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CMAs' INDUSTRY BULLETIN

JULY 2019

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

Behind every successful business decision, there is always a CMA

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"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

VISION STATEMENT

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

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MESSAGE

CMA Balwinder Singh
President
The Institute of Cost Accountants of India

Greetings!!

I am happy to note that the Members in Industry Committee of the Institute is continuing with publication of the e-Journal, "*CMAs'* Industry Bulletin" on monthly basis for the members of Institute and other stakeholders. The journal has received great compliments from various readers over the year as it contains interesting articles and valuable industry information.

Cost and Management Accountants have the key role of facilitating organizations to achieve cost competitiveness and excellence in operations. They are responsible for guiding the organizations in the changing economic realities. This requires them to keep abreast of the latest developments in various Industries and other business domains. The Institute is focused on building valuable capacity of the CMA professionals and to educate, engage and execute newer and desirable approaches to sustainable growth through research, publications, seminars and conferences involving diverse domain expertise.

I hope the Members in Industry Committee would meet up to the expectations of the members and other stakeholders of the Institute and support the Institute to take the CMA profession at greater heights.

My best wishes to the Members of the Committee.

With Warm Regards,

CMA Balwinder Singh
President
The Institute of Cost Accountants of India

MESSAGE

CMA Biswarup Basu
Vice President &
Chairman, Members in Industry Committee
The Institute of Cost Accountants of India

Greetings!!!

We are pleased to continue with publication of the CMAs' Industry Bulletin, an e-journal from the Members in Industry Committee for our esteemed readers. The readers have expressed their heartfelt appreciation for this circulation and we are grateful to our readers for this admiration. We are happy to note that members are benefitted from this publication as lot of research and dedication is being devoted to come out with Industry facts that are up-to-date and provide authentic sources of information to our members in Industry. We would do our utmost to incorporate more and more articles from the industry experts and increase the value addition of this bulletin.

In enterprises today, technology is being a major game changer of the modern economics of industries. The ongoing manufacturing revolution is not only increasing productivity and shifting economics, but also fostering industrial growth, and modifying the profile of the workforce, ultimately changing the competitiveness of companies and regions. Keeping in view the objective of developing a professional body of members and to play a vital role in the context of providing leadership, the Members in Industry Committee would be embarking on programmes of sharing, disseminating and providing a platform for interaction of our members and industry experts.

Hope you will enjoy reading this issue of CMAs' Industry Bulletin.

CMA Biswarup Basu
Vice President &
Chairman, Members in Industry Committee
The Institute of Cost Accountants of India

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MUTUAL FUND SCHEME RATIONALIZATION: A PROGRESSIVE STEP TOWARDS SIMPLIFYING INVESTING IN MUTUAL FUNDS

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Introduction

The rationalization in mutual fund schemes implemented by Securities and Exchange Board of India, the securities market regulator, has been a progressive step that has transformed the mutual fund investing experience for various stakeholders. The new guidelines and modifications thereon offer the much required clarity for fund managers, financial advisors and more importantly for common investors. This report documents the prospects of rationalization and its impact on various industry stakeholders.

1.0 GENESIS OF MUTUAL FUNDS IN INDIA

Even if you are crawling, you have to keep moving can be an analogy for the growth of mutual funds in India ever since this concept was officially presented and introduced in the year 1963 through the Act of Parliament. In 1964 mutual funds was formally born as an investment medium under the name of "Unit Scheme 64." Mutual funds were brought under an Act that facilitated every type of investors to invest indirectly in equity and debt markets through objective driven portfolios designed and managed by professional fund managers who are employed by asset management companies. Required regulations were introduced that was framed and overseen directly by the government before a formal regulatory body was institutionalized during early 1990s, through SEBI Act, 1992. As on December 2018 the assets under management stood at an impressiveRs.24.00 lakh crore mirroring the growth path.

Introduction of mutual funds was an attempt to mobilize savings of the small investors who were not well-versed in the operations of the financial markets. During the discussion in the Parliament, then in 1964 at the time of introduction, it was mentioned that, "the man who knows something about these things (financial markets) has not got the money and the man who knows nothing about this is afraid to invest in securities not knowing what will happen to his money." Hence, to make the investing process and experience efficient and effective simplicity of categories and schemes were the key requirements for the government besides ease of investing. Over these years mutual funds have gone through several amendments, changes and modifications under the watchful eye of Securities and Exchange Board of India or SEBI. Strong and robust regulations were framed under the watchful eyes of the regulator and the important reforms are chronicled herein:

1.1 Reforms in Mutual Fund industry

1993: Mutual Fund industry opened for private sector

1995: Association of Mutual Fund Industry (AMFI) was formed under the aegis of SEBI to develop the Indian Mutual Fund industry on professional, healthy and ethical lines and to enhance and maintain standards in all areas with a view to protecting the interests of mutual fund investors

1995: RBI allows mutual funds to set up money market mutual fund schemes facilitating exclusive investments in money market instruments

1996: Comprehensive Mutual Fund regulations introduced replacing 1993 regulations

2004: Long term capital gains on equity stocks and equity mutual funds abolished making gains beyond one year of staying invested from equity oriented products fully exempt from any type of taxes subject to paying of STT

2008: Introduction of KYC based investing in mutual funds

2009: Entry loads abolished across all types of mutual fund schemes making it less expensive for investors

2013: Introduction of Direct Plan option that reduced the expense incidence on the NAV for investors

2017: Categorization and Rationalization of mutual fund schemes to make it easy for investors to evaluate and compare different options available before investing in a scheme

2018: Total Return Index or TRI introduced that considers dividend and interest payments that are generated across equity and debt securities

2018: Government decides to impose 10% long term capital gains tax for equity oriented investments on gains above Rs.1.00 lakh

Source: Self compiled from various sources

2.0 MUTUAL FUND SCHEME CATEGORIES & INVESTOR RISK PROFILE CLASSIFICATION

Over the years the market regulator has been proactive in protecting the interest of common investors and to this effect there have been frequent changes in the composition of mutual fund categorizations and schemes across both debt and equity categories. The earlier practiced categorization of themes is displayed through Exhibit-1.

EXHIBIT -1: OLD MODEL OF SCHEME CATEGORIZATION (BEFORE RECATEGORIZATION)

CATEGORIES	SCHEME OBJECTIVES
Growth Oriented Funds	Pure Equity Schemes
Income Oriented Funds	Pure Debt Schemes
Balanced Funds	Blend of equity & debt
Liquid & Money Market Funds	Short Term Debt
Gilt Funds	Long Term Debt
Equity Linked Savings Schemes	Tax Saving Under Sec. 80C
Fund of Funds	Investing in multiple mutual funds

Source: Mutual Funds – Products & Services, book prescribed by Indian Institute of Banking & Finance; 2010 edition; Taxmann Publications, New Delhi

These categories were the benchmark across all fund houses and their respective fund managers to design portfolios that met the objectives of different types of investors who were indicatively classified as,

(1) Conservative
(2) Moderate
(3) Moderately Aggressive
(4) Aggressive

The schemes that were launched were brought under any of the categories as mentioned above and broadly equity oriented schemes were classified under "growth" while those that were part of debt got classified under "income" schemes.

3.0 DUPLICATION OF SCHEMES CONFUSING INVESTORS UNDER EARLIER REGIME

Over the years SEBI realized that the themes and schemes were confusing investors who were unable to differentiate the schemes under "growth", "income" and the rest of the categories that had gradually began to be counterproductive for the investment objectives rather than offering solutions since mutual funds are more of solutions to financial goals than being just products. Mutual fund houses had launched numerous schemes under the same categories but under different names that compounded the confusion for investors who could not clearly differentiate while investing that led to multiple investments by the same investors in similar themes/categories.

An illustrative sample has been presented through Exhibit - 2 from the fund house – Aditya Birla Sun Life Asset Management Company. Multiple schemes under single category of theme can be clearly observed.

EXHIBIT - 2: ADITYA BIRLA SUN LIFE MUTUAL FUND (SCHEMES PRIOR TO RATIONALIZATION)

Sl. No.	SCHEME NAMES	CATEGORY
1	Aditya Birla Sun Life Cash Plus	Money Market
	Aditya Birla Sun Life Cash Manager Fund	
2	Aditya Birla Sun Life MIP II - Wealth 25 Plan	Debt Hybrid
	Aditya Birla Sun Life MIP	
	Aditya Birla Sun Life Monthly Income Plan	
	Aditya Birla Sun Life MIP II - Savings 5 Plan	
3	Aditya Birla Sun Life Frontline Equity Fund	Large Cap
	Aditya Birla Sun Life Top 100 Fund	

Note: Randomly chosen fund house for illustration purpose; only three relevant scheme examples has been considered for brevity

Source: Aditya Birla Sun Life Mutual Fund Factsheet for March 2018

4.0 CANADIAN MUTUAL FUND INDUSTRY SHOWING THE WAY FOR RATIONALIZATION OF THEMES

Even before the rationalization was considered in India in 2017, the mutual fund industry in Canada had proposed similar changes during 2013 which was successfully implemented during 2015that was aimed at bringing transparency and consistency leading for the investors to compare their risk levels of different categories and schemes before investing. The Canadian Securities Administration believed that the rationalization would benefit investors and other market participants as well.

Perhaps, taking a cue from this successful implementation in Canada the market regulator in India too seemed to be inspired to bring similar changes that benefited investors and market participants alike. From the details mentioned in Exhibit- 2 it can be noticed that there were visible duplication of schemes that indeed could have confused investors before and after investing. These anomalies were found across almost every fund house and considering there are 44 asset management companies in India the move by SEBI to rationalize the schemes seem justifiable.

5.0 RATIONALIZATION OF SCHEMES & THEMES

Thus began the arduous process of standardization and rationalization of categories and schemes; SEBI directed all mutual fund houses through an official circular issued on October 6, 2017 to bring their existing schemes under single categories and asked to discontinue duplication of schemes. The undertone of the circular was to have only one scheme under each defined categories that were demarcated with more clarity and purpose further enabling investors to align the categories with their investment objectives. The revised categorization is displayed through Exhibit - 3:

EXHIBIT - 3: MUTUAL FUND CATEGORIES POST RATIONALIZATION	
SCHEMES	**PORTFOLIO OBJECTIVES**
Equity Schemes	Exposure to equity stocks: 0 - 100% (including tax saving schemes)
Debt Schemes	Exposure to debt instruments: 0 - 100%
Hybrid Schemes	Exposure up to 65% into equity: Aggressive Hybrid
	Exposure up to 25% into debt: Conservative Hybrid
	Exposure to equity & debt from 0% to 100%: Dynamic Hybrid
Solution Oriented Schemes	Retirement / Children Education
Other Schemes	Index funds, Fund of Funds, Global Markets & Stocks

Source: SEBI Circular dated 6th Oct 2017; URL accessed on 19.12.2018

6.0 CATEGORIZING COMPANIES BASED ON MARKET CAPITALIZATION

Further, SEBI made it mandatory for all fund houses to replace the existing schemes either by merging or renaming with the newly directed categorization with defined purpose or objective behind the schemes. Each scheme's investment objective, investment strategy and benchmark were asked to be suitably modified. Further, the market regulator simplified the classification of market capitalization of companies under three categories and Association of Mutual Funds in India or AMFI, the governing body for mutual funds in India was directed by SEBI to classify the listed stocks on stock exchanges under the newly defined market capitalization categories based on the largest to smallest market capitalization on full market capitalization basis.

Among the listed companies the first 150 companies were classified as Large Cap, the next 150 companies as Mid Cap and the rest as Small Cap.

7.0 REVISED CATEGORY OF SCHEMES & UNDERLYING OBJECTIVES

The mutual fund houses were directed to align their existing schemes with the new and revised categorization of themes and avoid duplication of schemes. Mutual fund houses began to make such modifications from April 2018 onwards based on the below sub-categories as defined by SEBI. Between April and June 2018 every fund house successfully concluded the alignment with their existing themes and schemes as per the new directive and the new-look schemes were made available for investors – both existing as well as new investors.

After the changes and modifications Aditya Birla Sun Life Mutual Fund rechristened the names of certain schemes by merging and/or renaming them; the scheme names and categorization is exhibited as Exhibit – 4.

EXHIBIT - 4: ADITYA BIRLA SUN LIFE MUTUAL FUND (SCHEMES POST-RATIONALIZATION)	
NEW SCHEME NAME	**CATEGORY**
Aditya Birla Sun Life Liquid Fund	Money Market
Aditya Birla Sun Life Regular Savings Fund	Debt Hybrid
Aditya Birla Sun Life Frontline Equity Fund	Large Cap

Source: Self compiled from Cams online, India's largest mutual funds Registrar & Transfer Agents; URL accessed on 19.12.2018; only three relevant scheme examples has been considered for brevity

The rationalization shown in Exhibit-4above noticeably offers better clarity for investors compared to earlier followed practice as displayed in Exhibit-2.

8.0 IMPACT FOR THE FUND HOUSES & INVESTORS

The impact post-rationalization has been constructive with long term positives outclassing the near term negatives.

8.1 Near Term Impact:

(1) Changes in portfolio composition leading to churning in the underlying securities

(2) Short term impact on the scheme's performance due to changes in the portfolio composition

(3) Fund managers may initially find it difficult with the changes leading for gaps in generating alpha against the chosen benchmark of indices

8.2 Long Term Impact:

(1) Assist investors with the uniform standardization of themes
(2) One theme and one scheme brings investing clarity
(3) Reduction in wrong choices of schemes before investing

9.0 CONCLUSION

The steps taken by the market regulator is in the right direction and with good intention to further strengthen the belief of common investors in mutual funds as a medium of wealth preservation & creation. For an organic growth of the mutual fund industry taking investors into confidence is imperative and investors should invest in mutual funds as a solution for their financial goals. The categorization and rationalization of schemes can be seen as a step in the right direction that provides simplicity of identifying the category/theme and subsequently the scheme that meets specific investment objectives. As reported by CRISIL this move by SEBI would bring more clarity among the investors that would auger well for the growth of the industry that alongside solves investing problems too.

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PRODUCTION STATISTICS OF CRUDE OIL

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Introduction

Crude oil is the unrefined petroleum that is extracted from deposits in geological formations beneath the earth's surface. It is a fossil fuel just like coal and natural gas and is used across the globe in a variety of forms. Crude oil is refined to produce commercial fuels such as petrol, diesel and jet fuel, domestic fuels like LPG and kerosene and numerous industrial chemicals and solvents such as naphtha, wax, asphalt and so on. Besides this, the various by-products of petroleum refining are used to manufacture a variety of other products such as plastics, artificial fabric, lubricants, greases,and other industrial chemicals and chemical intermediates. Due to its versatility and universal usage crude oil is an extremely valuable natural resource, one whose production, distribution and availability impacts the world economy in a major way. Since oil is the dominant fuel for all kinds of transportation, fluctuations in the global oil prices have a cascading effect on the prices of almost all types of goods and services more so in countries which are heavily dependent on petroleum imports.

Crude Oil - Classification

Though all crude is essentially made of the same components, oil produced in different oilfields have different compositions which determine the type, value, and volume of the final products that can be economically recovered from it. Usually, the higher the percentage of valuable products in the oil or the easier it is to extract these, the higher the price of that variety. Generally, crude oil is classified and valued based on the following parameters.

1. The most important parameter is the geographic location of the oilfields producing the crude and often is named after this location. For example,Brent crude, which serves as a major benchmark for the global oil trade, was originally sourced from the Brent oilfieldsin the North Sea. The location of the oilfield affects the total production cost due to the transport coststhat must be incurred to movethe oil from its production site to the refineries.Most often undersea pipelines or cross-country pipelines are built to transport crude from one place to another. To minimize transport costs generally, refineries are set up near major oilfields or at places which have excellent connectivity to them, such as major ports.

2. Another major differentiator is the density of the crude as measured by its API gravity. Depending on the API gravity crude oil is classified as light, medium, heavy and extra-heavy. Usually crude with API greater than 31.1 is classified as light crude and that between 22.3 and 31.1 as medium crude. Crude with API gravity of less than 22.3 is classified as heavy and that less than 10 as extra-heavy. However, these values are not applied consistently across the world and the final determinant is the geographic location of the crude oil in question.

   Light crude is easier to extract and process than heavy or extra-heavy crude as it is a liquid at room temperature, flows easily and yields a greater amount of petrol. Due to these features light crude is more desirable and hence more valuable. About 30% of the global petroleum reserves are light oil. Heavy oil, on the other hand, is denser and more viscous than light crude which increases the production cost at the refinery. Moreover,

due to the high viscosity transporting heavy oil requires specialized equipment such as heated pipelines or heated oil tankers which add to the total cost for the refiner. These make heavy oil cheaper. However, it is more abundant and huge deposits have been discovered at numerous sites and at much lesser depths than light crude thus making them more accessible. So, production of heavy oil has increased over the years inspite of the higher cost.

3. Petroleum is also classified as sweet or sour depending on the amount of sulphur in it. Crude with a sulphur content of less than 0.5% is considered as sweet while sour crude contains more than 0.5% of sulphur. Sweet crude has many advantages over sour crude because of which it commands a greater premium. It is easier to transport, process and refine and is environmentally better as it gives off less sulphur (a highly corrosive element and responsible for air pollution and acid rain) when burnt as a fuel thus making it more desirable. On the other hand, oil with a sulphur content of greater than 0.5% requires special processing and is more degrading to the environment.

   For example, Brent crude is a sweet light crude oil, meaning it has a sulphur content of less than 0.5% and has a low density (between 22.3 and 31.1).

4. The wax content in the distillation residue is also used to classify crude oil. Crude with a paraffin base contains more than 5% wax while asphalt base has less than 2% wax in it. Paraffin base crude has a higher content of lubricating oil and kerosene while asphalt base crude is more suitable for producing petrol which is much more valuable as a fuel and hence fetches a higher price. Moreover, paraffin base oil has a higher pour point meaning it needs a higher temperature to flow making it more expensive to transport, process and refine.

5. Presence of water, dissolved salts, sediments, and metallic compounds also impact the quality and price of the crude. These impurities cause operational difficulties, induce rusting of equipment, contaminate the end products and generally make it harder for the refiners to process the oil and extract the final products, thus driving up the costs.

Crude Oil - Reserves and Production

While petroleum deposits are found across the world its distribution is not uniform with some regions, such as the middle-east, better endowed with this valuable resource than others. Often, new discoveries are not considered as part of official oil reserves unless commercial feasibility is proven. For example, oil trapped in the depths of the ocean-beds or in oil shale cannot be mined at a commercial scale due to the difficult terrain, high costs and lack of technology. Similarly, commercial exploration of new finds in ecologically fragile environments is often not allowed because of environmental concerns. Such fields even if containing major deposits are excluded from the official figures unless these are commercially exploitable.

Chart 1 here shows the recoverable oil reserves in different regions of the world.

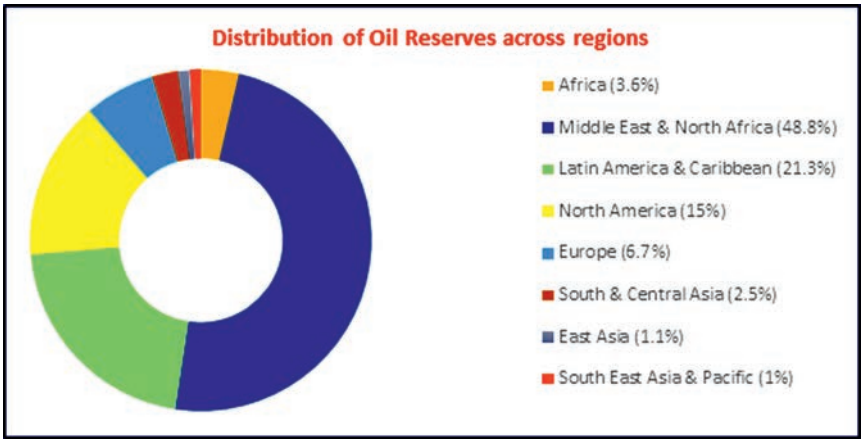

Chart 1: Global recoverable oil reserves. Source: World Energy Council, 2016 data

As evident from the chart, the most oil-rich region is the Middle-East followed by Latin America and then North America, together comprising 85% of the known oil reserves on the planet. However, the country with the largest proven oil reserves is Venezuela in South America with more than 300 billion barrels accounting for 20% of global reserves and far exceeding the 266 billion barrels of reserves of Saudi Arabia.

When it comes to oil production, in some of the regions, such as parts of the middle-east, Canada, USA, the UK and Russia, oil was discovered over a century ago and huge investments were made by visionary business leaders early-on. They set up oil companies not just within their countries but also entered into joint ventures with foreign governments or bought the rights to their vast oilfields. Due to such early capital outlays the oil industry in these regions are well developed and together they produce and export the lion's share of the global crude output. Global oil majors like Exxon Mobil, Shell, and British Petroleum are few such companies that have oil assets in many countries across the world.

Among all the oil-producing countries Saudi Arabia's output and infrastructure are the largest. Its government-owned national oil producer, Saudi Aramco, is the largest oil producing company in the world by total revenues and operates the largest oil fields, both on land and offshore. Moreover, it is also the swing producer of crude in the world with the ability to increase or decrease its production levels at a short notice with minimal incremental cost, and thus can influence global oil prices and provide protection from sudden fall in oil prices. Besides Saudi Arabia, other Gulf countries such as Iraq, Iran, Kuwait, Qatar, and UAE have also made significant investments in this field and have a major share in the global oil market. After Saudi, USA is the second biggest producer and the largest consumer of crude accounting for about 20% of the global consumption.

Statistics of the amount of recoverable reserves and annual production of crude in the top ten oil producing countries as of 2016 is summarised here in table 1 while chart 2 shows the production figures graphically.

Country	Reco. Reserves (billionbarrels)	Reco. Reserves (milliontonnes)	Annual Prod. (milliontonnes)
Saudi Arabia	266	36618	569
USA	264	6608	567
Russia	103	14024	541
Canada	172	27755	216
China	19	2521	215
Iraq	147	19308	197
Iran	156	21676	183
UAE	98	12976	176
Kuwait	102	13981	149
Venezuela	303	46971	135

Table 1: Reserves and Production data of the top 10 oil producers.

Source: World Energy Council, 2016 data

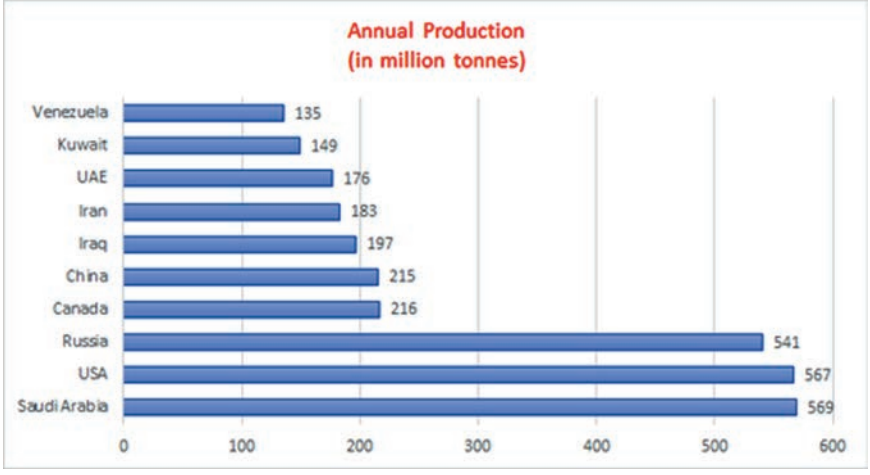

Chart 2: Annual crude oil production of top 10 producers.

Source: World Energy Council, 2016 data

In recent times, unconventional oil resources such as oil shale and oil sand deposits have been discovered in several oil-rich regions, especially on the North American continent. Of the total 172 billion barrels of crude in Canada, roughly 116 billion barrels are in oil sands proving that unconventional petroleum sources can be a major source of crude in the future. With the advancement of technology many oilfields which were not exploitable before are now available for production adding to the total petroleum reserves.

Conclusion

Constant advances in technology have made it possible to explore hitherto unexplored areas and oil exploration is being encouraged by many countries including India leading to an increase in the estimated oil reserves of several countries. Current technologies now allow extraction from deeper oil wells as well as from unconventional sources such as oil sands and oil shale. Availability of better shipping facilities and trans-national pipelines to transport the product within a short time and at reasonable cost have further improved the prospects of the oil industry. On the other hand, these developments have had a major environmental impact globally and have caused widespread damage to other natural resources such as the atmosphere, the seas, and marine life, arable land, and drinking water supply. Hence, the need is to have sustainable goals which will satisfy global energy needs while keeping the environmental impact to a bare minimum.

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A HELICOPTER VIEW ON IPv6

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Introduction

Information technology has registered a handsome growth in the past few years. This is a dynamic sector, as technology keeps on evolving. One needs to catch up with the latest to keep themselves updated with sector. Before discussion of any version of Internet Protocol, let us understand what is Internet Protocol (IP)? IP (short for Internet Protocol) specifies the technical format of packets and the addressing scheme for computers to communicate over a network. Most networks combine IP with a higher-level protocol called Transmission Control Protocol (TCP), which establishes a virtual connection between a destination and a source.

IP by itself can be compared to something like the postal system. It allows you to address a package and drop it in the system, but there's no direct link between you and the recipient. TCP/IP, on the other hand, establishes a connection between two hosts so that they can send messages back and forth for a period of time.

Now, It looks good to understand Internet Protocol version 6 (IPv6) as it is the most recent version of the Internet Protocol (IP), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet.

IPv6 (Internet Protocol Version 6) is also called IPng (Internet Protocol next generation) and it is the newest version of the Internet Protocol (IP) reviewed in the IETF standards committees to replace the current version of IPv4 (Internet Protocol Version 4).

The official name of IPng is IPv6, where IP stands for Internet Protocol and v6 stands for version 6.

Why need of IPv6 arise?

The most obvious answer is that IPv4 is out of IP addresses. it does not utilizes 128-bit addressesIPv6 uses 128-bit addresses and is capable of 340 undecillion addresses. That is 340 times 10 to the 36th power or 340 trillion trillion trillion possible IP addresses.

What is IPv6 (Internet Protocol Version 6)?

IPv6 is the successor to Internet Protocol Version 4 (IPv4). It was designed as an evolutionary upgrade to the Internet Protocol and will, in fact, coexist with the older IPv4 for some time. IPv6 is designed to allow the Internet to grow steadily, both in terms of the number of hosts connected and the total amount of data traffic transmitted.

IPv6 is often referred to as the "next generation" Internet standard and has been under development now since the mid-1990s. IPv6 was born out of concern that the demand for IP addresses would exceed the available supply.

Ipv6 also implements features not present in IPv4. It simplifies aspects of address configuration, network renumbering, and router announcements when changing network connectivity providers. It simplifies processing of packets in routers by placing the responsibility for packet fragmentation into the end points.

Mechanism of Ipv6

An IPv6 packet has two parts: a header and payload.

The header consists of a fixed portion with minimal functionality required for all packets and may be

followed by optional extensions to implement special features.

The fixed header occupies the first 40 octets (320 bits) of the IPv6 packet. It contains the source and destination addresses, traffic classification options, a hop counter, and the type of the optional extension or payload which follows the header. This Next Header field tells the receiver how to interpret the data which follows the header. If the packet contains options, this field contains the option type of the next option. The "Next Header" field of the last option, points to the upper-layer protocol that is carried in the packet's payload.

Extension headers carry options that are used for special treatment of a packet in the network, e.g., for routing, fragmentation, and for security using the IPsec framework.

Without special options, a payload must be less than 64kB. With a Jumbo Payload option (in a Hop-By-Hop Options extension header), the payload must be less than 4 GB.

Benefits of Ipv6

While increasing the pool of addresses is one of the most often-talked about benefit of IPv6, there are other important technological changes in IPv6 that will improve the IP protocol:

- No more NAT (Network Address Translation)
- Auto-configuration
- No more private address collisions
- Better multicast routing
- Simpler header format
- Simplified, more efficient routing
- True quality of service (QoS), also called "flow labelling"
- Built-in authentication and privacy support
- Flexible options and extensions
- Easier administration (say good-bye to DHCP)

Conclusions

The deployment of IPv6 networks is growing worldwide. Full replacement of IPv4 is expected to take some time, as it remains the most widely used Internet Protocol. The United States, China, and India are leading recent deployments of the IPv6 protocol and have large investments in IPv6 network infrastructure. The United States government has mandated that federal agencies must complete the transition to an IPv6 infrastructure no later than 2008. Software companies are also releasing operating systems that support the IPv6 standard. In 1997, IBM became the first commercial vendor to support IPv6 through its AIX 4.3 operating system. The latest version of Microsoft's Windows operating system, Windows Vista, has full IPv6 support enabled by default.

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Industry Focus - Cement Industry

Introduction

India is the second largest producer of cement in the world. No wonder, India's cement industry is a vital part of its economy, providing employment to more than a million people, directly or indirectly. Ever since it was deregulated in 1982, the Indian cement industry has attracted huge investments, both from Indian as well as foreign investors.

India has a lot of potential for development in the infrastructure and construction sector and the cement sector is expected to largely benefit from it. Some of the recent major initiatives such as development of 98 smart cities are expected to provide a major boost to the sector.

Expecting such developments in the country and aided by suitable government foreign policies, several foreign players such as Lafarge-Holcim, Heidelberg Cement, and Vicat have invested in the country in the recent past. A significant factor which aids the growth of this sector is the ready availability of the raw materials for making cement, such as limestone and coal.

Market Size

Cement production capacity stood at 502 million tonnes per year (mtpy) in 2018. Capacity addition of 20 million tonnes per annum (MTPA) is expected in FY19-FY 21.
The Indian cement industry is dominated by a few companies. The top 20 cement companies account for almost 70 per cent of the total cement production of the country. A total of 210 large cement plants account for a cumulative installed capacity of over 410 million tonnes, with 350 small plants accounting for the rest. Of these 210 large cement plants, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.

Investments

According to data released by the Department of Industrial Policy and Promotion (DIPP), cement and gypsum products attracted Foreign Direct Investment (FDI) worth US$ 5.28 billion between April 2000 and March 2018.

Some of the major investments in Indian cement industry are as follows:

- As of December 2018, Raysut Cement Company is planning to invest US$ 700 million in India by 2022.
- During 2017-18, Ultratech commissioned a Green field clinker plant with a capacity of 2.5 MTPA and a cement grinding facility with 1.75 MTPA capacities in Dhar, Madhya Pradesh. The company is expecting to complete a 1.75 MTPA cement grinding facility and a 13 MW waste heat recovery system by September 2018 at the same location.
- JK Cement is planning to invest Rs 1,500 crore (US$ 231.7 million) over the next 3 to 4 years to increase its production capacity at its Mangrol plant from 10.5 MTPA to 14 MTPA.

Government Initiatives

In order to help the private sector companies thrive in the industry, the government has been approving their investment schemes. Some such initiatives by the government in the recent past are as follows:

In Budget 2018-19, Government of India announced setting up of an Affordable Housing Fund of Rs 25,000 crore (US$ 3.86 billion) under the National Housing Bank (NHB) which will be utilised for easing credit to homebuyers. The move is expected to boost the demand of cement from the housing segment.

Road Ahead

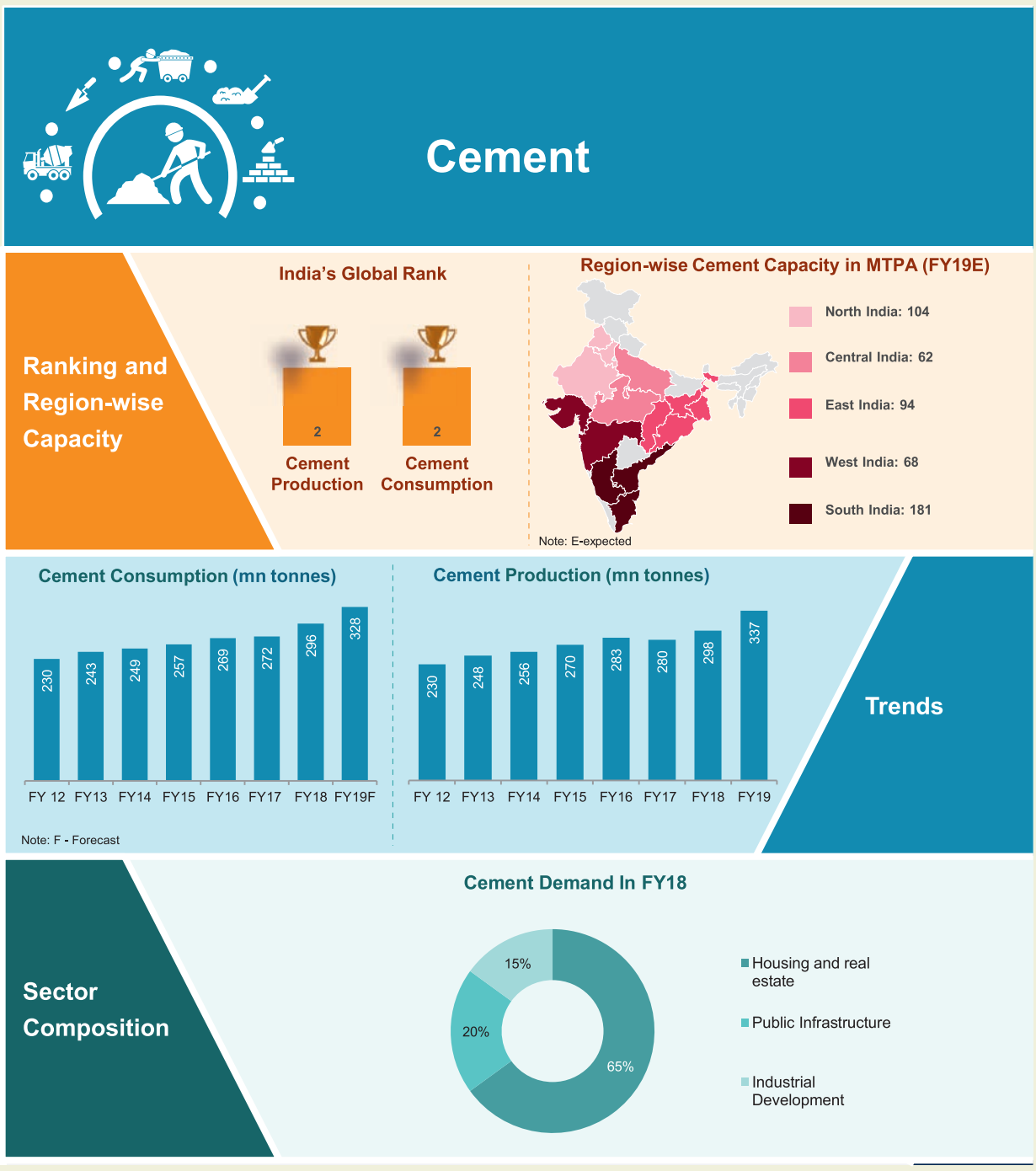
The eastern states of India are likely to be the newer and virgin markets for cement companies and could contribute to their bottom line in future. In the next 10 years, India could become the main exporter of clinker and gray cement to the Middle East, Africa, and other developing nations of the world. Cement plants near the ports, for instance the plants in Gujarat and Visakhapatnam, will have an added advantage for exports and will logistically be well armed to face stiff competition from cement plants in the interior of the country.Cement-June-2019.

Due to the increasing demand in various sectors such as housing, commercial construction and industrial construction, cement industry is expected to reach 550-600 Million Tonnes Per Annum (MTPA) by the year 2025.

A large number of foreign players are also expected to enter the cement sector, owing to the profit margins and steady demand.

References: Media Reports, IBEF, Press releases, Union Budget 2018-19, Edelweiss Securities Ltd.

Disclaimer: This information has been collected through secondary research and the Institute is not responsible for any errors in the same.



Industry Focus - Textiles Industry

Introduction

India's textiles sector is one of the oldest industries in Indian economy dating back several centuries. India's overall textile exports during FY 2017-18 stood at US$ 39.2 billion in FY18 and is expected to increase to US$ 82.00 billion by 2021 from US$ 31.65 billion in FY19 (up to Jan 19).

The Indian textiles industry is extremely varied, with the hand-spun and hand-woven textiles sectors at one end of the spectrum, while the capital intensive sophisticated mills sector at the other end of the spectrum. The decentralised power looms/ hosiery and knitting sector form the largest component of the textiles sector. The close linkage of the textile industry to agriculture (for raw materials such as cotton) and the ancient culture and traditions of the country in terms of textiles make the Indian textiles sector unique in comparison to the industries of other countries. The Indian textile industry has the capacity to produce a wide variety of products suitable to different market segments, both within India and across the world.

Market Size

The Indian textiles industry, currently estimated at around US$ 150 billion, is expected to reach US$ 250 billion by 2019. India's textiles industry contributed seven per cent of the industry output (in value terms) of India in 2017-18.It contributed two per cent to the GDP of India and employs more than 45 million people in 2017-18.The sector contributed 15 per cent to the export earnings of India in 2017-18.

The production of raw cotton in India is estimated to have reached 36.1 million bales in FY19^.

Investment

The textiles sector has witnessed a spurt in investment during the last five years. The industry (including dyed and printed) attracted Foreign Direct Investment (FDI) worth US$ 3.12 billion during April 2000 to March 2018.

Some of the major investments in the Indian textiles industry are as follows:

- In May 2018, textiles sector recorded investments worth Rs 27,000 crore (US$ 4.19 billion) since June 2017.
- The Government of India announced a Special Package to boost exports by US$ 31 billion, create one crore job opportunities and attract investments worth Rs 800.00 billion (US$ 11.93 billion) during 2018-2020. As of August 2018, it generated additional investments worth Rs 253.45 billion (US$ 3.78 billion) and exports worth Rs 57.28 billion (US$ 854.42 million).

Government Initiatives

The Indian government has come up with a number of export promotion policies for the textiles sector. It has also allowed 100 per cent FDI in the Indian textiles sector under the automatic route.

Initiatives taken by Government of India are:

- The Directorate General of Foreign Trade (DGFT) has revised rates for incentives under the Merchandise Exports from India Scheme (MEIS) for two subsectors of Textiles Industry - Readymade garments and Made ups - from 2 per cent to 4 per cent.
- As of August 2018, the Government of India has increased the basic custom duty to 20 per cent from 10 per cent on 501 textile products, to boost Make in India and indigenous production.
- The Government of India announced a Special Package to boost exports by US$ 31 billion, create one crore job opportunity and attract investments worth Rs 80,000 crore (US$ 11.93 billion) during 2018-2020. As of August 2018 it generated additional investments worth Rs 25,345 crore (US$ 3.78 billion) and exports worth Rs 57.28 billion (US$ 854.42 million).
- The Government of India has taken several measures including Amended Technology Up-gradation Fund Scheme (A-TUFS), scheme is estimated to create employment for 35 lakh people and enable investments worth Rs 95,000 crore (US$ 14.17 billion) by 2022.
- Integrated Wool Development Programme (IWDP) approved by Government of India to provide support to the wool sector starting from wool rearer to end consumer which aims to enhance the quality and increase the production during 2017-18 and 2019-20.
- The Cabinet Committee on Economic Affairs (CCEA), Government of India has approved a new skill development scheme named 'Scheme for Capacity Building in Textile Sector (SCBTS)' with an outlay of Rs 1,300 crore (US$ 202.9 million) from 2017-18 to 2019-20.

Achievements

- Following are the achievements of the government in the past four years:
- I-ATUFS, a web-based claims monitoring and tracking mechanism was launched on April 21, 2016.
- 381 new block level clusters were sanctioned.
- 20 new textile parks were sanctioned.
- Employment increased to 8.62 million in FY18 from 8.03 in Fy15.

Road Ahead

The future for the Indian textile industry looks promising,

buoyed by both strong domestic consumption as well as export demand. With consumerism and disposable income on the rise, the retail sector has experienced a rapid growth in the past decade with the entry of several international players like Marks & Spencer, Guess and Next into the Indian market.

High economic growth has resulted in higher disposable income. This has led to rise in demand for products creating a huge domestic market.

Exchange Rate Used: INR 1 = US$ 0.0159 in Fy19.

References: Ministry of Textiles, Indian Textile Journal, Department of Industrial Policy and Promotion, Press Information Bureau

Note: ^ - during the cotton season October–September

References

Media Reports, Press Releases, IBEF, Press Information Bureau (PIB), April'19 report by EY

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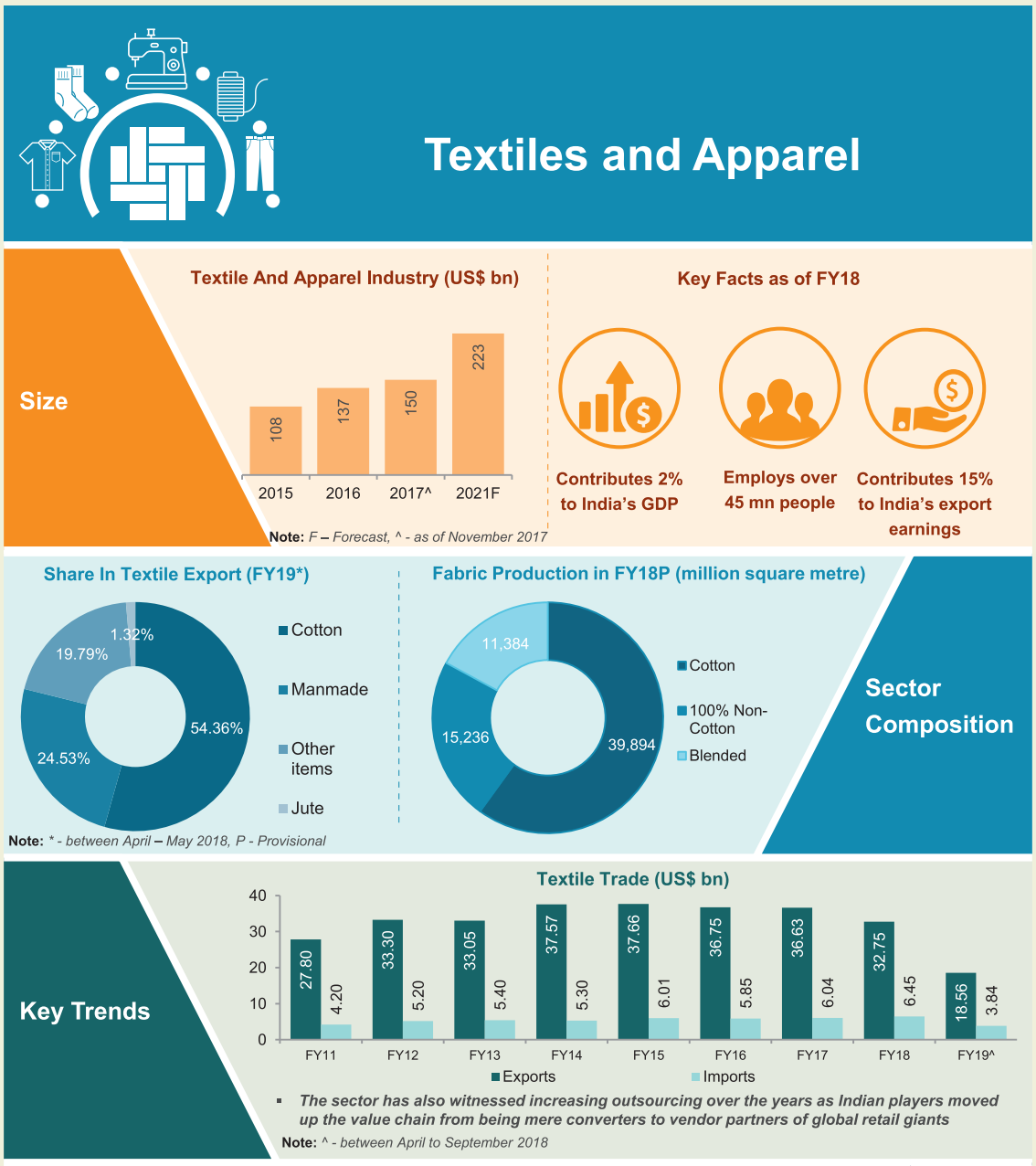

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