



## IPO Note – Heranba Industries Limited

22-February-2021

## Issue Snapshot:

Issue Open: Feb 23 – Feb 25, 2021

Price Band: Rs. 626 –627

\*Issue Size: 9,971,938 eq shares  
(Fresh Issue of 9,56,938 eq sh+ Offer for Sale of 9,015,000 eq sh)

\*Issue Size: Rs. 624.24 – 625.24 cr

Reservation for:

QIB	Upto	50% eq sh
Non Institutional	atleast	15% eq sh
Retail	atleast	35% eq sh

Face Value: Rs 10

Book value: Rs 97.62 (September 30, 2020)

Bid size: - 23 equity shares and in multiples thereof

100% Book built Issue

## Capital Structure:

Pre Issue Equity:	Rs. 39.05 cr
Post issue Equity:	Rs. 40.01 cr

Listing: BSE & NSE

Book Running Lead Manager: Emkay Global Financial Services Limited, Batlivala & Karani Securities India Private Limited

Registrar to issue: Bigshare Services Private Limited

## Shareholding Pattern

Shareholding Pattern	Pre issue %	Post issue %
Promoter and Promoter Group	98.8	74.2
Public & Employee	1.2	25.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

\*=assuming issue subscribed at higher band  
Source for this Note: RHP

## Background & Operations:

Heranba Industries limited (HIL) is a crop protection chemical manufacturer, exporter and marketing company based out of Vapi, Gujarat. It manufactures Intermediates, Technicals and Formulations and is one of the leading domestic producers of synthetic pyrethroids like cypermethrin, alphacypermethrin, deltamethrin, permitherin, lambda cyhalothrin etc. Its Pesticides range includes insecticides, herbicides, fungicides and public health products for pest control. Business verticals of HIL includes (a) Domestic Institutional sales of Technicals: manufacturing and selling of Technicals in bulk to domestic companies; (b) Technicals Exports: Exports of Technicals in bulk to customers outside India; (c) Branded Formulations: Manufacturing and selling of Formulations under its own brands through its own distribution network in India; (d) Formulations Exports. Export of Formulations in bulk and customer specified packaging outside India; and (e) Public Health: Manufacturing and selling of general insect control chemicals by participating in public health tenders issued by governmental authorities and selling to pest management companies.

HIL is present in the entire product value chain of the agrochemicals industry i.e. Intermediates, Technicals and Formulations and holds registrations for eighteen (18) Technicals for manufacture and sale in India, one hundred and three (103) Technicals & Formulations for manufacture and sale in the export markets and one hundred and sixty nine (169) Formulations registered for manufacture and sale in India. Applications for registration of fourteen (14) Technicals & Formulations for manufacture & sale in India and seven (7) Technicals and Formulations to manufacture for the export markets have been filed with the CIB&RC and are in the process of evaluation. It has diversified its business from manufacturing and selling of Intermediates to manufacturing, marketing and selling of Technicals and Formulations. Majority of its current Intermediates production is utilized for captive consumption for the manufacturing of Technicals Products.:

The Company's manufacturing process mainly includes chemical reactions of ammonolysis, esterification, hydrolysis, condensation, favorski reaction, isomerisation, cyanation, friedel crafts, methoxylation, cyclisation and halogenation. It has its in-house R&D team for product development and improvisation which is well supported by its product registration team. It is in process of developing two (2) products of Fungicides, two (2) products of Herbicides and one (1) product of Insecticides, for which research and development tests have been initiated, for exclusive sale to the European markets after registration with the regulatory authority in EU. It has an extensive distribution network in India supported by a skilled sales force and have more than nine thousand four hundred (9,400) dealers having access to twenty-one (21) depots of the Company across sixteen (16) states and one (1) union territory in India supporting the distribution of its products. It participates in various international & domestic agrochemical exhibitions and industry conferences to market its products. It also educates farmers regarding the benefits of using products by conducting farmer training camps, participating in village level programmes and exhibitions to establish a direct relationship with farmer communities all over India.

HIL has three (3) manufacturing and packaging facilities in and around the industrial belt of Vapi, Gujarat having one hundred seventy-four (174) reactors with an aggregate manufacturing capacity of 14,024 MTPA. These facilities will manufacture Intermediates like cypermethric acid chloride, cypermethric acid and MPBD and Technicals like Cypermethrin, Alphacypermethrin, Deltamethrin, Permitherin and Lambda cyhalothrin amongst others and a range of Insecticides, Herbicides and Fungicides Formulations.

## Objects of Issue:

The Offer comprises of the Fresh Issue aggregating to Rs. 600 million and the Offer for Sale of 90,15,000 Equity Shares by the Selling Shareholders.

## Offer for Sale

The object of the Offer for Sale is to allow the Selling Shareholders to sell an aggregate 90,15,000 of Equity Shares subject to finalization of Basis of Allotment held by them. HIL will not receive any proceeds from the Offer for Sale.

## Fresh Issue

The net proceeds of the Fresh Issue, i.e. gross proceeds of the Fresh Issue less the Offer expenses apportioned to HIL (“Net Proceeds”) are proposed to be utilised in the following manner:

- To fund working capital requirements; and
- To fund expenditures towards general corporate purposes

The other Objects of the Issue also include creating a public trading market for the Equity Shares of HIL by listing them on BSE and NSE.

## Competitive Strengths

**Presence in a wide range of products across the entire value chain of synthetic pyrethroids :** HIL manufactures Intermediates, Technicals and Formulations which form part of the entire value chain of synthetic pyrethroids and other active ingredients in the agrochemicals business. It is one of the leading domestic producers of synthetic pyrethroids like cypermethrin, alphacypermethrin, deltamethrin, permitherin, lambda cyhalothrin etc. The range of its business activities i.e. from the manufacturing of Intermediates to the sale of branded Formulations, both in the domestic and international markets, offers ample opportunities to enhance revenue and profitability of the Company. Its product pipeline will further expand once it receives necessary approvals from the CIB&RC for the manufacture and sale in India of fourteen (14) Technicals and Formulations, seven(7) Technicals and Formulations for the export markets and one hundred seventy two (172) Technicals and Formulations filed for registration by its International Distribution Partners before regulatory authorities in forty one (41) overseas jurisdictions, excluding Europe.

**Product registrations in the domestic and international markets enabling global outreach:** HIL’s International Distribution Partners, with its product and technical support, has obtained registrations for three hundred and seventy one (371) Technicals and Formulations in forty one (41) countries across Middle East, CIS, Asia, South East Asia and Africa. Further, one hundred seventy two (172) of its Technicals and Formulations has been filed by its overseas customers which are pending registration before the regulatory authorities of forty one (41) countries in various regions across the world, excluding Europe. HIL’s core strength lies in the R&D of Active Ingredients for creating new Formulations, preparing dossiers for national and international registrations of these new Formulations. Its in-house registration team is led by qualified personnel who facilitate the registration process in India with the CIB&RC and its dealers/customers in overseas jurisdictions, including some highly regulated markets like Europe enabling the manufacture and export of a range of Technicals and Formulations in the international markets.

**Strong product portfolio and wide distribution network:** HIL manufactures and supply Technicals to leading domestic and multinational agrochemical companies operating in and outside India which are used by it for manufacturing its own products. It supply Technicals like cypermethrin, alphacypermethrin, deltamethrin, permitherin and lambda cyhalothrin to other agrochemical companies in India and participates in various international and domestic agrochemical exhibitions & industry conferences to market its products. Its sales & marketing teams travel extensively to maintain and strengthen existing relationships with customers and to explore new relationships with potential customers. It educate farmers on the care and protection extended by its products over their crops by conducting farmer training camps, participating in village level programmes and district exhibitions to establish a direct relationship with farmer communities all over India.

**Diversified and stable customer base:** Various domestic and multinational agrochemical companies operating in and outside India are HIL’s customers for the Technicals manufactured by it. It also procure certain Technicals and Formulations from other companies depending on demand and supply and pricing dynamics. This diverse and stable base of customers provide the necessary revenue stability to the Company as not more than 20.85% and 18.57% of its aggregate sales come from its top ten (10) customers for FY 2020 and the period ended September 30, 2020, respectively.

**Experienced Promoters and Management Team:** Promoters of HIL have more than thirty (30) years of individual experience in the agrochemicals sector and are adequately qualified to manage the operations of the Company from manufacturing, exports and marketing. Its Promoters are completely involved in the day to day affairs of the Company and future business strategies. HIL are also instrumental in the development of new products and markets, both domestic and international. The second generation of its Promoters are also fully involved and taking active interest in the business activities of the Company and has become a part of its management and operations. With the right mix of youth and experience HIL is poised for growth and evolution in the near future.

## Business Strategy:

**Enhancing and streamlining production capacities and operations:** HIL has three (3) manufacturing and packaging facilities in and around the industrial belt of Vapi, Gujarat with one hundred seventy-four (174) reactors having an aggregate manufacturing capacity of 14,024 MTPA. These facilities manufacture Intermediates like cypermethric acid chloride, cypermethric acid and MPBD and Technicals like cypermethrin, alphacypermethrin, deltamethrin, permitherin and lambda cyhalothrin amongst others and a range of Insecticides, Herbicides and Fungicides Formulations. It acquired land parcel of around 55,000 sq. mtrs. in the year 2018 on lease basis from GIDC, out of which around 22,300 sq. mtrs. has been presently used the Formulations facility being Unit III. It has streamlined its production by

adding some new reactors and establishing an automated facility for packaging the Formulations at Unit III. Its new R&D facility at Unit III Sarigam has become operational from October, 2020. The remaining land shall be utilized at a later stage for manufacturing Intermediates, Technicals and for other establishing administrative facilities. In addition to the Sarigam land, it has another parcel of land admeasuring around 34,600 square metres at Saykha, at GIDC – Dahej extension, Gujarat (“Saykha”) which can be used for further expansion, when required. Further, HIL has applied with Ministry of Environment (Forests and Climate Change), India for the proposed expansion of manufacturing activities of the Company at Saykha for environmental clearance. The Pyrethroids market in India is projected to grow at a CAGR of 8.5% during 2020-2025, reaching a production volume of 25,398 Tons by 2025. Moreover, the production and consumption value are expected to reach a value of US\$ 462 Million and US\$ 205 Million by 2025, exhibiting a CAGR of 12.5% and 19.6% respectively. HIL’s infrastructure and facilities, present and future growth plans will be in line with the growth of the pesticides industry.

**Development of new products at R&D facility at Unit III (Sarigam Unit):** In order to enter the highly regulated markets of USA and Europe HIL has further enhanced its R&D facilities and capabilities by establishing a 2,000 sq. ft. R&D facility at Unit III (Sarigam Unit) which has become operational from October, 2020. The new R&D facility has the latest technology and processes required to conduct research on Active Ingredients and Formulations, mainly of the molecules going off-patent in the near future with some of them going off-patent in 2020 itself. The new R&D facility will focus on 3-4 such new molecules which are undergoing R&D tests out of which two (2) products are fungicides which will be effective on rice and wheat crops, two (2) are herbicides and one (1) is an insecticide which will be effective on wheat, rice, cotton and sugarcane, for exclusive sale in the European and USA markets. Once these tests and processes are successfully established, these will be documented in a dossier to be then filed for the purpose of registration in USA, Europe and other overseas jurisdictions through International Distribution Partners. It has its in-house R&D team for product development and improvisation which is well supported by its product registration team.

**Entering the highly regulated markets of USA and Europe:** Various Technicals will be going off-patent in the near future and some of them are going off-patent in the year 2020 itself, which may lead to a good demand for the generic versions of these molecules across the world, especially in the highly regulated markets of USA and Europe. To exploit these opportunities, HIL will have to enhance its ability and capabilities with respect to R&D and registrations of the generic versions of these molecules and related formulations in USA and Europe. There is significant growth potential in these markets with higher margins for its existing and new line of products. Its knowledge of the generic agrochemical markets, existing dossiers and registrations across the world will enable new registrations in these highly regulated markets. HIL’s International Distribution Partner in Europe has already received registration for Deltamethrin Technical. Its International Distribution Partner in the USA has also applied for registration of Lambda Cyhalothrin Technical manufactured by HIL as another source of supply to their existing registration for this product.

**Enhancing Formulations & Technicals business in the international markets:** Sales in the international markets require registrations of HIL’s Formulations with the respective regulatory authorities in various overseas jurisdictions. Its International Distribution Partners are required to file the application along with various details of the Formulations with the respective regulatory authority. The Company is named in the application as the manufacturer of the Formulation and it is required to provide the chemical composition details and documents to the local dealer/customer to support the process of registration. It intends to leverage its existing relationships in the international markets where it is already present for new products and develop new relationships in the markets where it is not yet present on the strength of the quality and range of its products. The manufacture and supply of Technicals is mostly based on demand and supply dynamics in the international markets. Its International Distribution Partners present in these markets regularly provides the information on the demand and supply situation and place orders accordingly. With a total product profile of one hundred and three (103) Technicals & Formulations for export and total product profile of three hundred and seventy one (371) Technicals and Formulations registered in forty one (41) countries in the international markets by its International Distribution Partners, HIL is well placed for growth in the international markets. It is expected the global Pyrethroids market to grow at a CAGR of 6.38% in terms of value, during 2020-2025, reaching a value of US\$ 4,068 Million by 2025. Pyrethroids serve as a cost-effective alternative to the conventionally used insecticides.

**Branded Formulations and Public Health products segment:** As part of HIL’s further growth strategy it intends to focus on manufacturing and sales of Formulations under its own brands in India and the manufacturing and marketing of Public Health products. Some of its Branded Formulations have already established themselves and have a high recall value amongst farmers. On the Public Health side, its products include general insect control, termiticide, larvicide, indoor residual spray, rodenticide and cockroach gels which are Formulations of synthetic pyrethroids. Public Health products are supplied to municipal corporations and government bodies/agencies through the bidding process of tenders issued by them for public health purposes like controlling the spread of malaria, filaria, dengue and such other parasitic diseases. These products are also supplied to pest control companies which spray them at residential and commercial premises like warehouses and godowns. HIL has been able to successfully bid for government tenders issued by central and state governments agencies and municipal corporations as it meet their eligibility criteria viz. quality of products, capability of supplying large volumes and track record. HIL normally supply these products under its own brands like “Temper” and “Rat Kill” or in bulk form as may be required.

## Industry

### Overview

Pyrethroids are synthetic chemical compounds that are procured from chrysanthemum cinerariaefolium flowers. Owing to these properties, they are used to control pest insects in farms, homes, communities, restaurants, hospitals and schools. Apart from this, as they are less toxic to mammals and birds, they are widely utilized in the production of veterinary medicines. Pyrethroids are currently available in the form of emulsifying concentrates, wet powders, granules and ultra-low-volume (ULV) spray. Pyrethroids were first developed in the 1950s. However, they gained popularity when photostable second-generation pyrethroids were introduced in the late 1970s and 1980s. With the phasing out of most acceptable uses of organophosphate insecticides (e.g., chlorpyrifos and diazinon), pyrethroids became the predominant class of insecticides that were available in the urban marketplace. In the early 2000s, the United States Environmental Protection Agency (USEPA) approved the sales of permethrin-treated mosquito-repellent clothing. Nowadays, pyrethroids are used both outdoors and indoors to control insects such as ants, fleas, termites, and bedbugs.

### Key Industry Trends

Growing at a CAGR of nearly 7.4% during 2014-2019, the India Pyrethroids market is currently experiencing a positive growth. In 2019, the market reached a sales value of US\$ 110 Million. Pyrethroids are cost-effective alternatives for conventionally used insecticides. They exhibit biodegradable properties and are widely used as liquid powders, granules, concentrate emulsifiers, and ultra-low-volume (ULV) sprays. Additionally, they are relatively less poisonous for mammals or birds, owing to which they are used for killing bugs and flying insects in small quantities. Consequently, they are also replacing organophosphates, which were conventionally used on vegetables, such as carrots and lettuce.

Despite the presence of several driving forces, the Indian pyrethroids market faces some challenges as well. For instance, the rapid photodegradation and high susceptibility to moisture and heat are limiting the effectiveness of pyrethroids in agriculture and other open space applications. Moreover, although pyrethroids offer lower toxicity to human applicators and non target mammals and birds, they are highly toxic to invertebrates and fish. Furthermore, the behavioral and genetic changes in insects that result in resistance to pyrethroid treatment act as another major restraint to the market growth. Overall, it is expected the demand for pyrethroids in India to remain positive during 2020-2025, exhibiting a CAGR of 19.6% and reaching a sales value of US\$ 205 Million by 2025.

### Market Trends

The global agrochemicals market reached a value of US\$ 65.59 Billion in 2019, growing at a CAGR of 0.87% during 2014-2019. Agrochemicals have gained popularity in the agriculture industry in recent years because they help farmers boost their crop quality as well as quantity. Considering the current global population scenario, rising crop production within the present arable land to feed the global population is of utmost importance, which is helping the agrochemicals market to grow further.

### Factors Driving the Global Consumption Growth of Agrochemicals

A significant increase in the global population, the escalating requirement to improve crop yields, and increasing demand for biologically based new products have catalyzed the demand for crop protection chemicals over the past few years.

**Asia Pacific:** The Asia-Pacific region accounts for the largest share in the global agrochemicals industry. Some of the major factors influencing the agrochemicals market growth in the region are as follows:

**Increasing Demand:** Growing population in the region, especially in India and China, and the rising need for achieving food grain self-sufficiency have stimulated the agrochemicals market growth.

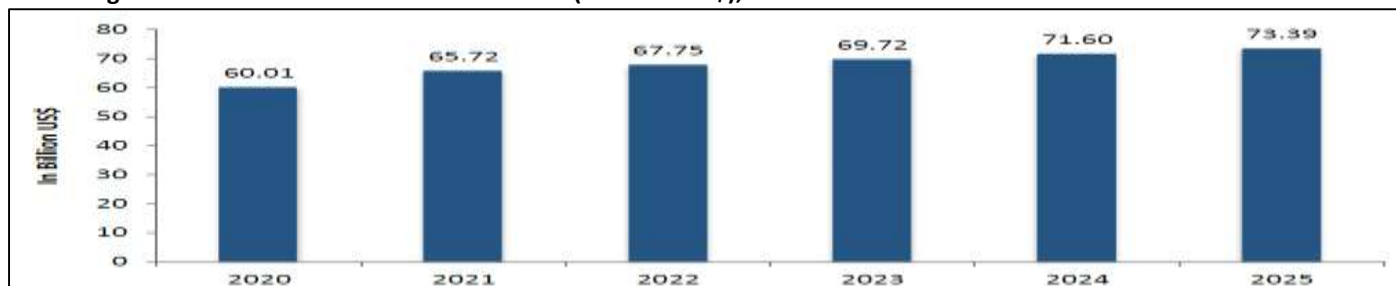
**Farmland Availability:** Rapid urbanization has had a negative impact on land availability. The pressure to increase yield per hectare can be achieved through increased usage of productivity-enhancing inputs, such as crop protection products.

**Off-patent Molecules:** The share of off-patent molecules compared to patented molecules and proprietary off-patent molecules have been increasing over the years. This provides improved export opportunities for Asian companies (especially India and China) that possess expertise in the off-patent segment.

### Market Forecast

Looking forward, it is expected the global agrochemicals market to grow at a CAGR of 4.11% during 2020-2025, reaching a value of US\$ 73.39 Billion by 2025.

Global: Agrochemical Market Forecast: Sales Value (in Billion US\$), 2020-2025



## Market Trends

The agrochemicals market in India reached a value of US\$ 2,760 Million in 2019, growing at a CAGR of 6.5% during 2014-2019. In India, the agrochemicals market is rising due to growing demand for food driven by an increasing population. Moreover, India's agrochemical market is expected to grow in the forecast period due to rising export opportunities for Indian suppliers owing to the shutdown of agrochemical plants in China due to green movements.

## Factors Driving Agrochemical Consumption in India

India is the fourth-largest global producer of crop protection products, after the US, Japan and China. It has also emerged as one of the major exporters of crop protection products globally. With more mouths to feed, shrinking arable area and loss of yield due to increased pest attacks, the crop protection products industry in the country is growing significantly. Some of the major factors driving the Indian agrochemicals market growth are as follows:

**Increasing Food Demand:** With the estimated growth of population to 1.7 Billion by 2050, Indian food grain demand is estimated to reach a volume of 355 Million Tons by 2030. On account of reducing arable land, small land holdings and low consumption of pesticides per hectare, the requirement for increasing farming productivity is being witnessed, which is crucial for improving the overall outputs. This can be further achieved through optimum usage of farm productivity-enhancing inputs like agrochemicals.

**Increasing demand for Horticulture and Floriculture:** Fruits and vegetables account for nearly 90% of total horticulture production in the country. Due to rapid urbanization and a shift towards nutritious and healthy diets, the demand for fruits and vegetables is likely to increase by 141% (from 268 Million Tons to 647 Million Tons in 2050). Hence, in order to reduce the post-harvest loss in fruits and vegetables, the demand for fungicides is expected to increase significantly.

**Off Patent Molecules:** Pesticides worth USD\$ 4.1 Billion are expected to go off-patent by 2020. This is anticipated to provide significant export opportunities for Indian companies to develop generic molecules. Further, the implementation of stringent regulations by the Chinese government pertaining to environmentally polluting industries is also projected to offer numerous opportunities for the Indian manufacturers in the form of off-patent molecules for effectively increasing exports from India.

**Increasing Export Potential:** The Indian exports of agrochemicals reached a value of US\$ 3.37 Billion in 2019, growing at a CAGR of 11.6% during 2014-2019. The Indian government has set an agricultural export policy to expand the exports to USD\$ 60 Billion by 2022. This is expected to boost the Indian export of agrochemicals in the coming years. Apart from this, the government is also targeting cluster-based developments, which will boost the competitiveness of exports and domestic sales by reducing logistics costs.

**Government Budgetary and Policy Support:** The growing adoption of institutional credit to provide credit facilities to farmers in rural areas is continuously increasing. Thus, the availability and low-interest rates of farm loans have encouraged farmers to use pesticides in order to improve their crop yields. The increasing MSP (Minimum Selling Price) has also invigorated farmers to improve their yield, which is anticipated to boost the use of agrochemicals.

**Increasing Usage of Bio-pesticides:** Globally, the bio-pesticides market is growing at a CAGR of 10-15%, whereas the bio-pesticides segment in India constitutes only 3% of the Indian crop protection market. However, growing awareness regarding numerous eco-friendly approaches and the increasing use of integrated pest management (IPM) method for crop protection is providing lucrative opportunities for the growth of bio-pesticides in the Indian agrochemical industry.

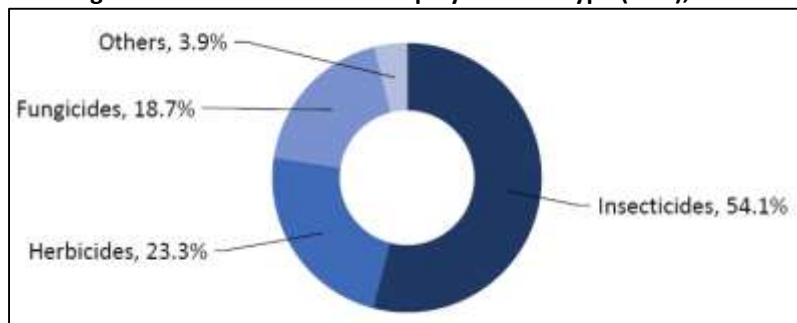
**Per Capita Consumption:** India has one of the lowest pesticide consuming country in the world. India's per hectare consumption of pesticide is 0.6 Kg is lower when compared to the US (5-7 Kg/ha) and Japan (11-12 Kg/ha). Thus, an immense potential for the growth of the agrochemical industry in India is anticipated. This lower per capita consumption of pesticides has positively impacted the agrochemicals market growth over the past few years.

**Climatic Conditions:** Farms need an array of inputs to protect crops from the effects of erratic climatic conditions. Irregular monsoons, in confluence with lack of irrigation, results in low agricultural yields.

## Market Breakup by Product Type

In 2019, Insecticides represented the most popular product type in the agrochemicals industry of India, accounting for 54.1% of the total market in India. The insecticides were followed by herbicides (23.3%), fungicides (18.7%) and others (3.9%).

## India: Agrochemicals Market: Breakup by Product Type (in %), 2019



## Regulatory Aspects in India for Production and Consumption of Agrochemicals

### Overview

India is one of the most dynamic generic pesticide manufacturers in the world and is the fourth largest pesticide manufacturer after China, the US and Japan.

Manufacture, Import, Registration, Sale, Transport, Distribution and use of agrochemicals in India is regulated by The Insecticides Act, 1968 and Insecticides Rules, 1971. All agrochemicals (Insecticides, Fungicides, Herbicides, Public health insecticides) must be registered with Central Insecticides Board & Registration Committee (CIB&RC), ministry of agriculture under various sections of Insecticides Act before they can be imported/ manufactured for sale and distribution.

Once a crop protection product is approved by CIB & RC, it will be further approved by state governments of each state. As per the Insecticides Act, pesticides are defined as those substances that are listed on the "Schedule" of the Insecticides Act, 1968. If there is any pesticide other than listed in schedule, then it must be included in schedule before it can be applied for registration with CIB & RC.

### Commentary on Key Raw Materials and Pricing Impact Due to Chinese Factors

The agrochemical industry has an extensive consumption of raw materials that are derived from crude-oil, chlorine, yellow phosphorus and bromine. As these materials are essential for the manufacturing of technical grades, any fluctuation in the pricing of these raw materials, directly impacts the overall production costs of agrochemicals. Currently, China is the largest exporter of agrochemicals to India, accounting for a share of around 55% of the total agrochemical imports in India. The key Indian agrochemical companies import a significant part of their technical requirements from China as it sources most of the raw materials required to manufacture agrochemicals.

Recently, the coronavirus outbreak in China has hit the supply chains worldwide. Indian importers of raw materials are also facing problems as China factories remain shut for some time now. As a result, there has been a sudden surge in the prices, which were initially declining from past few months. The Indian agrochemical sector is closely monitoring the outbreak as it imports a noteworthy portion of its raw material from China. A prolonged trade barrier is expected to impact the profitability of the Indian firms. Besides this, the recent trade tensions between the US and China has benefited the Indian agrochemical industry. China is the largest exporter of agrochemicals to the US, accounting for around 22% of the total US import in 2019. India stands at the second position with a share of 17%. The trade war between the US and China has provided a lucrative opportunity for Indian firms to increase their export potential in the long run.

### R & D Expenditure: India vs Global

Research and development (R&D) includes various activities undertaken by the organizations to innovate and introduce new products and services. The R&D in the agrochemical sector involves a long gestation period and high capital requirement. In general, it takes an investment of \$100-350 Million, along with a period of 10 years, to develop a new market for agrochemicals. Owing to extensive R&D and innovation, product manufacturers are now able to screen potentially toxic traits in the active ingredients. This aids in ruling out the products at an early stage of the development process, which can have adverse effects on human health or the environment.

The world's leading manufacturers of agrochemicals invest more than \$3 Billion annually into the R&D of new products, while the overall R&D investment by the major research-based companies has remained consistently high at 7%-10% of annual sales every year. Even though the rate of new product approvals has decreased in the recent years, the industry still has been able to maintain a decent level of product innovation. Apart from this, investment also remains high, along with other developments such as integrated crop solutions, application technology and precision farming. These factors reflect a continually increasing R&D investments in this sector as compared to that of other sectors. The average R&D expenditure between the period 2010-14 was reported to be \$286 Million, which increased from \$256 Million in the previous period.

Although companies in Japan always had low R&D capabilities, they are now spending extensively in their R&D. However, Japan's previous status stands in contrast to the leading agrochemical companies in the European region and in the US, which have always maintained a relatively higher level, i.e., approximately 40% of their agricultural chemical products, in the R&D phase.

Several Indian agrochemical companies are building strategic partnerships with pesticide manufacturing companies based in the USA, Europe, Japan and China. In return, these companies provide a strong distribution network and sales infrastructure. As per the data, it is

estimated that most Indian companies spend 1-2% of their sales in R&D. The Agrochemical industry has witnessed huge investments and mergers and acquisitions (M&A), which is helping the Indian companies to minimize their costs of R&D and product development time, thereby improving the overall efficiency of the R&D process.

PI Industries Limited, an Indian chemical manufacturing company, has one dedicated unit for R&D among its manufacturing units that focuses on improving the product quality in the agri-input industry. The constantly invest in the R&D and new product launches despite fluctuations in the prices of raw materials, which usually lead to depletion in the margins. As a result, the R&D expense has doubled in FY 2018 to INR 650 Million from INR 350 Million in FY 2017.

## Government Policies and Initiatives

With the objective of increasing the production of agricultural products, the Government of India launched various policies and initiatives, which played a significant role in escalating the sales of agrochemicals across the country. Some of the major government policies and initiatives are described below:

**Increasing MSP:** The Government has fixed minimum selling prices (MSPs) of 22 mandated kharif and rabi crops and fair and remunerative prices (FRPs) for sugarcane. This has assured the farmers a minimum of 50% as margin of profit, which is one of the important and progressive steps towards doubling farmers' income by 2022 and improving their welfare substantively.

**Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):** The PM-KISAN Yojana was introduced in the interim budget for the year 2019-2020. Based on this initiative, the small and marginal landholder farmer families with cultivable land holding up to 2 hectares were assured Rs 6000 per year across the country. Moreover, the Government of India has recently revised the scheme and it is now expected to cover around 2 crores more farmers, increasing the coverage of the Yojana to around 14.5 crore beneficiaries, with an estimated expenditure by the Central Government of INR 87,217 Crore for the year 2019-20.

**Direct Benefit Transfer:** Through the simpler and faster flow of information/funds, the direct benefit transfer initiative re-engineered the cash disbursement process in welfare schemes to ensure accurate targeting of beneficiaries, remove duplication and reduce fraud. In FY 2019-20 alone, this scheme is estimated to have transferred more than INR 231,927 Crore.

**Pradhan Mantri Annadata Aay SanrakshAn Abhiyan (PM-AASHA):** This scheme aims to ensure that farmers get remunerative prices for their produce. It is expected to complement the increase in MSP, which will be translated into farmers income by way of robust procurement mechanism in coordination with the states.

**Make in India:** The Government of India through its 'Make in India' initiative has been inviting several national and international organizations to manufacture and expand operations in the country. Most of the companies are currently looking for sourcing chemicals from India to de-risk their sourcing from China. Additionally, there are numerous other reasons for MNCs investing in India. Few among those are low capex, availability of skilled manpower at low cost, and infrastructural advancement.

**National Agriculture Market (eNAM):** National Agriculture Market (eNAM) is a pan-India electronic trading portal that networks the existing Agricultural Produce Market Committee (APMC) mandis to form a unified national market for agricultural commodities. Small Farmers Agribusiness Consortium (SFAC) is the lead agency, which implements eNAM under the aegis of Ministry of Agriculture and Farmers' Welfare (Government of India). The scheme aims to encourage uniformity in agriculture marketing by streamlining of procedures through the integrated markets, removing information asymmetry between buyers and sellers, and promoting real time price discovery on the basis of actual demand and supply.

**National Horticulture Mission:** National Horticulture Mission (NHM) refers to a centrally sponsored scheme that was launched in 2005-06. It helps in improving the horticulture production and enhancing nutritional security and income support to farm households and others through area-based regionally differentiated strategies. After its launch, significant progress has been made in area expansion under horticulture crops, which resulted in higher production. Over the last decade, the area under horticulture grew at an average rate of 2.7% per annum and annual production increase at an average rate of 7.0% per annum.

## India Pyrethroids Market

### Overview

Pyrethroids serve as an economical and safe alternative for increasing crop yields for combating hunger, as well as eliminating vector borne diseases like malaria. Today pyrethroids find usage in significant applications across pest protection, environmental health and crop care as well as animal health. Since pyrethroids are significantly more effective against a broader range of insects, they are considered highly economical and beneficial by most farmers. Pyrethroids are extremely useful and fast-acting against chewing insects and have low water solubility. This implies pyrethroids are less likely to develop to environmentally hazardous levels. They are low in mammal and bird toxicity and require very low dosage as compared to organophosphate pesticides to kill insects. They maintain insecticidal activity over a prolonged period which helps to control overlapping pest generations. Finally, they are naturally readily biodegradable. Pyrethroids are safe



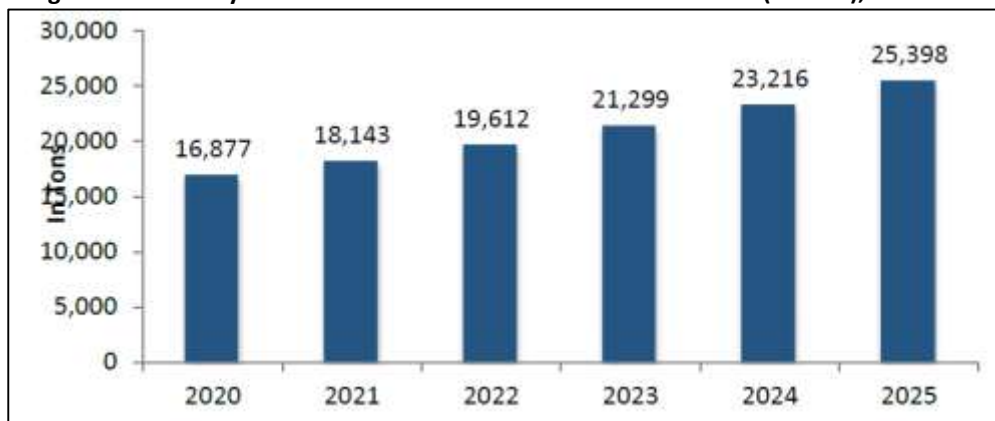
chemistry, they have a broad spectrum of usage and are cost-effective when considering agriculture economy per hectare. There has always been a significant application of pyrethroids in the cotton industry which brought higher returns on investment. The pyrethroids market growth declined with the launch of Bt cotton in India in the early 2000s and the subsequent reduction was experienced in the need for pesticides to be sprayed onto a crop. The region under Bt cotton cultivation, which was barely 0.29 lakh ha (0.38%) out of 76.70 lakh, in 2002-03, increased to 119.40 lakh ha out of 128.19 lakh hectares in 2014-15, showing more than 93.14% adoption over a span of 13 years. The demand for pyrethroids remained stagnant until manufacturers started to look for their applications in other sectors, such as rice, fruit, and vegetables, around 2015.

Throughout 2016, the pyrethroid industry was experiencing a resurgent demand mainly caused by the need to substitute certain organophosphates (OP) and carbamates that were being investigated for their high toxicity risks. Pyrethroids, on the other hand, being safer for the environment, became an automatic option as they balanced environmental concerns and costs of production. India has emerged as the largest pyrethroid manufacturer over the years. More than half of the global demand for pyrethroids comes from China, after importing intermediates from India, which is used to produce pyrethroid. Yet China's adoption of the 'Blue Sky' program to realize green GDP has led to the shutdown of several chemical plants. This, in turn, is expected to result in higher volumes of pyrethroids being exported out of India.

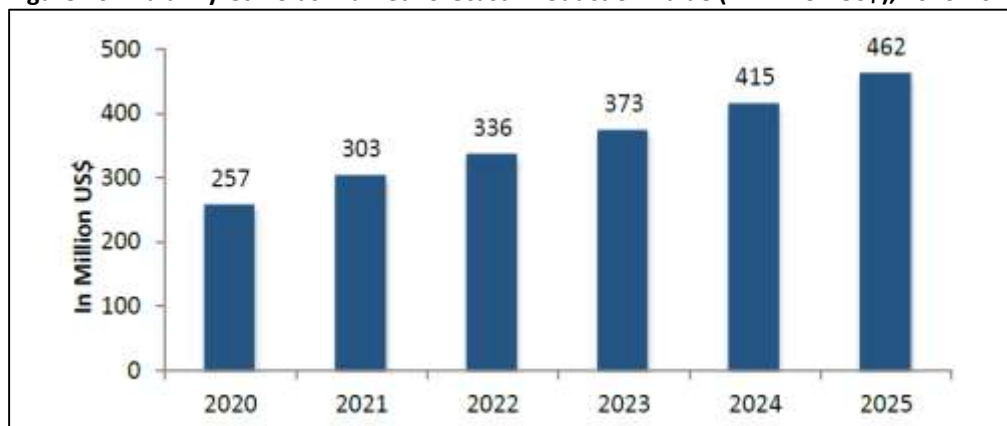
### Market Forecast

Looking forward, it is expected the Pyrethroids market in India to grow at a CAGR of 8.5% during 2020-2025, reaching a production volume of 25,398 Tons by 2025. Moreover, the production and consumption value are expected to reach a value of US\$ 462 Million and US\$ 205 Million by 2025, exhibiting a CAGR of 12.5% and 19.6% respectively.

**Figure 25: India: Pyrethroids Market Forecast: Production Volume (in Tons), 2020-2025**



**Figure 26: India: Pyrethroids Market Forecast: Production Value (in Million US\$), 2020-2025**



### Key Players

In 2019, Heranba Industries Limited dominated the India pyrethroids market, accounting for a share of 19.5% of the total Indian pyrethroids production values. Heranba Industries Limited was followed by Tagros Chemicals India Limited (14.8%), Hemani Industries Limited (9.9%), Dhanuka Agritech Limited (8.7%), Insecticides (India) Limited (7.9%), Syngenta India Limited (6.2%), Sumitomo Chemical India Limited (5.8%), UPL Limited (4.2%), Bayer CropScience Limited (3.9%), Rallis India Limited (3.6%), Excel Crop Care (3.4%) and Others (12.1%).

## Value Chain Analysis

The value chain of the pyrethroid industry involves- Research & development, technical grade manufacturer, formulators, distributors/exporter and the end users. A detailed value chain has been illustrated below

**Research and Development** – For a new pyrethroid, the discovery or research process involves the synthesis of candidate molecules. These candidate molecules are subsequently subjected to a series of biological research tests or screens which are designed to demonstrate the biological activity of the new molecule. The screening process is likely to involve several increasingly complex stages to ensure that the new chemical has a suitable biological activity to merit further development.

After research comes the development stage. Pyrethroid development encompasses a broad range of processes which are all aimed at developing the product for subsequent commercialization. Chemical development processes include the establishment of a pilot plant to produce suitable quantities of material for further biological and safety testing. Studies on optimizing the manufacturing process for commercial production are subsequently undertaken with the aim of arriving at a suitably cost-effective manufacturing process.

**Technical Grade Manufacturer:** After the successful synthesizing of the active ingredient in the lab, the production begins in the factory. Synthesizing a pyrethroid is a complex chemical procedure that requires trained chemists and a large, sophisticated laboratory. Once synthesized, the active ingredient is packaged and sent to a formulator.

**Formulators:** A formulator accepts the active ingredient, measures out the proper amount, mixes it with carrier if it is to be a liquid or with inert powders if it is to be a dust pesticide, then bottles or packages it. Liquid pyrethroids are usually packaged in 200-liter drums if a large-scale farmer is the anticipated customer or 20-liter jugs for small-scale operations. Dry formulations can be packaged in 5 to 10 kg plastic or plastic-lined bags. An emulsified formulation is usually concentrated to render transport easier (the active ingredient typically makes up 50 percent of the emulsified concentrate), but granulated and dry pesticides are ready to use.

**Distributor:** The distributor of pyrethroid procures pyrethroids in various formulations from the formulators and distribute them to various end users. They are responsible for distributing and selling commercial pyrethroid products across the country. Many of these are regional players who have tie ups with one or more agrochemical companies for distribution and sale of their products.

**Exporter:** Like the distributors, the exporters of agrochemicals procure them from the formulators and supply it to the end users based in other countries.

**End-user:** The agrochemicals are then provided to various end users including farmers and households.

## Key Concerns:

- HIL's top ten customers constituted not more than 22.03% and 20.85% of its sales for the six months period ended September 30, 2020 and for Fiscal 2020, respectively, both in the domestic and the international markets. Its top five international customers across product categories constituted 13.04%, 9.60%, 12.68% and 11.50% respectively, of its total revenue for six months period ended on September 30, 2020 and for the Fiscal 2020, 2019 and 2018, respectively. Absence of large customers and dependence on smaller customers increases uncertainty of demand may have an adverse impact on its business operations and financial performance.
- Top five institutional customers across product categories constituted 14.89%, 11.64%, 13.05% and 11.77% of its total revenue for six months period ended on September 30, 2020 and for the Fiscal 2020, 2019 and 2018, respectively. Any reduction or loss in sales to its institutional customers could have an adverse effect on the business, financial condition and results of operations.
- HIL has not entered into long-term agreements with its customers for purchasing its products nor for the supply of raw materials with its suppliers. This could impact the business and financial performance of the Company.
- Raw materials constitute a significant percentage of Company's total expenses. Any increase in prices and any decrease in the supply would materially adversely affect the Company's business.
- Required to obtain and/or renew certain registrations from the CIB&RC for its products manufactured in India. HIL also register its products in overseas jurisdictions through International Distribution Partners to enable exports to such countries. Any failure to successfully register its products in India or in the international markets may affect the results of operations and financial condition.
- HIL may not be able to avail funding from banks or financial institution for its future working capital requirements. The failure to obtain such financing may adversely affect the ability to grow and its future profitability.

- Operations are subject to high working capital requirements. HIL's inability to obtain and / or maintain sufficient cash flow, credit facilities and other sources of funding in a timely manner to meet requirements of working capital or payment of its debts, could adversely affect the operations.
- HIL engage in certain transactions in or with countries or persons that are subject to U.S. and other sanctions.
- The outbreak of Novel Coronavirus, or outbreak of any other severe communicable disease could have a potential impact on HIL's business, financial condition and results of operations.
- In FY 2018-19 certain injunctions or restraining orders were passed against HIL by GPCB prohibiting operations of its manufacturing facilities. In the event it is restrained by the authorities from operating its manufacturing facilities for any length of time, it may adversely affect the business, financial condition and results of operations.
- Any restriction or decline in exports to China, the country from which HIL receive a substantial portion of its overseas revenues, or any other general restriction or curtailment on export of any products it manufacture, or Any restriction or curtailment on imports from China, the country from which HIL imports some of its raw materials, or any other general restriction or curtailment on import of any raw materials it require could adversely affect the business, financial condition and results of operations.
- HIL's operations are subject to environmental and workers' health and safety laws and regulations
- Inability to acquire, develop or protect Branded Formulations, or defend successfully against claims asserting that it has infringed the IPRs of third parties may adversely affect the business, financial condition and results of operations.
- Sales of Branded Formulations are to a large extent dependent on the overall area under cultivation, the cropping pattern adopted by the farming community in India, lack of monsoon and overall general weather conditions in India.
- Branded Formulations business of HIL is sensitive to seasonal fluctuations, climatic variations and other factors beyond its control, which could adversely affect the business, financial condition and results of operations.
- The value of brands may be diluted if there is a change in the brand name for a product it is known for with the farmers, which could adversely affect HIL's business, financial condition and results of operations.
- HIL's agreements with various financial institutions for financial arrangements contain restrictive covenants for certain activities and if it is unable to get their approval, it might restrict its scope of activities and impede its growth plans.
- Any adverse revision to HIL's credit rating by rating agencies may adversely affect the ability to raise additional financing and the interest rates and other commercial terms at which such funding is available.
- Products sold by HIL are subject to independent verification by Government agencies on a sample check basis and any non-conformity with the prescribed standards may lead to adverse impact on the business.
- Failure to accurately forecast and manage inventory could result in an unexpected shortfall and/ or surplus of products, which could harm HIL's Formulations business.
- HIL's customers may be unable to pay their debts due to local economic conditions, which may affect payment for its products used by them on credit in their agricultural activities leading to adversely affecting the business, financial condition and results of operations.
- HIL's Branded Formulations business is sensitive to seasonal fluctuations, climatic variations and other factors beyond its control, which could adversely affect its business, financial condition and results of operations.
- Fluctuations in the prices of commodities crops may affect the sales of HIL's crop protection products and its results of operations.
- Quality concerns and negative publicity, if any, would adversely affect the value of HIL's brand and its sales.
- Inability to respond adequately to increased competition may adversely affect HIL's business, financial condition and results of operations.

- Product innovation and research and development (R&D) activities are an integral part of HIL's business model. If its research and product development efforts are not successful, its business may be restricted which may in turn have an adverse effect on the business and financial condition.
- Traditional agrochemical products may be subject to alternative pest management and crop protection products and measures such as biotechnology products, pest resistant seeds or genetically modified crops.
- Resistance from farmers to crop protection chemicals may adversely affect HIL's business, financial condition and results of operations.
- Lack of education and awareness among farmers in India may lead to inappropriate application of HIL's Formulations and adversely affect its business prospects.
- Agrochemicals is a labour intensive industry, hence HIL may face labour disruptions and other planned and unplanned outages that could interfere or temporarily disrupt its operations.
- Unfavourable global weather patterns may have an adverse effect on export business, results of operations and financial condition.
- Business is dependent on manufacturing facilities which are geographically located in one area, in and around Vapi, Gujarat. Any shutdown of operations in and around Vapi, Gujarat may have an adverse effect on the business and results of operations.
- Any reduction in the demand for products could lead to underutilization of manufacturing capacity.
- Operations are dependent on reactors, machines, and equipment for manufacturing Products. Any breakdown, failure or malfunction may have an adverse effect on HIL's business and results of operations
- Information relating to estimated installed capacities of manufacturing facilities is based on various assumptions and estimates and actual production may differ significantly from such estimated capacities.
- Depend on distribution network to sell products to the farmers and inability to manage distribution partners could hamper the business, financial condition and results of operations.
- HIL is subject to risks arising from foreign exchange rate movements.
- If it is unable to rightly anticipate foreign exchange movements and hedge forex risks, its financial condition may get adversely affected due to forex losses.
- Any changes in regulations or applicable government incentives would materially adversely affect HIL's operations and growth prospects.
- Pyrethroids and Insecticides are known to cause health hazards in humans.
- A slowdown in economic growth in India could adversely affect the business.

## Profit & Loss

Particulars (Rs in million)	H1FY21	FY20	FY19	FY18
<b>Income</b>				
Revenue from operations	6,183.4	9,513.7	10,044.4	7,451.0
<b>Total revenue from operations</b>	<b>6,183.4</b>	<b>9,513.7</b>	<b>10,044.4</b>	<b>7,451.0</b>
Other income	8.7	165.3	73.9	53.2
<b>Total income</b>	<b>6,192.1</b>	<b>9,679.1</b>	<b>10,118.4</b>	<b>7,504.1</b>
<b>Expenses</b>				
Cost of materials consumed	4,517.9	6,397.8	7,083.6	4,970.1
Purchase of stock in trade	138.2	153.1	64.7	0.0
Changes in Inventories of Finished Goods and Work-in-Progress	-461.6	-176.5	-170.7	67.4
Excise Duty on Finished Goods	0.0	0.0	0.0	38.5
Employee Benefits Expense	228.6	464.7	380.1	332.1

Finance Costs	34.6	88.4	107.3	118.1
Depreciation and Amortisation Expenses	66.0	82.0	59.5	50.1
Other Expenses	767.7	1,381.3	1,372.7	1,164.8
<b>Total expenses</b>	<b>5,291.3</b>	<b>8,390.6</b>	<b>8,897.2</b>	<b>6,741.0</b>
<b>Profit before Tax</b>	<b>900.8</b>	<b>1,288.4</b>	<b>1,221.2</b>	<b>763.1</b>
<b>Tax expense</b>				
Current tax	234.0	336.1	457.5	280.0
Deferred tax (credit) / charge	3.7	-25.2	5.3	7.7
Short / (Excess) provision for taxation in respect of earlier years	0.0	0.0	4.4	6.6
<b>Total Tax Expenses</b>	<b>237.7</b>	<b>310.9</b>	<b>467.2</b>	<b>294.3</b>
<b>PAT</b>	<b>663.1</b>	<b>977.5</b>	<b>754.0</b>	<b>468.8</b>
EPS	17.0	25.0	19.3	60.0
Equity	390.6	390.6	390.6	78.1
FV	10	10	10	10
PATM (%)	10.7	10.3	7.5	6.3

(Source:RHP)

## Balance Sheet

Particulars (Rs in Million)	H1FY21	FY20	FY19	FY18
<b>Assets</b>				
<b>NON CURRENT ASSETS</b>				
Property, Plant and Equipment's	1306.6	954.4	511.4	462.4
Capital Work-in-Progress	33.1	377.7	159.7	11.6
<b>Financial Assets</b>				
<i>Investments</i>	124.5	37.3	0.2	0.2
<i>Other Financial Assets</i>	98.5	84.3	71.0	62.4
Current tax assets	0.0	0.0	1.5	0.0
Other Non Current Assets	80.5	80.7	344.6	223.5
<b>TOTAL NON CURRENT ASSETS</b>	<b>1643.2</b>	<b>1534.4</b>	<b>1088.4</b>	<b>760.1</b>
<b>CURRENT ASSETS</b>				
Inventories	1735.2	1455.2	1138.9	940.0
<b>Financial Assets</b>				
<i>Trade Receivables</i>	3727.8	2584.7	2532.7	2030.8
<i>Loans</i>	0.0	9.0	0.0	0.0
<i>Cash and Cash Equivalents</i>	252.8	31.9	209.7	117.8
<i>Other financial assets</i>	19.8	17.2	15.4	14.9
Other Current Assets	502.4	615.3	619.3	641.0
<b>TOTAL CURRENT ASSETS</b>	<b>6238.0</b>	<b>4713.3</b>	<b>4516.0</b>	<b>3744.5</b>
<b>TOTAL ASSETS</b>	<b>7881.2</b>	<b>6247.6</b>	<b>5604.4</b>	<b>4504.7</b>
<b>LIABILITIES</b>				
<b>EQUITY AND LIABILITIES</b>				
Equity Share Capital	390.6	390.6	390.6	78.1
Other Equity	3422.0	2817.9	1891.2	1495.1
<b>TOTAL EQUITY</b>	<b>3812.6</b>	<b>3208.5</b>	<b>2281.8</b>	<b>1573.2</b>
<b>NON CURRENT LIABILITIES</b>				
<b>Financial Liabilities</b>				
<i>Borrowings</i>	0.0	0.0	0.0	2.5
<i>Other Financial Liabilities</i>	65.5	61.5	57.3	52.2
Provisions	12.7	6.5	4.2	1.8
Deferred Tax Liabilities (Net)	19.8	16.1	41.3	36.0
Other Non Current Liabilities	1.6	2.3	0.0	0.0
<b>TOTAL NON CURRENT LIABILITIES</b>	<b>99.6</b>	<b>86.3</b>	<b>102.8</b>	<b>92.5</b>
<b>CURRENT LIABILITIES</b>				
<b>Financial Liabilities</b>				
<i>Borrowings</i>	380.2	430.8	498.7	757.4
<i>Trade payables</i>	2,976.4	2,124.7	2,352.1	1,784.2
<i>Other Financial Liabilities</i>	299.3	139.3	121.9	70.2

Current tax Balances	115.5	37.5	101.7	129.5
Provisions	63.6	57.4	49.1	48.3
Other Current Liabilities	134.1	163.2	96.5	49.4
<b>TOTAL CURRENT LIABILITIES</b>	<b>3,969.0</b>	<b>2,952.8</b>	<b>3,219.9</b>	<b>2,839.0</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>7,881.2</b>	<b>6,247.6</b>	<b>5,604.4</b>	<b>4,504.7</b>

(Source:RHP)

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