Fine Organic Industries Limited

Issue Snapshot:

Issue Open: June 20 – June 22, 2018

Price Band: Rs. 780 – 783

Issue Size: 7,664,994 Equity Shares (Entirely Offer for sale)

Offer Size: Rs.597.87 crs – 600.17 crs

QIB	Upto	3,832,496 eq sh
Retail	atleast	2,682,748 eq sh
Non Institutional	atleast	1,149,750 eq sh

Face Value: Rs 5

Book value: Rs 114.65 (Dec 31, 2017)

Bid size: - 19 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity:	Rs. 15.33 cr
Post issue Equity:	Rs. 15.33 cr

Listing: BSE & NSE

Book Running Lead Manager: JM Financial Limited, Edelweiss Financial Services Limited

Registrar to issue: Karvy Computershare Private Limited

Shareholding Pattern

Shareholding Pattern	Pre issue %	*Post issue %
Promoter and Promoter Group	100.0	75.0
Public & Others	-	25.0
Total	**100.0**	**100.0**

Source for this Note: RHP

Background & Operations:

Fine Organic Industries Ltd (FOIL) is the largest manufacturer of oleochemical-based additives in India and a strong player globally in this industry. It produces a wide range of specialty plant derived oleochemical-based additives used in food, plastic, cosmetics, paint, ink, coatings and other specialty application in various industries. As at March 31, 2018, it had a range of 387 different products sold under the "Fine Organics" brand. It is the first company to introduce slip additives in India and is the largest producer of slip additives in the world. Success is the result of sustained efforts over the decades in all areas of its business, such as product innovation, process technology improvements, increases in scale, improved raw material procurement and focus on cultural understanding of consumers. In the 12 months ended March 31, 2018, FOIL had 631 direct customers (i.e., end-users of its products) and 127 distributors (who sold its products to more than 5,000 customers) from 69 countries. Its direct customers are multinational, regional and local players manufacturing consumer products and petrochemical companies and polymer producers globally. Its plastics additives and specialty additives are also used in the packaging of foods and other fast moving consumer goods.

FOIL currently has three production facilities: one in Ambernath (Maharashtra) (the'First Ambernath Facility'); one in Badlapur (Maharashtra) (the 'Badlapur Facility'); and one in Dombivli (Maharashtra) (the 'Dombivli Facility'). As at March 31, 2017, these three facilities has a combined installed capacity of approximately 64,300 tonnes per annum. Each of its current manufacturing facilities has the ability to manufacture its wide range of products, which provides with the necessary flexibility to cater to changing demands in the market, thereby avoiding dependence on any one major product category. FOIL has developed in-house process design expertise to construct its production facilities. This gives scale advantages by enabling the timely expansion of its capacity in response to market needs and reduces capital expenditure costs for expansions significantly compared to other players. FOIL is currently planning to set up an additional production facility in Ambernath with a planned installed capacity of 32,000 tonnes per annum (the 'Third Ambernath Facility'). It expects it to commence operations in the fourth quarter of Fiscal 2019. In addition, it is currently planning to set up a new production facility in Leipzig, Germany with a planned initial installed capacity of 10,000 tonnes per annum (the 'German Facility'). FOIL expects to commence operations in the third quarter of Fiscal 2020. This facility will be owned and operated by a joint venture company (which it plans to name FineAdd Ingredients GmbH, ('FineAdd')), in which it will have 50% equity interest. The company has a dedicated research and development ('R&D') centre located in Mahape, Navi Mumbai. Its R&D activities are focused on improving production processes, improving the quality of its present products, creating new additives and creating downstream products. It has developed several new products, such as Acetem, Datem and Lactem, and processes, such as in-house technology for the production of fatty amides for the polymer industry. FOIL is currently conducting research and development for new products such as fatty amines, polyglycerols and guerbet alcohols and new organic anti-block additives and new additives to make plastics biodegradable. It is also conducting research into new technologies for chemical processing to minimise energy costs.

Objects of Issue:

The objects of the Offer is to achieve the benefits of listing Equity Shares on the Stock Exchanges and to carry out the sale of up to 7,664,994 Offered Shares by the Promoter Group Selling Shareholders. The listing of Equity Shares will enhance FOIL's Company's brand name and provide liquidity to the existing Shareholders. The listing will also provide a public market for Equity Shares in India. FOIL will not receive any proceeds from the Offer and all the proceeds from the Offer, less Offer related expenses, will go to the Promoter Group Selling Shareholders.

Competitive Strengths

Largest Producer of Oleochemical-based Additives in India and One of the Few Large Players in the Oleochemical based Additives Industry in the World: FOIL is the largest manufacturer of oleochemical-based additives in India and one of the few large players in global oleochemical-based additives industry. It is one of six global players in the food additives industry and one of five global players in the plastic additives industry. The 'Fine Organics' brand has a legacy of over 44 years and the brand is widely recognized in the major markets in which it competes. Although the company has only been operating for over 15 years, the 'Fine Organics' brand has been in use by Promoter Group entities since 1973. It manufactures a wide range oleochemical-based additives in India. It was the first company to introduce slip additives to the Indian market. There are only a few other small players who manufacture oleochemical-based additives in India. However, they have only a partial presence in the oleochemicals-based additives portfolio. It has a huge first-mover advantage in India, alongside various other competitive advantages over other global players. This gives an advantage in pricing products competitively and allows to provide stiff competition to new players. Hence, no major domestic or global player has set up a manufacturing facility in India. Nevertheless, other global payers do have a small market share in India, which they meet with production from their factories globally.

Diversified Product Portfolio Catering to a Variety of High Growth Industries: As at March 31, 2018, FOIL had a range of 387 products sold under the 'Fine Organics' brand, used in the (a) plastic industry and (b) food industry and others (cosmetics, printing inks, coated papers, lube additives, wires and cables, coatings and other specialty applications) industries. The Indian food emulsifiers market is estimated to be worth Rs 5-6 billion in 2016, and is expected to grow to Rs 9 billion by 2021, a CAGR of 10-12% in the period 2016-2021. (Source: CRISIL Research Report). The global food emulsifiers market is expected to grow to USD 3.4 billion by 2021, a CAGR of 4.1% in the period 2016-2021, and this growth is expected to be driven by growth in the Asia-Pacific region, primarily in India and China. (Source: Credence Research (as cited in the CRISIL Research Report). The Indian plastic additives market is estimated to be worth Rs 55-60 billion in 2016, and is expected to grow to Rs 90 billion by 2021, a CAGR of 8-10% in the period 2016-2021 (Source: CRISIL Research Report). The global plastic additives market is expected to grow to USD 30 billion by 2021, a CAGR of 6% in the period 2016-2021, and this growth is expected to be driven by growth in the Asia-Pacific region, primarily in India and China. (Source: Mordor Intelligence (as cited in the CRISIL Research Report)) The market for additives for (a) cosmetics, (b) rubber, and (c) paint and coatings in India is estimated to grow at a CAGR of 10-12%, 6-7% and 8-10%, respectively, in the period 2016-2017 to 2021-2022. (Source: CRISIL Research Report)

Specialised Business Model with High Entry Barriers: There are multiple entry barriers for a new entrant in the global oleochemical-based additives industry, such as product formulations, process technology and customer stickiness to established players. As a result, FOIL is one of the few large global players in this industry. Its products require specialised skills, processes and equipment to manufacture, as manufacturing additives from base oleochemicals, is a highly complex process. Therefore, many of its specialty and formulated products are also difficult to replicate. This provides with a significant advantage over new entrants, as they would need to invest a great deal of resources to gain a foothold in the markets in which FOIL compete.

Flexible and Strategically Located Production Facilities with In-house Development Capabilities: FOIL currently has three manufacturing facilities: the First Ambernath Facility; the Badlapur Facility; and the Dombivli Facility. These three facilities have a combined installed capacity of approximately 64,300 tonnes per annum as at December 31, 2017. Each of its current manufacturing facilities has the ability to manufacture wide range of products. Two of its production facilities, the First Ambernath Facility and the Badlapur Facility, are fully automated. This helps ensure that it will continue to produce high-quality products, as well as minimising the number of employees required to operate them, thereby reducing costs. All three of its production facilities are strategically located in close proximity to the Jawaharlal Nehru (Nhava Sheva) Port located near Mumbai. As FOIL is largely export-oriented, its facilities' locations help to reduce freight and logistics costs. Its facilities require specialised facility design and technologically sophisticated equipment. Its in-house team is capable of designing and assembling production equipment at a much lower cost compared to what a third party contractor would charge. This provides with an advantage over potential competitors and helps to protect intellectual property.

Strong R&D Capability with a Focus on Innovation: FOIL's R&D efforts place significant emphasis on improving production processes, improving the quality of present products, creating new additives and creating downstream products, such as Acetem, Datem, and Lactem. It is in the process of developing a downstream product called Citrem, which is a hydrophilic (attracted to water molecules and water-soluble) emulsifier used in the confectionary industry. It is also developing other blends of existing products for foods, plastics and other applications. Its R&D efforts are driven by customer needs, in terms of meeting specific needs that its direct customers communicate to it prior to manufacturing products. Since April 1, 2014, FOIL has developed and launched 46 new products. It has also developed and recently commercialized a feed nutrition additive based on natural vegetable oils, which it intends to export to selected markets, mainly in Europe and the United States. It has also developed, but not fully commercialized yet, a feed nutrition additive that increases milk yield from cows and Buffaloes and is currently conducting research and development for new products such as fatty amines, polyglycerols and guerbet alcohols, new organic anti-block additives and new additives to make plastics biodegradable. It is also conducting research into new technologies for chemical processing to minimise energy costs.

Diversified Customer Base with Long-Term Relationships with Marquee Customers: FOIL's customer base comprises direct customers and distributors. Direct customers are end-users of its products. Distributors are entities that purchase its products and then on-sell these products. In the 12 months ended March 31, 2018, FOIL had 631 direct customers and 127 distributors (who sold its products to more than 5,000 customers). Its direct customers are multinational, regional and local players manufacturing consumer products and petrochemical companies and polymer producers globally. It has an extensive distribution network in India and worldwide, enabling its products to be sold in 69 countries in the 12 months ended March 31, 2018.

Strong Management Team: FOIL has a strong management team led by Prakash Damodar Kamat, the co-founder and Chairman, as well as an executive director of the Company. He has more than four decades' experience in the oleochemical-based additives sector, having cofounded the first Promoter Group entity along with the late Mr. Ramesh Shah and having joined a Promoter Group entity in 1970. It has a strong team of professionals to manage the core functional areas, such as finance, procurement, manufacturing, logistics, sales and marketing, and human resources.

Business Strategy:

Expand Total Installed Production Capacity and Product Range: Some of FOIL's products are currently manufactured at the Second Ambernath Facility by Olefine on a job-work basis. The Second Ambernath Facility is situated on a plot of land that MIDC currently leases to Olefine.The Company has entered into a leave and license agreement for the land with Olefine for a term of three years effective March 26, 2018. However, it was unable to take over the operation of the Second Ambernath Facility until it receive MIDC's approval, which it received from MIDC pursuant to a letter dated May 21, 2018. It will be taking over operation of the facility in the near future. FOIL is in the process of setting up the Third Ambernath Facility. The planned installed capacity of the Third Ambernath Facility is 32,000 tonnes per annum. It expects it to commence operations in the fourth quarter of Fiscal 2019. It is currently in the preliminary stages of planning to set up the Patalganga Facility. The Company entered into a long-term lease agreement for the land on which it intends to build the Patalganga Facility with MIDC and Neo Wheels Limited, as the confirming party, dated January 30, 2018. FOIL also plans to incorporate FineAdd and for it to set up the German Facility, which will manufacture specialty food emulsifiers and other additives for food.

Expand into Manufacturing Premixes for Bakery and Confectionary Products and Pan Release Agents: Fine Zeelandia currently acts as an exclusive distributor for Zeelandia International Holdings B.V.'s range of premixes for bakery and confectionary products and pan release agents in India, Sri Lanka, Bangladesh and Nepal, but does not currently manufacture these products. The Fine Zeelandia Facility will produce premixes for bakery and confectionary products and pan release agents, in line with its strategy to enter high-growth segments. FOIL plans for the Fine Zeelandia Facility to commence operations by the first quarter of Fiscal 2019. Its planned installed capacity is 10,000 tonnes per annum. Fine Zeelandia's products will be marketed to high-class star hotels, large niche and high-quality bakeries and quick service restaurants. Demand for bakery ingredients in India depends on demand from the end-use bakery industry. CRISIL Research estimates that the market size of the biscuits and bakery products segments was Rs 359,000 million in Fiscal 2016 and its forecast is that the size of the bread and bakery items market in India will grow at the rate of 10-12% over the five-year period Fiscal 2017-2022.

Increase Sales of Higher-Margin Downstream Products: One of FOIL's strategies is to increase its sales of higher margin downstream and other specialty products. For instance, it plans to manufacture specialty feed nutrition additives, which currently manufactures only in limited quantities for export.

Global Expansion: In order to serve FOIL's existing direct customers and distributors, as well as to secure new direct customers and distributors and expand the reach of its products to new markets, it intends to expand globally. It has entered into a joint venture agreement with Adcotec dated January 17, 2018, to set up FineAdd, which will operate the German Facility. FineAdd will manufacture specialty food emulsifiers and other food additives. It will own a 50.00% equity interest in FineAdd. The plot of land on which it intends to build this facility in Leipzig, Germany has been identified and is currently owned by Adcotec. It is in the process of establishing a wholly-owned subsidiary in China and are in the process of opening a sales office in Shanghai. Given that most of its potential direct customers in China are large petrochemical companies many of which are state-owned, its sales offices in China will allow it to maintain a presence closer to these large direct customers to help secure their business and, if necessary, modify its products to meet their specifications.

Continuing Focus on R&D: FOIL's focus on product innovation through continuous development has been critical to the growth of its business and improved its ability to customize its products for its customers. It plans to expand its R&D lab by adding additional equipment for semi-commercial batches. It also plans to expand its applications labs for food and plastics, in addition to a new cosmetic application lab. It also leases a plot of land in Dombivli on which it plans to build new R&D facility. The chemistry laboratory at FOIL's current Navi Mumbai facility will be moved to this new R&D facility. It also plans to expand its applications laboratory in Navi Mumbai facility.

Industry:

OVERVIEW AND EVOLUTION OF OLEOCHEMICALS-BASED GREEN ADDITIVES INDUSTRY

Oleochemicals are chemicals derived from natural oils and fats of plant origins. Oleochemicals can be categorised into basic oleochemicals such as fatty acids, fatty methyl esters, fatty alcohols, fatty amines and glycerol, and their downstream derivatives obtained from further chemical modifications of these basic oleochemicals. These oleochemicals exhibit special properties such as excellent emolliency, surface activity, emulsifying properties, as well as beneficial biological properties. Since the 1950s, oleochemistry has grown in diversity thanks to technological developments due to research in various institutions and industries. New and niche oleochemicals have been developed for utilisation in industries such as cosmetics and polymers. Thus, these oleochemicals have become essential to a variety of industries such as coatings, surfactants, plasticisers, lubricant additives (slip and anti-block additives), cosmetics, soaps, detergents, textiles, plastics and organic pesticides. In polymer applications, derivatives of oils and fats are used as plastic additives. In recent years, there has been rapid increase in natural fatty acid derivatives usage as additive materials in several industries by replacing potentially harmful petrochemicals. Being derivatives of vegetable fats and oils, these products are also consumer- and environmentally-friendly.

Only a Few Successful Players Globally

Base oleochemicals such as fatty acids, fatty alcohols and methyl esters are produced from vegetable oils through splitting, distillation and fraction process. This step in the oleochemical value chain is a simple process with many players globally. The technology is also easily available. Hence, this sub-segment of the value chain is non-specialised and base oleochemicals are commoditised products. However, manufacturing of green additives from base oleochemicals is a highly specialised process. Hence, green additives are specialty products, and this industry enjoys premium margins with only a few players dominating the industry globally. The proprietary technology to manufacture these specialty additives is available with only a few global players.

FOOD EMULSIFIERS AND PLASTIC ADDITIVES - OVERVIEW AND OUTLOOK

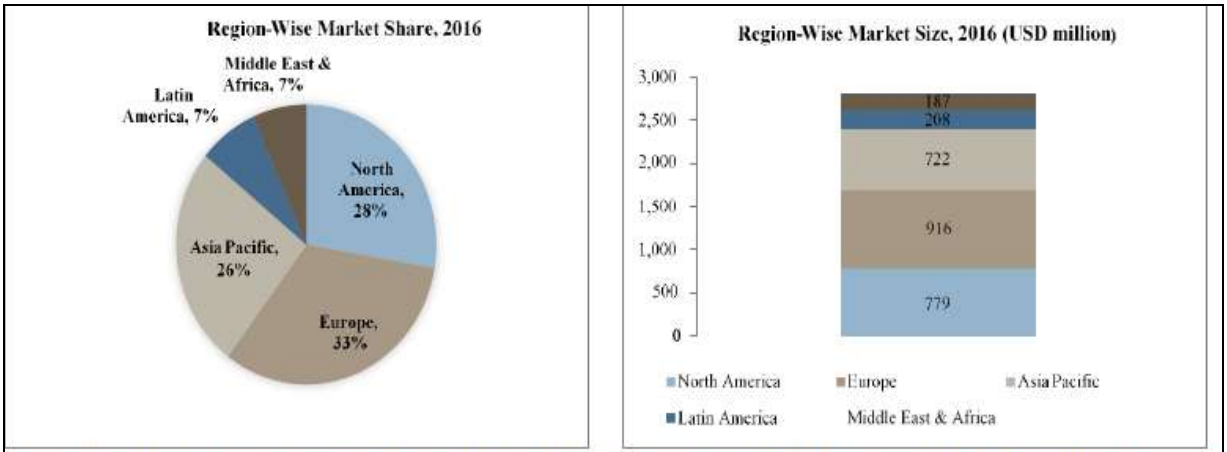
Food Additives' Overview and Demand Outlook

Any substance added to food can be termed broadly as food additive. In a stricter sense, any substance that is intended to affect the characteristics of food is a food additive. This includes any substance used in production, processing, treatment, packaging, transportation and storage of food. Food additives are used to preserve, flavour, blend, thicken and colour foods. Food additives are strictly regulated and monitored by Government to ensure safe health of people. Food additives can be categorised into direct and indirect additives. Direct food additives are substances that are added to a food for a specific purpose in that food. For example, xanthan gum is a direct food additive that adds texture to foods such as salad dressings, chocolate milk, bakery fillings, and puddings. Most direct additives used in foods are mentioned in the ingredient list label of foods. Indirect food additives are substances that can be part of the food in trace amounts owing to packaging, storage or other handling.

Global Food Emulsifiers Market is estimated to be US$ 2.8 billion in CY 2016

In CY 2016, overall global food emulsifiers market size was estimated to be US$ 2.8 billion. Europe is the largest consuming region with 33% share of global market. Among product categories, mono- and di-glycerides and natural emulsifiers were the largest product categories.

Snapshot of global emulsifiers market (2016)



- *Source: CRISIL Research, Credence Research (as cited in the CRISIL Research Report)*
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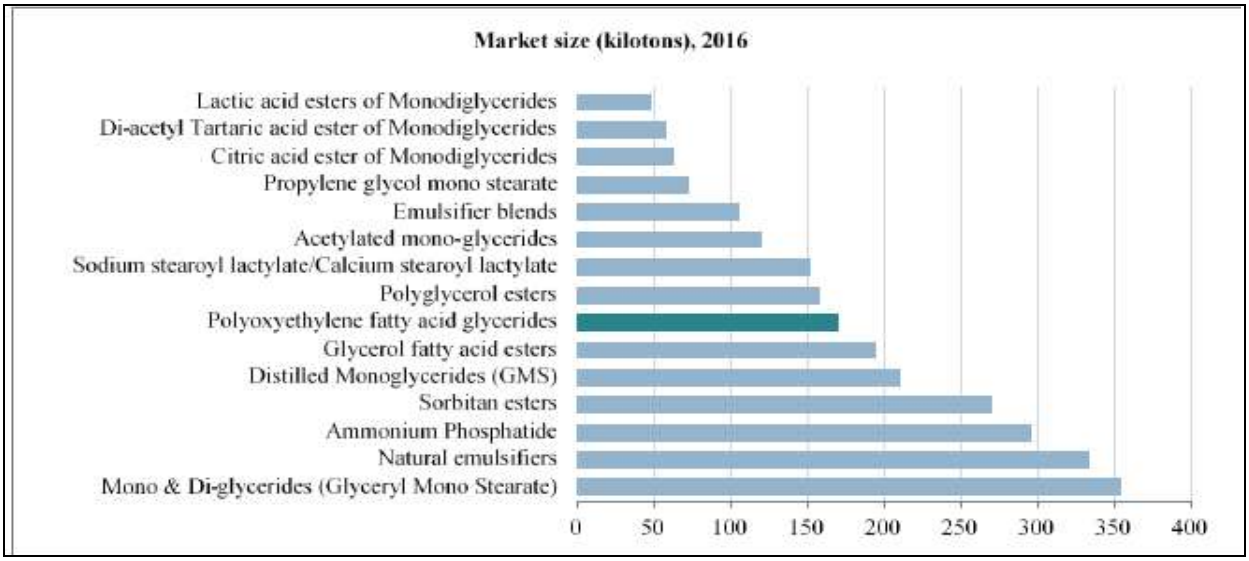
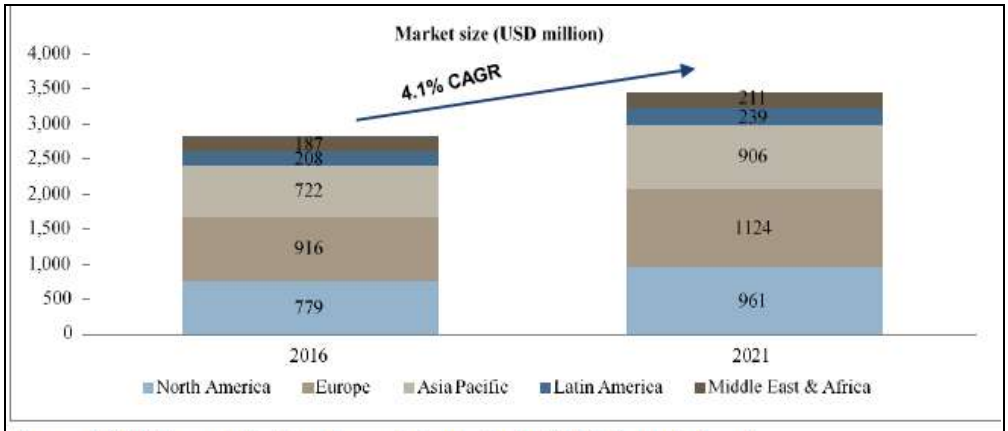


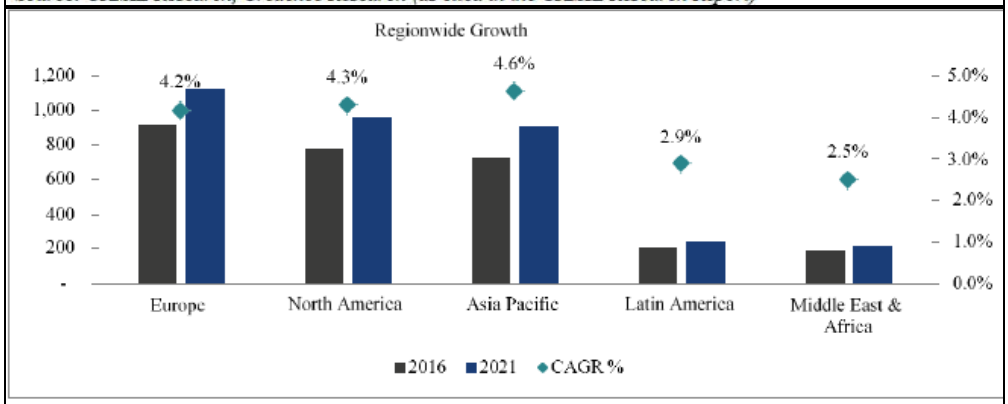
Global Food Emulsifiers Industry to reach US$ 3.4 billion by CY 2021

The global food emulsifiers market size is expected by Credence Research (as cited in the CRISIL Research Report) to reach US$ 3.4 billion by CY 2021 by growing at CAGR of 4.1% over CY 2016- CY 2021, driven by higher growth in the Asia Pacific region (accounts for 26% global share), which is expected to record 4.6% CAGR. Within the Asia Pacific region, emerging economies such as China and India to record higher growth. Europe (which accounts for 33% global share) is expected to also propel demand by growing at 4.2% CAGR. Within Europe, key markets Germany and France will continue to grow at steady CAGR over the next five years. Among product categories, mono and di-glycerides and natural emulsifiers are expected to drive demand.

Market outlook on global food emulsifiers



Source: CRISIL Research, Credence Research (as cited in the CRISIL Research Report)



Source: CRISIL Research, Credence Research (as cited in the CRISIL Research Report)

Key Global Drivers of Growth

- Increasing awareness among food processors about advantages and applications of food emulsifiers in various applications like bakery and confectionary industry and dairy, as well as high consumption of ice creams, biscuits, mayonnaise, chocolates, bread, coffee, soft drinks, etc.
- Growing population, higher economic growth and disposable income, and changing lifestyles of emerging nations in Asia such as India, China and Vietnam, leading to high growth of packaged and convenience foods, which require food emulsifiers to sustain quality for longer hours and for enhanced taste, colour and appearance.
- Rise in health awareness and quality consciousness of consumers in developed nations
- Modern lifestyles have increased the demand for healthy packaged and convenience foods. This has led to high consumer demand for trans-fat products, which is driving food processors to use emulsifiers to reduce calories and fat content.

Growing population and rising concerns regarding food quality and safety. Emulsifiers can aid in the decrease of salt and sugar content without changing texture and taste of food and associated products.

Indian Food Emulsifiers Market Size to Reach Rs 9 billion by CY 2021

Indian food emulsifiers market size is estimated to be Rs 5-6 billion in 2016. Going forward, between CY 2016 and CY 2021, CRISIL Research expects the Indian food emulsifiers market size to reach Rs 9 billion by CY 2021 by growing at 10-12% CAGR driven by healthy growth in convenience and packaged food segments, especially the premium food segments. Changing lifestyles and hectic work schedules are widening the market for processed and packaged convenience foods. The booming organised retail sector further extends the reach of processed foods. Change in eating habits and frequent introduction of new products and product lines, particularly in the functional food and beverage market for low-fat, low-calorie products, necessitates usage of food emulsifiers.

Plastic Additives' Overview and Demand Outlook

Overview and Applications

Plastics products are essentially made from polymers. However, basic polymer material is mixed with a complex blend of materials collectively called as plastic additives. Plastic additives impart key properties to plastics that are critical from functional perspective such as ease the plastic processing, improve aesthetics of plastics, save money by improving efficiency of plastic function, make plastics safe, make plastics clean and healthy, increase plastics life and make plastics environment friendly.

Global Plastic Additives Market Estimated to be US$22 billion in CY 2016

In CY 2016, the overall global plastic additives market size was estimated to be US$22 billion. Asia Pacific is the largest consuming region with a 53% share of global market. Among end-use sectors, the packaging sector dominated plastic additives offtake with a 25% share of global market. Among the end use plastic types, polyethylene category was the largest with a 16% share.

Cosmetic and pharmaceutical Additives Overview and End-Use Sector Growth Outlook

Cosmetic and pharmaceutical additives are ingredients added in cosmetic and related pharmaceutical products to achieve certain specific properties. They have various functions such as enabling the manufacturing of cosmetic and pharmaceutical products with different structures like creams, gels, pastes, lotions, solutions, varnishes, sticks, powders and aerosols. They aid cosmetic products in achieving long-term physical stability for transport and storage; inhibit germination through moulds, yeast and bacteria; increase chemical stability of sensitive active agents towards atmospheric oxygen; and influence sensory perception like consistency, dispersion on the skin, scent (fragrance) and colour.

Outlook for Indian Cosmetics Sector

Cosmetic additive demand growth in India will depend on growth prospects for end-use cosmetics sector. CRISIL Research expects cosmetics industry revenues that are estimated to be Rs 24-25 billion in 2016-17 to grow at 10-12% CAGR over 2016- 17 to 2021-22 vis-à-vis 8-10% CAGR over 2011-12 to 2016-17 with volume growth coming largely from rural areas through increasing penetration and marketing initiatives. Monsoons, however, remain a crucial factor that will influence extent of recovery in rural spending. The roll-out of Seventh Pay Commission will help demand growth. Growth in demand for relatively under-penetrated products like shampoos, hair dyes, and hair colours is being driven by better availability, increase in per capita consumption. Strong growth has been witnessed in emerging categories across various product lines. Market trends like spread of organized retail to Tier II cities, development of non-traditional segments like men's cosmetics (with products like hair gels and fairness creams) and development of a wide range of products at different price points could contribute to growth of domestic cosmetics sector. At a global level, CRISIL Research expects the cosmetics industry to grow at 4-4.5% CAGR over 2017-2022.

Growth will be driven by a rise in disposable incomes, changing lifestyles, rising demands of skin and sun care products due to varying climatic conditions. A shift of preference towards natural and organic beauty products, particularly in the United States and European countries, is also driving the growth of the cosmetics market.

Rubber Additives Overview and End Use Sector Growth Outlook

An elastomer without additives is normally not strong. It would not be able to maintain its shape after deformation, is very sticky, has less resistance to solvents and is vulnerable to attack by oxygen and ozone. So, elastomers need to be modified to make useful articles out of it. Additives are added to elastomers to make them meet the performance parameters of specific applications. Compounded rubber (rubbed added with other ingredients) has many unique characteristics that are not present in other traditional materials, such as dampening properties, high elasticity and abrasion resistance. Consequently, rubber is used in applications such as tyres, conveyor belts, dock fenders, building foundations, automotive engine components, hoses, shoe soles and a wide range of domestic appliances.

Outlook for end-use sectors of rubber additives

Demand growth for rubber additives in India will depend on the growth prospects for the end-use elastomers sector. CRISIL Research expects both Styrene-butadiene Rubber ("**SBR**") and Poly-butadiene Rubber ("**PBR**") SBR and PBR domestic demand to grow at a CAGR of 6-7% between 2016-17 and 2021-22. Recovery in automobile sales will drive the offtake in SBR. Growth in auto sales would be aided by the improving industrial activity, steady agricultural output, and the Government's focus on infrastructure. Consequently, tyre sales are also projected to record a 6-8% CAGR, backed by higher auto sales. Demand from the non-tyre or other general rubber goods segment is estimated by CRISIL Research to grow at a 7-8% CAGR over this period. At the global level, CRISIL Research expects SBR and PBR demand to grow at a 3-4% CAGR over the next five years, driven by healthy growth in automobile production in the Asia region.

Paint and coating additives overview and end-use sector growth outlook

The main components present in coating materials, such as paints, are binders, pigments and extenders, solvents and additives. Other than these key ingredients, the additives in a paint composition also have a major influence on the various paint properties. Additives can also significantly modify the properties of the main ingredients of paint such as binder, pigments/extenders and solvents. The typical proportion of a single additive in a formulation is generally around 1.5% of the total quantity of the coating formulation. Although used in very small quantities, additives have a significant impact on application properties and performance of coatings and inks. Additives used in the correct order, at appropriate time, and at right levels, are capable of improving the appearance and durability of a coating, the flow of paints and inks, the efficiency of the manufacturing process, and the sustainability of formulations. There are many varieties of coating additives, if classified based on their functions.

Outlook for the Indian paints and coatings sector

Paints and coatings additives demand growth in India will depend on the growth prospects for end-use paints and coatings sector. CRISIL Research forecasts the paints and coatings industry to grow at an 8-10% CAGR between 2016-17 and 2021-22. Apart from macroeconomic drivers such as a rise in population, income, Government initiatives, urbanisation, number of nuclear families, and the availability of retail financing options, demand for the paints industry to be guided by the following factors:

A pick-up in the economy: Despite the steady climb, per-capita paint demand in India is still very low at 3.4 kg per year, compared with 4.0 kg in China, 20.0 kg in developed countries, and the global average of 15.0 kg. As the economy picks up pace, disposal income, housing supply and industrial activity will rise resulting in increased consumption of paints. Consequently, India's per-capita paints consumption is bound to increase.

Increase in the penetration of paints in rural and non-metro cities: In rural and non-metro cities, distemper is the primary product. With the rising household incomes in rural and non-metro cities, CRISIL Research expects the preference for superior aesthetics to increase and, with it, demand for paints. Also, the augmentation of distribution networks in these regions to tap the rising paint demand will contribute to the sector's growth. At a global level, CRISIL Research expects the paints industry to be driven by factors such as increasing construction spending, rapid urbanization, increasing household consumption expenditure and accelerating economic growth. In addition, CRISIL Research believes the growing popularity for waterborne paints and coatings to offer potential growth opportunities. Niche products such as nano-coatings and green coatings will also gain momentum in the coming years.

OUTLOOK ON RAW MATERIAL VEGETABLE OILS

As discussed in earlier sections, oleochemical-based additives are manufactured from base oleochemicals that are produced from vegetable oils. Hence additive player's procurement costs are linked to vegetable oil prices. Base oleochemicals are not exchange traded and prices are negotiated between parties.

Global vegetable oils demand and price outlook

Global demand for vegetable oils to slow down over the next five years, because of the decline in biofuel consumption

Vegetable oil demand grew at a 5-6% CAGR over 2011 to 2016, mainly driven by the biodiesel consumption in the past five years, as per CRISIL Research. However, over 2016 to 2021, CRISIL Research expects vegetable oils demand to grow at only 2-3% CAGR, mainly due to a slowdown in biofuel consumption growth. Supported by the policies to stimulate biofuel production in the second half of 2000s, world ethanol and biodiesel production increased strongly, leading to a rapid growth in the share of global vegetable oil production for biodiesel

consumption. For vegetable oils consumption, the share of biofuels grew from less than 1% in CY 2000 to 13% in CY 2016, as per the FAO. However, CRISIL Research does not expect much policy support for biodiesel production, thereby resulting in a decline in the offtake of vegetable oils.

Indonesia and Malaysia will continue to be the major producers of vegetable oils for global consumption in the next five years

Indonesia and Malaysia account for 21% and 12% share of global vegetable oils production, respectively, in CY 2016. About two-thirds of Indonesian and more than 80% of Malaysian vegetable oil production is exported. CRISIL Research believes vegetable oil exports will continue to be dominated by these two countries. CRISIL Research expects the expansion of soybean and palm oil production will depend on the availability of additional new land, which could be constrained by new legislation seeking to protect the environment. This concerns notably oil palm plantations. Biofuel policies in the United States, the EU and Indonesia are also major sources of uncertainty, as they account for a considerable share of vegetable oil demand in these countries. Despite a slowdown in the expansion of the mature oil palm area, production growth in Indonesia and Malaysia over the next five years, i.e., 2016 to 2021, will be able to meet the incremental demand.

Slowdown in global vegetable oil demand will keep the prices subdued in the next five years

Compared to 2011-2016, demand for vegetable oil is slowing down considerably, due to a decline in the offtake for biodiesel production. However, existing key exporters/suppliers, Indonesia and Malaysia are in a position to meet the incremental demand. Thus, subdued demand amid healthy supply potential will keep the vegetable oil prices range bound.

Vegetable oil types are substitutable for the manufacture of base oleochemicals and derivatives

Base oleochemical manufacturers change vegetable oil type for processing based on market prices. For edible applications also, vegetable oils can be interchanged. Hence, prices of vegetable oils are interlinked with each other due to this mutual substitutability. Typically vegetable oil prices are stable over the years, except in some years hit by disruptions due to natural events. For example, in 2016, El Nino resulted in reduced palm output in the Southeast Asian nations, raising palm oil prices.

Indian Vegetable Oils – Demand-Supply Scenario

Indian vegetable oil production is short of domestic demand, but competitive imports from Indonesia and Malaysia cater to the needs of domestic vegetable oil consumers

Oilseed production in India is concentrated in seven major oilseed producing states – Madhya Pradesh, Maharashtra, Rajasthan, Karnataka, Uttar Pradesh, Andhra Pradesh and Gujarat, which cover close to 75% of the country's oilseed production. Since most oilseeds are kharif crops, which are grown along the country's western belt, rainfall from the southwest monsoon winds is critical. However, domestic production, which stood at 10.2 million tonnes in 2016-17, is insufficient to meet the domestic demand. Hence, the country imports vegetable oil to meet this deficit. Imports stood at 57% of overall domestic demand in 2016-17. Key global vegetable oil suppliers, Indonesia and Malaysia are key exporters to India also. Prices at which these countries supply vegetable oils to India is also lower compared with domestic supplier prices. Thus vegetable oil consumers such as base oleochemical manufacturers do not face any major issues in sourcing.

Domestic vegetable oil prices

Domestic vegetable oil prices depend on global demand-supply dynamics as well as domestic output. Duty changes (by the Indian Government and exporting countries) can result in price fluctuations, and hence volatility in demand. Climatic changes and a weak monsoon could impact production of oilseeds as well, and consequently supply. Also, foreign exchange rate volatility impacts prices in the short term.

MSP does not affect vegetable oil procurement costs

While hiking minimum support prices ("**MSP**") of oilseeds, the Government looks to balance the interests of consumers, farmers and companies. An MSP encourages farmers to increase cultivation and assists proper sales and distribution. When weak monsoons lower crop output, an MSP ensures steady returns for farmers but not so for edible-oil manufacturers. From 2011-12 to 2013-14, the MSP has been increased by 47%. The hike came at a time when the Indian vegetable oil industry was already battling an oilseed supply crunch. However, MSPs are still lower than the market-determined prices; hence, CRISIL Research believes it will not significantly impact the vegetable oil consumers' procurement costs.

Global oleochemical-based additives industry is dominated by a few large players

There are only a few large players (see the table below) in the global oleochemical-based additives industry. The reason for the presence of only a few players is due to multiple entry barriers, such as product formulations, process technology and customer stickiness to established players. All the established players are enjoying their first-mover advantages. For an entry into this industry, new players won't be able to procure product formulations and process technology from established players, which are reluctant to share their technology and other intellectual properties. Proprietary technology and product formulations with established players is as a result of continuous R&D over decades, in response to the changing needs of food and plastic for environmental and human-friendly materials usage.

Lengthy, expensive customer product approval process and innovative technology restrict smaller and new players from entering the additives industry

Additives, although used in minor quantities, are very critical in terms of performance in end-use material, be it food products, plastic products or rubber products. This makes it imperative for the customer using the additive to validate the additive's quality and performance thoroughly. In addition to performance, as many of these additives are used in food, they also need to comply with stringent health and environment-related regulations globally, as explained in the regulatory section. This validation process for additive quality and safety standards is not just time-consuming, but also expensive. Many customers typically take 3-5 years for product approval, after which the additive manufacturer can supply on a commercial basis. This forces additive customers to source tested additives from established suppliers to avoid expensive and lengthy validation tests, if they source from new additive suppliers. Lengthy customer approval process also restricts the entry of new players, as they have to wait for 3-5 years to supply their products on a commercial basis. Manufacturing additives with high quality requirement needs innovative technology and incurs high manufacturing cost. Capex cost will also be high if players do not have own process design. Innovative technology is also required in testing labs for stringent quality and safety standards of additives. Only large players can enter this industry and develop proprietary technology and manufacturing costs. Hence, unorganised small players are absent in this industry.

Long-term supply contracts prevalent in the additives industry

Prices of oleochemical-based additives' base raw materials, i.e., vegetable oils, are relatively less volatile compared with other commodity prices. This enables additive players to enter into long-term supply contracts with pre-fixed prices, typically of one year tenure, without being much impacted by the change in vegetable oil prices. Customers also prefer to opt for long-term contracts, as they source from the limited number of suppliers, which have passed the customer's approval processes. Additives are used in minor quantities - typically under 1% weight in plastic materials and under 2% weight in food materials. However, their functional usage is very critical for end-use product applications. Hence, customers don't compromise on the quality of additives to save costs. This means only additive manufacturers that can maintain high additive quality and performance standards can survive in this industry. The criticality also restricts the entry of new players, which want to compete on a cost basis by lowering the quality standards.

Global additive players expanded to emerging nations to tap the growth opportunity

The development of oleochemical additives requires high R&D investments over years by large companies. Thus, regularly coming up with new additives over years through the development and innovation has strengthened the position of these companies globally. As discussed in the earlier sections, additive consumers across the world, such as automotive companies, consumer food companies and plastic product companies, confine to established preferred suppliers, due to issues such as long product-testing periods, criticality of additives and expensive additive- testing costs. When MNC companies in end-use applications expand globally, these end-use companies prefer to source additives for their regional plants from their established additive sources. Thus, the additive companies' market reach is spread across the globe along with end-use application MNC companies. Emerging nations are making a number of efforts to attract manufacturing companies, while developed nations are making chemical companies tough to operate by coming up with stringent environmental regulations. In addition, demand for specialty chemicals (including additives) is growing strong in emerging nations, with the end-use domestic and MNC companies setting up their manufacturing units in emerging nations. As a result, global chemical companies started shifting their manufacturing bases to emerging nations. They are not just catering to the domestic requirement of these emerging nations, but also exporting the surplus to other markets due to manufacturing-cost competitiveness.

Export market offers huge opportunity alongside domestic demand

India traditionally has the advantages of low-cost labour and easy agro-based raw material availability for manufacturers of various natural derivatives. High growth opportunity in India has also encouraged many multi- national companies (MNCs) to start manufacturing plants in India. In fact, many MNCs started setting up excess capacities in India to export the surplus to other countries. Implementation of stringent environmental norms like Europe's REACH regulations in many key developed regions has forced MNCs' to gradually shift their manufacturing bases to India and other developing regions. Consequently, Indian exports of speciality chemicals are growing rapidly. For example, over the past five years (2011-12 to 2016-17), exports category of key plastic additives recorded 12% CAGR. Similarly, key food additives recorded 11% CAGR between 2011-12 and 2016-17.

BAKERY INGREDIENTS

Bakery Ingredients Overview and End-use Sector Growth Outlook

Baking ingredients are widely used in various end-use segments such as bread, cookies, biscuits, cakes, pastries, rolls, pies, tarts and cupcakes. Their consumption is driven by the bread segment as it is a staple food in developed countries and affordable to many price-sensitive consumers in emerging economies. Such ingredients include emulsifiers, leavening agents, enzymes, baking powders and mixes, oil, fats and shortenings, starch, colours and flavours, etc. The baking powders and mixes segment is the largest category. Customers are increasingly seeking bakery products that are fresh, tasty and have good texture and improved nutritional profile. Modern ingredients, especially organic types, are being developed by the baking industry in response to customer demands for healthier products and healthier living. Innovation in bakery ingredients enabled bakery industry to make products with nutritional benefits such as low in cholesterol, high in fibre and rich in vitamins.

Outlook for End-Use Bakery Industry in India

Demand growth for bakery ingredients in India depends on the prospects for the end-use bakery industry. The market size of the biscuits and bakery products segment is pegged at Rs 359 billion, and accounted for a 35% share of the Indian consumer foods industry in fiscal 2016. This segment includes biscuits, bread, cakes, pastries and puffs. Biscuits dominate with a 65-70% market share, as they are convenient to carry and come in a variety of options. Bread and other bakery items comprise the rest (30-31%), including bread sticks, rusk, pav, buns, cakes and pastries, among others. Nutritional value-added bread varieties are on the rise due to increasing consumer health awareness and exposure. White bread is the largest sub-segment in the category with a 70% market share, led by its ubiquitous presence in the domestic market and lower price range. Brown/ multigrain and other nutritional bread varieties, which together account for about 20%, are gaining popularity, especially in metros and tier II cities, led by the rising health awareness. Other bread varieties include flavoured bread and Italian/herbed bread. These varieties are growing rapidly, led by the increased exposure to global cuisine, coupled with a change in consumption habits. On the other hand, consumption of white bread is growing at a slower pace. The bread and other bakery items segment has grown at 10% CAGR during the past five years, due to an increase in disposable income and change in consumers' eating habits. With increasing exposure to global cuisine and rising westernisation, bread is increasingly being accepted as a part of regular diet.

ANIMAL FEED ADDITIVES

Animal Feed Additives Overview and End-use Sector Growth Outlook

Animal feed additives are products used in animal nutrition to improve the quality of feed and of food from animal origin, or to improve the animals' performance and health, e.g., providing enhanced digestibility of the feed materials. There are four general types of feed additives:

Sensory Additives: To stimulate an animal's appetite so that it naturally wants to eat more.
Nutritional Additives: To provide a particular nutrient that may be deficient in an animal's diet.
Zootechnical Additives: To improve the overall nutritional value of an animal's diet through additives in the feed.
Coccidiostats and Histomonostats: These are antibiotic feed additives intended to kill or inhibit protozoa (bacteria/microorganisms).

Outlook for End-use Poultry Industry In India

CRISIL Research expects the poultry industry to expand at a CAGR of 11-13% in value terms between fiscals 2017 and 2022. The current market size is estimated to be around Rs 1,100 billion. An increase in disposable income, health awareness, and growing food processing industry are the main factors driving growth. Growth in income is associated with a diversification of the food basket and an increase in animal based protein intake. With rising middle class incomes and greater international exposure due to travel and quick service restaurant ("**QSR**") chains, CRISIL Research expects demand for chicken meat and processed chicken meat to rise. Being white meat, broiler meat has the advantage of being a healthier choice vis-à-vis red meats like mutton, pork and beef. Many consumers also prefer poultry meat over other animal protein due to its relatively lower price. Additionally, it has no religious stigma attached for meat eaters, unlike pork and beef (different ethnic groups have cultural and religious prohibitions for eating pork, water buffalo meat, and beef). Indian consumers generally enjoy dark chicken meat, including chicken legs, thighs, and drumsticks, which is also preferred for traditional Indian cooking. There is also an increase in egg consumption due to its growing acceptance in vegetarian households, and its comparative affordability. However, demand for both segments is seasonal and fluctuates sharply due to religious and cultural practices. Globally, CRISIL Research expects poultry production to expand in developing and low-cost regions, and stagnate in higher cost developed regions, while short-term trade interruptions will increase largely due to sanitary concerns. CRISIL Research expects Brazil to continue to strengthen its position in the world meat and poultry trade, and Thailand will continue to grow as an important source of cooked products. Opportunities are increasing for new countries to emerge as exporters in the long term. The industry facing challenges related to global warming and use of feedstock.

Key Concerns

Increases in the cost of raw materials as a percentage of revenue from operations could have a material adverse effect on FOIL's results of operations and financial condition*:* FOIL's largest expense, by far, is its cost of raw materials. Its primary raw materials are derived from vegetable oils, including rapeseed oil, palm oil, palm kernel oil, sunflower oil, castor oil, soybean oil, rice bran oil. Its cost of material consumed (raw material costs) represented 60.81%, 56.77%, 61.69% and 64.03% of its revenue from operations for Fiscals 2015, 2016 and 2017 and the nine months ended December 31, 2017, respectively. It has not entered into supply contracts that are longer than six months, and therefore, it is subject to the risk of increases in the costs of raw materials. FOIL purchase domestic and imported raw materials. Domestic vegetable oil prices depend on global demand-supply dynamics as well as domestic output and import volumes of vegetable oils. Duty changes (by the Indian government and exporting countries) can result in price fluctuations, and hence volatility in demand. Climatic changes and a weak monsoon could impact production of oilseeds as well, and consequently supply. Further, base oleochemical manufacturers change vegetable oil type based on market prices. It primarily import raw materials derived from palm and palm kernel oil. The cost of these raw materials to FOIL is affected by fluctuations in market prices and import duties. The cost of its imported raw materials is also affected by fluctuations in the rate of exchange of the currency in which it purchase these raw materials (primarily USD) and the Rupee. If FOIL cannot fully offset increases in the cost of raw materials with increases in the prices for its products, it will experience lower margins, which will have a material adverse effect on its results of operations and financial condition.

If products fail to meet customers' quality standards, it could result in removal from end-user customers' 'approved supplier' lists, which would have a material adverse effect on the business, financial condition and results of operations: FOIL's customers are in the plastic industry, food industry and the cosmetics, printing inks, coated papers, lube additives, wires and cables, coatings and other specialty applications industries. These industries are characterised by intense competition. Its products make up a small proportion of the finished products manufactured by its customers. As such, any defect in its products would result in a disproportionately large amount of finished products being defective. As such, FOIL must ensure that its products and manufacturing facilities continue to meet customers' standards and maintain its inclusion on its customers' core lists of suppliers. If it is unable to do so, it would have a material adverse effect on FOIL's business, financial condition and results of operations.

Commercial success also depends to a large extent on the success of customers' products with end consumers: FOIL's products are used by its customers as additives in the production of plastic and food, cosmetics, paint and coatings and other specialty applications. its commercial success also depends to a large extent on the success of its customers' products with end consumers. The success of the end products manufactured by its customers depends on it and its customers' ability to identify early on, and correctly assess consumer market preferences. It cannot be assured that its customers will correctly assess consumer preferences in a timely manner or that demand for goods in which its products are used will not decline. If the demand for the products in which its products are used declines, it could have a material adverse effect on its business, financial condition and results of operations.

Do not have long-term agreements with most of its customers: FOIL does not have long-term agreements with most of its customers. Customers with whom it do not have long-term agreements may choose to cease sourcing its products. In the event a customer ceases to use FOIL as its preferred supplier for products that were specifically created for them, it cannot be assured that it will be successful in marketing those products to another customer. This could lead to a surplus of those products in its inventory. Further, it cannot be assured that it will be able to enter into new agreements or renew its existing agreements with customers on terms acceptable to it, or at all, which could have an adverse effect on its business, financial condition and results of operations.

Some of the long-term agreements for the sale of products are for fixed prices: Some long-term agreements for the sale of FOIL's products contain a 'meet or release' provision, i.e., a provision pursuant to which a purchaser may terminate the agreement if it do not agree to meet any lower offers that the purchaser receives from other suppliers. Some of its long-term agreements stipulate fixed prices for its products. Some of its long-term agreements stipulate that there are no minimum purchase obligations on FOIL's customer(s), and/or do not contain any express provision stipulating a minimum purchase obligation. The aforementioned provisions (or absence of provisions) in its long-term contracts may adversely affect the profit margins, and therefore, its business, financial condition and/or results of operations.

Fluctuations of the Rupee against other currencies could adversely affect the financial condition and results of operations: FOIL prepares its financial statements in Rupees. Most of its sales to overseas customers are denominated in foreign currency, predominantly USD. It imports goods, primarily raw materials. A depreciation of the Rupee would result in an increase in the prices of imported goods. It generally hedges some of its net foreign currency exposure. Fluctuations in the value of the Rupee against such foreign currencies, to the extent that it is not hedged, would result in gains or losses, which in the case of losses could have a material adverse effect on the business, financial condition and results of operations. On a net basis, an appreciation of the Rupee would be negative for the business, financial condition and results of operations

If the costs of setting up new manufacturing facilities are higher than expected it could have a material adverse effect on the business, financial condition, results of operations and growth prospects: FOIL plans to set up three new production facilities in the next two years. The estimated costs for setting up these planned facilities are based on management estimates and have not been appraised by any bank or financial institution. The estimated costs are based on current conditions and are subject to change in light of changes in external circumstances, costs, and other financial conditions. As a consequence of any increased costs or delays in implementation, the actual costs to set up these new facilities may be higher than FOIL's management's estimates, as a result of which, its financial condition, results of operations and cash flows could be materially and adversely impacted. Further, there could be delays in setting up the new facilities as a result of, among other things, contractors' failure to perform, unforeseen engineering problems, disputes with workers or force majeure events, any of which could give rise to cost overruns and delays in its implementation schedules.

FOIL has yet to obtain possession of the land on which it is in the preliminary stages of planning to set up the Fourth Ambernath Facility: In December 2013, FOIL paid Rs242 million (which was the full purchase price) for a plot of land on which it plans to build the Fourth Ambernath Facility. Although it has received the allotment letter, it has not yet received possession of the land from the MIDC authorities and it is unsure as to when this will occur. If FOIL is unable to obtain possession of the plot of land for the Fourth Ambernath Facilities, or if it has not received possession in time for it to adequately plan the construction of the new facility on it as per the needs of its business at that time, it would need to look for an alternative plot of land on which to build new facility, which may be materially more expensive than the

land FOIL has currently purchased. Furthermore, there is a possibility that it may not be able to obtain a refund of the amount that it paid for the land if it is unable to obtain possession of the plot of land for the Fourth Ambernath Facility.

An increasingly stringent regulatory environment with regard to foods, cosmetic ingredients and other specialty additives could result in stricter standards being applied to its products, which could cause FOIL to incur substantial costs and may therefore have an adverse effect on the business and results of operations: Food products and their ingredients and cosmetic substances are subject to high regulatory standards to protect consumers from health hazards in all countries in which FOIL manufacture or distribute its products. Similar regulations also apply to plastics additives used in manufacturing packaging materials used for food packaging and medical products. In addition to Indian laws, rules and regulations, it must also comply with the laws, rules and regulations in each country where it sell its products, including the European Union and the United States. If FOIL was to breach these regulations, it could face substantial legal sanctions, including fines. Regulations are supplemented by strict standards imposed by self-regulating associations and certain of its key customers. Gaps in operational processes, improper handling, storage or processing of raw materials and any real or perceived contamination could adversely affect the quality of its products and result in regulatory non-compliance. As FOIL products are used as ingredients in many products meant for human consumption, these consequences would be exacerbated if its customers did not identify the defect and there was a resulting impact at the consumer level. Such a result could lead to potentially large scale adverse publicity, recalls and potential consumer litigation. Furthermore, adverse publicity about its products, including concerns about product safety or similar issues, whether real or perceived, could harm its reputation and result in an immediate adverse effect on its sales, as well as require it to utilize significant resources to rebuild its reputation. A violation could result in the loss of customers and could have an adverse effect on its business, results of operations and financial condition. Any loss of customers to its competitors could have an adverse effect on the business, results of operations and financial condition.

Dependent on two of its suppliers for key raw materials: In Fiscals 2015, 2016 and 2017 and in the nine months ended December 31, 2017, FOIL's purchases of raw materials from its top two suppliers constituted 46.22%, 47.18%, 51.61% and 39.44% of its total purchases made from all suppliers, respectively. It do not enter into supply contracts of durations of more than six months. If the suppliers do not supply it, there can be no assurance that it will be able to identify alternative suppliers in future at similar cost. Any disruption in the supply of the raw materials could disrupt its manufacturing operations, which could have a material adverse effect on its business, results of operations and financial condition.

FOIL is required to obtain, renew or maintain certain critical statutory and regulatory permits and approvals required to operate the business*:* FOIL's operations are subject to extensive government regulation and it is required to obtain and maintain several critical statutory and regulatory permits and approvals under central, state and local government rules for operating its business generally, for each of its manufacturing facilities and proposed manufacturing facilities, proposed joint venture in Germany (which FOIL plans to name FineAdd Ingredients GmbH, in which it will have 50% equity interest) and its proposed subsidiary and sales office in China. It is also required to obtain environmental clearances for the manufacture and sale of certain products. A majority of these approvals are granted for a limited duration. Some of these approvals has expired and it has either made or are in the process of making an application for obtaining the approval or its renewal. The approvals required by FOIL is subject to numerous conditions and it cannot be assured that these would not be suspended or revoked in the event of accidental non-compliance or alleged non-compliance with any terms or conditions thereof, or pursuant to any regulatory action. If there is any failure by it, through a failure of its employees, Directors or Promoters, to comply with the applicable regulations or if the regulations governing its business is amended, it may incur increased costs, be subject to penalties, have its approvals and permits revoked or suffer a disruption in its operations, any of which could adversely affect the business.

If FOIL is unable to estimate demand for its products and thereby effectively manage its inventory, it could have an adverse effect on its business, results of operations and financial condition*:* FOIL evaluate its inventory balances of materials based on the shelf-life of its products (typically one year), expected sourcing levels, known uses and anticipated demand based on forecasted customer order activity and changes in its product sales mix. Efficient inventory management is a key component of FOIL's results of operations. If its raw materials purchase decisions do not accurately predict sourcing levels, customer trends or its expectations about customer needs are inaccurate, it may have to take unanticipated markdowns or impairment charges to dispose of the excess or obsolete inventory and may have to procure additional inventory, including inventory space and associated costs, which could adversely affect its results of operations.

FOIL is subject to strict customer specification requirements in terms of manufacturing processes and products and any failure by the company or its suppliers to comply with the applicable customer specifications may lead to cancellation of existing and future orders, recalls or warranty claims, or civil claims*:* A significant number of FOIL's products are made in accordance with customers' specifications. If it is unable to meet those specifications, this may lead to cancellation of existing and future orders, recalls or warranty claims, or civil claims, which may have a material adverse impact on the business, financial condition and results of operations. For instance, Schulman Plastics cancelled an order for "Finawax SE", a chemical used in the production of plastic pellets, from FOIL for alleged breach of the quality assurance agreement executed between it and the Company. Although FOIL was found not to have breached the agreement with Schulman

Plastics in a case brought by AIG Europe Ltd, Schulman Plastics' insurer, in the sixth chamber of the Court of Commerce, Antwerp, Belgium, it nonetheless lost that customer's order.

FOIL is subject to safety, health, environmental, labour, workplace and related laws and regulations and any failure to comply with any current or future laws or regulations could have a material adverse effect on the business, financial condition and results of operations: FOIL is subject to a broad range of safety, health, environmental, labour, workplace and related laws and regulations in the jurisdictions in which it operates, which impose controls on the disposal and storage of raw materials, air and water discharges; on the storage, handling, discharge and disposal of chemicals, employee exposure to hazardous substances and other aspects of its operations. Manufacturing sites by nature may be hazardous. Its sites often put its employees and others in close proximity with moving vehicles and chemical and manufacturing processes. As a result, it is subject to a variety of health and safety laws and regulations dealing with occupational health and safety. Further, any accidents at FOIL's facilities may result in personal injury or loss of life, substantial damage to or destruction of property and equipment that could result in the suspension of operations. Additionally, the government or the relevant regulatory bodies may require it to shut down its facilities, which in turn could lead to product shortages that delay or prevent it from fulfilling its obligations to customers. If FOIL fails to maintain safe work sites or violate applicable laws, it could expose it to civil and criminal liabilities and harm its reputation, any of which could have a material adverse effect on its business, financial condition and results of operations.

FineAdd may not be profitable or may not achieve the profitability that justifies FOIL's investment. Its proposed investment is also subject to reputational, financial and/or legal risks: Entering into the FineAdd Shareholders Agreement may subject FOIL to the risk of changes in economic and political conditions in Germany. It will also require a detailed understanding of the German commercial market, and relevant laws and regulations. In this respect, FOIL may be dependent on Adcotec for product distribution, local market knowledge or other resources. There can also be no assurance that FineAdd will be able to sell sufficient quantities of products at the prices required for it to be profitable. If FineAdd is not profitable, FOIL may need to make additional investments in the business to support it. If FineAdd fails to be profitable, FOIL may lose the money that the Company invested in this business, which could have a material adverse effect on its reputation business, financial condition and results of operations.

One of FOIL's strategies is to increase its sales of higher margin downstream and other specialty products: One of FOIL's strategies is to increase its sales of higher margin downstream and other specialty products. For instance, it plans to manufacture specialty feed nutrition additives, which it currently manufacture only in limited quantities for export. There can be no assurance that its specialty feed nutrition additives will be accepted in the market or that its competitors will not be able to produce similar products at a lower price than it can, which would have an adverse effect on its products' competitive position. If FOIL is unable to increase its sales of higher margin downstream and other specialty products, it could have an adverse effect on its growth prospects.

Credit and non-payment risks of customers could have a material adverse effect on its business, financial condition and results of operations: The majority of FOIL's sales are to customers on an open credit basis, with standard payment terms of generally between 30 to 90 days. While it generally monitor the ability of its customers to pay these open credit arrangements and limit the credit it extend to what is reasonable based on an evaluating of each customer's financial condition and payment history, it may still experience losses because of a customer being unable to pay. As at December 31, 2017, its total trade receivables amounted to Rs 1,172.09 million, or 24.74% of its total assets. If FOIL is unable to collect customer receivables or if the provisions for doubtful receivables are inadequate, it could have a material adverse effect on its business, financial condition and results of operations.

Rely, in part, on distributors for the sale of its products. Any disruption in such arrangements will adversely affect the results of operations: In the 12 months ended March 31, 2018, FOIL had 631 direct customers and 127 distributors (who sold its products to more than 5,000 customers). It does not have written contracts with distributors. It has no control over the amount of time and resources these distributors devote to selling its products. It also cannot assure be assured that such distributors are not in financial difficulty or in violation of any anti-corruption laws, international sanctions or other agreements. Any disruptions in its relationship with such distributors could have an adverse effect on its business, results of operations and financial condition.

If FOIL's competitors are able to improve the efficiency of their manufacturing processes and thereby offer their products at lower prices, its revenues and profitability may decline: If FOIL's competitors harness better process technology or improved process yield, or manufacture their products more efficiently, and are therefore able to offer their products at lower prices than it can, its revenues and profitability may decline. Some of its competitors are global companies that have greater technical and financial resources and broad customer bases needed to bring competitive products to the market. There can be no assurance that it can continue to compete effectively with its competitors in the future, and failure to compete effectively may have an adverse effect on its business, financial condition and results of operations.

A material disruption at one or more of manufacturing facilities could have a material adverse effect on the business, results of operations and financial condition: FOIL currently operate three manufacturing facilities. Its manufacturing facilities could unexpectedly stop operating because of events unrelated to it or beyond its control, including fires, floods and other natural disasters, utility and transportation infrastructure disruptions, shortages of raw materials, and acts of war or terrorism. Any material disruption at one or more of its facilities could have a material adverse effect on the business, results of operations and financial condition.

A shortage or non-availability of electricity, natural gas and other similar utilities could affect the manufacturing operations and have an adverse effect on the business, results of operations and financial condition: FOIL's manufacturing operations require a continuous and supply of electricity. Its facilities require the power voltage to be the same at all times to achieve a standard quality of product. A shortage or non-availability of electricity could adversely affect its manufacturing operations and have an adverse effect on its business, results of operations and financial condition. The First Ambernath Facility and the Badlapur Facility uses piped natural gas and furnace oil, respectively, to power their machines. If the supply of piped natural gas and/or furnace oil is interrupted, FOIL would be unable to operate these facilities, and as such, an interruption of the supply of piped natural gas and/or furnace oil at these facilities could have an adverse effect on its business, financial condition and results of operations.

FOIL is subject to risks associated with expansion into new geographic regions*:* FOIL has two subsidiaries in Europe and North America that sell directly to selected large direct customers, as well as to distributors in Europe and North America who then sell to smaller or medium-sized customers. Additionally, it plans to establish a wholly owned subsidiary in China and is in the process of opening sales office in Shanghai to sell directly to selected large direct customers. Operating in foreign countries subjects it to various risks, including those relating to its lack of familiarity with the culture, legal regulations and language barriers. The risks involved in entering new geographic markets and expanding operations, may be higher than expected, and it may face significant competition in such markets. FOIL could lose some or all of its investment in such regions, as a result of which its business, financial condition and results of operations could be adversely affected.

Rely on contractors for the recruitment of contract labourers for non-core tasks and are therefore exposed to execution risks and liability towards labourers under applicable Indian laws*:* FOIL enters into arrangements with contractors for recruitment of contract labourers only for non-core tasks such as loading and unloading of goods and housekeeping as per its requirements for a fixed period of time. There is no assurance that it may be able to renew these arrangements on a timely basis or at all. FOIL does not have direct control over the timing or quality of the services and supplies provided by such third parties. Contractors hired by it may be unable to provide the requisite manpower on a timely basis or at all or may be subjected to disputes with their personnel, which, in turn, may affect production at its facilities and timely delivery of its products to its customers. Although it do not engage contract labourers directly, FOIL may be held responsible under applicable Indian laws for wage payments to such labourers should its contractors default on wage payments.

Operations could be adversely affected by strikes, work stoppages, demands for increased wages or any other kind of employee dispute*:* As at March 31, 2018, FOIL had 608 full-time employees. It never had a labour strike and none of its full-time employees are in a union. While it enjoys a good relationship with its workforce, there can be no assurance that it may not experience disruptions in its operations due to disputes or other problems with its work force such as work stoppages, labour strikes, increased wage demands or any other kind of employee dispute that could adversely affect its business and results of operations. These actions are impossible for FOIL to predict or control and any such event could adversely affect its business, results of operations and financial condition.

Profit & Loss **Rs in million**

Particulars	9MFY18	FY17	FY16	FY15
Revenue From Operations	5904.3	8149.4	6860.1	6359.3
Other Income	87.8	44.1	102.1	20.3
Total Income	5992.1	8193.5	6962.2	6379.6
Total Expenditure	4861.6	6695.0	5407.6	5250.0
Cost of Materials Consumed	3780.8	5027.6	3894.4	3866.9
Purchase of Stock-in-trade	16.6	11.4	22.2	21.5
Changes in Inventories of Finished Goods, Stock-in-trade and Work-in-progress	46.5	-61.3	-40.8	-64.1
Excise Duty / Goods and Service Tax Expenses	94.6	367.4	335.2	291.3
Employee Benefits Expense	379.1	642.8	545.4	443.3
Transmission And Wheeling Charges	0.0	0.0	0.0	0.0
Other Expenses	544.1	707.2	651.3	691.1
PBIDT	1130.4	1498.5	1554.6	1129.5
Interest	30.2	45.7	83.1	77.0
PBDT	1100.2	1452.8	1471.5	1052.5
Depreciation	146.3	237.1	295.6	225.8

PBT	954.0	1215.7	1175.9	826.8
Tax (incl. DT & FBT)	344.5	432.1	411.1	294.9
Tax	349.0	450.0	427.8	300.0
Deferred Tax	-4.5	-17.9	-16.8	-5.1
PAT	609.5	783.6	764.8	531.8
EPS (Rs.)	19.88	81.12	79.17	55.06
Equity	153.30	48.30	48.30	48.30
Face Value	5.0	5.0	5.0	5.0
OPM (%)	17.7	17.8	21.2	17.4
PATM (%)	10.3	9.6	11.1	8.4

Balance Sheet: Rs in million

Particulars	9MFY18	FY17	FY16	FY15
ASSETS				
NON CURRENT ASSETS				
Property, Plant And Equipment	922.6	967.7	1024.7	1024.2
Capital Work In Progress	67.4	28.0	56.5	81.1
Intangible assets	2.1	2.1	1.3	0.0
Investments	105.7	110.7	52.7	0.0
Other financial assets	2.9	1.3	0.4	0.7
Deferred tax assets (net)	39.0	34.5	14.4	0.0
Other non current assets	634.7	492.1	531.6	527.4
Total Non Current Assets	**1774.3**	**1636.4**	**1681.5**	**1633.5**
CURRENT ASSETS				
Inventories	866.0	919.8	760.2	644.4
Trade receivables	1172.1	1114.0	867.9	862.7
Cash and Cash Equivalents	260.8	139.7	393.5	30.4
Bank Balances	1.9	39.5	28.3	3.3
Loans	7.3	7.4	7.6	5.7
Other financial assets	1.4	1.0	1.0	0.1
Current tax assets (net)	23.8	39.7	0.0	15.2
Other current assets	630.7	559.2	416.0	520.9
Total Current Assets	**2963.9**	**2820.3**	**2474.5**	**2082.6**
TOTAL ASSETS	**4738.2**	**4456.6**	**4156.0**	**3716.1**
EQUITY AND LIABILITIES				
EQUITY	**3622.0**	**3291.4**	**2511.0**	**2072.2**
Equity Share Capital	153.3	48.3	48.3	48.3
Other Equity	3468.7	3240.3	2459.9	2023.9
Equity Share Suspense account	0.0	2.8	2.8	0.0
LIABILITIES				
NON CURRENT LIABILITIES				
Borrowings	0.0	0.0	212.7	290.6
Deferred tax liabilities (Net)	0.0	0.0	0.0	3.4
Total NON CURRENT LIABILITIES	**0.0**	**0.0**	**212.7**	**294.0**
CURRENT LIABILITIES				
Trade payables	771.0	643.2	533.4	532.6
Borrowings	285.5	402.6	728.7	655.9
Other Financial Liabilities	8.2	9.1	86.4	88.2
Provisions	0.0	0.0	3.3	1.7
Other current liabilities	51.5	110.2	75.7	71.7
Current tax liabilities (Net)	0.0	0.0	4.9	0.0
Total CURRENT LIABILITIES	1116.2	1165.2	1432.4	1349.9
Total Equity & Liabilities	**4738.2**	**4456.6**	**4156.0**	**3716.1**

HDFC securities Limited, I Think Techno Campus, Building - B, "Alpha", Office Floor 8, Near Kanjurmarg Station, Opp. Crompton Greaves, Kanjurmarg (East), Mumbai 400 042 Phone: (022) 3075 3400 Fax: (022) 2496 5066 Compliance Officer: Binkle R. Oza Email: complianceofficer@hdfcsec.com Phone: (022) 3045 3600

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