untenable as such activities depend on the availability and convenience of the customers and these are not determined by the pharmaceutical industry. ii. By fixing working hours companies and medical representatives loses all flexibility in managing their promotional activities and they will be forced to adhere to an inefficient and recalcitrant work routine. This a part of the skill set expected of the medical representatives and they are appropriately compensated for the same. iii. Due to the fluid requirements of the customers in the pharmaceutical field, work timings each day can potentially be different for a medical representative. It will be very difficult for the companies to monitor such work hours. iv. In addition to the monitoring and control issues, operational costs will certainly shoot up and may eventually reflect in drug prices. v. The MRs, thus have flexible working time/hours in line with the trade practices prevailing in their respective working areas and the same is in practice and followed in the pharmaceutical industry for over several decades. Hence, there can be no fixed working time/hours for the MRs.

3. Ethics

3.1 Uniform Code for Pharmaceutical Marketing Practices (UCPMP)

The DoP in November 2014 had issued the much awaited UCPMP to be voluntary for a period of six months with effect from 1 January 2015. It was also suggested that it would be up for further review on the basis of the inputs received by the department. As per UCPMP, no gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised to persons qualified to prescribe or supply drugs, by a pharmaceutical company or any of its agents, i.e. distributors, wholesalers, retailers, etc. Gifts for the personal benefit of healthcare professionals and family members (both immediate and extended) (such as tickets to entertainment events) also are not be offered or provided. As per the UCPMP, free samples of drugs shall not be supplied to any person who is not qualified to prescribe such product. Where samples of products are distributed by a medical representative, the sample must be handed directly to a person qualified to prescribe such product or to a person authorized to receive the sample on their behalf.

Short-Term Asks
Before making Uniform Code for Pharmaceutical Practices statutory, all concerns submitted by stakeholders should be taken into consideration and changes to the code be made accordingly.

4. CONCLUSION

The Indian pharmaceutical market size is expected to grow to US$100 billion (€88.69 billion) by 2025. The government and regulators have a key role to play if the industry needs to realize this goal.

Some of the major initiatives taken by the government to promote the biopharmaceutical sector in India are as follows:

- The Government of India plans to provide incentives to bulk drug manufacturers, including both state-run and private companies, to encourage the Make in India programme and reduce dependence on imports of active pharmaceutical ingredients (API), nearly 85 per cent of which come from China.
- The DoP has set up an inter-ministerial co-ordination committee, which would periodically review, coordinate, and facilitate the resolution of the issues and constraints faced by the Indian pharmaceutical companies.
- The DoP has planned to launch a venture capital fund of ₹1,000 crore (€127.41 million) to support start-ups in research and development in the pharmaceutical and biotech industry.
- Telangana has proposed to set up India's largest integrated pharmaceutical city spread over 11,000 acres near Hyderabad, complete with effluent treatment plants and a township for employees, in a bid to attract investment of ₹30,000 crore (€3.82 billion) in phases. Hyderabad, which is known as the bulk drug capital of India, contributes almost 20 per cent of pharma exports from India and generates US$15 billion (€13.30 billion) a year.
- At the launch of Cluster Development Programme of the pharmaceutical sector, Ananth Kumar, Minister of Chemicals and Fertilizers, announced that six pharmaceutical parks will be approved and established this year which will have sufficient infrastructure and facilities for testing and treatment of drugs and also for imparting training to industry professionals.
- A lot more still needs to be done. Transparency and predictability in policies will be key to making India the innovation hub for biopharmaceuticals, moving forward.

POWER

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EXECUTIVE SUMMARY

India is the third largest producer of electricity in the world after China and the United States, with an electricity generation of 1,376.1 billion units (BU) during 2017–18. Sustained economic growth has continued to drive electricity demand in India; with the demand for electricity being 1,274,595 million units (MU) in 2018–19 vis-à-vis 1,213,326 MU in 2017–18. The Indian power sector has also emerged as one of the leading sectors attracting substantial foreign direct investment (FDI); during 2018–19, the sector received US$ 1.10 billion (€975.60 million) as FDI.

Arguably, the Indian power sector has witnessed reasonable progress both in terms of policy evolution as well as capacity addition; the sector also reflects tremendous potential for further growth, given the government's macroeconomic objectives of achieving rapid infrastructure development, increasing urbanization and rural electrification. Among various incentives introduced by the government, formation of a High Level Empowered Committee to consider issues relating to stressed thermal power projects, roadmap to bid out solar and wind energy projects, measures to promote hydropower plants, wind–solar hybrid policy, guidelines for promoting development of charging infrastructure for electric vehicles (EVs), are select key initiatives that have fared well with the investors.

Earlier, the government had set its targets for installed renewable energy capacity up to 175 gigawatts (GW) by 2022. Currently, the renewable installed capacity as on 30 April 2019 has reached 79 GW, comprising 28.68 GW from solar power, 35.82 GW from wind power, 9.81 GW from biopower, and 4.59 GW from small hydropower. India's installed generation capacity stands at 356.1 GW as of 30 April 2019. Out of such installed capacity, thermal-based power plants account for 63.54 per cent of the total installed generation capacity. Of this, coal-based generation capacity accounts for 56.36 per cent, gas 7.4 per cent, and oil 0.18 per cent. Hydro-based generation accounts for 12.75 per cent and nuclear for 1.9 per cent of the total installed generation capacity. Other renewable energy sources account for 21.8 per cent of the total installed generation capacity.

Key recommendations for the sector

1. In line with India's commitment to reduce its carbon emissions (as ratified in the UN Climate Change Conference held in Paris), the concerned Indian ministry had introduced specific measurable emissions norms for SO_x/NO_x/mercury from coal-fired utilities. Innovative new technologies such as supercritical, ultra-supercritical, and even solar–thermal in the thermal power sector and high concrete dams, special tunnels, tidal power and offshore wind power projects in the renewable sector, followed by their proper implementation is vital in achieving the maximum efficiency from the project.
2. Incentives such as zero import duty on capital equipment, raw materials, low interest rate, and priority sector lending, single window mechanism for all related permissions as offered to solar sector under National Solar Mission, should be introduced for hydropower sector as well.
3. In view of the government's target of 'Power for All' by 2019, accelerated depreciation rate of 80 per cent should be continued for specified block of assets. Alternatively, the government may consider including generation and distribution operations within the definition of 'infrastructure facility' eligible for investment-linked deduction in respect of capital costs incurred under section 35AD of the Income Tax Act, 1961 (IT Act). In addition, the government may consider extending benefit of investment allowance to taxpayers engaged in generation or generation and distribution of power as well.
4. Considering power projects are capital intensive and require significant financing, infrastructure projects (including the power generation and/or distribution projects) should be exempted from the applicability of thin capitalization rule under the IT Act. Alternately, a much higher ratio (i.e. greater than 30 per cent) may be introduced for such projects to ensure that the limitation on interest deduction

is triggered only in exceptional cases, without rendering debt financing more expensive for the developers.

5. For facilitating investments through the foreign venture capital investor (FVCI) route in the Indian power sector, certain critical activities supporting power sector (viz., operations and maintenance [O&M] activities, power consultancy, etc.) should be specifically included within the definition of 'infrastructure sector'. The definition presently only includes activities involving power generation/ distribution/transmissions. Further, FVCIs should also be allowed to invest in other forms of entity, viz., partnerships and limited liability partnerships.
6. Restrictions on re-financing existing rupee loans, under the revised external commercial borrowings (ECB) regulations, is emerging as a deterrent for certain category of power developers. From an exchange control standpoint, erstwhile ECB regulations permitted borrowing of foreign currency loans from both foreign equity holder and unrelated foreign lenders for re-financing of existing rupee loans. However, under the revised ECB framework, ECBs for refinancing of existing domestic loan is permissible only if such loan is sourced from a foreign equity holder. In view of the restriction to access relatively cheap foreign loans, the overall project costs increases, particularly for Indian-owned power project developers. As a countermeasure, likewise for the erstwhile ECB regulations, a specific category ECB (similar to erstwhile Track-II) is recommended to be introduced under the revised ECB regulations.
7. To ensure indirect taxes flows seamlessly across the value chain, a mechanism should be created allowing refund of all non-creditable indirect taxes in the hands of the power project owner, particularly to mitigate the cascading effect of indirect taxes for project owner in the absence of indirect tax liability on output side, i.e. sale/supply of electricity. Likewise, basic custom duty (BCD) and integrated goods and services tax (IGST) on imported coal used in thermal power plants may be reduced to nil or reduced to a lower rate.
8. The levy of GST compensation cess on coal is recommended to be reviewed. The removal or at least reduction in this cess will provide big support to power intensive industries and will help them retain competitiveness.
9. As for levy of GST on solar power projects, engineering, procurement, and construction (EPC) contractors should be entitled to determine ratio based on actual record as against deemed ratio of 70:30 (presently 70 per cent value is deemed as value of supply attracting GST of 5 per cent and remaining 30 per cent value is deemed as value of services attracting GST of 18 per cent). Additionally, deemed ratio may be changed from 70:30 to 90:10 based on actual industry estimate.

The progressive policy-level changes and effective implementation of directives by the government have been well-appreciated by the industry and investors. Besides, the government's unstinted commitment to scaling up power generation using non-fossil fuel resources, reducing carbon footprints, and ensuring 24X7 power for all, will enable this sector gain more investments in the medium to long run. To further incentivize large-scale investments in electricity generation projects as well as transmission infrastructures, it is imperative that the government pays heed to concerns of the industry (as highlighted in this paper), and responds in a timely manner.

1. INTRODUCTION

1.1 Market Description

1.1.1 Electricity is one of the critical infrastructures for socio-economic development of any country. India is one of the fastest growing economies in the world and is expected to grow at a steady rate of around 7.5 per cent in coming years[1]. The Government of India (GoI) was successful in achieving 100 per cent village electrification in May 2018 and has achieved 99.93 per cent household electrification as on date. The impetus is now towards providing reliable, sustainable, and affordable electricity for all. The country will require an exponential rise from present levels to support the growth momentum and reliable power supply. The Indian power sector added 127 GW[2] during the 12th Plan period 2012–17[3] and is projected to add around 200 GW during 13th Plan period 2017–2022[4]. The sector surpassed 12th Plan periods target of 88.5 GW. With 175 GW and 275 GW renewable energy installed capacity targets by 2022 and 2027 respectively, the capacity additions for future years is expected to be dominated by renewable energy (RE).

1.1.2 India is the third largest producer of electricity in the world after China and USA[5]. The electricity generation during the year 2017–18 was 1,376.10 BU[6].

India's electricity consumption increased from 1,061,183 gigawatt hour (GWh) in the year 2016–17 to 1,130,244 GWh in the year 2017–18, an increase of around 6.5 per cent. However, due to India's high population base and low power consumption in rural areas, per capita consumption of electricity was around 1,149 kilowatt hour (KWh) during the year 2017–18. The per capita consumption is lower than the global average signifying potential opportunities for migrating to an electricity intense ecosystem[7].

1.1.3 The power sector has emerged as one of the leading sectors attracting substantial foreign direct investment (FDI). The sector received US$1.10 billion (€975.60 million) in the year 2018–19. Cumulative FDI inflows since 2000 up to March 2019 have been around US$14.32 billion (€12.70 billion), 3 per cent of the total FDI inflows[8]. Although the power sector is not a major contributor to the exchequer by way of taxes, this industry is a major employment generator both in the public and private sector, directly and indirectly.

1.1.4 The government had set its targets for installed renewable energy capacity to 175 GW by 2022, comprising 100 GW from solar, 60 GW from wind, 10 GW from biomass, and 5 GW from small hydropower. The renewable installed capacity as on 30 April 2019 has reached 79 GW, comprising 28.68 GW from solar power, 35.82 GW from wind power, 9.81 GW from biopower, and 4.59 GW from small hydropower[9].

1.1.5 Nuclear power for civilian use is well established in India and has been a priority since Independence. The Indian nuclear programme for production of power has been an indigenous effort. It is strategically important to develop core capabilities in critical areas to reduce vulnerabilities to external pressures. India is the only country in the world that has accorded high priority to use of all three main fissionable materials, U-235, plutonium and U-233 in order to meet the challenge of reaching independence through deployment of domestic nuclear resource. The installed capacity as on 30 April 2019 has reached 6.78 GW from nuclear power.

1.2 Generation

1.2.1 India's installed generation capacity stands at 356.10 GW as of 30 April 2019. Out of such installed capacity, thermal-based power plants account for 63.54 per cent of the total installed generation capacity. Of this, coal-based generation capacity accounts for 56.36 per cent, gas 7.00 per cent and oil 0.18 per cent. Hydro-based generation accounts for 12.75 per cent and nuclear for 1.90 per cent of the total installed generation capacity. Other renewable energy sources account for 21.80 per cent of the total installed

generation capacity. Approximately, 46 per cent of the installed capacity is owned by private sector and balance 54 per cent by central and state government utilities.[10] The private sector interest in the sector has grown exponentially on the power generation and transmission sector aided by the migration to a competitive bidding framework from the negotiated power-purchase agreement (PPA) model.

1.2.2 Demand for electricity was 1,213,326 MU during the year 2017–18, whereas during the year 2018–19 was 1,274,595 MU. On the other hand, availability during the year 2017–18 was 1,204,697 MU whereas during the year 2018–19 availability was 1,267,526 MU. Whilst the deficit has remained marginal at 0.7 per cent in 2016–17 and 0.6 per cent in 2018–19, the supply needs to increase further at a greater pace to match the growing demand from economic growth, increasing urbanization and rural electrification.

Peak demand for power has increased from 160,752 megawatt (MW) during the year 2017–18 to 177,022 MW during 2018–19; peak deficit was at 0.8 per cent in the year 2018–19.[11] The overall gross domestic product (GDP) composition of India has been skewing towards the services sector and this has resulted in lowering of the electricity intensity of GDP consumption from 1.1 to around 0.8.

1.3 Transmission and Distribution

1.3.1 India's capacity of transmission system of 220 kilovolt (KV) and above voltage levels as on 30 April 2019 was 413,881 circuit kilometre (ckm) of transmission lines and 904,263 mega volt amp (MVA) of transformation capacity of substations. Almost 100 per cent of transmission facility and 85 per cent of distribution facility in India is owned by the public sector. In order to enable greater private participation, in recent years a number of transmission projects in different regions have been awarded to private bidders under a competitive bidding model. Also, privatization of distribution is being attempted by way of sale of government-owned distribution licensees and through appointment of private distribution franchisees in select states.

1.4 Recent Developments

1.4.1 The Indian power sector has seen significant developments with progressive policy-level changes and effective implementation of directives. Some of the key initiatives taken by GoI in the last one year to boost the Indian power sector are as follows: draft amendment to Electricity Act, draft National Tariff Policy, formation of High Level Empowered Committee to consider issues related to stressed thermal power projects, conducting second round of pooled thermal power procurement bid, issued roadmap to bid out solar and wind energy projects, issued revised solar bidding guidelines, issued long-term renewable purchase obligation (RPO) targets, constituted RPO compliance cell, notified measures to promote hydropower plants, issued wind–solar hybrid policy, offshore wind scheme introduced, issued draft amendments to captive power plant rules, and issued guidelines for promoting development of charging infrastructure for EVs.

1.4.2 The Ministry of Power proposed several amendments to Electricity Act 2003 and National Tariff Policy 2016 for promoting development of electricity markets, development of renewable energy, development of ancillary services, development of EVs, 24×7 reliable power supply, tariff rationalization, operational and financial efficiency of electricity distribution utilities, etc.

1.4.3 The Ministry of Power has identified 34 coal-based thermal power projects totalling around 40 GW as stressed. GoI constituted High Level Empowered Committee to consider issues related to stressed thermal power projects. The committee has recommended coal allocation for short term PPA, use of linkage coal in case of termination of PPAs due to payment default by electricity distribution utilities, procurement of bulk power by a nodal agency against pre-

declared linkages, that PSUs to act as an aggregator of power, increase in quantity of coal for special forward e-auction for power sector, linkage to be provided at notified prices without bidding, non-accrual of short supplies of coal, annual contracted quantity (ACQ) for supply of coal to be determined based on efficiency, retirement of old and inefficient plants, mandatory payment of late payment surcharge by electricity distribution utilities to the generators, payment security mechanism for independent power producers (IPPs), no cancellation of PPA/fuel supply agreements (FSA)/long-term open access (LTOA) post-National Company Law Tribunal (NCLT) scenario, no cancellation of PPA for non-compliance of commercial operation date (COD) for reasons not attributable to the generator, and scheme for revival of gas-based power plants.

1.4.4 One of the recommendations of the High Level Empowered Committee was procurement of bulk power by a nodal agency. The Ministry of Power issued guidelines for procurement of aggregated power of 2,500 MW under Pilot Scheme-II for three years. Subsequent to this, PFC Consulting Limited (nodal agency identified by the Ministry of Power) bid out the said capacity recently.

1.4.5 The Ministry of Power announced a roadmap to bid out 30 GW of solar energy capacity in FY 2019 and FY 2020 each and 10 GW of wind energy capacity in FY 2019 and FY 2020 each to accelerate the pace of installations.

1.4.6 The timelines for bid process, financial closure, and commissioning of solar projects were reduced in the ‘Amendments to the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects’. This was done for speedy implementation of solar projects to meet the 100 GW solar installed capacity targets by 2022.

1.4.7 The Ministry of Power in consultation with the Ministry of New and Renewable Energy (MNRE) notified the RPO growth trajectory as 17.5 per cent, 19 per cent and 21 per cent for FY 2019–20, FY 2020–21 and FY 2021–22 respectively.

1.4.8 MNRE created the RPO compliance cell for periodic monitoring and reporting on the matters relating to RPO compliance. The cell will coordinate with Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commission (SERCs) and report within GoI for taking up non-compliance issues with appropriate authorities.

1.4.9 India is endowed with large hydropower potential of around 145 GW out of which around 40 GW of capacity is operational so far. The share of hydro capacity has halved to 12.75 per cent in last two decades. Therefore, in order to promote hydropower, the Ministry of Power approved several measures like declaring large hydro projects (>25 MW) as RE (earlier only <=25 MW hydro projects were classified as RE), hydro purchase obligation (HPO) is notified as a separate entity within non-solar RPO, proposed tariff rationalization measures for bringing down hydropower tariff, accorded in-principle approval for providing budgetary support through the budgetary grant of the Ministry of Power for flood moderation component for storage hydropower projects to be set up in the future and accorded in-principle approval for providing budgetary support through the budgetary grant of the Ministry of Power for funding enabling infrastructure for hydropower projects, i.e. roads/bridges.

1.4.10 MNRE issued National Wind-Solar Hybrid Policy to provide a framework for promotion of large grid connected wind-solar photo-voltaic (PV) hybrid systems. Subsequently, Solar Energy Corporation of India Limited (SECI) has bid out two tenders, in which total capacity of 1,560 MW was awarded to successful bidders.

1.4.11 MNRE has fixed the targets for offshore wind power installation capacity as 5 GW by 2022 and 30 GW by 2030. The National Institute of Wind Energy (NIWE) has invited expressions of interest (EoI) from suitable and experienced bidders to develop a 1,000 MW offshore wind

project off Gujarat. This project attracted interest from 35 wind developers across the World. MNRE and NIWE are working on the bid documents for calling proposals from interested and qualified developers for development of this project.

1.4.12 The Ministry of Power has issued draft amendments in the provisions relating to captive generating plant in Electricity Rules, 2005. It has proposed several changes including a major change in definition of ownership. As per the draft amendment, ownership means the issued and paid-up share capital in the form of equity share capital with voting rights (excluding equity share capital with differential voting rights) only as per the provisions of the Companies Act, 2013. Whereas as per the current rules the ownership means the equity share capital with voting rights.

1.4.13 The Ministry of Power has issued guidelines and standards for promoting development of charging infrastructure for EVs.

1.4.14 On income tax front, vide Finance Act, 2018, lower corporate base tax rate of 25 per cent was extended to domestic companies having reported turnover of ₹2,500 million (€31.85 million) in FY 2016–17. Such tax rates remained unchanged in the Interim Finance Act, 2019. Reduced base tax rate for domestic companies provides reprieve to special purpose vehicles (SPVs), especially in the renewable energy space.

2. GENERIC INDUSTRY ISSUES

2.1 Although various significant steps have been taken in this direction, there are several areas that need attention. Some utilities have cancelled renewable energy bids after the outcomes of bid process, gas-based power projects are stressed and running at sub-optimal levels, stressed power plants are struggling for re-financing, delayed payment by electricity distribution utilities are a stress area; besides these management of cross-subsidies, cross subsidy surcharges, open access, imposition of additional surcharge, commercial revival of the state electricity boards, and proper management of grids are other areas where more policy thrust is needed.

2.2 There are several challenges for power institutions; structure of institutions, power theft, and inability of distribution companies to collect revenues add burden on the power sector.

2.3 Financing power projects is presently a challenge for developers, given the high financial stakes involved in power projects. As a result, this sector continues to be affected by way of shortfalls – both in generation and transmission capacity.

The Indian power sector is highly leveraged – as high as 70–80 per cent and continues to struggle for funds. As mentioned earlier, financing power projects has been perennially constrained for developers, given the long-gestation period of projects and high financial stakes. Given the high exposure of banks in this sector and sectoral cap on lending by domestic financial institutions, financing power projects has been an impediment. Indian power companies have been exploring opportunities of borrowing overseas funds for their projects.

2.4 Nearly 60 per cent of the corporate debt owed by the private power producers is with companies having interest coverage ratio of sub1 (hereinafter referred to as 'IC sub1 companies'). Cash flows of said IC sub1 companies are on a declining trend, thereby, leading to increased borrowings. These issues have led to cost overruns. Coupled with high cost pressures, falling plant load factors and tariff rates aren't helping much:

- Plant load factors (PLF) are exceptionally low and tumbled to about 60 per cent from 75 per cent levels over the last 5 years.
- Merchant tariffs for electricity purchased in the spot market have slid to around ₹3 (€0.038)/kwh, far below the breakeven rate of ₹4(€0.050)/kwh needed for most plants.
- As a result, cash flow for most private power generation companies falls short of what is needed to service interest obligations. This

has led to about 40 GW of stressed assets mostly in coal- and gas-based generation segments.

3. KEY ISSUES AND RECOMMENDATIONS

3.1 Implementation of New Technologies

While CO_2 emissions are unavoidable when using coal-fired power generation for electricity due to its nature as a fossil fuel, it is imperative to use and adopt new environmentally sensitive technologies in India that will lead to maximum efficiency and reduce emission of harmful gases and toxics, including mercury emissions. India has committed to reduce its carbon emissions at the UN Climate Change Conference held in Paris in 2015 as a part of its Intended Nationally Determined Contribution (INDC) goals which were subsequently ratified in 2016. The Ministry of Environment, Forest and Climate Change has introduced clear guidelines into the law on allowable emission standards for SO_x/NO_x/mercury from coal-fired utilities. The guidelines provide for specific measurable emissions norms for all supercritical and sub-critical power plants going into generation from 2017 onwards, in line with MATS (mercury and air toxic standards) in the US and norms being promulgated in China. For all fossil fuel burning electricity generating plants, incentives are provided to encourage use of emission capturing equipment and processes including use of activated carbon to reduce mercury and other toxic emission.

European companies are well-equipped to provide cutting edge knowhow to electricity generation businesses in India to meet this critical objective.

Recommendation

Innovative new technologies such as supercritical, ultra-supercritical, and even solar–thermal in the thermal power sector and high concrete dams, special tunnels, tidal power, and offshore wind power projects in the renewable sector have demonstrated high efficiencies worldwide and their proper implementation is vital in achieving the maximum efficiency from the project.

3.2 Promote Hydropower Sector

Recently, the Ministry of Power has issued measures to revive hydropower projects and announced certain policy measures, but the implementation of policy measures is still unclear, especially for private developers.

Recommendations

- Under the National Solar Mission, various incentives were offered, which gave a push to the solar sector – zero import duty on capital equipment and raw materials; low interest rate and priority sector lending; and single-window mechanism for all related permissions. A similar approach for hydro should also be adopted to revive the ailing hydropower market.
- Discussion with states to promote a conducive environment to make projects viable for implementation of hydro projects – like waiver of water cess and free power; waiver of transmission charges and losses as is available to wind and solar.
- The government needs to intervene to evoke investor’s confidence in the sector. Delay in land acquisition and forest clearance issues should be mitigated with a timeline through a systematic system. A default or delay in each step of clearance should be deemed as accepted.
- It is also suggested that Ultra Mega Power Project (UMPP) model as is prevalent in case of thermal projects should be adopted for hydro also where project is brought to the stage of readiness by the bid process coordinator (BPC like Rural Electrification Corporation/Power Finance Corporation) appointed by the government. After the allotment of the project to the successful bidder, the cost incurred by BPC should be reimbursed.

- Proper coordination and implementation of policies with all stakeholders (ministries and states) and timely issuance of policy is the urgent need of the sector. For instance: certain policies like tariff policy, proposed amendments to Electricity Act are still in the draft stage and have been pending for long which is affecting the stakeholders.
- Keeping a close watch on the financials of involved entities to safeguard the country against further non-performing assets.
- For strict implementation of policy measures, there have to be stringent penalty mechanism in place. For instance, penalty for non-compliance of RPO/HPO or standard of performance laid down by the regulatory commissions.
- During the course of policy formulation, it is imperative for the government to take a holistic view and evaluate its impact on all stakeholders. For instance; in Andhra Pradesh, reduction in the term of solar PPA from 25 years to 5 years is being deliberated for the PPAs in force; this may hamper the existing projects as well as upcoming projects and may be detrimental for the developers.
- For Indian government promoted projects in neighbouring countries, it has been seen in some cases that only public sector undertakings (PSUs) are allowed to participate. Global companies that have established their manufacturing facilities in India cater to the regional market also. Such companies do not get a chance to participate in bids. Therefore, it is suggested that tendering process should be open to all legal entities registered in India having requisite experience and manufacturing set up in line with Make in India policy.
- The Indian subcontinent today is seeing exponential growth in renewable energy from photovoltaic solar and wind. Due to unpredictability and variability associated with the renewable energy, there is strong need to balance the grid through storage technology. Presently, pumped storage plants (PSP) is the most matured technology available for large storage requirements. With geography favouring setting of PSPs in India, it would act as a hydro battery to the region. Battery is another form of storage device available but in the long-run, large scale disposal of such devices can be a problem for the environment.

  There is a strong need to establish financial viability of PSPs through policy support for introduction of revenue stream for ancillary services or capitalizing the cost of PSPs as part of transmission/distribution network since today its primary role is foreseen to balance the grid.
- Renewable energy projects are covered under priority lending which is cheaper than other sources of credit. With all hydro projects categorized as renewables, all hydro projects should now be eligible for priority sector lending.
- Banks are reluctant to fund hydropower project and state finances are also constrained for giving subsidies and grants. Therefore, innovative financing solutions should be explored to make hydro self-sustainable (i.e. financing instruments with long-repayment tenure and subsidized interest rate).

3.3 Introduction of Reverse Auction Bidding

Several foreign companies have set up manufacturing facilities in India which aligns well with the Government of India's Make in India initiative. This initiative of the government was primarily set forth to encourage foreign companies to set up manufacturing base in India to promote FDI. Under this initiative, one primary objective was to provide a purchase preference to the domestic manufacturers to supply from India and enjoy this benefit. Further, foreign companies who have set up base in India, are needed to pre-qualify for tenders which require procurement of goods

and services. Under this scenario, many central PSUs and state utilities have provided the provision whereby a bidding entity can qualify for a particular tender based on the credentials of its parent company (for electro-mechanical suppliers).

When such safeguarding and welcome measures have been made available to domestic companies to bid in a free and transparent bidding system, the Central Vigilance Commission (CVC) Guideline vide memo dated 11 June 2015, provides a procuring entity to exercise electronic reverse auction (e-RA) to purchase capital equipment for projects where the equipment purchase is substantial in value. This practice of reverse auction usually leads to bidders underbidding one another. This very process of e-RA then contradicts the Make in India initiative, purpose of the government fails when these same companies bid through the e-RA, where margins are either diminishing or negative for that matter.

Recommendation

An appropriate mechanism to safeguard the interest of developers as well as suppliers should be formulated. For instance, reverse auction to be made applicable to select the lowest bidder where more than 50 per cent of the bids are above the budgeted price.

3.4 Extend Investment-linked Incentive Under the Income Tax Act, 1961 (IT Act) to Power Sector Companies

The government's stated policy intent for gradually phasing out tax incentives has led to a sunset on income-linked tax holiday[12] for power generation and distribution, with effect from 1 April 2017. Further, accelerated tax depreciation for power businesses in respect of certain block of assets, earlier allowed at the rate of 80 per cent, has been capped to 40 per cent with effect from 1 April 2017.

At the same time to encourage capital investments in large infrastructure projects, Finance Act 2016 had extended the benefit of investment-linked incentive to the business of developing and/or operating and maintaining an infrastructure facility including roads, highway projects, water supply/treatment projects, port/airport projects, etc. However, such investment-linked deduction has not yet been introduced in respect of capital costs incurred by power businesses.

Further, investment allowance of 15 per cent is allowed on cost of new plant and machinery acquired by taxpayers which set up an undertaking/enterprise for manufacturing or production of an article or thing on or after 1 April 2015 in any notified backward areas in specified states[13], if such asset is acquired and installed on or before 31 March 2020, under section 32AD of the IT Act. Such incentive is not available to taxpayers engaged in generation and/or distribution and transmission of power.

It is imperative to provide for adequate fiscal incentive for stimulating private investments in the power industry.

Recommendations

In view of the government's target of 'Power for All' by 2019, it is recommended that accelerated depreciation rate of 80 per cent should be continued for specified block of assets. Alternatively, the government may consider including generation and distribution operations within the definition of 'infrastructure facility' eligible for investment-linked deduction in respect of capital costs incurred under section 35AD of the IT Act. In addition, the government may consider extending benefit of investment allowance to taxpayers engaged in generation or generation and distribution of power as well.

3.5 Rationalization of MAT Rate and MAT Adjustments

The current MAT rate of ~20 per cent on 'book profits' acts as a significant deterrent in the overall investment decision-making for high-risk and capital intensive operations. Vide the

Finance Act, 2017, carry forward of MAT credit has been allowed for a period upto 15 years (from 10 years).

Recommendations

Given the high rate of MAT, purpose of extending tax incentive to power generation businesses is defeated by levy of MAT and therefore, it is recommended that the government may consider a moderate rate of MAT for power generation businesses to incentivize power generation in the country. In addition, under current MAT provisions, inclusion of MAT adjustments on transition to Indian Accounting Standards (Ind AS) is leading companies to pay taxes on notional income/gains. Such adjustments are putting undue tax burden on companies and need to be suitably amended.

3.6 Aligning Provisions of the IT Act with Securities and Exchange Board Of India (Infrastructure Investment Trusts) Regulations, 2014

In the recent years, investors have begun to actively evaluate feasibility of Infrastructure Investment Trusts (InvITs) as the preferred structure for large-scale operations of power assets, primarily due to factors such as, tax exemptions/pass through status accorded to InvITs; public participation through listed units; structural simplicity and ability to hold multiple infra assets under one pooling vehicle, etc. As investments through InvITs structure is gaining momentum, it is imperative that provisions of the IT Act be aligned with Securities and Exchange Board of India (SEBI) regulations, to do away with any anomalous scenario.

Presently, provisions of the IT Act provide for following exemptions:

- Exemption from dividend distribution tax (DDT) on dividends distributed by SPV to InvITs. Also, dividend received by unit holders from InvITs is exempt from income tax.
- Exemption in respect of interest income received by an InvITs from SPV, being an Indian company.

Recently, through amendment in InvITs regulations, SEBI has permitted two-tier holding structure, i.e. investment in SPV through another SPV/holding company (Hold Co) subject to fulfilment of specified conditions.

In the now permitted two-tier asset holding structure through InVITs, presently, IT Act limits the benefit of exemption from DDT only in respect of dividends distributed by Hold Co to InVITs. DDT exemption is thus, presently not available on dividends distributed by downstream SPVs held by such Hold Co.

Also, considering that the tax exemption is limited to interest received by an InVIT from an SPV being a company, such exemption would not be available in case the SPV is set up as a limited liability partnership (LLP). Such aspects may act as a roadblock for a complete pass through status for investments in power assets through the InvIT structure.

Recommendations

To do away with the anomalous tax outcome in a two-tier holding structure, it is imperative that a complete pass-through status is accorded to the InvIT structures by granting the benefit of DDT exemption with respect to dividends distributed by SPVs to Hold Co, which in turn is held by InVIT. Also, the tax pass through should be allowed in case of interest payment by an SPV being an LLP, to InVIT.

Above rationalization measures will align the provision of the IT Act effectively with the SEBI regulations for InVITs, and will thus, encourage a more holistic evaluation of InVITs as preferred investment structure.

3.7 Need for Tax Consolidation Structure

Presently, owing to the PPA or financing requirements, power businesses end up creating a whole web of companies under a holding company. A power company on an average operates 20–100 SPVs, of which

early stage companies incur losses while the advanced stage companies show profits. However, in the absence of explicit provisions under the IT Act, setting off of losses against the profits of entities is not permissible leading to unnecessary tax payouts for the group as a whole.

Recommendations

To facilitate growth for power companies, government may consider allowing multiple SPVs held under the same ownership structure to file a consolidated group tax return, thereby, leveraging group level synergies for an improved tax outcome. This will also enable cash flow efficiencies amongst multiple projects and thus, encourage ploughing back of surplus resources.

3.8 Need for Adequate Fiscal Incentives for Encouraging Financing of Power Projects

The government has announced significant capacity addition in power sector, especially in renewable space (175 GW). One key challenge for the sector, however, shall be to achieve required financing for new projects. Whilst the Indian power sector is highly leveraged, project developers continue to explore opportunities of borrowing overseas funds for the projects.

Vide Finance Act, 2017, the government has extended/ provided the benefit of concessional tax withholding base rate of 5 per cent on external commercial borrowings (ECB) and masala bonds. On the flip side, the government has also introduced limit on interest deduction in line with recommendations of the OECD Base Erosion and Profit Shifting Action Plan 4. Such provisions are applicable to an Indian company or a permanent establishment of a foreign company incurring interest expenditure exceeding ₹10 million (€127,417) in respect of debt owed to a non-resident associated enterprise (AE) or to a non-AE (in respect of debt guaranteed by AE). Interest in excess of 30 per cent of earnings before interest, taxes, depreciation, and amortization (EBITDA) or interest paid or payable to non-resident AE or to non-AE (in respect of debt guaranteed by AE), whichever is lower is proposed to be disallowed. Such interest expense to the extent disallowed is henceforth to be carried forward for 8 years for set off against business income of future years, to the extent of maximum allowable interest, i.e. 30 per cent of EBITDA. Considering debt-push down structure is common in power companies, disallowance of interest cost reckoned with respect to 30 per cent of rule could pose significant challenge for project entities as the effective post-tax cost of debt investments could soar.

Recommendations

Considering that power projects are capital intensive and require significant financing, the government should consider the following approaches:

- Exempt infrastructure projects, including the power generation and/or distribution projects from the applicability of thin capitalization rule under the IT Act. Such companies have large capital requirements and are highly leveraged due to commercial imperatives. Any limitation on deductibility of interest cost could significantly inhibit the commercial feasibility of projects in such sectors which are otherwise crucial for a sustained economic growth.
- Introduce a much higher ratio (i.e. greater than 30 per cent) for such projects, to ensure the limitation on interest deduction is triggered only in exceptional cases, without rendering debt financing more expensive for the developers.
- Remove the restrictions on number of years to carry forward interest disallowed under section 94B of the IT Act.

3.9 Enable Investments via FVCI Route in Companies Engaged in Supporting Power Sector

In recent years, foreign investments in infrastructure sector by a registered foreign

venture capital investor (FVCI)[14] has gained momentum and is fast emerging as an alternate to investments under extant FDI regime. This is primarily driven by the fact that it provides for a more liberalized investment framework; key relaxations are illustratively mentioned hereunder:

- Entry and exit pricing guidelines applicable under the FDI regime do not apply to investment by FVCIs.
- No ceiling on interest pay-outs.

Presently, whilst 'infrastructure sector' for this purpose is defined to include activities involving power generation/distribution/transmissions, however, few critical activities supporting power sector (viz., O&M activities, power consultancy, etc.) are not specifically included, thereby, discouraging FVCI investments in power sector on a holistic basis. Furthermore, FVCIs are allowed to invest in companies only and not in other forms of entity, viz., partnerships and LLPs.

Recommendations

For enabling FVCI to invest in Indian power on a holistic basis, it is recommended that critical activities supporting power sector (viz., O&M activities, power consultancy, etc.) be specifically included within the definition of 'infrastructure'.

Further, given that substantial part of project SPVs are being structures as LLP (specifically SPVs engaged in O&M activities), investment by a FVCI should not be merely restricted to corporates and should be extended to other forms of entities, viz., partnership and LLPs.

3.10 Permit Re-financing or Repayment of Domestic Project Loans with ECB Proceeds

Based on prevalent industrial trends, power project developers (specifically wind and solar project developers) resorts to high-cost domestic loans for funding the initial project construction phase. This is primarily due to the fact that overseas lenders are reluctant to undertake project construction risks before commercial operations owing to perceived risk in acquisition of land and laying of transmission systems. On project commissioning, project developers generally re-finance such loans from low cost foreign borrowings sourced from overseas lenders. Re-financing of such domestic loan by availing external commercial borrowings (ECB) is an accepted alternate funding tool especially for renewable energy project developers in the current low liquidity and lesser appetite domestic financial market.

From an exchange control standpoint, erstwhile ECB regulations issued by the RBI permitted borrowing of foreign currency loans from both foreign equity holder and unrelated foreign lenders for re-financing or repayment of existing rupee loans. However, under recently introduced revised ECB framework[15], ECBs for refinancing of existing domestic loan is permissible only if such loan is sourced from a foreign equity holder[16].

Recommendations

Re-financing restrictions under the revised ECB regulations is emerging as a deterrent for developers of Indian-owned and controlled power projects, as such developers are unable to access relatively cheap foreign loans, thereby implicitly pushing up the overall project cost. As a countermeasure, likewise the erstwhile ECB regulations, a carve out for specific category ECB (similar to erstwhile Track-II) be introduced under the revised ECB regulations.

3.11 Goods and Services Tax (GST)

- Transmission or distribution of electricity does not attract levy of GST by virtue of specific exemption under the GST Laws. Further, Section 17 of the CGST Act, 2017 restricts input tax credit on procurements obtained for rendering exempt supplies. Accordingly, tax paid on procurements made for generation, transmission, and distribution of electricity

would not be creditable since the output supply (i.e. electricity) is exempt from GST. Consequently, GST paid on such procurements would form a part of the cost for the power sector.

Recommendation

By including electricity under the ambit of GST, output supply would become taxable and GST paid on procurements would become creditable. This would substantially reduce the cost of power generation.

Alternatively, government may ensure seamless flow of GST credit across the value chain by allowing refund of input GST paid on procurements made by power project owners. Accordingly, such input GST would not form a part of cost leading to reduction in prices.

On one hand, the above recommendation may lead to a loss to the exchequer, on the other hand, such loss may be equalized on account of increased competitiveness in the market and consequent increase in production.

- Taxability of goods and services used for engineering, procurement, and construction (EPC) of a solar power generating system has been a critical issue since the advent of GST. Multiple adverse rulings by the GST Advance Rulings on this issue have upheld the view that such supplies would be construed as works contract service taxable at the rate of 18 per cent. Whereas, the industry was of the view that such supplies should be treated as composite supply of goods (taxable at rate of 5 per cent).

  To settle the dispute on characterization of EPC projects, CBIC issued Notification 25/2018 – Integrated Tax (Rate) dated 31 December 2018 whereby it was clarified that 70 per cent of the gross value of the project would be deemed as the value of supply of goods attracting GST at the rate of 5 per cent. Remaining 30 per cent would be deemed as the value of supply of services and would attract GST at the rate of 18 per cent. However, industry does not view the deemed 70:30 ratio as a fair estimate of the actual split between value of goods and services.

Recommendation

EPC contractors to be eligible to determine the ratio based on actual records, if available.

Additionally, percentage of value of goods involved in EPC to be increased from 70 per cent based on the actual industry estimate which is 90:10 for goods and services. In this regard, it may also be noted that the Solar Power Developers Association has filed a petition with the Delhi High Court challenging the 70:30 ratio for solar power projects. The High Court has directed GST council to consider this petition during the next Council meeting.

- Circular no 46/20/2018 dated July 6, 2018 issued by CBIC stated that Renewable Energy Scrips would be charged to tax at the rate of 12 per cent. However, industry stance is that such scrips are in the nature of ‘securities’ which are excluded from the ambit of goods as well as services under the GST regime. Further, these scrips are freely traded on power exchanges and were electricity derivatives.

Recommendation

Renewable Energy Scrips should be exempted from the levy of GST since, these certificates are purchased by the power project owners to comply with environmental norms and the certificates are derivatives based on the power generated in green route. It may be noted that the Delhi High Court has issued notice to the Revenue challenging the aforesaid Circular.

- At present, coal imports are subject to BCD of 2.5 per cent and IGST of 5 per cent. Since there is shortage of domestic coal in India, power plants are compelled to meet the requirement through imports. Since there is no duty on electricity on the output side, any duty imposed on procurement of coal would be a cost for power companies. The present duty structure is unintentionally

increasing the cost of power generation and thereby increasing the cost of power, which is directly impacting the common man.

Recommendations

It is recommended that BCD and IGST on coal imported for the usage in thermal power plants should be NIL. Without prejudice to the above, IGST @ 5 per cent on coal shall be reduced to 2 per cent to bring it in line with levy of countervailing duty (CVD) being levied on the same goods under erstwhile indirect tax regime.

- Coal supply including import is subject to a levy of compensation cess of ₹400 (€5.09) per tonne under the GST regime. Compensation cess is creditable against output compensation cess and not against output GST. Thus, Compensation cess coupled with tax cost on inputs have led to an exceptional rise in costs for the power project owners (with no output compensation cess or GST liability). Burden of these exorbitant costs are ultimately to be borne by the end customers. Budget recommendation has also been made by All India Power Engineers Federation in this regard.

Recommendation

The government should consider reduction/ exemption from levy of compensation cess on coal procured by power project owners and incidentally control the rising prices.

- Cement, which is a vital consumable in hydropower projects is leviable to GST at the rate of 28 per cent. This has a glaring impact on the cost of power produced from hydropower projects due to input GST being non-creditable.

Recommendations

It is recommended that the rate of tax for cement used in hydropower projects be reduced. Alternatively, government may also allow refund of taxes paid on inputs used in generating power.

3.12 Miscellaneous Recommendations

Contractual issues

- There are no proper provisions relating to claims of the contractor in case of delays or unforeseen measures attributable to the owner. Unlike most global tendering norms practised (Asian Development Bank, World Bank, FIDIC [International Federation of Consulting Engineers], FMO [The Netherlands Development Finance Company], and KfW [Kreditanstalt für Wiederaufbau]), Indian utilities do not provide any monetary recourse to the contractor in case of delays in payments and time overruns due to the owner's default. Under such a scenario, the contractor does not receive any monetary compensation for which it has mobilized equipment and manpower. This puts a financial burden on the contractor and ultimately leads to further project delays.

  Monetary compensation to the contractor owing to owner's delays should be premeditated by Indian utilities prior to release of tenders.

- Parent company clause in case of hydro-mechanical projects (in cases where credentials of Indian subsidiary are not sufficient to bid): Until last year, the hydro-mechanical sector was addressed primarily by Indian companies which had a major market share amongst a few foreign companies. Such Indian companies would usually meet the pre-qualifying criteria for any forthcoming tenders in India. In the case of foreign companies, who have forayed into the Indian market recently, it is extremely difficult for them to qualify in similar tenders in the absence of a parent clause. The parent clause is specifically used to enable a locally set up manufacturing company to pre-qualify based on global credentials and references of its parent company.

  It is therefore suggested that project owners (mainly government/state owned)

must provision parent company clause for all companies to participate on a level playing basis for hydro-mechanical tenders as is provisioned for electro-mechanical works.

- The limitation of liability (LoL) clause in most tenders floated by government project owners is ambiguous in its entirety. Internationally practised tender conditions include a liability capping of 100 per cent of the contract value on the contractor. In the case of most tenders floated in India, the LoL remains uncapped or includes consequential damages, unforeseen damages and at times even damages by third party.

  The LoL of a contractor should be clearly defined and capped at the value of the contract value without any deemed or unforeseen damages which are not covered under the scope of the contractor in the contractual provisions.

Implementation issues

- There is a mismatch of gestation period of renewable energy sources mainly from solar and wind from setting up transmission lines:
  - Gestation for transmission line varies from 3–4 years while for solar and wind projects, it is around 12–18 months.
  - Even if the plant is ready it cannot either dispatch power or else it forced to back down due to inadequate capacity of transmission available.

  Therefore, there is need for upgradation of grid infrastructure to evacuate power from renewable sources.
- Recommendations to improve energy access in India:
  - Encourage development of mini-grids where extension of grid is not a viable solution.
  - Government/research organizations should examine on making rural appliances more energy-efficient.
  - Prepaid metering for rural households; legalizing unauthorized electricity connections.

Legal issues

- Arbitration clause should be provisioned in tenders floated by state utilities and dispute resolution mechanism should be time bound to avoid delays in the project.
- Disposal of appeals/petitions takes around 2–3 years in regulatory commissions. Therefore, creation of additional bench may be considered for faster disposal and early resolution of cases.

4. CONCLUSION

Arguably, the power sector has witnessed reasonable progress both in terms of policy evolution as well as capacity addition; the sector has certainly tremendous potential for accelerated growth, given the government's macroeconomic objectives of achieving rapid infrastructure development, increasing urbanization, and rural electrification.

The progressive policy-level changes and effective implementation of directives by the government have been well appreciated by industry and investors. Renewable energy achieving grid parity after introducing competitive bidding, improvement in financial of electricity distribution companies (Discoms), coal linkage policy, are select key initiatives amongst various incentives introduced by the government that have fared well with the investors. Besides, the government's unstinted commitment to scaling up power generation using non-fossil fuel resources, reducing carbon footprints, and ensuring 24X7 power for all, will enable this sector gain more investments in medium to long run.

To further incentivize large-scale investments in electricity generation projects as well as transmission infrastructures, it is imperatives that the government pays heed to concerns of the industry as highlighted in this paper, and responds in a timely manner. Among wish

list identified, resolution of GST stalemate for ‘electricity’ will be an important tax policy reform that the industry is hoping to witness in the coming year.

Endnotes

1 The 2019 Global Economic Prospects (GEP), World Bank.

2 Monthly Report, Central Electricity Authority (CEA), March 2019.

3 India follows April–March financial year. 2012–2017 means period from 1 April 2012 to 31 March 2017.

4 Draft National Electricity Plan

5 BP Statistical Review of World Energy, 2018

6 Growth of Electricity Sector in India from 1947–2018, CEA.

7 Growth of Electricity Sector in India from 1947–2018, CEA.

8 FDI Quarterly Factsheet, January 2019 to March 2019, Department of Industrial Policy & Promotion, India.

9 MNRE physical progress overview.

10 All India Installed Capacity, Monthly Report, April 2019, CEA

11 Monthly Executive Summary Reports, CEA.

12 Under section 80-IA of the IT Act

13 Andhra Pradesh, Bihar, Telangana, and West Bengal.

14 FVCI investments are regulated by the RBI and SEBI pursuant to relevant regulations issued in this regard.

15 Foreign Exchange Management (Borrowing and Lending) Regulations, 2018 read with A.P. (DIR) Circular No 17 dated 16 January 2019.

16 The term 'foreign equity holder' is defined under the new ECB framework to mean (a) direct foreign equity holder with minimum 25 per cent direct equity holding by the lender in the borrowing entity, (b) indirect equity holder with minimum indirect equity holding of 51 per cent, or (c) group company with common overseas parent.

Notes

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EXECUTIVE SUMMARY

India's retail market is dynamic with strong fundamentals, increasing urbanization, and consumerism. Sharp rise and improvement in the consumption pattern of Indians with a growing economy has made the retail sector grow further and faster, both horizontally and vertically. Many factors have led to the growth of the retail sector in India like digitization, rising purchasing power of consumers, urbanization, and rapidly changing lifestyle of the consumers.

The government has shown interest in addressing the challenges in this sector and has been consistently making efforts to liberalize investments in this sector – such as relaxation in foreign direct investment (FDI) regulations, rolling out the Model Shops and Establishments Act, model guidelines on direct selling, the goods and services tax (GST) law, and changes in Legal Metrology Act, etc.

Considering the initiatives taken, some concerns of multinational retailers remain. Addressing these would help in Ease of Doing Business in India and will create more investment opportunities in the retail sector while achieving the Make in India initiative. Some key expectations on retail players are noted below:

- Allow self-certification by a single brand retail trade (SBRT) entity for global group sourcing during the first 5 years and reduce sourcing limit to 10 per cent by the SBRT entity over a period of 5 years post expiry of the initial 5-year period.
- Allow global sourcing by group companies from India to be counted for domestic sourcing limits beyond initial 5 years and also clarify that purchases made by the SBRT entity from India after first 5 years which are exported is to be counted for domestic sourcing compliance.
- Increase FDI limit for multi-brand retail trade (MBRT) upto 100 per cent and relaxation in domestic sourcing norms for MBRT similar to SBRT.
- Remove 25 per cent turnover limit for group sales made by FDI entities engaged in wholesale trading.
- Grant industry status to retail sector to facilitate organized financing and fiscal incentives.
- Labour laws should be made more flexible and relaxed.
- Need for legislative amendment in the Legal Metrology Act to replace criminal liability with penalties/fines for technical violations.
- Allow labelling outside custom-bonded warehouse for importers importing large volumes as long as the importers can demonstrate their internal controls, ensure that imported goods are labelled before removal from the warehouse for distribution or sale.
- Unify the criteria for issuance of e-way bill for the whole country, limit for inter-state movement should be enhanced to ₹100,000 (₹1,274.17), requirement of e-way bill for transfer between two warehouses in same city.
- Relaxation of requirements of mentioning particulars on the invoice to be able to claim GST credit and dispensing away with expense-wise input tax credit reporting.
- Allowability of one GST audit return for the whole company to be filed instead of annual GST audit return for each GST registration.
- GST law be amended to allow for input tax credit in case of goods or services or works contract used for building/construction of retail stores/outlets.

India's retail market presents a significant opportunity for global retail players. However, some challenges in policy have caused foreign investors to alter regular operating business models, adding to cost of business, which in turn makes products expensive for the ultimate customer. Adopting some of the changes in areas identified in this paper will augur well for facilitating investment, trade, and above all be in the best interests of the Indian consumer. The suggestions in this paper are made with this objective and may be further discussed with the government as desired.

1. INTRODUCTION

The 2018 Global Retail Development Index (GRDI) study ranked India as the most dynamic retail market in the world (among 30 developing countries). While strong growth fundamentals coupled with increased urbanization and consumerism offer immense scope for expansion, there are certain trade challenges that needs to be addressed. This paper provides a brief overview of the retail sector in India, key investor challenges, and recommendations.

1.1 Market Description

1.1.1 Indian retail sector, comprising both organized and unorganized retail, has emerged as a dynamic and fast growing sector over the past few years. From a history of traditional/ unorganized retailing, the Indian retail sector has come of age and has gone through major transformation over the last decade with a noticeable shift towards organized retailing. Large international and domestic players are attempting to continuously increase their India presence.

1.1.2 Also, as per the India Brand Equity Foundation's (IBEF's) sectoral report, the retail sector in India accounts for over 10 per cent of the country's gross domestic product (GDP) and around 8 per cent of the total employment. As per IBEF, India is the fifth largest global destination for retail worldwide and the retail sector in India is poised to grow at a compound annual growth rate (CAGR) of 10.97 per cent. The total market size of the Indian retail industry reached US$672 billion (€596 billion) in 2017. It is forecast to increase to US$1.2 trillion (€1.06 trillion) by 2021 and US$1.75 trillion (€1.55 trillion) by 2026.

1.1.3 As per the IBEF, the online retail business (i.e. e-commerce) sector in India is expected to reach US$60 billion (€53.21 billion) by the year 2020 from US$18 billion (€15.96 billion) in the year 2017.

1.1.4 Further, as per a study by Federation of Indian Chambers of Commerce and Industry (FICCI), India's retail market is expected to grow at a CAGR of 10 per cent to US$1.6 trillion (€1.41 trillion) by 2026 from US$641 billion (€568.51 billion) in 2016. While the overall retail market is expected to grow at 12 per cent per annum, modern trade would expand twice as fast at 20 per cent per annum and traditional trade at 10 per cent. India's total potential of business to consumer (B2C) trade is estimated to be US$26 billion (€23.05 billion), of which $3 billion (€2.66 billion) can be achieved in the next three years from 16 product categories, according to a study by FICCI and Indian Institute of Foreign Trade (IIFT).

1.1.5 India's direct selling industry is expected to reach a size US$3.54 billion (€3.13 billion) by FY 2019–20, as per a joint report by India Direct Selling Association (IDSA) and PHD Chambers of Commerce. This industry has also significantly contributed to growth and development of small and medium enterprises (SMEs) and allied services like transportation, distribution/logistics, etc.

1.2 Regulatory Framework

The retail sector is governed by multiple legislations at the central and state level, and also by sector-specific regulatory bodies. These include state-wise shops and establishments acts, labour laws, Legal Metrology Act, sector-specific labelling regulations, FDI policy, local/ municipal laws, etc. In this regard, a brief overview of some of the regulations has been provided below.

1.2.1 The enactment of a shops and establishments act is a state subject and hence different states have different legislations relating to shops and establishments. The state acts regulate the conditions of work of employees/workers in shops and commercial establishments.

1.2.2 The legal metrology law[1] seeks to establish standards of weights and measures, regulate the trade in weights and other goods which are sold or distributed by weight, measure or number. It is also used as a measure to ensure consumer protection by making the originator of goods (manufacturer/packer/importer) accountable for such goods.

1.2.3 Sector-specific labelling regulations are used as a measure to provide needed information and/or to ensure the health and safety of consumers. These regulations are required to protect customers and businesses from unfair competition from false representations of product content, origin and quality.

1.2.4 India's FDI policy in retail identifies following broad categories within retail – SBRT, MBRT, wholesale cash and carry trading, ecommerce, and food product retail trading (FPRT).

1.3 Recent Developments

The current government has taken a number of welcome steps to liberalize the organized retail sector. Some of the key steps are as follows.

1.3.1 Approval for 100 per cent FDI in SBRT under automatic route and relaxation in 30 per cent local sourcing requirement

The following are the changes effected in the recent past in FDI regime relating to SBRT:

a. As per the existing FDI policy 2017, FDI up to 49 per cent was permitted under the automatic route and beyond that, approval from the government was required. Now pursuant to Press Note No. 1 of 2018, 100 per cent FDI in SBRT sector will be permitted under the automatic route.

b. As per existing FDI Policy 2017, there is mandatory sourcing requirement of 30 per cent of purchases from India, where the FDI is in excess of 51 per cent, which is required to be self-certified by the SBRT entity. Now, it has been decided that sourcing of that single brand from India either directly or through group companies, for global operations during initial 5 years starting with the year in which the first store is established, to be counted towards the local 30 per cent sourcing requirements to be met by the SBRT entity. Thereafter, it is required to be met on an annual basis.

c. As per the FDI policy 2017 prior to the Press Note No. 1 of 2018, where a non-resident entity who is not the owner of the brand wishes to undertake SBRT, it was required to enter into a legally tenable agreement with the brand owner. Now, such an agreement can be entered between the brand owner and the Indian entity which is proposing to undertake SBRT.

1.3.2 Introduction of mechanism for determining 'state-of-the-art' and 'cutting-edge technology'

As mentioned earlier, FDI beyond 51 per cent in SBRT entities requires local sourcing of 30 per cent of the value of goods to be purchased from India. However, in case of products that have 'state-of-the-art' and 'cutting-edge technology' and where local sourcing is not possible, this requirement is relaxed for the initial three years from the commencement of business, i.e. opening of the first store. What constitutes 'state-of-the-art' and 'cutting edge technology' was not defined and was creating challenges. In 2017, in a welcome step it was decided that a committee under the chairmanship of Secretary, the Department of Promotion of Industry and Internal Trade (DPIIT, previously the DIPP), with representatives from NITI Aayog, the concerned administrative ministry, and independent technical expert(s) on the subject, will examine the claim and determine the products getting qualified under 'state-of-the-art' and 'cutting edge' technology and cases where local sourcing is not possible and proposals would be decided on the basis of their recommendations. This will help in removing the ambiguities in the minds of the investors and will ultimately boost the Ease of Doing Business initiative of the Government of India.

1.3.3 Clarity on FDI in e-commerce

Key amendments introduced vide PN2/2018 are discussed below:

a. *Control over inventory*: E-commerce entity providing a marketplace will not exercise ownership or control over the inventory, i.e. goods purported to be sold. Such an ownership or control over the inventory will render the business as an inventory-based model. Inventory of a vendor will be deemed to be controlled by e-commerce marketplace if more than

25 per cent of purchases of such vendor are from the marketplace entity or its group companies.

b. *Restrictions levied and equity ownership*: An entity having equity participation by e-commerce marketplace entity or its group companies or having control on its inventory by e-commerce marketplace entity or its group companies will not be permitted to sell its products on the platform run by such marketplace entity. E-commerce marketplace entity will not mandate any seller to sell any product exclusively on its platform only.

c. *Display of vendor details*: In marketplace model goods/services made available for sale electronically on website should clearly provide name, address, and other contact details of the seller. Post sales, delivery of goods to the customers, warranty/ guarantee of goods and services sold and customer satisfaction will be the responsibility of the seller.

d. *Submission to RBI*: E-commerce marketplace entity will be required to furnish a certificate along with a report issued by the statutory auditor to RBI, confirming compliance with the above guidelines, by 30 September every year for the preceding financial year (1 April to 31 March).

In light of the above amendments in the extant FDI policy for e-commerce, a vendor will be deemed to be controlled by e-commerce marketplace entity if more than 25 per cent of purchases of such vendor are from the marketplace entity or its group companies.

1.3.4 FDI regulations in retail trading of food products manufactured and/or produced in India

In addition to permissibility of FDI in SBRT and MBRT subject to certain conditions, the government has permitted 100 per cent FDI in FPRT under approval route in respect of trading of food products manufactured and/or produced in India.

1.3.5 Model Shops and Establishments Act rolled out

The Ministry of Labour and Employment passed the Model Shops and Establishments (Regulation of Employment and Conditions of Service) Bill in July 2016 which may be adopted by the states as per their discretion. Maharashtra is the first state in India to adopt the new shops and establishments law. The Maharashtra Shops and Establishments (Regulation of Employment and Conditions of Service) Act, 2017 came into effect on 20 December 2017. The Act is applicable to all commercial establishments in the state, (not covered under the Factories Act), which employ 10 or more workers. The Act provides for different working hours for different categories of establishments and various safety measures for women and for the welfare of the workers.

1.3.6 Model guidelines on direct selling rolled out

The Ministry of Consumer Affairs has formulated model guidelines on direct selling which may be adopted by different states at their discretion. Since then the states of Sikkim, Chhattisgarh, Telangana, Andhra Pradesh, Odisha, and Mizoram have adopted the same. The Government of Tamil Nadu has notified the Direct Selling Guidelines 2018. Likewise, the Government of West Bengal has notified 'West Bengal Direct Selling Guidelines 2018'. Other states like Karnataka and Maharashtra are in the process of adopting the same.

1.3.7 Legal Metrology Act, 2009

The Department of Consumer Affairs vide order dated 4 December 2017 earlier relaxed the manner of declaration of the retail sale price for SBRT entities for a period of 1 year which has now been extended up to 31.07.2019. Now:

a. Retail sale price of the products displayed for sale on the racks in a store must be made through labels affixed to the racks.

b. Pre-packaged commodities offered for sale shall contain bar codes on the principal display panel, which should show the retail sale price by using the scanners available across the store.

c. Once a pre-packaged commodity is imported into the country or manufactured/packaged within the country, the retail sale price of the same shall not be increased during the product's lifecycle.

However, to ensure compliance of the aforesaid requirement and consistency of pricing, the SBRT entity must take the following steps, at its own cost:

a. Make the retail sale price information available on its website.

b. Print a catalogue of retail sale prices and make the same available to the concerned authority.

c. Deposit the retail sale price information with a third party repository who shall provide such information to consumers, through a consumer friendly web-based app and a call centre with toll free number. Information regarding the aforementioned facility must be prominently displayed on the single brand retailing entity's website as well as near the billing counter of the store.

2. KEY ISSUES AND RECOMMENDATIONS

2.1 FDI and Exchange Control Laws

2.1.1 FDI in SBRT

1. Issues related to local sourcing

i. Global sourcing to be counted even after initial 5-year period

It is recommended that global sourcing from India should continue to be counted for the limit of 30 per cent even after the end of the five year period. This will support the government's intention of increasing manufacturing, etc., in India and will boost foreign exchange reserves of the country.

ii. Self-certification for group sourcing

In relation to the local sourcing requirement, sourcing for the purpose of global operations by group entities has been permitted to be counted towards the 30 per cent sourcing requirements in the first five years. In this connection, the requirement to validate the sourcing requirement by statutory auditor on the basis of self-certification provided by the SBRT entity should be done away with as the Indian auditor of the SBRT entity may not be in a position to certify the sourcing which is done by the group companies or affiliates or parent company. Accordingly, it is recommended that self-certification by the SBRT entity should be considered sufficient.

iii. Sourcing undertaken prior to establishing the SBRT store to be included for local sourcing

As per the proposed amendment, there exists ambiguity on whether a group that has been sourcing from India in the past before setting up the SBRT store will be allowed to adjust past sourcing (assuming it is in relation to the same brand) for the 30 per cent rule for the first 5 years. Thus, it should be clarified that the sourcing which has been made prior to set up of any store in India will be allowed to be adjusted for computing the threshold limit.

iv. Five-year period for including sourcing by group entities to be available from year in which FDI increases beyond 51 per cent

As per the extant FDI policy, sourcing of single brand from India either directly or through group companies, for global operations during initial five years starting with the year in which the first store is established, will be counted towards the local 30 per cent sourcing requirements to be met by the SBRT entity. However, there is no clarity on how the 5-year condition would apply to SBRT entity which currently has 51 per cent FDI and has opened its first store more than 5 years ago. It should be clarified where the FDI increases beyond 51 per cent then the five-year exemption should be available from the year in which FDI increases beyond 51 per cent.

v. Clarification that goods sourced for exports by SBRT entity will be counted within local sourcing requirements

As per the amended FDI policy it has been provided that subsequent to five years the SBRT entity shall be required to meet the 30 per cent sourcing norms directly towards its Indian operations on annual basis. There exists ambiguity on whether domestic procurement by the SBRT entity inter alia for exports will be considered while testing the local sourcing conditions or whether only domestic sourcing by the SBRT entity for domestic sales will be considered. Thus, it should be clarified that post five years, domestic procurement for exports by the SBRT entity will also be considered for the 30 per cent sourcing requirement. This is in accordance with the intent of the policy as such an interpretation supports the Make in India programme and at the same time result in earning of additional foreign exchange for the country.

vi. Meet 30 per cent local sourcing in the fifth year

As per the current law 30 per cent local sourcing has to be met on an average basis in the first five years. It is recommended that instead of average, 30 per cent local sourcing requirement should be complied with in the fifth year.

vii. All raw material sourced from India to be included for local sourcing compliance

It is pertinent to note that in some cases multinational single brand retail entities which own several brands may be sourcing raw material from India which may be utilized for one of the brands which is not sold in India and this fact is not known at the time of sourcing. Accordingly, it should be clarified that raw material sourcing for the group from India should be covered in mandatory local sourcing requirements.

2. Issues relating to brand

i. Need to mention umbrella brand to be removed

SBRT players are permitted to market sub-brands in Indian stores subject to the condition that umbrella brand clearly appears alongside the 'sub-brand'. This requirement is unlike in any other country and necessitates development of separate branding elements that are otherwise not made, resulting in increased costs, inconsistency, and inefficiency. It is therefore recommended that the requirement of mentioning the umbrella brand be removed and registration of the sub-brand under the umbrella brand in terms of intellectual property laws should be deemed to satisfy said requirement.

ii. Multiple brands under a SBRT entity to be considered under SBRT FDI policy

In terms of the extant FDI Policy, FDI in a company engaged in trading of multiple brands owned by the entity or its parent are considered as MBRT. In many cases, multinationals dealing in a similar product prefer to have different brands under single entity, without any mention of the umbrella brand. In such cases, in order to promote FDI in retail trading sector, it is recommended that multiple brands under a SBRT entity should be permitted to receive FDI in terms of the extant SBRT guidelines rather than the extant MBRT guidelines subject to maintaining separate books of account for each brand.

2.1.2 FDI in MBRT

1. Allow 100 per cent FDI in MBRT

In terms of extant FDI policy 2017, in MBRT, FDI only up to 51 per cent is allowed under government approval route. To boost the confidence of foreign investors in Indian markets and help in development of this sector in India, it is recommended that sectoral cap should be increased up to 100 per cent wherein up to a certain sectoral cap, FDI under automatic route should be permitted. To protect the interest of MSMEs, FDI beyond 51 per cent can be kept under government route. Further, there can be specific policy for the trading of goods manufactured in India in line with the food product retail trading.

2. **30 per cent sourcing condition for MBRT to be made consistent with those for SBRT**

   As per existing FDI Policy 2017, there is mandatory 30 per cent local sourcing requirement in MBRT. It is recommended that similar relaxation as in SBRT may be allowed in this sector as well.

2.1.3 FDI FPRT

1. **Allow trading in food products produced outside India**

   In terms of the extant FDI Policy, FDI up to 100 per cent under approval route is permitted in respect of trading of food products manufactured and/or produced in India. However, various global players have shown resistance taking advantage of the liberalization, as the same is restricted only for trading in 'food' products manufactured/processed in India. Therefore, it is suggested to permit such companies that invest in India to also sell other food products produced outside India. This relaxation may be permitted with conditions such as a cap or proportion to the total turnover, for example 30 per cent of the total turnover. Further, given that for FDI in FPRT, the basic condition is that the said food products should be manufactured/produced in India, the sector should be permissible under automatic route as the same would result in increase of manufacturing of food products in India.

2.1.4 FDI in wholesale trading

1. **Removal of limit of 25 per cent of turnover for trading with group companies**

   As per the extant FDI policy on wholesale trading, wholesale trading of goods would be permitted amongst companies of the same group. However such wholesale trading to group companies taken together should not exceed 25 per cent of the total turnover of the wholesale venture. Considering that the government vide Press Note 12 of 2015 dated 24 November 2015 has allowed a company undertaking wholesale trading to also undertake single brand retail trading provided separate books of accounts for these two arms of business are maintained and duly audited by the statutory auditor, it is recommended that the condition which limits wholesale trading between group companies to 25 per cent of the turnover of the wholesale venture be removed This will help in Ease of Doing Business in India.

2.2 Issues in Relation to Labelling Requirements and Recommendations

2.2.1 Multiple regulations

Various laws govern the sector specific labelling requirement leading to multiplicity of compliances. For example for food products, Prevention of Food Adulteration Act, cosmetics governed by Cosmetic Regulation 1223/2009, etc., are applicable. A comprehensive law for all goods/items would help in simplifying regulations, bringing efficiencies, and cross pollinating best practices.

2.2.2 Decriminalization of offences under Legal Metrology Act

One of the areas of concern for retail industry relates to the provisions of the Legal Metrology Act, 2009, enacted by the central government with the objective of establishing and enforcing the standards of weights and measures. Currently under the Act, violation of provisions can result in a criminal liability which may attract imprisonment. The inherent subjectivity in the provisions and the discretionary powers given to the field officials makes the industry vulnerable to misuse of these powers and invocation of criminal liability even for the slightest /technical offence.

Retail industry would request the government to initiate a legislative amendment in the Legal Metrology Act to replace criminal liability with penalties/fines for technical violations akin to the welcome steps that the government has taken to review certain legislations, such as the Companies Act, 1956, wherein it has replaced criminal liability with penalty in case of a default, thus enhancing the Ease of Doing Business.

2.2.3 Pre-conditions to re-labelling and re-packaging

The provisions contained in the Legal Metrology Act requires that no commodity in packaged form may be sold until it contains a label giving the prescribed declarations. Further, law casts responsibility on the manufacturer/packer to repack/relabel as and when required. In retail business, relabelling is common as goods are required to be packed/ re-packed for transportation and delivery purposes. Given the complexities involved in fulfilling the conditions for relabelling, it is recommended to streamline the entire process and make the same simpler by removing the requirement of relabeling for repacking.

2.2.4 Pre-requisite of all declarations on principal display panel

The provisions of Legal Metrology Act in India requires the declarations to be made and pre-printed information to be grouped together and given at one place. Though as per international standards the declarations are made on the product, However, the requirement of grouping them at one place is not economically feasible as businesses manufacture products in many locations as per requirements and changing the supply chain for a single market on stand-alone basis is not economically feasible. It is therefore recommended to relax this requirement with specific conditions, if required.

2.2.5 Impossibility of few excessive declaration requirements

Every package is required to contain certain declarations, e.g. in case of imported goods, a product label must include importer information like month and year of import, name and address of importer, etc. This information may not be available with the manufacturer before or during the manufacturing process (since manufacture happens globally for different markets). Further, in many instances, products or their parts are produced in different countries and then combined in countries other than where the final product would ultimately be sold. Under such supply chain networks, the destination market for each product is not pre-defined and stock is kept at various regional distribution centres and supplied on demand by markets. Such requirements puts undue burden on stakeholders and consequently increases costs, which would ultimately need to be borne by consumers. Therefore, an objective-based impact assessment exercise should be undertaken on labelling regulations so that onerous statutory requirements can be removed.

2.2.6 Retailers of unpackaged goods

The Legal Metrology Act intends to cover the declarations on ‘packaged commodities’ only. However, practical challenges are involved with respect to classification of products as ‘packaged commodities’. Given the significant litigations around this issue, it is recommended to bring appropriate clarifications to with respect to classification of products as packaged commodities and enable speedy redressal of pending litigations.

2.2.7 Removal of maximum retail price (MRP)

The government in SBRT has relaxed the provisions for maximum retail price (MRP) wherein MRP for products displayed for sale on racks is required to be affixed on racks and in case of pre-packaged commodity by way of a bar code on the commodity. In addition, details with regard to MRP is to be made available on website, catalogues, etc. However, in SBRT, this requirement is redundant as the retailer produces, affixes the price, and sells the product itself and hence there is no pricing differentiation. Also, putting MRP poses a challenge in global supply chain since displaying prices in foreign currencies is not permitted in some countries such as Indonesia. Further, at the point of production, the final sales price may not be accurately determined as price is determined at the country level. Given the above, it is recommended that the requirement of putting MRP should be done away with and an advanced pricing system in line with international best practices may be implemented.

2.2.8 Labelling to be allowed in non-bonded warehouse

Requirement of labelling in customs bonded warehouses leads to inspection of the same consignment twice resulting in more documentation work for customs department and companies. This altogether slows down the speed of customs clearance and impact lead time for companies and adding extra cost. Hence it is recommended to allow companies importing large volumes to label their products outside customs bonded warehouse as long as the importers can demonstrate that their internal control ensure that the imported goods are labelled before removal from the warehouse for distribution or sale. This will support Ease of Doing Business by allowing faster customs clearance and reduction in documentation procedures.

2.3 Issues in Relation to Product Certification Requirement and Recommendation

2.3.1 Relaxation in product certification requirement

Most of the imports made are already internationally certified and adhere to international standards of testing and quality. When the same are imported in India, they are subject to various additional certification/ testing by various departments. Thus, it is recommended that already internationally certified products should not be subject to same testing requirements again. In case any unique parameter is required to be tested, it may be tested on a fast track basis with modernized procedures.

2.4 Issues in Relation to GST and Recommendations

2.4.1 Anti-profiteering

The central government has set up the Anti-Profiteering Committee to monitor that reduction in rate of tax on any supply of goods or services, i.e. the benefit of input tax credit passes on to the recipient by way of commensurate reduction in prices. Recently, notices have been issued by the Anti-Profiteering Committee to a few retailers; however there is ambiguity whether the benefit needs to be seen at company level or product level. Thus, it is recommended that clear methodology and procedure be laid down to avoid ambiguities and litigation.

2.4.2 Time limit for applicability of tax rate amendment notifications

Generally, whenever there is rate change under GST, it is applicable with effect from the date when the notification is published in the official gazette. However, practically it becomes challenging to make changes in the IT system and the process takes about 2–3 days. Therefore, it is recommended that the applicability of rate change notifications should be made effective after couple of days after the notification is published in the official gazette.

2.4.3 Mentioning HSN on invoice

In GST tax invoice, it is mandatory to mention HSN of products sold. Many times, it is seen that a large number of products are sold in a single invoice. It sometimes become difficult to mention all the HSN in an invoice as there are many other mandatory particulars also which needs to be mentioned in an invoice.

Therefore, it is recommended that retail sector should be covered under Rule 46 (ii) of CGST rules which empowers the government to cover certain class of registered persons, who would not be required to mention HSN for goods or services on a tax invoice.

2.4.4 Distribution of credit by input service distributor (ISD) in the same month

As per Rule 39(a) of the CGST Rules, the input tax credit available for distribution in a month is required to be distributed in the same month. There does not appear to be any apparent reason for restricting the time within which credit should be distributed. Therefore, it is recommended that there should not be any timeline for distribution of GST credit similar to provision in cenvat credit rules in pre-GST regime or a reasonable time limit should be available for distribution of the credit.

2.4.5 Relaxation of particulars on GST tax invoice to avail input tax credit

As per Section 16 of CGST Act, one of the conditions for availing input tax credit is that the recipient should be in possession of tax invoice or debit note. The particulars that are required to be mentioned on tax invoice and debit note are provided under rule 46 and 53 of CGST Rules respectively. Thus, if tax invoice/debit note does not contain all the particulars as required under rules, then input tax credit of recipient may be subject to litigation.

Therefore, recipient is required to ensure that all particulars required to be mentioned on tax invoice have been correctly mentioned by the supplier. This is an onerous requirement on part of recipient of goods/services.

In this regard, a reference may be made to proviso of Rule 9(2) of erstwhile Cenvat Credit Rules, 2004 under excise law. In terms of this rule, cenvat credit was allowed on the basis of a document which even though does not contain all the particulars prescribed under Central Excise Rules, 2002 or Service Tax Rules, 1994 but contains certain specified details.

Therefore, it is recommended that Section 16 of the CGST Act should be amended in order to provide that credit can be availed on the basis of a document that even though does not contain all the particulars prescribed under CGST Rules, but contains certain specified critical details, such as details of tax amount; and name, address and GSTIN of the supplier and recipient/ distributor of credit and recipient of credit.

2.4.6 Input tax credit for retail store construction

As per Section 17(5) of the CGST Act, input tax credit is not allowed on goods or services received for construction of an immovable property (other than plant and machinery) or works contract service when supplied for construction of an immovable property (other than plant and machinery). The retail industry invests significant amounts in building/constructing retail stores but is not allowed to take input credit on cost incurred in construction of stores. Due to this, the cost base is significantly higher. Thus, it is recommended that GST law be amended to allow input tax credit for goods or services or works contract used for building/construction of retail stores/ outlets.

2.4.7 Sales return to be eased

According to the GST law, returned goods necessarily should go to the destination from where goods were delivered originally. However, in case of multi-channel retailers it implies that goods returned by customer should be returned to central/regional warehouse which in most cases are across various states. The costs for such transportation is substantially high and many a times even higher than the actual value of the returned product. Thus, it is recommended to ease GST law to allow return of goods to the nearby store or company outlet.

2.4.8 Requirement to report expense-wise input tax credit

As per format of GST audit report, input tax credit is required to be reported expense-wise. Generally, retailers do not maintain such records and preparing such information is a cumbersome task. Thus, it is recommended to dispense with the said requirement of reporting expenses-wise input tax credit.

2.4.9 Requirement to report HSN-wise procurements and input tax credit

As per format of GST annual return, procurements and input tax credit is required to be reported HSN-wise. Said requirement has been eased a little and now HSN-wise reporting of only major inputs (value >10 per cent of total procurements) are required to be reported. Generally, retailers do not maintain HSN-wise procurements information and preparing such information is a cumbersome task. Thus, it is recommended to dispense with the said requirement of reporting HSN wise procurements and input tax credit.

2.4.10 Uniformity of issuance of e-way bill and enhancement in limit

Presently, different states have different

criteria for issuance of e-way bill for intra-state movement. Also, states like Telangana and Karnataka have e-way bill limit to ₹50,000 (€637.08). While states like Delhi, Maharashtra, Bihar, West Bengal, and Gujarat have increased the e-way bill limit to ₹100,000 (€1,274.17). It is recommended to provide uniform criteria for issuance of e-way bill and increase the limit for intra-state movement to ₹100,000 (€1,274.17) uniformly.

2.4.11 Doing away with e-way bill requirement for transfer between two warehouses in the same city

Under GST, ample opportunities have been provided to businesses to review its supply chain functions and companies are consolidating mother warehouses at one location, for transfer of goods. Bigger companies are required to take more than one warehouse in the same city to manage logistic volumes and meet retail demands on business. Supply chain planning also require that such goods should be moved from one warehouse to another warehouse to optimize transport cost.

However, such transfer between one warehouse to other within the same city require GST documentation of delivery *challan* and e-way bill. It is recommended that as these transfers do not have any negative impact on tax revenues of government and only results in increasing the compliance cost, same e-way bill must be considered between various warehouses for transfer of goods. This will help in reducing compliance cost and enhance ease of operations in business.

2.4.12 Providing for one GST audit return for different GST registrations

Presently, GST returns are required to be filed based on state-wise GST registrations. Accordingly, GST audit report is also required to be filed separately for each GST registration number. Direct expenses like purchase, freight, etc., can be allocated as per GST registration number but for indirect expenses like salaries, conveyance, etc., it is very difficult to allocate such expenses as per the GST registration numbers. Thus, it is recommended that single GST audit return is allowed for the whole company.

2.4.13 Relaxation in digital certification of few documents

The government vide notification number 74/2018 dated 31 December 2018 relaxed the condition of digitally certifying certain GST documents like tax invoice and bill of supply. However, many other important documents like invoice-cum-bill of supply, credit note, debit note, receipt voucher, refund voucher, payment voucher, revised tax invoice, revised credit note, delivery *challan*, etc., are still required to be signed digitally. Also, the said relaxation has not been extended expressly to all the industries. Therefore, it is recommended to provide relaxation for digitally certifying these documents as well for all the industries.

2.5 Direct Tax Recommendations

2.5.1 Relaxation in provisions of section 80JJAA of the Income Tax Act

Section 80JJAA allows deduction for 30 per cent of additional employee cost subject to fulfillment of certain conditions like the total emoluments to the additional employee should not exceed ₹25,000 (€318.54) per month. The existing law should be relaxed and the emoluments per month should be increased to ₹40,000 (€509.67) per month.

2.5.2 Incentive to claim additional depreciation under section 32(1)(iia)

Generally in retail sector, companies do not invest much in plant and machinery and are hence deprived of the benefit of additional depreciation under section 32(1)(iia) of Income Tax Act as it is only restricted to plant and machinery. Considering the huge investment involved in furniture and fixtures in setting up the infrastructure in the stores and high maintenance cost incurred, it is recommended to allow additional depreciation on investment made in furniture and fixtures under section 32(1)(iia) of the Act.

3. GENERIC ISSUES AND RECOMMENDATIONS

3.1 Lack of Industry Status to Retail

Due to lack of industry status, the retail sector faces difficulties in procuring organized financing and fiscal incentives. The government should grant industry status to the sector with a clear articulated policy framework. Further, attempts must be made to ensure that there should be a single, nation-wide retail sector policy. The same will ensure larger investments, infrastructure creation for customer shopping experience, job creation, skill building, and competence development in the sector.

3.2 Inflexible Labour Laws

Few foreign investors view labour laws as an obstacle in doing business in India. After agriculture, the retail sector is a major source of direct employment and lack of investments in the retail sector may have an unfavourable impact on the unemployment conditions in India. These regulations vary from state to state and some of them contained in respective Shops and Establishments Act (SEA). The inflexible labour laws should be made flexible considering the demands of the industry and the same should be relaxed. In addition, the specified duration for which a store can operate (not for customers) should be made flexible considering the backend working involved which impacts the overall efficiency. Also, there is a need to allow female employees working till midnight after taking appropriate steps to ensure the safety of these employees.

3.3 Increase in Customs Duty Rate

The Finance Minister vide Budget 2018–19 has proposed to increase the custom duty rate on various products like mobile phones, watches, perfumes, toiletry preparations, etc., to incentivize domestic value addition. This is likely to lead to increase in prices of various products like perfumes, toiletries, sunglasses, footwear, toys, etc.

Keeping in mind that India has large potential for these sectors, to boost these sectors, it is recommended that the custom duty be restored back at reduced rates so as to meet the demand. It is important to consider that in view of supply chain considerations, all goods cannot be manufactured in India and imports are essential to strike the balance between demand and supply ensuring good quality products at the same time.

Further increase in custom duty could lead to other countries effecting reciprocal increase in custom duty thereby impacting competitiveness of Indian exports and have a detrimental impact on the Make in India programme.

3.4 Direct Selling

The Ministry of Consumer Affairs has issued an advisory to state governments on the Model Direct Selling Guidelines on 9 September 2016. Since then, some of the states have adopted the same. However, these guidelines do not have any force of law. Thus, it is recommend to legally notify the guidelines to protect the interest of direct selling industry in India.

Further, the government has introduce the New Consumer Protection Bill in Lok Sabha on 5 January 2018 to provide for strict punishment and hefty fines for misleading advertisements and food adulteration. To provide relief to industry, it is recommended that the Ministry of Consumer Affairs incorporate the following commercial practice as unfair in all circumstances, as adopted by the European Parliament in Unfair Commercial Practices (UCP Directive) 2005:

'Establishing, operating, or promoting a pyramid promotional scheme where a consumer gives consideration for the opportunity to receive compensation that is derived primarily from the introduction of other consumers into the scheme rather than from the sale or consumption of products.'

3.5 Policy Induced Barriers

Organized retail is regulated by the Ministry of Commerce and Industry and Ministry of

Consumer Affairs; while the former administers retail policy, the latter regulates retailing in terms of licensing and approvals. The sector is subject to complex regulations due to multiple ministries/regulators. The development of the retail sector can take place at a faster pace if a comprehensive regulation is enacted. It is therefore recommended that central and state level consolidation of trade act must be effected by a single trade policy so that multiple acts and legislation can be unified. All trade related acts should be a part of a single trade policy.

3.6 Poor Supply Chain Infrastructure

Lack of storage and transport logistics often leads to wastage. Lack of cold chain infrastructure hampers development of food retail. Further, low internet penetration in rural areas is an obstructing factor for online retail industry. Thus, poor quality and irregular supply of infrastructure and intermediate services act as a major impediment for retail sector in India. There is therefore a need for growing allied infrastructure in the country.

3.7 Real Estate Concerns

Escalating real estate prices and rentals in large cities severely impacts profitability of retail companies. Further, lacking sophisticated retail planning is another major challenge since it is difficult to find suitable properties in central locations for retail, primarily due to fragmented private holdings, infrequent auctioning of large government owned vacant lands and litigation disputes between owners. It is therefore recommended that auctions sales even to a single bidder should be allowed, zoning laws be introduced to create 'property banks' suitable for the retail sector. Commercial zones could be split into retail with low floor space index (FSI) having high ground coverage and office, hotels with high FSI having low ground coverage. Excess FSI could be transferred to nearby plots for office, hotels, and other adjacent components. Big box developments should be allowed in areas with lower FSI. This would help in investment in land or reducing rental costs providing a good mix of housing, workplaces, and shopping on convenient walking distance.

3.8 Ease of Doing Business

A major impediment for new entrants is coping with procedures associated with starting and carrying on a business in India. According to the World Bank Doing Business 2018 Report, India has climbed 30 spots to reach the 100th position in Ease of Doing Business Index 2018 from 130th position in 2017. Starting a business in India requires considerable time approximately a month while the OECD average is 12 days. The procedures to secure permits are rather cumbersome and involve permission to be sought from various departments. It is recommended that a single window clearance for all licences and approvals be introduced for retailers to ease and accelerate the pace of doing business in India.

3.9 Municipal Laws

Each municipal authority have their own laws which are not transparent and not published. Therefore, there is an inconsistency in these laws across the country leading to difficulties for the retailers such as compliance requirements for trade licence, signage/name board licence/ advertising permission, etc. It is recommended that there should be consistency among laws of the different municipal authorities and clear guidelines should be provided.

4. CONCLUSION

With tremendous potential, huge population and high domestic consumption, the macro trends for the retail sector look favourable. Although the growth potential in the retail sector is immense, there are obstacles too, that could slow the pace of growth for new entrants and investment in the retail sector which are outlined in para 4.

In particular the following are that demand immediate attention of the Government of India:

1. Clarity in local sourcing rules for FDI.
2. Clarity on self-certification requirements.
3. Decriminalization of offences under the Legal Metrology Act.
4. Industry status for retail.
5. Flexibility in labour law.
6. Issues relating to labelling.
7. Single window for all approvals and clearances to enable Ease of Doing Business.

We look forward to early implementation of the recommendations proposed in the position paper.

Endnotes

1 The Legal Metrology Act, 2009 read with the Legal Metrology (Packed Commodities) Rules, 2011

2. http://ficci.in/sector-details.asp?sectorid=33

3. https://indiacorplaw.in/2018/04/single-brand-retail-trading-remains-ambiguity-indian-fdi-policy.html

4. https://retail.economictimes.indiatimes.com/re-tales/fdi-in-single-brand-retail-what-dipp-needs-to-do-to-sell-india-s-retail-story/2539

5. https://www.india-briefing.com/news/maharashtra-shops-and-establishment-act-of-2017-15439.html/

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8. https://www.business-standard.com/article/economy-policy/tamil-nadu-brings-cheer-for-direct-sellers-notifies-industry-guidelines-118112600934_1.html

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Notes

TELECOMMUNICATIONS

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EXECUTIVE SUMMARY

The year 2018 will first be defined as the time in which the government unveiled the National Digital Communications Policy (NDCP), 2018. A visionary policy, mounted on the three pillars of Connect India, Propel India, and Secure India, the policy lays down very clear goals and strategies to achieve the government's vision on a Digital India. The key strategies for Connect India include setting up of a fibre authority, fabrication of 60 per cent of towers, a common duct policy, policy for common telecom infrastructure, incentives for setting up base stations, etc. A strong emphasis has also been laid under the policy for a Secure India – which includes a strong data protection framework as well as net neutrality rules that are aligned with next generation technologies.

Other legislative and policy initiatives that are on the anvil include the Personal Data Protection Bill and a review of the intermediary guidelines under the Information Technology Act (IT Act) by the Ministry of Electronics and Information Technology (MEITY).

On the market front, the year has been a mixed bag – with consumers enjoying unlimited voice and data services at unbelievably low prices, whilst the operators for most part were struggling under severe financial stress due to a combination of lowering their tariffs and investing heavily in 4G in order to compete in the market. The deteriorating financials are evident from the table, *Telecom Sector at a Glance*.

The past year has also seen further consolidation of the sector with smaller players exiting the market and the number 2 and 3 players merging. The market now stands at three private players and one public sector operator, which is the right structure from both competition and scale point of view.

Telecom sector at a glance				
2017	**Gross revenues**	**Adjusted gross revenues**	**Licence fee**	**Spectrum usage charge**
Q1	₹63,315 cr (€8.06 bn)	₹40,831 cr (€5.20 bn)	₹3,361 cr (€428.25 mn)	₹2,148 cr (€273.69 mn)
Q2	₹64,889 cr (€8.26 bn)	₹39,788 cr (€5.06 bn)	₹3,261 cr (€415.50 mn)	₹1,309 cr (€166.78 mn)
Q3	₹66,362 cr (€8.45 bn)	₹41,669 cr (€5.30 bn)	₹3,249 cr (€413.98 mn)	₹1,256 cr (€160.03 mn)
Q4	₹62,198 cr (€7.92 bn)	₹35,697 cr (€4.54 bn)	₹2,932 cr (€373.58 mn)	₹1,051 cr (€133.91 mn)
2018				
Q1	₹58,401 cr (€7.44 bn)	₹36,552 cr (€4.65 bn)	₹2,929 cr (€373.20 mn)	₹1,028 cr (€130.98 mn)
Q2	₹57,827 cr (€7.36 bn)	₹36,142 cr (€4.60 bn)	₹2,889 cr (€368.10 mn)	₹1,043 cr (€132.89 mn)
Q3	₹58,991 cr (€7.51 bn)	₹36,054 cr (€4.59 bn)	₹2,890 cr (€368.23 mn)	₹1,064 cr (€135.57 mn)
% Change	-6.8	-11.7	-14.01	-49.53

Source: TRAI
Note: cr = crore, bn = billion, mn = million

The year 2018 was also the period when 5G took centrestage. The government, indicating its intent to take a leadership role in 5G, set up a 5G High Level Forum which submitted its report in September 2018. The Telecom Regulatory Authority of India (TRAI) also came out with a white paper on 5G – highlighting the huge investments that are required for establishing it and the regulatory challenges that need to be addressed for its deployment in India, including right of way (RoW) issues, an early decision on E and V bands, and need for coordinated efforts for managing the 5G ecosystem.

TRAI has made a number of recommendations through 2018, notably on In-Flight Connectivity (IFC) [18.01.2018], Inputs for Formulation of National Telecom Policy – 2018 [02.02.2018], Next Generation Public Protection and Disaster Relief (PPDR) Communication Networks [04.06.2018], Making ICT Accessible for Persons with Disabilities [09.07.2018], Privacy, Security and Ownership of the Data in the Telecom Sector [16.07.2018], Method of Allocation of Spectrum for Public Mobile Radio Trunking Service (PMRTS) Including Auction, as a Transparent Mechanism [20.07.2018], Recommendations on Auction of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz Bands [01.08.2018], Promoting Local Telecom Equipment Manufacturing [03.08.2018] and Methodology for Levy of Spectrum Charges for Provision of Satellite-based Services Using Gateway Installed in India Under 'Sui-generis' Category [27.12.2018].

TRAI also responded to various back references received from the Department of Telecom (DoT) on its recommendations on In-Building Access by Telecom Service Providers dated 20 January 2017 [09.03.2018], In-Flight Connectivity dated 18 January 2018 [05.06.2018], Sale-rent of International Roaming SIM cards–Global Calling Cards in India [25.06.2018] Regulatory Framework for Internet Telephony [16.07.2018], Ease of Doing Telecom Business [20.07.2018], Introduction of UL (VNO) for Access Service Authorization for Category 'B' Licence with Districts of a State as a Service Area [20.12.2018].

TRAI also issued various telecom related consultations, some of which were of interest to the group, viz., Inputs for Formulation of National Telecom Policy – 2018 [03.01.2018], Method of Allocation of Spectrum for Public Mobile Radio Trunking Service (PMRTS), Including Auction, as a Transparent Mechanism [08.02.2018], Voice Services to LTE Users (including VoLTE and CS Fallback) [26.02.2018], Draft Telecommunication Interconnection (Amendment) Regulations, 2018 [08.05.2018], Regulatory Framework for Over-The-Top (OTT) Communication Services [12.11.2018], and Review of Terms and Conditions for Registration of Other Service Providers (OSPs) [29.03.2019].

The government recognizing the financial stress in the sector, increased the number of instalments for payment of spectrum from 10 to 16 years. The spectrum caps were also liberalized, now providing for a cap of 50 per cent for sub 1 GHZ band spectrum and increasing the overall spectrum cap from 25 per cent to 35 per cent.

On 19.06.2018, DoT amended the licence for internet telephony, providing that the mobile numbering series should be used to provide internet telephony under licence. It was also simultaneously clarified by DoT that internet telephony services envisaged in the licences is un-tethered from the underlying access network and hence the service can be provided by Access Service Provider to the customers using internet service of the other service providers.

The TRAI recommendations on net neutrality were accepted by DoT and a letter was issued stating the amendments to be made in the respective licences to incorporate the provisions with regard to net neutrality.

Some other key developments that are of particular interest to the EBG membership, include the requirement of the government for mandatory testing facilities to be set up in India. While a number of extensions have been given and the current implementation date now stands at 01.08.2019, the fundamental requirement remains unchanged. Another area of concern for the membership has been the increase in customs duties for various 4G/5G related network products from 10–20 per cent. The EBG has represented on these issues through various submissions to the government.

The EBG's efforts and interactions through 2017–18 has led to the announcement of the National Telecom Policy, 2018 which is visionary in its structure and approach. The policy has envisaged attracting

investments worth US$100 billion (€88.69 billion) in the sector by 2022.

India today stands at the cusp of a digital revolution. Expeditious and time-bound implementation of the NDCP 2018 strategies will be key in determining whether India can achieve its objective of becoming a trillion dollar economy. The first and foremost requirement in this regard is to implement measures to restore the financial health of the industry so as to create a sustainable climate for operators to make the huge investments required to meet NDCP goals.

The data protection bill is a very important legislative instrument in this increasingly data driven economy. The bill must balance the need for privacy and data protection with the need to fuel/facilitate innovation.

The regulatory framework for over the top (OTT) service providers will be another critical factor in determine the regulatory framework for communication services that can be offered using a range of technologies/applications. A future fit framework is the need of the hour which should look at lessening the regulatory burden on telecom rather than imposing stringent rules on the OTT players.

5G and spectrum auctions are another key make or break factor for India's digital future. Not only do the reserve prices recommended by TRAI need to be reviewed in the light of the government's changed stance from revenue maximization to optimal pricing, but access to 5G spectrum need to be ensured for all players for them to remain relevant in the market. Just as access to 4G today is crucial for any operator, so also will be the case for 5G – which will be the dominant technology for the next 10 years.

1. INTRODUCTION

1.1 Key Market Trends

The telecom sector is one of the most dynamic sectors in the country. It has grown rapidly in the past two decades and has brought with it many innovations that have transformed the way India communicates, works, lives and transacts. For the first time in history, technology is inseparable from personal, consumer, business, employee, government, and education activities.

This transformation has accelerated with the onset of the data revolution in India. The number of smartphones in India has increased from 21 per cent in 2017 to 31 per cent in 2018 as per various surveys. As per TRAI, mobile data usage per month in India has increased from 39 petabytes in June 2016 to 4,178 petabytes in September 2018, thereby showing a manifold increase. With the exponential growth in data usage, India has become one of the countries with highest mobile data usage. As of 31 March 2019, India is the world's second-largest telecommunications market, with over 1.18 billion subscribers as of 31 March 2019, of which over 98 per cent are wireless subscribers. India has over 563 million broadband subscribers of which 545 million (97 per cent) are broadband wireless subscribers. This growth is likely to become more pronounced and enriched in the coming years as Indian operators complete their 4G footprint and start trials for 5G.

Telecom is the third largest attractor of foreign direct investment (FDI) into the country, attracting US$6.2 billion (€5.49 billion) FDI in 2017–18 and further US$2.29 billion (€2.03 billion) upto December 2018 according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT).[1]

However, despite this, on the market front, the year has been a mixed bag – with consumers enjoying unlimited voice and data services at unbelievably low prices, whilst the operators for most part were struggling under severe financial stress due to a combination of lowering their tariffs and investing heavily in 4G in order

to compete in the market. The deteriorating financials are evident from the table *Telecom Sector at a Glance* (see Executive Summary).

The past year has also seen further consolidation of the sector with smaller players exiting the market and the number 2 and 3 players merging. The market now stands at three private players and one public sector operator, which is a right structure from both competition and scale point of view.

2. KEY DEVELOPMENTS IN 2018 AND EBG POSITION/ RECOMMENDATIONS

2.1 National Digital Communications Policy, 2018

The policy was notified on 26 September 2018 and has been positioned as supporting India's transition to a digitally empowered economy and society by fulfilling the information and communications needs of citizens and enterprises by establishment of a ubiquitous, resilient, and affordable digital communications infrastructure and services. The key objectives of the policy are provisioning of broadband for all; creating 4 million additional jobs in the digital communications sector; enhancing the contribution of the digital communications sector to 8 per cent of India's gross domestic product (GDP) from ~ 6 per cent in 2017; propelling India to the Top 50 Nations in the ICT Development Index of the International Telecommunication Union (ITU) from 134 in 2017; enhancing India's contribution to global value chains; and ensuring digital sovereignty. These objectives are to be achieved by 2022.

To achieve the enunciated objectives, the policy has identified three missions/pillars:

- **Connect India**: Creating Robust Digital Communications Infrastructure
- **Propel India**: Enabling Next Generation Technologies and Services Through Investments, Innovation, and IPR Generation
- **Secure India:** Ensuring Sovereignty, Safety, and Security of Digital Communications

NDCP 2018 has also listed the various strategies for the achievement of the enunciated goals under policy, key ones include, as follows.

Connect India	Propel India	Secure India
• Collaborative mechanism between Centre, states and local bodies for common right of way (RoW) standardization of costs and timelines and removal of barriers to approvals. • Incentives and exemptions for construction of telecom towers. • Accelerated RoW permissions for telecom towers in government premises.	• Accord telecom infrastructure status of critical and essential infrastructure – enable low cost financing. • Review levies and fees including licence fee, spectrum usage charges, definition of adjusted gross revenue, and rationalize Universal Service Obligation levy. • Review concept of pass through charges to align with principles of input line credit to avoiding double incidence of levies.	• Comprehensive data protection regime that safeguards privacy, autonomy and choice, and facilitates India's effective participation in the global digital economy. • Ensure net neutrality principles are aligned with service requirements, bandwidth availability, and network capabilities including next generation access technologies.

Connect India	Propel India	Secure India
• Make requirement for telecom installations, associated cabling and in-building solutions mandatory in in all commercial, residential, and office spaces. • Establish common service ducts and utility corridors in all new city and highway road projects. • Encourage investment in broadband infrastructure through fiscal incentives including accelerated depreciation and tax incentives. • Optimal spectrum pricing for sustainable and affordable access. • Effective utilization of high capacity backhaul E&V band in line with international best practices. • Rationalize annual royalty charges for microwave links for backhaul.	• Rationalize taxes and levies on digital communications equipment, infrastructure, and services. • Reduce licence and regulatory compliance requirements keeping in view best international practices. • Reviewing penalty provisions to ensure proportionality and reasonableness. • Simplify licence and regulatory frameworks for Internet of Things/Machine to Machine, etc. • Develop policy framework for OTT services. • Enhance backhaul capacity to support 5G. • Review industry practices with respect to traffic prioritization to provide 5G-enabled applications and services.	

EBG lauds NDCP 2018 as a visionary document that is designed to transform India into a trillion dollar economy and usher in Industry 4.0. The key to success lies in an expeditious and time-bound implementation of the policy strategies to transform India into a digitally empowered economy and society. The first important step will be to restore a sustainable investment climate so that the industry is in a position to make the huge investments of US$100 billion (€88.69 billion) as envisaged under the policy.

2.2 Goods and Services Tax Regime

The anomalies of different tax regimes levied by the states, especially value-added tax (VAT), have been resolved to a large extent, on the introduction of a pan-India uniform GST regime, from 1 July 2017.

However, even as the new GST policy has addressed old issues, it has created new challenges. For example, GST registration is now required in each circle versus a centralized service tax registration earlier, which has increased logistics costs. Further, GST for telecom has been set at the higher slab of 18 per cent whereas the service tax earlier was 15 per cent. This is also inconsistent with the GST approach adopted for handsets, where GST has been set at 12 per cent. A legacy challenge that has carried through from the previous regime, has been the imposition of service tax on regulatory levies as also on payments

for auctioned spectrum. The levy of GST on spectrum as well as on the licence fee and spectrum usage charge payments has not only led to a double tax burden on the sector, but because of the present financial circumstances of the sector, has resulted in of blockage of input credit to the tune of around ₹300 billion (€3.82 billion).

Internationally, VAT/GST is not applicable to government services as they are considered as 'out of scope' or regarded as non-economic activity or sovereign functions which are outside the ambit of tax. It is pertinent to note that the European Court of Justice has held in June 2007[2] that no VAT is payable on the 3G spectrum awarded by the regulatory authority as it should not be regarded as an economic activity.

As regards the accumulated GST credit, there are examples both with India and globally. Article 18 of the Sixth VAT Directive [Article 183 of the Recast Directive[3]] in the European Union specifically states as below:

> *Article 18*
>
> *….*
>
> *4. Where for a given tax period the amount of authorized deductions exceed the amount of tax due, the Member States may either make a refund or carry the excess forward to the following period according to conditions which they shall determine.*
>
> *However, Member States may refuse to refund or carry forward if the amount of the excess is insignificant.*

Similarly, provisions for refund of unutilized credit was part of the VAT Acts of several states such as Maharashtra, Kerala, Madhya Pradesh, Karnataka, among others.

EBG believes that there is a need to urgently review the levy of GST on government levies. EBG suggests that as a first step, going forward, the imposition of GST on regulatory levies including spectrum payments needs to be done away with. This would be in line with international practices. EBG submits that the same can be done by issuing exemption notifications as per provisions stipulated under the GST Act. Furthermore EBG believes that provision must be there for refund of the accumulated input credit as is also the case internationally.

2.3 Personal Data Protection Bill

India's present journey to having a legislation on privacy and data protection began with the Supreme Court judgment of 24 August 2017, the constitutional right to privacy and declared that privacy constitutes an intrinsic part of the right to life and personal liberty under Article 21. Pursuant thereto, the government constituted a Committee of Experts on 31 July 2017, under the Chairmanship of Justice BN Srikrishna, former Judge, Supreme Court of India to identify key data protection issues in India and recommend methods of addressing them.

The Srikrishna Committee released its report and a draft of the Personal Data Protection bill in 2018. The draft bill dealt with issues related to the jurisdiction and applicability of the Bill, the definition of personal data, that consent is to be the lawful basis for processing of personal data, the obligations of data fiduciaries, the rights of data principal rights issues related to the transfer of personal data outside India, setting up of a data protection authority, etc. The draft bill was put out for consultation and inputs of all stakeholders were taken. The outcome of this exercise is awaited.

2.4 Privacy, Security, and Ownership of Data in the Telecom Sector

Simultaneously but separately, the TRAI also initiated a consultation on Privacy, Security and Ownership of Data in the Telecom Sector, and submitted its recommendations to the government on 16 July 2018. The key recommendations of TRAI include alignment of encryption standards stipulated under licence with the requirements in other sectors, notification of a national encryption policy at the earliest, personal data of telecom consumers to be encrypted during motion as well as

during storage and decryption permitted on a need basis by authorized entities in accordance to consent of the consumer or as per requirement of the law. The TRAI also made some recommendations to address, mitigate incidents and issues related to data security breaches, etc.

The TRAI noted that the larger issues relating to data protection framework applicable in general for all sectors of the economy would be addressed by the Srikrishna Committee and emphasized that its recommendations has considered only the telecom service providers (TSPs), devices, and the users of telecommunication services. It also stated that it may revisit the issue once the data protection law is enacted.

EBG believes that a robust privacy and data protection framework is a must in a data-driven digital economy and must be introduced at the earliest. EBG believes that a Data Protection Bill should balance the need for security and facilitate innovation. Cross-border data flows are essential for a digital economy and should be permitted. EBG believes that the penalty provisions should be reasonable and proportionate and should be based on the harm caused. The data protection and privacy norms should be applied consistently across telecom service providers and OTT communication service providers.

2.5 Enabling 5G

Making clear its objective of India taking a leadership role in 5G, the government set up a 5G High Level Forum (5G HLF) September 2017 in order to articulate the vision for 5G in India and to recommend the policy initiatives & action plans to realize this vision. The 5G HLF submitted its report in August 2018 titled 'Making India 5G Ready' suggesting various measures in the area of Spectrum Policy, Regulatory Policy, Education and Awareness Promotion Programme, Application and Use Case Labs, Development of Application Layer Standards, Major Trials and Technology Demonstration, and Participation in International Standards.

The NDCP 2018 also envisions supporting India's transition to a digitally empowered economy and society by fulfilling the information and communications needs of citizens and enterprises by establishment of a ubiquitous, resilient and affordable digital communications infrastructure and services. With respect to 5G, NDCP 2018 lays down the following:

2.2 …(d) Enabling Hi-speed Internet, Internet of Things and M2M by rollout of 5G technologies:

i. Implementing an action plan for rollout of 5G applications and services.

ii. Enhancing the backhaul capacity to support the development of next generation networks like 5G.

iii. Ensuring availability of spectrum for 5G in 6 GHz bands.

iv. Reviewing industry practices with respect to traffic prioritization to provide 5G enabled applications and services.

v. Developing framework for accelerated deployment of M2M services while safeguarding security and interception for M2M devices.

vi. Defining policy for EMF radiation for M2M devices, with accompanying institutional framework to coordinate government-funded and India specific research in this regard.

The TRAI has stated in its white paper on 5G that timely deployment of 5G in India is very essential for achieving the objectives envisaged in NDCP 2018 and that 5G will further push the Digital India programme and will help in making the governments digital services available to all. Further that 5G capabilities will also be needed to support the Smart Cities project. TRAI has noted that additional investment of US$60–70 billion (€53.21–62.08 billion) will be required to implement 5G networks.

In its white paper, TRAI has tried to identify regulatory challenges that need to be addressed for the deployment of 5G in India:

- Make entire process of Standing Advisory Committee for Frequency Allocation (SACFA) clearance paper-less, executed end-to-end through an online portal.
- Local and national authorities to ensure easy access to public infrastructure for installation of small cell on non-discriminatory terms.
- To speed up the approval process:
  i. *Further permission may not be mandated where electricity authorities, metro rail corporations or other government organizations are permitting installations of small cells and telecom infrastructure.*
  ii. *Consider batch processing for group of small cells.*
  iii. *Reconsider fee for getting approvals/ clearances.*
- Steps required for getting RoW rules 2016 implemented properly. Suitable amendment in the RoW rules for meeting requirements of small cell deployment.
- Early policy decision on V-band and E-band very crucial for 5G deployment.
- Aspects related to sectorial regulations – cross-sectorial use cases would require coordinated efforts in managing the 5G ecosystem.

EBG believes that the TRAI has rightly identified the challenges to be addressed in order to ensure expeditious deployment of 5G networks and the delivery of digital benefits to Indian consumers and recommends that early actions be initiated to mitigate the same. EBG notes the huge investments required in 5G networks require a sustainable investment climate. For this the government would need to review the regulatory duties and levies as also the pricing of spectrum, whilst the industry will need to look at co-created investment models through sharing of infrastructure and increased role of infrastructure providers.

2.6 Spectrum Auctions

The next round of spectrum auctions will be predominantly for 5G spectrum. The 700 MHz band was put to auction in October 2016 but found no takers because of its very high reserve prices [4x of 1800 MHz]. The TRAI initiated a consultation on Auction of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300–3400 MHz and 3400–3600 MHz Bands on 20.07.2018, and submitted its recommendations on 01.08.2018. The reserve prices for 700 MHz while pared down to 2x of 1800 MHz band, are still out of line with global benchmarks.

The GSMA has highlighted that while the October 2016 auction featured a much greater quantity of spectrum across seven bands, only 41 per cent[4] of the available spectrum was sold. It has estimated that the average price of $0.33 (€0.29)/MHz/pop (across 850, 1800, 2100, 2300 and 2600 MHz), was almost 33 per cent higher than the median price in developing countries between 2015 and 2017, whilst the average revenue per user (ARPU) levels in India were in the period 2010–17 on average almost 35 per cent lower than developing countries in Asia-Pacific overall.

It may also be noted that the TRAI recommendations were made at a time when the government-stated policy on the objectives of the spectrum auctions was revenue maximization. However NDCP 2018 has enunciated a clear reset of auction objectives, recognizing spectrum as a key natural resource for public benefit to achieve India's socio-economic goals, and optimal pricing of spectrum to ensure sustainable and affordable access to digital communications.

EBG believes that the reserve prices must be reviewed downwards by TRAI keeping in mind the revised approach of the government towards spectrum. Further, not only price, but access to spectrum is equally important. Just like for any operator to be relevant in 4G, access to 4G spectrum is a pre-requisite, so will be the case for 5G which will be the dominant technology for the next 10 years. Access to adequate 5G spectrum must be ensured for all operators to remain relevant in the market. EBG recommends that the government

allocates sufficient 5G spectrum in low, mid and high (mm waves) bands including E-V bands for microwave backhaul.

2.7 Using Wi-Fi to Bridge the Digital Divide in Rural India

DoT have unlicensed the 5 GHz spectrum in the range of 5150–5250 MHz, 5250–5350 MHz and 5725–5875 MHz band for last mile access to facilitate the low-cost broadband access in unconnected areas. Various telcos, especially the government PSUs – BSNL, RailTel and BBNL are practicing wi-fi-based solutions, which they are providing in a public–private partnership (PPP) mode under the Hotspot as a service business model on revenue share basis. Under this model more than 5,000 wi-fi hotspots have been created in the rural India and deployments are up and running.

Further, the idle/under-utilized infrastructure of the government-owned service provider, BSNL, in form of digital capacity as well as towers which are touching around 50,000 rural locations is being utilized by the 'Managed Wi-Fi Hotspot Service Providers' in a PPP mode with BSNL to convert the villages into wi-fi hotspots so that the delivery of broadband can be made in the hands of rural masses in the vicinity of such wi-fi hotspots.

As per the NDCP 2018, government has set targets for enabling the deployment of 5 million public wi-fi hotspots by 2020 and 10 million by 2022, which is very ambitious target but achievable jointly by public and private sector.

2.8 Ease of Doing Business

Promoting Ease of Doing Business is essential for unhindered growth of the telecom sector and is amongst the priorities of the government. The government has already undertaken several measures in this regard including easing the payment terms for spectrum auctions by increasing the number of instalments from 10 to 16, allowing sharing of active telecom infrastructure, abolishing the wireless operating licence, SACFA process has been made online, simplification of rollout procedure – self certification of maps, 10 per cent samples testing and 80 per cent reduction in test fee, etc.

The TRAI also initiated a consultation on this issue and submitted its recommendations to the government on 20 November 2017. Some of the recommendations were referred back to TRAI by DoT and TRAI provided its reconsidered view on 20 July 2018. These TRAI recommendations, the DoT view, and the TRAI response are given in the table below.

TRAI recommendation	DoT view	TRAI response
Applications for demonstration licence and experimental licence should be processed and licence granted within 15 days and 30 days respectively.	Demo licence is issued by Regional Licensing Offices (RLOs) in consultation with Wireless Monitoring Organization (WPC) HQRS for frequency clearance and period of 15 days may not be considered sufficient. TRAI is requested to reconsider whether 30 days period can be considered for process and grant of demonstration licence.	Avoiding coordination delays one of the rationales for recommending implementation of paperless end-to-end online system. Process of consultation/ coordination between WPC RLO and WPC HQRS can also be made part of paperless end-to-end online system. Fifteen days' time for grant of short-duration non-extendable demonstration licence appears to be sufficient.

TRAI recommendation	DoT view	TRAI response
Validity period of the experimental (radiating) licence should initially be six months, extendable by another six months.	Experimental (radiating) licence may initially be issued for three months and extendable by another six months.	As per the existing requirement, the licensee has to apply for renewal at least one month prior to the expiry of the licence. Therefore, if the validity of initial licence remains unchanged, i.e. for a period of 3 months, within two months of grant of experimental licence, the licensee will have to apply for renewal of its licence. The TRAI is of the view that two months is too short a period for a licensee to practically utilize the licence and also for DoT to assess whether the entity is a serious player or not. Further, it adds to the uncertainty for the licensee. In view of the above, the TRAI reiterates its recommendations.
• Mergers and acquisitions. • If a transferor company holds a part of spectrum, which (4.4 MHz/2.5 MHz) has been assigned against the entry fee paid, the transferee company/ resultant entity should be liable to pay the differential amount from the date of written approval of transfer/ merger of licences by DoT.	When the licensee applies for transfer/merger of licenses to DoT, DoT will raise demand upon transferee of One Time Spectrum Charges (OTSC), from the date of National Company Law Tribunal (NCLT) approval, with a stipulation that such demand is subject to revision after the grant of approval of transfer of licenses by DoT. The demand of OTSC will be recalculated based upon the date of grant of approval. Excess amount paid, if any, will be refunded back to the transferee/ set off against other dues.	A merger is effective only after the written approval by the licensor and the transferee company/ resultant entity will be able to derive benefits of merger, only after the approval. The TRAI agrees with the proposal of DoT.

The balance recommendations of TRAI as given below, were not referred back by DoT to TRAI:

- Make the entire process of SACFA clearance as well as grant of all licences/ approvals that are issued by WPC, paperless and executed end-to-end through an online portal. SACFA fee to also be reviewed once the process is online.
- There should be defined timeline, not exceeding 30 days, within which an import licence should be granted.
- TSPs should be allowed to reinstall/deploy their wireless equipment into another LSA (licenced spectrum access) after giving prior intimation to WPC preferably through the online portal.
- Spectrum trading should be permitted in all access spectrum bands which have

been put to auction. The permissible block size should be same as specified in latest NIA (notice inviting applications).

- Mergers and acquisitions:
  - DoT to file objections, if any within 30 days of notification of merger proposal.
  - DoT to give approval within 30 days of NCLT approval.
- In case of excess spectrum holding beyond permissible spectrum cap, resultant entity should have option to either surrender or trade its spectrum within stipulated period of one year.
- Rollout
- TSPs should be charged test fee only for DHQs (district headquarters)/BHQs (block headquarters)/SDCAs (short distance charging areas) which are actually tested by TERM Cells.
- There is a need to rationalize testing fee to avoid double payment for testing the same mobile switching centre (MSC).
- Performance bank guarantee (PBG) for a particular phase of rollout obligations should be released after successful certification by TERM Cell. If TERM Cell fails to submit its report within 12 months after the date of offer, PBG should not be held back on account of pendency of testing.
  - DoT should review the process adopted by Controller of Communication Accounts (CCA) for the refund of bank guarantee and should ensure that CCA does not take more than 30 days for the release of bank guarantee.
  - Renewal – condition of minimum net worth should not be applicable for an existing service provider, for renewal of licence or migration of its licence to unified licence (UL).
  - Electromagnetic frequency (EMF) Certification.
- Consequent to the implementation of the online portal Tarang Sanchar, DoT may review:
  - The need of revised certification by all the TSPs for every BTS upon upgrade by any TSP on a shared site.
  - Calling biennial certification for all the existing sites of every TSP.
- TSPs should be asked to submit all requisite certifications only through Tarang Sanchar portal. TSPs should not be required to re-submit these certificates/ reports separately in any other forms such as in hard copy or through email.
- DoT should place an updated list of other service provider (OSP) registration holders with their validity of registration and place of OSP centre on its website.
- DoT should devise a suitable matrix, linking the penalty to the severity of the incident and recurrence of the violation for imposition of financial penalties.

EBG urges that the TRAI recommendations should be urgently accepted by DoT and incorporated into respective processes and guidelines.

2.9 In-Country Testing

The Gazette Notification on Testing and Certification of Telegraph dated 5 September, 2017 issued by DoT made it mandatory that all telecom equipment shall have to undergo prior mandatory testing and certification of all telecom equipment from Telecommunications Engineering Centre (TEC) certified test labs before they are imported/deployed in Indian telecom networks. This was to come into force from October 2018.

Concerns were voiced to the government on the lack of testing infrastructure in the country, which could lead to the mandatory testing requirements becoming a ‘Technical Barrier to Trade’, impact Ease of Doing Business, increase costs, cause potential import delays and consequent business disruptions and in a 5G scenario, may even delay the rollout of 5G.

The government, appreciating these concerns, has been granting extensions from time to time before the mandatory testing requirements come into effect and presently, the date stands at 1 August 2019. In October 2018, TEC introduced procedure for mandatory testing and certification. It has also launched a portal for Mandatory Testing and Certification of Telecommunication Equipment (MTCTE) which provides for online applications, automated routing, and online clearance.

EBG appreciates the desire of the government to have in-country testing facilities. To this end, a workshop was also organized by the Delegation of the European Union to India on 7 February 2019.

EBG believes that there is a need to have testing infrastructure fully in place before any mandate is imposed for in-country testing. It is also desirable to adopt incremental approach and test only critical features rather than trying to carry out end-to-end testing. Further, introduction of testing should be done in a phased manner – first step, continue to recognize test reports and certificates issued by internationally reputed conformity assessment bodies, as is the case now; second phase, allow both systems to run parallel to make the system robust and scaled to take care of the huge testing requirement and once the system is fully in place, look at an in-country mandate.

2.10 Recent Hike in Customs Duties

On 12 October 2018, the government hiked the customs duties on various 4G/5G related network products, notably multiple input multiple output/long term evolution (MIMO/LTE) products, soft switches and voice over internet protocol (VoIP) equipment, etc., from 10 per cent to 20 per cent. This increase in duties is most unjustified as the equipment's impacted are critical items for the networks, required for harnessing new digital technologies and platforms to unlock productivity.

The duty hike will result in unexpected costs increase and adverse impact on the network rollouts. The unplanned increase in duty has serious impact on business case of service providers as well as equipment vendors and is causing further constraints on an already financially stressed sector.

The increase in customs duties is also contrary to strategy of rationalizing taxes and levies on digital communications equipment, which is enunciated in the NDCP 2018 to Propel India and enable next generation technologies and services.

This is also causing non level playing field as certain vendors from countries with which India has free trade agreements are able to provide the same equipment at NIL duty.

EBG believes that the customs duties on these products should be brought down to NIL considering the essential nature of these imports to meet the national vision of Digital India and for level playing field for all vendors and operators. However, if at all the duties are to be levied, these should be done in a phased manner so as to give all vendors an opportunity to set up manufacturing facilities in India.

2.11 Regulatory Framework for OTT Players

In recent times, the growth of the internet and the rapid proliferation of smart phones has led to growth of OTTs, who are able to offer voice and messaging services that are directly in competition with telecom service providers. These players do to the non-network based nature of their services are not subject to the same rules that are applied to traditional telecom players, which leads to a non-level playing field.

The issue of a regulatory framework for OTT communication services has been under consideration by the Indian authorities for the last four years. This issue was also examined by a Committee set up by DoT. The TRAI has carried out two consultations on this issue, first in 2015 and then more recently through its consultation paper dated 12 November 2018. The outcome of the consultations is still awaited.

In the meantime, the EU, after enunciating a Digital Single Market Strategy in 2015,

which envisaged measures that aim to provide incentives for investment in high-speed broadband networks and ensuring a level playing field for all market players and consistent application of the rules, has in November 2018 recast the European Electronic Communications Code, which seeks to adapt the structure to the new market reality, where the provision of communications services is no longer necessarily bundled to the provision of a network. The Code defines OTT communication services as functionally equivalent services and has provided for a future-oriented definition of electronic communications services which should not be purely based on technical parameters but rather build on a functional approach.

EBG supports fair competition and believes that the objective of fair competition will be best met by applying the principle of same service same rules. The rules need not, rather should not be the rules as they exist today. There is a pressing need to review the regulatory burden on traditional TSPs and put in place a light touch approach that is applicable equally to all players. The concept of sector specific taxes and levies need to be specifically reviewed and done away with an application of a uniform indirect tax regime would perhaps best serve the purpose of fair competition and level playing field and revenues to the exchequer.

2.12 Net Neutrality

The TRAI submitted its recommendations on net neutrality on 28 November 2017. These recommendations were accepted by the DoT and a letter was issued on 31 July 2018 accepting the TRAI recommendations issuing the following policy directives:

- Licences to be amended to incorporate principles of non-discriminatory treatment of content by internet access services along with appropriate exclusions and exceptions.
- IAS (Internet Access Service) has been defined as access to internet that is generally available to the public and designed to transmit and receive data from all or substantially all end points on the internet.
- Specialized services, critical Internet of Things (IoT) services as defined by DoT and content delivery networks will be excluded from the principle of non-discrimination. Specialized services should not be usable/ offered as replacement of IAS provision of such services should not be detrimental to the overall quality of IAS.
- Also excluded are proportionate, transient, and transparent measures such as reasonable traffic management practices, emergency services, implementation of court orders, network security, etc.
- Traffic management practices will be formulated by DoT after TRAI recommendations.
- TRAI will supplement its existing disclosure and transparency requirements with additional regulations.
- Monitoring and enforcement will rest with DoT. A multi-stakeholder body shall be established which will have an advisory role.

Licences were amended on 26 September 2019 as below:

Scope of the Licence

Clause No. 2.7

Principle of non-discriminatory treatment, definition of specialized services and reasonable traffic management and other exceptions

i. *A licensee providing Internet Access Service shall not engage in any discriminatory treatment of content, including based on the sender or receiver, the protocols being used or the user equipment.*

ii. *The licensee is prohibited from entering into any arrangement, agreement or contract, by whatever name called, with any person, natural or legal, that has the effect of discriminatory treatment of content.*

iii. *Nothing contained in this provision shall restrict:*

a. *The provision of any specialized service by a licensee, provided that:*

- *The specialized services are not usable or offered as a replacement for Internet Access Service; and*
- *The provision of the specialized services is not detrimental to the availability and overall quality of Internet Access Service.*

b. *Any measure adopted by the licensee that are proportionate, transient and transparent in nature and fall under any of the following categories:*

- *Reasonable traffic management practices as may be specified from time to time;*
- *Provision of emergency services or any services provided during time of grave public emergency, as per the process laid down by the licensor/TRAI;*
- *Implementation of any order of a court or direction issued by the government, in accordance with law;*
- *Measures taken in pursuance of preserving the integrity and security of the network and equipment; and*
- *Measures taken in pursuance of an international treaty, as may be specified by the government.*

iv. *For the purpose of this provision:*

a. *'Content' shall include all content, applications, services and any other data, including its end-point information, which can be accessed or transmitted over the Internet.*

b. *'Discriminatory treatment' shall include any form of discrimination, restriction or interference in the treatment of content, including practices like blocking, degrading, slowing down or granting preferential speeds or treatment to any-content.*

c. *'Specialized services' shall mean services other than Internet Access Services that are optimized for specific content, protocols or user equipment, where the optimization is necessary in order to meet specific quality of service requirements. Provided that the licensees is authorized to provide such services in accordance with the provisions contained in this license, as modified from time to time.*

Annexure-1

Clause no. 26A

Definition of Internet Access Service UL

Internet Access Service is a service to access the internet that is:

i. *Generally available to the public; and*

ii. *Designed to transmit data to and receive data from all or substantially all endpoints on the Internet.*

Explanation: Any service that offers capabilities that are incidental to or provide the functional equivalent of Internet Access Service, shall also be included within the scope of this definition.

2.13 Mobile Termination Rates

The TRAI, in 2017 reduced the mobile termination charges from 14 paise per minute to 6 paise per minute and also directed that with effect from 1 January 2020 India will move to a 'bill and keep' regime.

The mobile termination rate (MTR) calculation done by TRAI was on a pure long-run average incremental cost (LRIC) model as recommended by the European Commission. However while this was given as a preferred approach, the European Commission also give individual countries the liberty to adopt a different model.

In respect of pure LRIC the TRAI, had in its just previous regulation [2015] that a pure LRIC approach was not right for India. The TRAI had in 2015 noted:

- The off-net incoming minutes are about 30 per cent of the total minutes of usage (MOU).
- When making capital investment decisions, a TSP has to necessarily take into account the off-net incoming traffic.

- A model based on recovery of only avoidable costs, would not adequately reimburse the costs of providing a termination service to the TSPs.
- In India, the wireless telecom infrastructure has not yet reached many far-flung areas.
- Unless TSPs are assured of cost recovery of the wholesale services (provided to competing TSPs, there would be little incentive to invest and grow in areas where connectivity is far from adequate.
- The case for using a pure LRIC model for estimation of mobile termination cost is not strong given the present day development of the telecom sector and keeping in view the public policy imperative of enhancing rural tele-density.

EBG believes that 'pure LRIC' is not the right approach for India in view of the fact that huge investments and rollout of infrastructure is still required. Further 'bill and keep' does not mean NIL costs – it is a settlement regime and is nowhere prescribed as a Regulatory mandate as has been done in the case of India. EBG believes that a fair cost must be payable to an operator for use of its network by a competing service provider and that 'bill and keep' as an approach should be left to mutual agreement amongst operators and not prescribed as a regulatory mandate.

2.14 Local Manufacturing

Having initiated a consultation in 2017, the TRAI On 03.08.2018, submitted its Recommendations on Promoting Local Telecom Equipment Manufacturing. Key Recommendations made by TRAI included:

- Standardization, testing, and certifications:
  - i. *TEC to be responsible for products testing and certification agencies in country.*
  - ii. *Mandatory in-country testing and certification at the earliest.*
  - iii. *Incentivize setting up facilities by private entities – to be accredited by TEC.*
  - iv. *Mechanisms of mutual recognition of Indian and international testing and certification labs.*
  - v. *TEC to harmonize testing and certification procedures with global standards and test procedures*.
- Market access:
  - i. *Appoint nodal officer in DoT/TEC to look into cases related to lack of implementation of preferential market access (PMA) policy.*
  - ii. *Value addition claims under PMA to be verified independently and made available at a central portal.*
  - iii. *DoT to review PMA policy and align with the present realities.*
  - iv. *PMA policy applicable for all public telecom networks.*
  - v. *TSPs be incentivized for deploying indigenous telecom products, beyond quantities mandated under PMA.*

TRAI has also recommended that India should aim to achieve the objective of 'net zero imports of telecommunication equipment's' by 2022. For this purpose, Telecom Equipment Manufacturing Council (TEMC), a Council already constituted for promoting R&D, standardization, and manufacturing of telecom equipment in the country, and consisting of experts from telecom service providers, telecom equipment manufacturing industry, government, academia, and R&D institutions, should identify and recommend specific areas of priorities.

Apart from the above, TRAI also made recommendations for setting up various bodies for monitoring, facilitation, R&D, adequate supply of skilled manpower, finalization of a patent framework and resolution of disputes, manufacturing and productivity.

EBG suggests that in-country testing may be implemented as per phased approach suggested above. As regards PMA Policy, EBG believes that PMA should not be mandated for TSPs; rather it should be encouraged and incentivized. EBG supports the other TRAI recommendations on promoting local manufacturing.

Further, the DoT PMA scheme should be made more broad-based with achievable value-addition criteria for all manufacturers including local and global. Currently global OEMs manufacturing in India are not able to qualify for PMA due to high, unachievable value-addition norms for global OEMs v/s Indian OEMs. Access to PMA incentives for global OEMs manufacturing in India will lead to increase in production volumes creating much more jobs and in-turn attracting component manufacturers as well. A PMA credits scheme could be implemented where global companies could get credits (points) for the volume of their exports/jobs created in India from manufacturing which could be used for qualifying for PMA tenders.

2.15 Internet Telephony

Accepting TRAI's recommendations dated 24 October 2017 on internet telephony, the DoT on 19 June 2018, clarified that the internet telephony services envisaged in the licences is un-tethered from the underlying access network and hence internet telephony service can be provided by access service provider to the customers using internet service of the other service providers. On the same day, DoT also issued a licence amendment as under:

- *Internet telephony calls originated by international out roamers from international locations shall be handed over at the international gateway of licensed ILDOs and international termination charges shall be paid to the terminating access service provider. In case the licensee is not able to ensure that internet telephony call originated outside of the country is coming through ILDO gateway, International out roaming to internet telephony subscribers of the access provider shall not be allowed. Further, the calls originated outside the country using internet telephony shall be routed through ILD (International Long Distance) Gateway like any other international call.*
- *The mobile numbering series should be used for providing internet telephony by a licensee. TSPs are allowed to allocate same number to the subscriber both for cellular mobile service and internet telephony service.*
- *The access service licensee should use private ENUM in its network for telephone number mapping from E.164 to SIP/H.323 addresses and vice-versa.*
- *The licensees should comply with all the interception and monitoring related requirements as specified in the licence as amended from time to time for providing internet telephony.*
- *The public IP address used for originating/terminating internet telephony calls should be made a mandatory part of CDR in case of internet telephony. The location details in form of latitude and longitude should also be provided wherever it is feasible.*
- *CLI restriction (CLIR) facility should not be provided for internet telephony subscribers.*
- *IP address assigned to a subscriber of internet telephony shall conform to IP addressing Scheme of Internet Assigned Numbers Authority (IANA) only.*
- *The licensees providing internet telephony service may facilitate access to emergency number calls using location services; however it is not mandated to provide such services at present. The subscribers may be informed about the limitation of providing access to emergency services to internet telephony subscribers in unambiguous terms.*
- *The licensees must inform QoS parameter supported by them for internet telephony so that the subscribers can take an informed decision.*

2.16 Making ICT Accessible for Persons with Disabilities

On 9 July 2018, TRAI submitted its recommendations to DoT, key highlights of which are as below:

- *Set up a steering committee under aegis of Department of Empowerment of Persons*

with Disabilities (PwD) to review, suggest additional measures, formulate guidelines and suggest implementation and monitoring mechanism so as to improve ICT accessibility for PwDs and also collaborate with state governments.

- *Adopt measures suggested by ITU to address ICT challenges for PwDs [Availability and affordability of accessible equipment, provide affordable access to assistive technologies, structure Products and tariff plans, ensure accessible services and interfaces, redesign inaccessible customer services.]*
- *Mandate device manufacturers/importers not to curtail accessibility features available in popular operating systems in any manner from their devices. An undertaking to this effect may be taken from them when their device models come for certification in government approved labs.*
- *All TSPs to identify existing mobile/landline numbers of their customers who are eligible to be classified under PwD. Provision should be made in the Customer Acquisition Form (CAF) for registering new customers as PwD All such numbers should be assigned a special category.*
- *TSPs, MSOs and DTH operators should have a special desk in their call centres/customer support centres where calls received from special category numbers are routed; ensure that executives that deal with PwD customers have been given sensitivity training from time to time.*
- *While implementing the 'Integrated Emergency Communication and Response System (IECRS)' make provision for a special desk in each of the Public Safety Answering Point (PSAP) for attending to calls/SMSs/social media calls/SMSs from PwDs.*
- *TSPs and DTH/MSOs to conduct awareness campaigns regarding issues of accessibility, design, affordability, and information pertaining to assistive products available to PwDs and the various government policies/schemes pertaining to accessible ICT that can be availed by PwDs.*
- *Every mobile manufacturer who produces 5 or more different models of mobile handsets should provide at least one mobile handset satisfying the accessibility criteria for PwDs – may be achieved by the end of 2020.*
- *All TV set top box manufacturers or importer should make/import at least one model in different variants of set top boxes in accessible format by 2020.*
- *Government should create and maintain a database of devices and ancillary equipment which satisfy the accessibility standards for ICT for PwDs. This should be available on government website(s) in accessible format.*
- *All government websites should be accessibility compliant to PwDs.*
- *Accessibility standards for mobile, landline phones and for set top boxes (STBs) in India.*
- *Broadcasting channels may be developed in accessible format too for PwDs with audio and visual impairment in a phased manner.*

EBG believes that the hallmarks of universal access and universal service recognized by ITU, viz., availability, accessibility, and affordability should address the needs of all citizens including PwDs.

2.17 Public Protection and Disaster Relief

On 4 June 2018, TRAI submitted its recommendations to dot on 'Next Generation Public Protection and Disaster Relief (PPDR) Communication Networks'. The key highlights of TRAI recommendations are as below:

- Set up pan-India integrated broadband PPDR network based on 3GPP PS-LTE.
- Follow a hybrid model – dedicated network funded by government and created by

PSU [BSNL/MTNL] in metro cities, border districts, disaster prone and sensitive areas; existing commercial network be leveraged in other regions.

- Operators be mandated to provide mobile BTS and backpack devices for PPDR agencies with in specific time limits in case of disaster when terrestrial network gets damaged/ dysfunctional.
- Form SPV under MHA to plan, coordinate and steer the nationwide BB-PPDR network implementation and operation.
- Form an advisory committee – include representatives state government, central government and Ministry of Communications, to provide domain specific advice to the SPV.
- DoT to study feasibility of doing away with CMRTS licence for PPDR agencies in phased manner.
- SPV to be the nodal agency to coordinate with DoT for allocation of spectrum and other issues.
- PPDR agencies and details of equipment deployed by them be registered with DoT through SPV.
- DoT to work out timelines to phase out existing analog networks in PPDR in a phased manner.
- New spectrum assignments only for deploying digital equipment.
- Carry out pilot testing prior to implementation of BB-PPDR dedicated network.
- Formulate plan for migration of existing legacy equipment on to new network after comprehensive study during pilot testing.
- Test efficacy of PPDR trunking service roaming on public telecom networks during pilot testing, and if found feasible, implement on pan-India basis.
- Identify dedicated spectrum for nationwide BB-PPDR communication network:
  i. *2x10 MHz of dedicated spectrum [814-824/859-869 MHz] be allocated nationwide to SPV on no-cost basis for LTE based broadband PPDR networks.*
  ii. *20 MHz [440-470 MHz, preferably 450-470 MHz) allocated for future evolution of broadband PPDR.*

EBG recommends fast-track implementation of TRAI recommendations for creating a robust disaster recovery telecommunication ecosystem.

2.18 In-flight Connectivity

On 18 January 2018, TRAI submitted its recommendations to DoT on framework for In-flight Connectivity. On 14 December 2018, the government notified the Flight and Maritime Connectivity Rules, 2018, which provided as below:

- IFMC (In-flight, Maritime Mobile Phone Services) service provider to be authorized by DoT.
- The Aircraft Earth Station or Earth Station in Motion established by IFMC service provider to conform to applicable standards set by (ITU), (ETSI), (IEEE); or international fora such as (3GPP). IFMC communication systems using Direct-Air-to-Ground Communications (DA2GC) to also be in compliance of above standards.
- Following can apply for IFMC authorization.
- Licensees:
  i. *Access/ISP licensees.*
  ii. *NLD licensee or commercial VSAT CUG service license with satellite gateway earth station within the service area of the licence in case connectivity through satellite is used.*
- Non-licensees (by entering into commercial agreements with licensees):
  i. *Any Indian or foreign airlines having permission to enter Indian airspace.*
  ii. *Any Indian or foreign shipping company whose vessels or ships call Indian ports or transit Indian territorial waters.*
  iii. Any company incorporated under Companies Act, 2013/any previous company law.

- Licensee can provide voice/data/both in accordance with scope of licence held by it.
- Data service may be provided through wi-fi. Non-licensees required to enter into a commercial agreement with licensee.
- Authorization valid for ten years.
- Services to be provided in aircraft at minimum height of 3,000 metres in Indian airspace to avoid interference with terrestrial mobile networks.
- Internet services through wi-fi in aircraft be made available when electronic devices are permitted to be used only in airplane mode.
- IFMC shall be in exclusive control of the pilot or captain of the aircraft or ship to enable him to turn off the connectivity during any adverse condition.
- In case of using satellite system, satellite gateway earth station located within India, and shall be interconnected with licensee's network for further delivery of service.
- IFMC permitted to use either Indian satellite system or foreign satellite system capacity duly authorized through the Department of Space.
- Spectrum neutral approach to be adopted in satellite system being used.
- IFMC services to be subject to lawful interception and monitoring.
- IFMC service provider to pay annual fee of one rupee; in addition satellite bandwidth charges, licence fees, spectrum charges, and such other charges to be paid by telecom licensees under respective licences. Revenue earned from IFMC be included in gross revenue of licensee, for the purpose of licence fee and spectrum usage charges.

While DoT has notified IFC Rules and mentioned A2G solution, no spectrum is identified for it yet. This leads to unavailability of A2G solution for India. A2G is hugely cost-effective solution and will lead to revolutionizing connectivity in-flight at reasonable charges.

EBG suggests that Band 65A that has been proposed by the industry is identified and allocated along the lines of European Union for in-flight connectivity in India.

2.19 Standardization

Telecommunications Standards Development Society, India (TSDSI) is the recognized telecommunications standards development organization in India founded in November 2013, mainly intended to develop standards that are suitable to the Indian market. It is encouraging that TSDSI is successfully federating the industry (manufacturers, service provider and R&D units), academia and Government of India within its membership. Collaboration with global Standards Development Organizations such as oneM2M and 3GPP is now happening at the level of the Global Standards Collaboration (GSC) initiative, where TSDSI is a full member and at the level of 3GPP where, TSDSI is the 7th 3GPP Operational Partner (from 1 January 2015), and at oneM2M as a partner organization.

TSDSI may like to develop country-specific standards where suitable international standards are lacking, including country-specific applications and futuristic technologies however TSDSI shall table these locally developed standards in global forums such as 3GPP, oneM2M, etc., and get them acknowledged for its global harmonization and implementation. Transposition and adoption of available international standards from 3GPP, oneM2M shall be implemented for telecom system products to avail smooth inter-connectivity, interoperability, and economies of scale, wherever so applicable.

- Transposition of oneM2M Specifications Rel 2 (comprising 17 specifications and 10 technical reports) into TSDSI Standards. These have been published on TSDSI website.[5]
- Transposition of 296 specifications of 3GPP (select specifications from Rel 10 to Rel 13) for IMT Advanced (as per ITU-R M.2012-3) into TSDSI Standards.[6]

- TSDSI has been mandated by MoC to develop standards for cloud services interoperability and adapt 3GPP specifications related to security.

Recently, Telecommunications Engineering Centre (TEC), Department of Telecommunication (DOT) has approved a policy for adoption of standards of Telecom Standards Development Society, India (TSDSI)/international standards body. 'Standardization Guide' – a policy document for adoption of telecom and related ICT standards defines the process of adoption/ ratification of TSDSI/international standards like institutional mechanism, process of adoption, maintenance of standards, numbering plan, stakeholder consultation, etc. The adoption of the TSDSI or the International Standards is aimed to promote coherence with the International Standards. TEC has also started process of making oneM2M standards as national standards, which are well suited for implementation as part of Smart Cities in India.

TSDSI have taken up important areas of technical work such as M2M, energy efficiency, security, 5G, to name a few. TSDSI is fully operational with a leadership in place, an active technical organization having its own IPR policy.

TSDSI shall continue working if already started working or kickstart activities around the standardization of emerging technologies such as the following to keep pace with technological evolution:

- **Future Network:** NFV/SDN, Multi Access Edge Computing, mmW, 5G, Artificial Intelligence (Cognitive N/w), Smart Card (eUICC), m-Wallet (Fin-Tech), etc.
- **Future Internet:** Internet Protocol, IPv6, etc.
- **Next Generation of M2M/IoT:** Industrial IoT (Wireless Industrial Automation), Smart Appliances, Body Area Network (eHealth), ITS, etc.
- **Next Generation of Fixed Line:** DECT, UWB, DSL, PLT, etc.
- **Open System, Open API, and Open Data**
- **Security:** Telecom Security, Cyber Security, Quantum Safe Computing, Block Chain, Electronics Signature, LI for new technologies, Advanced Security Algorithm - Ciphering, Encryption, etc.
- **Smart Cities:** Big Data, Deep Learning, Context Information Modelling, etc.
- **Sustainability:** Energy Efficiency in ICT
- **Society:** Accessibility [ICT for all – Disability], Active Assisted Living, etc.

Also considering the reality of convergence, TSDSI shall consider including topics of:

i. Satellite Communication
ii. Mobile and Broadcast Convergence – Media Quality, Broadcasting, and User Experience
iii. Protection and Right Mechanism, Data Privacy, etc.

EBG members believes that faster adoption of oneM2M standards as National Standards and its implementation as part of Smart Cities rollout will help inharmonizing the standards based implementation among the Smart Cities. TSDSI shall also continue its efforts harmonizing national standards requirements with 3GPP and oneM2M.

3. CONCLUSION AND RECOMMENDATIONS

India stands at the cusp of transforming to one of the leading digital economies of the world. Various progressive and market based measures have already been taken by the government and the future roadmap has also been laid down in the form of visionary NDCP 2018. The time has now come for implementation of the strategies enunciated in the Policy in order to unlock productivity of the Indian economy through emerging new digital technologies such as 5G, M2M, IOT, artificial intelligence, robotics, big data analytics, etc., thereby catalysing economic growth and development, generating new-age jobs and livelihoods and ensuring access to next generation services for India and its people.

Endnotes

1 https://dipp.gov.in/sites/default/files/FDI_Factsheet_12March2019.pdf

2 http://curia.europa.eu/juris/document/document.jsf?text=3G%2BVAT&docid=61676&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=3632266 #ctx1

3 https://eur-lex.europa.eu/eli/dir/2006/112/oj

4 965 MHz out of a total of 2,354.55 MHz spectrum was sold. Auction proceeds of ₹65,789.12 crore (€8.38 billion) was a fraction of the ₹5.63 trillion (€71.74 billion), at reserve price, of spectrum for sale.

5 https://tsdsi.in/onem2m/

6 https://members.tsdsi.in/index.php/s/hnKXsrhxSHFB5Zh #pdfviewer

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