Aster DM Healthcare Limited

Issue Snapshot:

Issue Open: Feb 12 – Feb 15, 2018

Price Band: Rs. 180 – 190

Issue Size: 51,586,146 Equity Shares (Including Fresh issue of *38,157,895 eq sh + Offer for sale of 13,428,251 eq sh)

Offer Size: Rs.928.55cr – 980.13cr *

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

Face Value: Rs 10

Book value: Rs 39.13 (Sept 30, 2017)

Bid size: - 78 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity:	Rs. 467.1 cr
Post issue Equity:	Rs 505.2 cr*

Listing: BSE & NSE

Global Co-ordinators and Book Running Lead Manager: Kotak Mahindra Capital Company Limited, Axis Capital Limited, Goldman Sachs (India) Securities Private Limited

Book Running Lead Manager: ICICI Securities Limited, JM Financial Limited, YES Securities (India) Limited

Registrar to issue: Link Intime India Private Limited

Shareholding Pattern

Shareholding Pattern	Pre issue %	*Post issue %
Promoter and Promoter Group	43.28	37.35
Public & Others	56.72	62.65
Total	**100.0**	**100.0**

Source for this Note: RHP

* =assuming issue priced at upper band

Background & Operations:

Aster DM Healthcare Ltd (Aster) is one of the largest private healthcare service providers which operates in multiple GCC (Cooperation Council for the Arab States of the Gulf) states based on numbers of hospitals and clinics. It currently operate in all of the GCC states, which comprise the United Arab Emirates, Oman, Saudi Arabia, Qatar, Kuwait and Bahrain, in Jordan (which classify as a GCC state as part of its GCC operations), in India and the Philippines. Its GCC operations are headquartered in Dubai, United Arab Emirates and its Indian operations are headquartered in Kochi, Kerala. It operates in multiple segments of the healthcare industry, including hospitals, clinics and retail pharmacies and provide healthcare services to patients across economic segments in several GCC states through various brands 'Aster', 'Medcare' and 'Access'.

The execution capabilities of Aster's experienced management team has enabled its consistent growth in recent years, both organically and through strategic acquisitions. It had 149 operating facilities, including 10 hospitals with a total of 1,419 installed beds, as of March 31, 2013 and has expanded to 323 operating facilities, including 19 hospitals with a total of 4,754 installed beds, as of September 30, 2017. Further, it entered into an operation and management services agreement with Rashtreeya Sikshana Samithi Trust in Bengaluru effective February 25, 2017 to provide operation and management services at a hospital in J P Nagar, Bengaluru.

Aster has a diversified portfolio of healthcare facilities, consisting of 9 hospitals, 90 clinics and 206 retail pharmacies in the GCC states, 10 multi-specialty hospitals and 7 clinics in India, and 1 clinic in the Philippines as of September 30, 2017. Its hospitals in India are located in Kochi, Kolhapur, Kozhikode, Kottakkal, Bengaluru, Vijayawada, Guntur, Wayanad and Hyderabad and are generally operated under the 'Aster', 'MIMS', 'Ramesh' or 'Prime' brands. Its clinics in India are located at Kozhikode, Eluru and Bengaluru. It had 17,408 employees as of September 30, 2017, including 1,417 full time doctors, 5,797 nurses, 1,752 paramedics and 8,442 other employees (including pharmacists). In addition, it had 891 'fee for service' doctors working across various specialities in its hospitals in India as of September 30, 2017.

Aster's long standing operations, quality of medical care and track record of building long-term relationships with its doctors and other medical professionals has enabled to build a strong brand name in the GCC states and will enable to further establish the brand in India. Its brands, reputation, strong and stable management team, investment in medical technology and commitment to medical training and education has helped to attract and retain well-known doctors and other health care professionals for its operations, who in turn draw more patients to its facilities. A majority of Aster's hospitals and clinics provides secondary and tertiary healthcare services to patients. In addition to providing core medical, surgical and emergency services, some of its hospitals provide complex and advanced quaternary healthcare in various specialties, including cardiology, oncology, radiology, ophthalmology, neurosciences, paediatrics, gastroenterology, orthopaedics and critical care services.

Objects of Issue:

The Offer comprises the Fresh Issue and the Offer for Sale.

Offer for Sale

Aster will not receive any proceeds from the Offer for Sale.

Requirement of Funds

Aster proposes to utilise the Net Proceeds from the Fresh Issue towards funding the following objects:

- Repayment and/or pre-payment of debt;
- Purchase of medical equipment; and
- General corporate purposes

In addition, it expects to receive the benefits of listing of the Equity Shares on the Stock Exchanges and enhancement of Aster's brand name and creation of a public market for Equity Shares in India.

Utilization of Net Proceeds

Particulars	Amount (in Rs mn)
Repayment and/or pre-payment of debt	5,641.56
Purchase of medical equipment	1,103.11
General corporate purposes	*
Total Net Proceeds	*

Schedule of Implementation and Deployment of Net Proceeds Rs in million

Particulars	Total Estimated Cost	Amount which will be financed from Net Proceeds	Estimated Utilisation of Net Proceeds		
			Fiscal 2018	Fiscal 2019	Fiscal 2020
Repayment and/or prepayment of debt	5,641.56	5,641.56	5,641.56	-	-
Purchase of medical equipment	1,103.11	1,103.11	300.00	803.11	-
General corporate purposes	*	*	*	*	
Total	*	*	*	*	

Competitive Strengths

Long standing presence across GCC states and India with strong brand equity: Aster's is one of the largest private healthcare service providers which operates in multiple GCC states based on numbers of hospitals and clinics, according to the Frost & Sullivan Report, and an emerging healthcare player in India. It is well placed to capitalise on the expected growth in healthcare sector in the GCC states due to its early mover advantage, strong brand presence using a targeted strategy of offering different brands to cater to diverse group of customers and existing track record. Its 'Aster', 'Medcare' and 'Access' brands are widely recognised in the GCC states by both healthcare professionals and patients. Its 'Aster' and 'Medcare' brands address the needs of the upper and middle income segments in the GCC states respectively, while its 'Access' brand offers affordable healthcare services to blue collar expatriate workers and the lower income segment in the GCC states. Further, the presence of Aster's pharmacies at multiple locations across various GCC states also enhances the visibility of its brands. Its long-standing presence in the GCC states has helped it gain an understanding of the respective markets and the regulatory environments and has contributed towards the success of its GCC operations. In fiscal 2015, it launched Aster Medcity in Kochi, Kerala, which is intended to be positioned as a destination for medical value travel from select markets including India and countries across the GCC states, the MENA region and South Asia. Its understanding of and long-term commitment to the Indian market across diverse segments and its financial strength will enable Aster to further establish its brand in India.

Well diversified portfolio of service offerings to leverage multiple market opportunities*:* Aster has an established presence across multiple geographies, multiple healthcare delivery verticals and serve multiple economic segments. It provides healthcare services in the United Arab Emirates, Oman, Saudi Arabia, Qatar, Kuwait and Bahrain, which comprise all of the GCC states, in Jordan (which it classify as part of its GCC operations) and in the Indian cities of Kochi, Kolhapur, Kozhikode, Kottakkal, Bengaluru, Vijayawada, Guntur, Wayanad and Hyderabad. Aster operates in multiple formats providing a wide range of services through its diverse network of 9 hospitals, 90 clinics and 206 retail pharmacies in the GCC states, 10 multi-specialty hospitals and 7 clinics in India, and 1 clinic in the Philippines as of September 30, 2017. Its GCC operations encompass all levels of healthcare services from primary to tertiary and position it to be a one-stop destination for patients needs once they enter its network. In addition to providing core medical, surgical and emergency services, it also offers advanced surgical treatments in various specialties, including cardiology, oncology, radiology, neurosciences, paediatrics, gastroenterology, orthopaedics and critical care services. As Aster's healthcare network serves a diverse range of patient needs and is spread across a large region, this model and large ecosystem has enabled to expand its reach and leverage market opportunities to gain access to a larger patient base and achieve synergies across verticals and geographies, while efficiently deploying its resources. This has helped Aster to improve its operational efficiencies, by allowing it to centralise certain key functions, such as finance, sourcing, distribution, branding and marketing. It is in the process of centralising its information technology systems in order to deliver better healthcare services to its patients.

Provision of high quality healthcare service*:* Aster constantly strive for a high standard of clinical excellence at all its hospitals, clinics and retail pharmacies. It follow well defined quality and patient safety protocols in patient handling and care. Further, its hospitals in the GCC and India offers a wide range of advanced medical care and emergency services, including cardiology, gastroenterology, neurology, obstetrics and gynaecology, orthopaedics, paediatrics, plastic surgery, dental, women's health, child and adolescent health, urology, nephrology and allied services such as radiology. Its focus on quality is evidenced by the quality certifications and accreditations that its

facilities has obtained from various local and international accreditation agencies, which include accreditation from the JCI. JCI is considered the gold standard of hospital accreditation in the healthcare industry and 5 of its hospitals, 1 clinic and 1 diagnostic centre in the GCC states, and Aster Medcity in Kochi, Kerala, has obtained such accreditation. Its multi-specialty hospital MIMS Hospital in Kozhikode received accreditation by the NABH in 2006. Aster MIMS hospital in Kottakkal, Aster Aadhar hospital in Kolhapur, Aster Medcity in Kochi, and both Dr. Ramesh Hospitals in Vijayawada and Dr. Ramesh Hospital in Guntur has also received NABH accreditation. Its Sanad Hospital in Saudi Arabia has obtained an accreditation from the Saudi Central Board for Accreditation for Healthcare Institutions, or CBAHI. It's solicit after-service patient feedback through various means such as discussions, feedback forms and in some cases through call-centres. This helps in continuous improvement of its service delivery to its patients.

Ability to attract and retain high quality medical professionals: Aster had 17,408 employees as of September 30, 2017, including 1,417 full time doctors, 5,797 nurses, 1,752 paramedics and 8,442 other employees (including pharmacists). It also had 891 'fee for service' doctors working across various specialities in its hospitals in India as of September 30, 2017. Many of its specialists, physicians and surgeons has been trained in some of the best medical institutions across the world and has received accolades and awards. As of September 30, 2017, approximately 30% of the doctors in Aster's hospitals and clinics specialise in various clinical fields such as cardiology, cardio vascular thoracic surgery, neurovascular surgery, nephrology, orthopaedics, oncology and gastroenterology. Its brand, long-standing presence, competitive compensation and incentives, investment in medical technology and advanced equipment, continuous expansion and reputation has helped to attract and retain well-known doctors and other health care professionals from an international and diverse talent pool for its facilities, who in turn draw more patients to its facilities. In addition to attracting doctors and other medical professionals to Aster's facilities, it has a track record in building long-term relationships with its doctors and other medical and non-medical professionals through various incentive programs such as its domestic and international conference travel policies and its sponsored training and education assistance policy. Aster's operations in India enables to source doctors, nurses and other medical professionals from India to its operations in the GCC states. As of September 30, 2017, 60.74% of its doctors and 64.47% of its non-medical professionals in the GCC states are of Indian nationality.

Ability to identify, adapt to and capitalise on market developments, conditions, trends and opportunities: Aster's ability to identify, adapt to and capitalise on market developments, as well as its flexible business model has enabled it to stay at the forefront of market trends and develop a strong track record of achieving profitability and growth. It also has a proven track record of identifying and capitalizing on emerging technology trends in the healthcare services industry. By tracking technological innovations and medical developments across the world, it continuously invest in medical technologies, facilities and equipment in order to offer high quality healthcare services to its patients and to expand and improve on its range of healthcare services. Aster is at the forefront of market trends in the healthcare services industry and the provision of advanced treatment procedures and complex surgeries such as cardiothoracic surgeries, neuro surgeries, nephron surgeries and orthopaedic surgeries.

Track record of operating and financial performance and growth: Aster's has grown from 149 operating facilities in 5 countries, including 10 hospitals, as of March 31, 2013 to 323 operating facilities in 9 countries, including 19 hospitals, as of September 30, 2017. It has increased the bed capacity of its hospitals from 1,419 beds as of March 31, 2013 to 4,754 beds as of September 30, 2017. Its operational beds increased from 1,309 as of March 31, 2013 to 3,584 as of September 30, 2017. This includes 432 operational beds out of a total capacity of 670 installed beds for Aster Medcity in Kochi, Kerala, which launched in August 2014. The number of Aster's clinics in GCC states increased from 41 as of March 31, 2013 to 90 as of September 30, 2017, and the number of its retail pharmacies increased from 98 as of March 31, 2013 to 206 as of September 30, 2017. It assess the likely profitability of hospitals before it construct or acquire them.

Experienced core management team: Aster benefit from an experienced management team in the healthcare services industry, which will be important in executing growth strategy including potential acquisitions and organic expansion projects, retaining flexibility to adapt to changing market conditions and capitalizing on market opportunities. Its management team is composed of directors and senior officers with an average of approximately 18 years of experience in the healthcare services industry, as well as doctors with both clinical and administrative experience. Given extensive presence and operations across regions and verticals, Aster also has a second line of management with managerial, healthcare and regulatory experience in control of, and to provide stability across, its daily operations. Each of its vertical segments has its own management team led by its own Chief Executive Officer.

Business Strategy:

Continue to grow within existing centres: Aster intends to grow its existing hospitals and clinics by adding new specialities and services, increasing the number of beds and relocating certain specialities into new facilities. Its expansion plans are generally driven by its existing facilities functioning at close to maximum capacity, as the new or expanded facilities will have a ready customer base, resulting in quicker operational ramp-up and higher business volume with lower operational risks. It intends to continue the growth of retail pharmacy business through organic growth and acquisitions. In 2014, it expanded its product profile and commenced distribution of a number of products, including over-the-counter medicine, cosmetics and vitamin supplements, for which Aster has been granted exclusive distribution rights for

the UAE by the supplier, to be sold in retail pharmacies as well as those of third parties. A number of retail pharmacies are open 24 hours a day and offers services such as home delivery. India is geographically well positioned for medical value travel from the GCC states, MENA region and South-East Asia and is highly competitive in terms of healthcare costs compared to developed countries. medical value travellers, who are patients for whom it is less expensive to travel to receive quality medical treatment than to obtain such treatment locally, will contribute to higher revenues per bed per day than its other patients and will help drive growth. Its Aster Medcity Kochi and Aster CMI Bengaluru hospitals are well-connected for both domestic and international travel to be preferred destinations for medical value travel. The company intends to increase its marketing efforts to attract medical value travellers to these facilities. The presence of a large network of its clinics and hospitals in the GCC states helps to drive medical value travellers to its hospitals in India.

Increase presence by way of greenfield expansions: Aster has 9 hospitals in the GCC states, with a total capacity of 867 beds, as of September 30, 2017. It intends to capitalise on the increasing demand for healthcare services in the GCC states by building or expanding 4 multi-specialty hospitals in the UAE, for a total additional capacity of 286 beds. These hospitals are in the process of construction and are expected to be completed within the next 1 to 2 years. It also plans to build or expand 5 hospitals in India within the next 4 years to add 1,372 beds to its total bed capacity, with a focus on building and expanding facilities in Tier I and II cities such as Bengaluru, Trivandrum, Kannur and Kozhikode.

Pursue inorganic growth opportunities to expand into newer service offerings or new markets*:* In the past Aster has successfully used acquisitions and strategic partnerships to expand its operations and consolidate its presence in new markets. Since its incorporation, it acquired 8 hospitals in India and management rights in Aster CMI Hospital and DM WIMS Hospital, as well as 1 hospital, 1 clinic and 39 retail pharmacies in the GCC states. It intends to leverage its acquisition experience to successfully identify, execute and integrate new opportunities that may arise in the future. Aster entered into strategic partnerships for the Kolhapur, Wayanad, Vijayawada and Hyderabad facilities to achieve the multiple objectives of rapidly expanding its operations in India and also gaining insights into the local environment. To complement the expansion of services at its existing facilities and enhance service offering, it intends to seek opportunities in new underpenetrated markets in India, mainly through exploring strategic investments in, or acquisitions of, hospitals. It will also continue to assess further opportunities in Tier 1 cities and may participate in competitive bidding auctions for acquisitions.

Capitalise on mandatory health insurance in GCC*:* The Emirate of Abu Dhabi introduced mandatory health insurance for all residents, locals as well as expatriates (along with their dependents), in 2006 and the number of people insured in Abu Dhabi increased at a CAGR of 7.4% between 2008 and 2013 to cover 3.43 million people in 2015. As a result, approximately 1.5 to 2 million additional people are likely to be covered by health insurance by 2017, with the increase primarily coming from the low-income population segment and middle-income dependents. All nationals and residents of Dubai (including those in the free zones), are required to have coverage to pay for emergency and curative healthcare needs since 2014. The mandatory health insurance law also requires visitors in Dubai to be covered under health insurance. It is well positioned to take advantage of the implementation of health insurance reforms and it can leverage its existing partnerships with insurers and suppliers to increase its presence in these markets. Aster has demonstrated its ability to provide high quality medical services along with quality customer service, to respond quickly and positively to health insurance reforms, and to be viewed as a reliable partner by insurers. Aster is adding additional specialities such as cardiology as it aims to expand on its high-end service offerings in tertiary and quaternary care.

Implementation of initiatives to improve existing operational efficiencies and profitability*:* Maximizing operating efficiencies and profitability across network is a key component of growth strategy, including the integration of acquisitions and the efficient management of organic growth. It intends to focus on the following key areas to improve clinical and administrative operating efficiencies and profitability:

Integrated healthcare network: Aster plans to improve efficiencies at its hospitals and retail pharmacies through greater integration across network. Further, its hospitals, clinics and retail pharmacies are large consumers of drugs and pharmaceutical products and medical consumables like stents, implants, sutures and other surgical materials. To minimise costs and leverage its economies of scale, Aster intends to focus on standardizing the type of medical and other consumables used across its network, optimizing procurement costs, consolidating its suppliers and optimizing the use of medical consumables by establishing guidelines for medical procedures across network of business segments, brands, verticals and geographical operations, as appropriate.

Integrated IT platform: Aster is in the process of fully integrating its IT platform across businesses and is implementing the use of electronic medical records and analytics which are intended to improve patient care, facilitate referrals among its facilities and allow it to more efficiently deploy resources. To date, Aster's integrated IT platform has been implemented at Aster Medcity, Kochi; Aster CMI, Bengaluru; and Aster Hospital, Dubai. Innovative usage of IT is expected to transform healthcare services and products and it intends to be at the forefront of these digital developments.

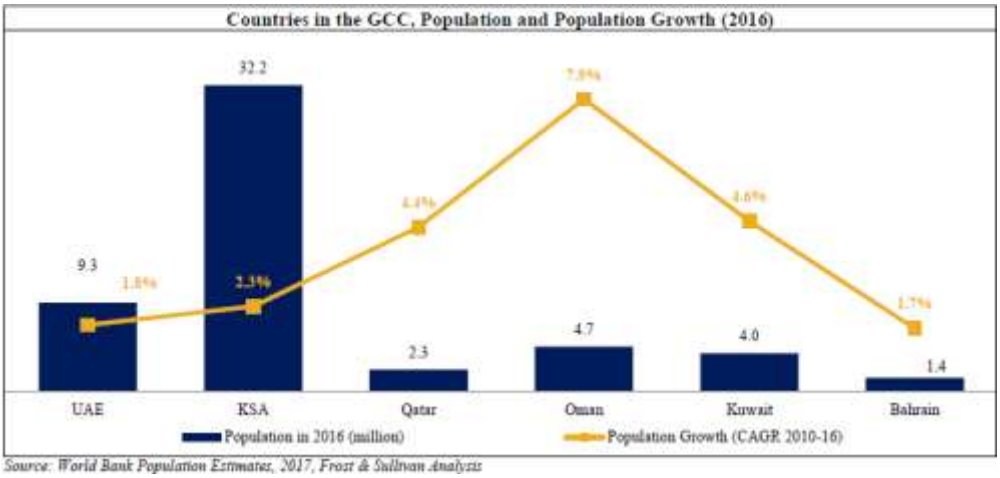
Medical technology: Aster focus continually on investing in the latest medical technologies and innovations, attracting skilled physicians and surgeons and developing expertise across key specialisations and in high growth tertiary and quaternary care areas to serve the increasing demand for sophisticated clinical care and procedures. By implementing its strategy to focus on high growth facilities and other technologies and specialist skill-driven clinical areas, the company intends to improve case mix and increase revenues per occupied bed per day.

Industry:

GCC States

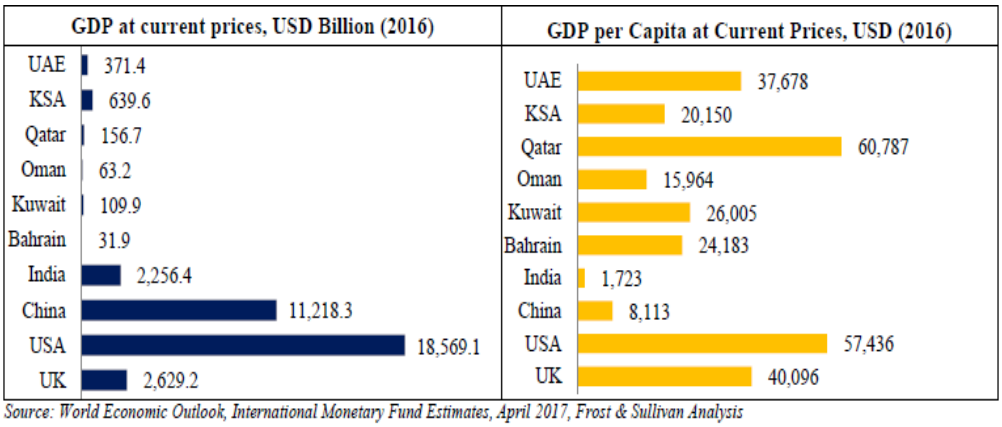
Macroeconomic and Demographic Overview

The Gulf Cooperation Council (GCC) consists of six countries in the Middle East viz. the Kingdom of Saudi Arabia (KSA), the United Arab Emirates (UAE), Qatar, the Sultanate of Oman (Oman), Kuwait, and Bahrain. Amongst the GCC countries, the KSA has the highest population, followed by the UAE.



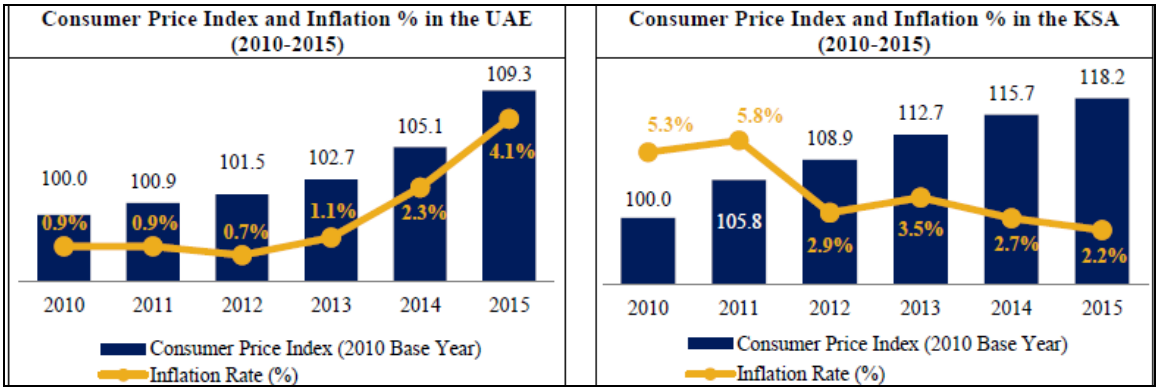
Source: World Bank Population Estimates, 2017, Frost & Sullivan Analysis

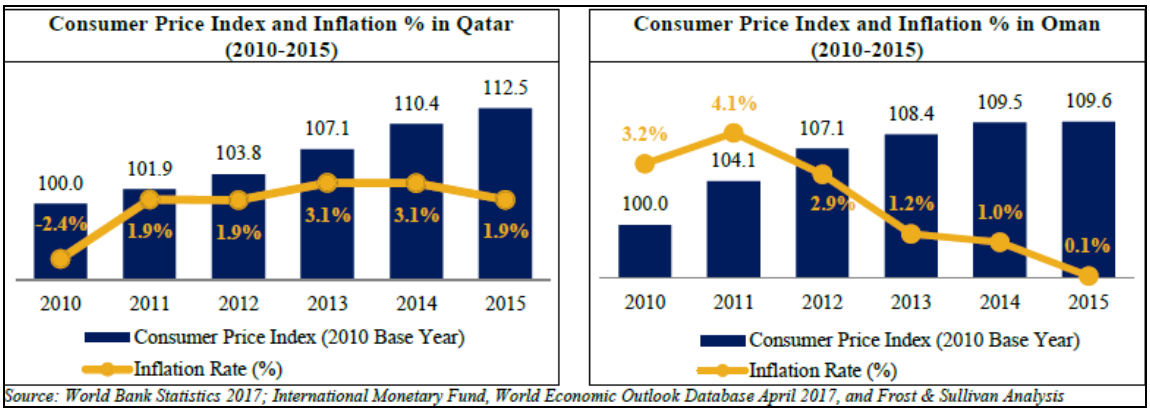
Amongst the GCC countries, the KSA has the highest Gross Domestic Product (GDP) at current prices followed by the UAE. GDP per capita of GCC countries such as Qatar, the UAE and Kuwait is compared to that of the USA and the UK below.



Source: World Economic Outlook, International Monetary Fund Estimates, April 2017, Frost & Sullivan Analysis

A large working population in the UAE is of expatriate origin, for whom work visas may be extended up to the age of 65 years. As a result, the population comprising people above 55 years was around 6% of the total in 2016. However, the population in the UAE for the 35-54 age groups has increased from 34% of total population in 2010 to 40% in 2016, indicating an ageing population. The trend of growth in the population above 35 years is expected to continue with the proportion likely to increase from 46% in 2016 to 48% in 2020. All the GCC countries, except Oman, are highly urbanised with over 80% urban population in 2016. High urbanisation, especially since the discovery of oil in the region, has helped in the growth of various industries including healthcare. Inflation rates1 in the UAE reached 4.1% in 2015 and the Consumer Price Index in the same year was 109.3. The average inflation rates in the KSA have fluctuated in the past few years, touching 5.8% in 2011 but decreasing to 2.2% in 2015. In Qatar, the average inflation rates grew to 3.1% in 2014 from 1.9% in 2011, then again dropped to 1.9% in 2015, which was due to increasing Government expenditure, excess liquidity, and an increase in consumer demand. In Oman, average consumer price inflation declined from 2.9% in 2012 to 1.0% in 2014 and 0.1% in 2015 due to lower food prices and Government subsidies on core goods and services.





Source: World Bank Statistics 2017; International Monetary Fund, World Economic Outlook Database April 2017, and Frost & Sullivan Analysis

Healthcare Industry Overview

Healthcare Services Market Size

The UAE had significant healthcare expenditures with a 3.6% share of the GDP in 2014. The total healthcare expenditure was USD 14.64 billion in 2014, growing at a CAGR of 8.0% since 2008. The healthcare expenditure can be estimated to reach USD 16.14 billion in 2016, which is 4.9% of the estimated GDP of the UAE in the same year. In absolute value terms, while the public health expenditure increased at a CAGR of 9.7% between 2008 and 2014, the private health expenditure increased at a lower rate of 4.1%. However, in recent years, the growth in private health expenditure has been increasing. Overall, healthcare expenditure in the KSA has shown continuous growth with the increasing number of inpatient and outpatient visits in private hospitals, increasing per outpatient visit realisation in private hospitals (USD 97 per visit in 2010 to USD 113 in 2013), and increasing per capita expenditure on healthcare. It has also been a major focus sector by the Government and this growth is attributed to the numerous new and planned hospital projects by the Government as well as the private sector. Qatar has seen growth rate of population in the recent past (CAGR of 4.4% over 2010-16). Qatar has been one of the fastest growing markets in the GCC region with the highest per capita spending on healthcare among the GCC states. Likewise, Oman with a low population base has also experienced high growth in population (CAGR of 7.9% over 2010-16). Healthcare spend in Oman is mostly dependent on the public sector, which contributed to around 80% during the 2008-12 period and increased to about 90% of the total healthcare expenditure in 2014. There has been a significant change in the out-of-pocket (OOP) healthcare expenditure in most of the countries in the GCC between 2008 and 2014. The biggest change has been observed in Qatar, where OOP changed from 100% in 2008 to 48% of total private healthcare expenditure in 2014.

Healthcare Expenditure

GCC countries have a lower share of healthcare expenditure as a percentage of the respective country's GDP. In the GCC, Bahrain had the highest healthcare expenditure (5.0% of the GDP) in 2014, followed by the KSA and UAE (4.7% and 3.6% of the GDP in 2014, respectively). The USA and the UK have significantly higher healthcare expenditure as a percentage of their GDP. Majority of the healthcare expenditure made in the GCC is by the Governments. Initially, the private sector focused more on less specialised care in specialties such as dermatology, dentistry, urology and gastroenterology. As the private healthcare facilities developed, they have started offering more specialized care, thus providing an alternative for the nations' populations. The healthcare expenditure per capita (in PPP terms) of the countries in the GCC is very low when compared to the USA and the UK. In PPP terms, Qatar had the highest healthcare expenditure per capita in 2014 (USD 3,077). However, this is still very low compared to the USA (USD 8,640) and the UK (USD 3,322) in the same year.

Healthcare Infrastructure

The GCC have low bed density as compared to the USA, the UK, and China. The KSA and Kuwait, with 2.20 and 2.14 beds per 1,000 populations, respectively, are closer to the developed countries of the USA and the UK in terms of availability of beds, which has 2.90 beds per 1,000 populations each. Oman and Qatar have a low bed density of only 1.44 and 1.42 beds per 1,000 populations, respectively.

In terms of presence of physicians and nurses (including midwives), the KSA leads amongst the GCC countries in terms of availability of physicians, with 2.75 physicians and Kuwait in terms of nurses (including midwives) with 7.05 nurses per 1,000 populations. A majority of countries in the GCC have shown robust growth in the number of healthcare professionals in the recent years.

Healthcare Delivery Market

The KSA, UAE, Qatar and Oman have seen increases in terms of number of hospital beds. Growth in hospital beds have been driven by additions in private hospital beds in Oman (2008-15 CAGR of 21.6%), the UAE (2008-15 CAGR of 12.8%) and the KSA (2008-15 CAGR of 5.6%).

Growth Drivers

Strong population growth and evolving demographics

GCC states are expected to experience population growth between 2016-20, with the KSA and Qatar expected to register the highest growth of 1.7% each. The growth of populations in Dubai and Abu Dhabi has been greater than the growth of population in other Emirates. Expatriates constitute a substantial proportion of the population of GCC countries. This has a significant effect on consumption of healthcare services within the respective country as expatriates do not have complete access to public sector hospitals and thus rely heavily on services provided by the private sector. In the UAE, 54% of the population belonged to the below 35 years age group in 2016. The population comprising people above 55 years was around 6% of the total population in 2016 but is expected to increase to 9% going forward. In the KSA, the population bracket of 35-54 years has increased from 26% in 2010 to 30% in 2016, whereas the age group comprising those above 55 years has increased from 7% to 9% in the same period. The trend of growth in the population above 35 years is expected to continue with the proportion likely to increase from 39% in 2016 to 41% in 2020. The ageing population is likely to put an additional burden on the health services of these nations.

High Prevalence of non-communicable diseases

An increasingly sedentary lifestyle, especially of local populations, has resulted in high prevalence rates of diabetes, obesity as well as hypertension. It is estimated that the prevalence of these diseases among the local population is even higher, owing to their affluent and sedentary lifestyles, and high calorie food habits. In the recent past, the Government as well as the private sector have targeted this segment to increase diagnosis as well as treatment. Current and projected diabetes prevalence rates of GCC have significantly higher prevalence as compared to other countries analysed. Comparison of obesity levels in the countries in the GCC shows that most of them have higher levels of obesity than the USA and the UK.

Thrust in Government Spending

Majority of the healthcare expenditure made in all the analysed countries in the GCC is by the Government. The federal and emirati governments are investing large sums of money for quick advancement of the healthcare scenario in the UAE. The Government has increased its total allocated budget for the healthcare sector to around USD 1.13 billion in 2017, which is about 8% growth over 2016, in order to achieve the leadership vision of providing high quality healthcare service. Other Emirates have also embarked on long term plans to meet the anticipated growth in their healthcare sectors. As per Sharjah's Investment and Development Authority estimation, the Emirate's healthcare market is expected to grow from USD 1 billion in 2015 to USD 1.5 billion in 2020.

Growth in medical tourism

The key element for a well-developed medical tourism destination is a well-regulated health sector with due regulations in place as quality of services is an essential component that leads to organic growth of medical tourism. Medical travellers emphasise on cost and quality. Inbound medical tourism is expected to be a key growth driver for the UAE and the KSA. The UAE has been at the forefront of the medical tourism industry in the Middle East with Dubai being promoted as a major hub for medical tourism in the country. To promote medical tourism, the DHA has rolled out an initiative to make the UAE one of the top medical tourism destinations around the world. In 2012, approximately 107,000 medical tourists visited Dubai. By 2020, Dubai is expected to attract 500,000 tourists, estimated to generate USD 0.71 billion in 2020 from USD 0.18 billion in 2012 indicating a CAGR of ~24% year-on-year (YoY), between 2014 and 2020. In KSA, medical tourists prefer Riyadh, Jeddah and Dammam given the business attached to various industries established here and Jeddah on account of its religious importance. The volume of medical tourists in the KSA is projected to increase at a CAGR of 15.3% between 2015 and 2020. The slump in medical tourists between 2014 and 2015 can be explained from the fact that a lot of inbound tourists in the KSA are from within the region. Many countries were affected by the slump in oil prices, thereby encouraging majority of population to get treatment locally, rather than travelling abroad.

Medical insurance

According to DHA, 98% of Dubai's population had insurance coverage in 2016, while approximately 38% of the KSA population was insured in 2016. Mandatory health insurance is also expected to increase private participation in the healthcare industry, with clear reimbursement rates and procedures in place. In this scenario, organised players which have a strong support system and are able to invest in upcoming infrastructure stand to gain by getting better reimbursement rates. While Abu Dhabi already had mandatory health insurance for all residents, all Dubai residents are mandated to be covered by insurance by March 2017.

Outpatient / Inpatient Volumes

UAE

Dubai

The outpatient volume in Dubai was 10.07 million in 2016, of which around 75% was concentrated in the private sector. The outpatient market has been growing at a significantly high rate of 8.4% between 2008 and 2016. Private centres, where the outpatient volumes grew at a CAGR of 10.4% between 2008 and 2016, contributed significantly to this growth. The key outpatient specialities in Dubai were respiratory, orthopaedics, endocrinology and metabolic disorders, genitourinary, gastroenterology, dermatology, trauma and burns. These specialities are growing at a robust growth rate. The inpatient volume in Dubai was 0.28 million in 2016 and has grown at a CAGR of 7.0% between 2008 and 2016, primarily driven by growth in the private sector which has been growing at a CAGR of 11.1%, as compared to 1.0% CAGR in the public sector in the same period.

Abu Dhabi

The total outpatient volume was 17.62 million in 2015, of which 46.4% was concentrated in hospital OP and the rest belonged to medical centres and clinics. The outpatient volume grew at a CAGR of 10.2% between 2010 and 2015. The share of the private sector grew from 66.7 in 2010 to 70.6% in 2015. Growth in the public sector was limited at a CAGR of 7.4% between 2010 and 2015, as compared to 11.4% in the private sector in the same period. The top specialities in outpatient services in 2015 were respiratory, orthopaedics, dermatology, genitourinary, gastroenterology, dental diseases and infectious and parasitic diseases. Similarly, the total inpatient volume in Abu Dhabi was 0.22 million in 2015 of which 52% was from the Government sector. The inpatient volume has grown at a CAGR of 9.9% between 2010 and 2015.

KSA

Outpatient volumes increased at a CAGR of 1.4% from 126 million in 2008 to an estimated 138.6 million in 2015. The public outpatient visits decreased at a CAGR of 0.3% between 2008 and 2015, while private outpatient visits grew at a CAGR of 4.9% between the same period. For inpatients, the volume has grown at the rate of 1.3% between 2008 and 2015. While inpatients in the public sector have grown at a CAGR of 0.5%, the private sector inpatient volumes have seen an increase by 2.9% per year between 2008 and 2015. The key specialties in the private sector include OBGYN, paediatrics, orthopaedics, general surgery ENT and urology.

Qatar

The outpatient volumes were approximately 11.9 million in 2014. Out of these, Government facilities continued to have the major share of 90%, while around 10% of patients opted for private facilities. The outpatient market has been growing significantly at a CAGR of 17.7% between 2008 and 2014. This growth is majorly attributed to the growing demand of healthcare services in the private sector.

Growth in public sector inpatient volumes has been higher at 10.7% as compared to 1.6% in the private sector between 2011 and 2013. The growth rate of population is outpacing the growth of public hospitals in numbers and in size. Consequently, the dependency of and demand for private healthcare facilities has been increasing.

Oman

The outpatient volumes in Oman have been growing at a CAGR of 3.5% between 2008 and 2015. The majority share of outpatient volumes is held by the public sector (85%). While the outpatient volumes of the public sector grew at a CAGR of 5.1%, the private sector outpatient volumes decreased at a CAGR of 2.7% between 2008 and 2015. One reason for this may be non-disclosure of volumes by a few private players to the MOH. The growth in inpatient volumes has been in tune with the outpatient numbers, growing at a CAGR of 3.9% per annum from 2008 to 2015, while the share of public sector in the inpatient services is much higher (around 94% of total). This trend can be attributed to the fact that uninsured patients of the private sector prefer 'cheaper' treatment options abroad in case of surgeries and major procedures.

Medical Insurance

UAE

The emirate of Abu Dhabi pioneered in introducing mandatory health insurance for all residents, both locals as well as expatriates (along with their dependents) in 2006. As a result, the number of people insured in Abu Dhabi increased at a CAGR of 6.2% between 2008 and 2015 to reach 3.43 million population in 2015. In order to give a push for universal access of healthcare in Dubai, the DHA has introduced the

Health Insurance Mandate for Healthcare Providers in November 2013, which stipulates that all nationals and residents of Dubai (including those in the free zones) must have coverage to pay for emergency and curative healthcare needs. While Abu Dhabi had set up a state-owned insurance company to aid in implementation, Dubai has taken the open market approach, which would develop a dynamic health insurance system by attracting investment of quality market participants. Similar to Abu Dhabi, the mandatory health insurance law is likely to bring most of the population under medical insurance coverage by the time of completion of implementation in 2017. As of January 2015, health insurance coverage has been made mandatory for visa applications and renewals in Dubai. Also, the DHA has launched an Essential Benefits Plan, available through the participating insurers and available to employees who draw less than USD 1,089 (AED 4,000) gross monthly salary and less. Around 1.5 to 2 million additional people are likely to be covered by health insurance by 2017, owing to mandatory health insurance law. The surge in the market is likely to mainly come from the low-income population including labourers as well as the middle-income dependents population. Overall, considering the people working in Dubai but residing outside the Emirate, more than 3 million people are expected to be covered by insurance by 2017.

India's Healthcare Industry Overview

For a country accounting for nearly a fifth of the world's population, India's overall bed density stands at 13 per 10,000 people. Not only there exists a conspicuous gap vis-à-vis the global median of 27 beds, bed density in India even lags that of some of the other developing nations such as Brazil (23 beds), Malaysia (19 beds), Vietnam (20 beds) and Thailand (21 beds). In India, the shortfall *vis-à-vis* the global median, in terms of bed density, is to the tune of 1.7 million. In India, the total number of government beds are estimated to be around 0.7 million. With an expected population of 1.29 billion, an average of 2050 people are served per government bed in the country. The states/UT's with the highest government bed density per 10,000 populations are Sikkim (24), Goa and Arunachal Pradesh (18), Himachal Pradesh (13) and Delhi (12). The states /UT's with the lowest government bed density per 10,000 population are Bihar (1), Andhra Pradesh, Haryana, and UP (3 each) and MP and Maharashtra (4). Compounding bed inadequacy is the insufficiency of healthcare personnel. At 7 physicians and 17 nursing personnel per 10,000 of population, India trails global median of 14 physicians and 29 nursing personnel. Even on this parameter, India lags behind other developing countries such as Brazil (19 physicians, 76 nurses), Malaysia (12 physicians, 33 nurses) and Vietnam (12 physicians). According to World Health Organization's (WHO) Global Healthcare Expenditure Database, India's total expenditure on healthcare stood at a low 4.7% of GDP as of 2014. This can be attributed both to the under-penetration of healthcare services and the lower propensity among people to spend on healthcare. In terms of per capita government expenditure on healthcare (at international dollar rate adjusted for PPP), India stood at $80 in 2014 vis-à-vis US' $4,541, UK's $2,808, Brazil's $607 and Malaysia's $574. Lower per capita spend on healthcare in India can also be partially attributed to the relatively low contribution from the government, given that only 30% of the total healthcare expenditure was from the government. When compared to other countries, these figures trail not only those for developed countries such as the US and the UK, but also developing countries such as Brazil and Malaysia.

Growth Drivers

Growth contributors of the domestic healthcare delivery industry are: (i) rising population as well as life expectancy requiring greater health coverage, (ii) increasing income levels to make quality healthcare services more affordable, (iii) increase in demand for lifestyle disease-related healthcare services over the next five years, (iv) growth in health insurance coverage to propel demand, and (v) growth in medical tourism to aid demand of healthcare delivery market.

Healthcare cost competitive

Healthcare costs in India are extremely competitive as compared with those in the developed countries and other Asian countries. The fact that India offers advanced medical facilities for critical illnesses such as cardiology, joint replacement, orthopaedics, ophthalmology, organ transplants and urology sharpens its competitive advantage. With healthcare costs soaring in developed economies, the relatively low cost of surgery and critical care in India makes it an attractive destination for medical tourism. According to the Ministry of Tourism, of the total foreign tourist arrivals in India, the proportion of medical tourists grew from 2.2% (0.11 million tourists) in 2009 to 3.4% (0.18 million tourists) in 2014. Also, as per Ministry of Tourism, Africa, South and West Asia together accounted for nearly 90% of all the medical tourists coming to India.

Regulation

The regulatory environment in India to set up a hospital is stringent, with several approvals required. Moreover, hospitals are covered under the purview of the policies such as Clinical Establishment Bill, 2010 and Bio-Medical Waste Management & Handling Rules, 1998, which provide guidelines for registering hospitals and clinics, and regulate their day-to-day operations as far as their environmental impact is considered. Accreditation of hospitals is a voluntary process, wherein an authorised agency evaluates and recognises health services according to a set of standards which are revised periodically. In developing countries such as India, where healthcare services are delivered mainly through private health providers, regulation is a vital instrument and function of government policy. In India, hospitals are accredited by National Accreditation Board for Hospitals and Healthcare Providers (NABH). The NABH is a constituent board of Quality Control of India and a member of International Society for Quality in Health Care (ISQua). NABH accreditation is compulsory for hospitals to get empanelled under the Central Government Health Scheme (CGHS).

Medical Insurance

Low health insurance penetration is one of the major impediments to the growth of the healthcare delivery industry in India, as affordability of quality healthcare facilities by the lower income groups continues to remain an issue. As per the Insurance Regulatory and Development Authority (IRDA), about 350 million people have health insurance coverage in India (as of 2015-16), accounting for only 27% of the total population.

Government or government-sponsored schemes such as the Central Government Health Scheme (CGHS), Employee State Insurance Scheme (ESIS), Rashtriya Swasthya Bima Yojana (RSBY), Rajiv Arogyasri (Andhra Pradesh government) and Kalaignar (Tamil Nadu government) account for nearly 80% of health insurance coverage provided. Only 20% is through commercial insurance providers, both government (such as Oriental Insurance and New India Assurance) and private (ICICI Lombard and Bajaj Allianz).

CRISIL Research believes that while low penetration is a key concern, it also presents huge opportunity for the growth of the healthcare delivery industry in India. This is evident from the fact that between 2011-12 and 2015-16, the total number of commercial health insurance policies in India increased at a CAGR of nearly 9% while premiums increased nearly 17%. Also, about 41.3 million households (nearly 200 million beneficiaries) have been brought under RSBY (as of March 2016), while nearly 82.9 million beneficiaries have been brought under ESIS (as of March 2016). Further, with the health insurance coverage in India set to increase, hospitalisation rates are likely to go up. In addition, health check-ups, which form a mandatory part of health insurance coverage, are also expected to increase, boosting the demand for a robust healthcare delivery platform.

Government focus

The government has been developing a universal healthcare framework to strengthen the reach and quality of healthcare delivery in India. By enacting policies such as the National Healthcare Policy 2017, Mental Healthcare Act 2017, HIV & AIDS (Prevention and Control) Act 2017 and Affordable Medicines and Reliable Implants for Treatment (AMRIT), the government aims to bolster healthcare in the country by developing human resources, reducing out-of-pocket expenditure and improving the quality of care. In the long term, these policies aim to develop healthcare human resources, improve life expectancy, total fertility rate (TFR) under-five mortality and reduce maternal mortality rate (MMR) by increasing government healthcare expenditure to 2.5% of GDP by 2025, opening AMRIT stores to provide lifesaving drugs and cardiac implants at 60-90% discount to patients and setting up diagnostic centres at public health facilities for patients to avail free diagnostic services. CRISIL Research believes that the efficient and timely implementation of these policies will help improve healthcare delivery infrastructure in the country.

Key Concerns

Aster's ownership structure in most of the GCC states is subject to risks associated with foreign ownership restrictions and the shareholder arrangements with local shareholders might be violative of the local laws of the jurisdictions*:* Aster's operations are principally located in the GCC states, where it generated 88.96%, 87.96%, 83.95% and 81.36% of its revenue for fiscal 2015, 2016 and 2017 and the six months ended September 30, 2017, respectively. In the six months ended September 30, 2017, its subsidiaries in the UAE generated 65.44% of the revenue while it subsidiaries in Oman, Saudi Arabia, Qatar, Kuwait, Jordan and Bahrain generated 5.37%, 5.25%, 3.62%, 0.61%, 0.74% and 0.33% respectively. It is subject to foreign ownership laws which provide that nationals must hold a majority of the shares of its subsidiaries incorporated in each of the UAE, Kuwait, Qatar and Jordan. Further, in Oman nationals are required to hold at least 30% of the shares of its Omani subsidiaries. In GCC states which restrict foreign ownership, Aster has typically entered into shareholder arrangements with local shareholders which are intended to provide with management control and a majority of the dividends or profits from its subsidiary notwithstanding minority legal shareholding; the local shareholder acts as its nominee for the purpose of fulfilling foreign ownership requirements, is only entitled to an annual fee (irrespective of actual profits) and is not involved in the company's management. Aster consolidate its minority shareholding in these subsidiaries in financial statements on the basis of shareholder arrangements. Aster Pharmacies Group LLC has entered into a nominee shareholder agreement with two Jordanian nationals to secure beneficial ownership of 51% of the shares of Orange Pharmacies LLC, including the right to receive the dividends from such shares. If the nominees challenge the nominee shareholder agreements before a court in Jordan, there is a risk that the court could find these agreements to be null and void as Aster Pharmacies Group LLC is a foreign party and should not hold more than 50% of the shares in Orange Pharmacies LLC; or because Aster Pharmacies Group LLC is not a natural person who is a pharmacist, and as such, should not hold any shares in Orange Pharmacies LLC. Jordanian laws also do not recognise the notion of a trust arrangement. As the company is not registered holder of any shares in Orange Pharmacies LLC, it would lose all rights to its operations in Jordan if the nominee shareholder agreements were voided.

Certain licenses required to operate businesses in the GCC may be held to contravene legal requirements*:* The licenses required for the operation of certain of Aster's medical facilities and pharmacies in the GCC states may be held to contravene legal requirements and there can be no assurance that the relevant authorities will continue to authorise such licenses, allow such licenses to be renewed or permit such licenses to be applied to additional medical facilities or pharmacies. The healthcare industry is highly regulated and any inability to hold the requisite licenses for its operations could have a material adverse effect on the business, financial condition and results of operations.

Certain nominee arrangements lack certain provisions of a protective nature commonly used in similar structures, which may adversely affect the business*:* There are certain provisions commonly provided for under agreements similar to the UAE Agreements that protect interests of the foreign shareholder in a UAE registered company. These provisions are usually included in the constitutional documents of such companies (to the extent allowed under UAE law) as well as addressed under the UAE Agreements entered into between the foreign shareholder and the UAE shareholder. The constitutional documents of the UAE Trust Entities do not include similar provisions. As a result, there could be a material adverse effect on Aster's business in the UAE, notably if the sponsor nominee encumbers the shares holds or if its ability to repatriate the annual dividends is impeded, which in turn could have a material adverse effect on the cash flow.

Revenue is highly dependent on operations in the GCC states*:* Aster's operations are principally located in the GCC states, where it generated 88.96%, 87.96%, 83.95% and 81.36% of its revenue for fiscal 2015, 2016 and 2017 and the six months ended September 30, 2017 respectively. Most of its revenues in the GCC states are from operations in the UAE, in particular from the Emirate of Dubai. Its results of operations are, and are expected to continue to be, significantly affected by foreign ownership restrictions, financial, economic and political developments in or affecting the GCC states and, in particular, by the level of economic activity in the UAE. If the economy of the GCC states decline, or if Government intervention in the economy restricts or limits economic growth, this could have a material adverse effect on its business, financial condition and results of operations.

Performance depends on ability to recruit and retain high quality doctors and other healthcare professionals, such as nurses, pharmacists and technicians*:* Aster's operations depend on the number, ability and experience of the doctors, nurses, pharmacists and other healthcare professionals at is hospitals, clinics and retail pharmacies. It competes with other healthcare providers, including those located in Middle East and North Africa region, or MENA, Asia, India, the European Union and North America, to recruit and retain qualified doctors and other healthcare professionals. The reputation, expertise and demeanor of the doctors, nurses, pharmacists and other medical professionals who provide medical services at its hospitals, clinics and retail pharmacies are instrumental to its ability to attract patients and maintaining good relations with them. The factors that healthcare professionals consider important in deciding where they will work include their compensation package, the reputation of the hospital, the quality of equipment and facilities, the quality and challenges of the cases they treat, the quality and number of supporting staff, the medical and legal environment, market leadership of the hospital, and any applicable professional licensing, visa and immigration requirements in the countries in which they would prefer to work. Moreover, since the ability to attract, hire, relocate and retain medical personnel from outside the GCC states is an important element of Aster's human resource planning, local immigration and medical licensing requirements significantly affect its staffing requirements. Immigration and medical licensing applications for medical personnel can take several months or more to be finalised. If Aster is unable to complete the requisite license and visa applications, either as a result of changing requirements or otherwise, its ability to implement successfully its business strategy could suffer, which may have a material adverse effect on business, financial condition and results of operations. Furthermore, the loss of a significant number of doctors, nurses or other healthcare professionals, or the inability to attract or retain a sufficient number of qualified doctors, nurses and other healthcare professionals, could have a material adverse effect on business, financial condition and results of operations.

Growth strategy depends significantly on the construction or development of hospitals, clinics and stand-alone retail pharmacies which may be subject to delay and cost overruns*:* Aster is currently planning to construct, develop or expand five hospitals and a number of clinics and retail pharmacies in the GCC states and five hospitals in India for which it is dependent on third-party developers and contractors for completion. Its ability to build and operate new hospitals, clinics and stand-alone retail pharmacies is subject to various factors that may involve delays or problems, including the failure to receive or renew regulatory approvals, constraints on human and capital resources, design, building and development risk, the unavailability of equipment or supplies or other reasons, events or circumstances. Its projects may incur significant cost overruns and may not be completed on time or at all. In view of the highly competitive nature of the industry in which Aster operate, it may have to revise its management estimates from time to time and consequently funding requirements may also change. This may result in the rescheduling of proposed project expenditure and an increase in proposed expenditure for a particular project. Any unanticipated increase in expansion costs could adversely affect Aster's cost estimates and its ability to implement expansion plans as proposed. Any delay in the completion of its expansion projects may have a material adverse effect on growth strategy and, therefore, on its business, financial condition and results of operations.

Aster is subject to risks associated with potential acquisitions and expansion strategy: As part of Aster's growth strategy, it is exploring opportunities to acquire hospitals and clinics and/or sites for such facilities in India, the GCC states, as well as in the broader MENA region. Its growth strategies could place significant demand on its management and its administrative, operational and financial infrastructure. Although it continuously evaluate potential investment opportunities, it may not be able to identify suitable sites for new hospitals, clinics or stand-alone retail pharmacies and/or existing facilities to acquire. Furthermore, as Aster may not achieve the operating levels that it expects from future projects, it may not be able to achieve its targeted return on investment on, or intended benefits or operating synergies from, these projects. If Aster cannot identify suitable expansion opportunities, secure suitable financing or achieve its requisite return on its investment, its business, financial condition and results of operations could be adversely affected. Although Aster currently operates and

maintain the facility, it may be prohibited from acquiring this hospital. Similarly, its ability to acquire other hospitals or clinics may be impacted, thereby affecting expansion strategy and its business operations.

Aster is subject to risks associated with expansion into new geographic regions*:* Expansion into new geographic regions, including different states in India, subjects Aster to various challenges, including those relating to lack of familiarity with the culture, legal regulations and economic conditions of these new regions, language barriers, difficulties in staffing and managing such operations, and the lack of brand recognition and reputation in such regions. By expanding into new geographical regions, it may be exposed to significant liability and 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.

Changes in healthcare laws, rules and regulations may materially adversely affect the business*:* The healthcare industry is subject to laws, rules and regulations in the regions where Aster conduct its business or to which it intends to expand operations. Regulation in the healthcare industry is constantly changing, and the company is unable to predict the future course of regulations across the various jurisdictions in which it operates. It cannot be assured that future regulatory changes will not materially adversely affect the business, financial condition and results of operations. In addition, regulations can be implemented that could affect the mix of services that Aster and its competitors provide, which could result in some market participants benefiting at the expense of others, for example insurance arrangements and funding for a range of services. If this were to occur, it could, if not managed properly, adversely affect Aster's overall patient mix and operating margins, which could have a material adverse effect on its business, financial condition or results of operations.

Business is dependent on obtaining and maintaining governmental licenses necessary to operate healthcare facilities: To operate Aster's business it is required to obtain and maintain various clearances, licenses, registrations and other approvals. In particular, it is required to obtain licenses for, among others, the following activities: provision of healthcare services, provision of pharmaceutical services, sale, supply and distribution of drugs, operating establishments, administration of narcotics, psychotropic and other controlled substances, and handling and transport of explosive and flammable materials. While it is currently applying for a number of licenses and other authorizations required for its business, including licenses in relation to some of its trademarks, or are seeking to renew such licenses after they have expired, there can be no assurance that the relevant authorities will grant or renew such licenses and other authorizations. In the event that Aster is unable to renew or obtain these licenses in a timely manner or at all, it could adversely affect its operations. Additionally, some of the approvals to operate Aster CMI Hospital are in the name of its partner, CMCL, and approvals to operate DM WIMS Hospital are in the name of its Group Entity, DM Education and Research Foundation. Failure by partner or Group Entity to maintain the requisite licenses could adversely affect its business operations.

May not be able to successfully integrate businesses that it acquire*:* Part of Aster's growth strategy involves the potential acquisition of established hospitals, clinics or pharmacies. The failure to successfully integrate any acquired businesses may result in damage to reputation and/or lower levels of revenue, earnings or operating efficiencies than those it has achieved or might have achieved if Aster had not acquired such businesses, and the loss of patients of the acquired businesses. Acquired businesses may have unknown or contingent liabilities, including liabilities for failure to comply with healthcare laws and regulations or unforeseen legal, contractual, labour or other issues, and it may become liable for the past activities of such businesses. Although Aster has policies in place to ensure that the practices of newly acquired facilities conform to its standards, and generally seek indemnification from prospective sellers covering these matters, it may become liable for past activities of any acquired business. If the company fails to integrate businesses that it acquire successfully in the future, manage the growth in its business pursuant to such acquisition or realise anticipated cost savings, synergies or revenue enhancements associated with such acquisitions, its ability to compete effectively, its business, financial condition and results of operations may be materially adversely affected.

If Aster is unable to increase hospital occupancy rates, it may not be able to generate adequate returns on capital expenditures: Aster has invested and continue to invest a significant amount of capital expenditures in creating bed capacity and opening new hospitals. It is currently involved in the construction or development of four hospitals in the GCC states and five hospitals in India. It has also introduced new technologies, modernised its facilities and expanded its range of services. Aster intends to focus on improving occupancy rates throughout its hospital network. Improving occupancy rates at its hospitals is highly dependent on brand recognition, wider acceptance in the communities in which it operate, its ability to attract and retain well-known and respected doctors, its ability to develop super-specialty practices and ability to compete effectively with other hospitals and clinics. In addition, occupancy rates at its multi-specialty hospitals in the UAE are partly dependent on referrals from its clinics. If Aster fails to improve occupancy rates, but continue to incur significant capital expenditure in the future, this could materially adversely affect its operating efficiencies and profitability.

The UAE Agreements include certain unenforceable provisions*:* The UAE Agreements provides that the sponsor nominee shall appoint such person(s) as proxy to attend the shareholders meeting of the UAE Trust Entities and vote on their behalf as Aster designate as beneficial owners. Under UAE law a shareholder may only appoint another shareholder in the limited liability company (who is not a manager in that

company) to represent him by proxy at the shareholders meeting. Appointment of any other party than the other shareholder in the company has no legal effect unless the party is appointed under the Memorandum of Association to represent the shareholder at the general assembly. The invalidity of this provision could adversely affect Aster's ability to exercise its beneficial voting rights in shareholders general assembly meetings of the UAE Trust Entities, which could have a material adverse effect on its ability to effectively manage the UAE Trust Entities.

Aster face competition from other hospitals and healthcare providers, which may result in a decline in revenues, profitability and market share: The healthcare business in the GCC states and India where Aster operates, is competitive, and competition among healthcare providers for patients and customers has intensified in recent years. For medical tourism business operated from Aster Medcity and other hospitals, it competes for patients and customers with competitors' hospitals in the GCC states, India, Southeast Asia and Europe. Hospitals and clinics compete on factors such as reputation, clinical excellence and patient satisfaction. Retail pharmacies in the GCC compete on factors such as location, price and product offerings. It also face competition from other providers such as government-owned hospitals and clinics, specialised healthcare firms, hospitals and clinics owned or operated by non-profit and charitable organizations and numerous independent practitioners, which may offer more affordable pricing, greater convenience or better services and facilities. The current policy of the Government of the UAE is to develop and implement organizational, legislative and legal frameworks based on international best practices to upgrade and improve the private and public sector health services. This also allows the private sector a greater role in healthcare by allowing UAE nationals to use their medical insurance coverage in private hospitals. There can be no guarantee that this policy will continue. It is also possible that there will be significant consolidation in the medical industry. Its competitors may develop alliances, and these alliances may acquire significant market share. Concentration within the sector, or other potential moves by competitors, could improve their competitive position and market share and may exert further pricing and recruiting pressure on Aster. Should it fail to compete effectively with other healthcare providers and other firms generally, prospective patients could elect to seek treatment at other healthcare service providers, which would adversely affect the business, financial condition and results of operations.

Arrangements with some of its doctors in India may give rise to conflicts of interest and time-allocation constraints, adversely affecting operations: Most of Aster's doctors in India are not its employees. Its contracts and other arrangements with some of its visiting doctors permit them to maintain their own private practices, as well as positions, at other hospitals. Particularly in India, some of these doctors may also have admitting privileges at other hospitals in addition to its hospitals. Certain of its senior doctors may also maintain positions at local clinics or affiliations with teaching hospitals. These arrangements may give rise to conflicts of interest, including with regard to how these doctors allocate their time and other resources between hospitals and clinics and other hospitals or clinics at which they also work and where doctors refer patients. Such conflicts may prevent Aster from providing a high quality of service at its hospitals and adversely affect the level of its patient intake.

The vast majority of revenues in the GCC states come from a relatively small number of insurance providers*:* For fiscal 2015, 2016 and 2017 and the six months ended September 30, 2017, revenue from insurance companies represented approximately 49.1%, 46.4%, 47.9% and 50.9% of its total income, respectively, and 29.9%, 24.5%, 23.5% and 24.9% of healthcare revenues from the GCC states over this period were derived from 5 insurance companies, respectively. Aster generally negotiate on an annual basis with insurance companies regarding the fees or pricing arrangements to be paid to it for services provided at its facilities. Some of these insurance companies have joined third party administered organisations, or TPAs, which insurers use to control costs by centralising back office functions, processing claims and negotiating fees and pricing arrangements with hospitals. It may face downward pressure on some of the payment rates from these insurers and TPAs, particularly if there is further consolidation of insurance companies into TPAs, which may strengthen their bargaining position and result in less favourable pricing and other terms for it. Aster may also be unable to effectively pass on any increases in its cost base to the tariffs paid by insurers. Its future success will depend, in part, on its ability to maintain good relationships with insurance providers. Competition from other hospital groups and healthcare providers in the region may also impact Aster's relationships with, or ability to negotiate fee increases or other favourable terms from, insurance providers. If its relationship with insurers deteriorates, it may be unable to negotiate favourable fee arrangements and/or its business may otherwise be adversely affected. An increase in claims rejections or significant failures by insurance companies to make payments could have a material adverse effect on the business, financial condition and results of operations.

The failure to maintain the quality of services provided at facilities may negatively impact brand or reputation*:* As healthcare patients tend to select their healthcare providers based upon brand recognition and reputation, Aster's business is dependent upon providing high quality healthcare (e.g. medical care, facilities and related services). Healthcare quality is measured by factors such as quality of medical care, expertise of healthcare professionals, friendliness of staff, waiting times and ease of access to its doctors, nurses and pharmacists. If Aster is unable to provide high quality services to its patients, fail to maintain a high level of patient satisfaction or experience a high rate of mortality or medical malpractice suits, its brand or reputation could be damaged. Quality of healthcare is also a key criteria that is evaluated in connection with the accreditation of its hospitals by JCI, a non-profit corporation which is the largest accreditor of healthcare organizations in the United States. If any of its hospitals were to lose their accreditation with JCI or NABH, or do not receive re-accreditation

by JCI or NABH, or are refused accreditation by JCI or NABH, its brand and reputation could be adversely affected. Any significant damage to reputation and/or brand caused by any of the foregoing factors could have a material adverse effect on the ability to attract new and repeat patients and, as a result, adversely affect the business, financial condition, results of operations or prospects.

Aster may be subject to liabilities and negative publicity arising from the risks of providing medical services including those resulting from claims of malpractice and medical negligence: As an operator of healthcare facilities, Aster is exposed to the risk of legal claims and regulatory actions arising out of the healthcare services provided by it. In addition, its medical professionals, employees, directors and promoters and others may be subject to criminal proceedings, including relating to allegations of medical negligence. The existence of such claims may harm professional standing and market reputation of and/or that of the doctors and medical professionals involved. In addition, the reputational consequences of any claims may materially and adversely affect the business and operations. Regardless of their validity, negative publicity arising from such claims may also affect the number of patients visiting healthcare facilities and may adversely affect the revenue generated by healthcare facilities. Moreover, if any such claims succeed, Aster may become liable for the damages and other financial consequences, which may materially and adversely affect the financial condition and results of operations. While it has procured medical liability insurance, there is no certainty that such insurance or indemnity will be adequate to satisfy all the claims arising from malpractice or medical negligence. Any successful claims against Aster in excess of the insurance coverage or the indemnity may adversely affect the business, financial condition, results of operations, cash flows and prospects.

Because of the risks typically associated with the operation of medical care facilities, patients may contract serious communicable infections or diseases at its facilities*:* Aster's operations involve the treatment of patients with a variety of infectious diseases. Previously healthy or uninfected people may contract serious communicable diseases in connection with their stay or visit at its facilities. This could result in significant claims for damages against it and, as a result of reports and press coverage, to loss of reputation. Although not currently prevalent in the GCC states or India, diseases or infections such as tuberculosis may pose risks in the future. Furthermore, these germs or infections could also infect employees and thus significantly reduce the treatment and care capacity at its medical facilities in the short-, medium- and long-term. In addition to claims for damages, any of these events may lead directly to limitations on the activities of its hospitals as a result of quarantines, closing of parts of the hospitals at times for sterilisation, regulatory restrictions on, or the withdrawal of, permits and authorisations, and it may indirectly result, through a loss of reputation, in reduced utilisation of its hospitals. Any of these factors could have a material adverse effect on Aster's reputation and business.

Aster may be exposed to liabilities and claims exceeding the scope of insurance coverage or that are not covered by insurance policies and insurance costs may increase*:* Aster maintain professional liability and general liability insurance coverage to cover certain liabilities and claims arising out of the operations of its hospitals and clinics, including liabilities from claims of medical negligence against doctors and other healthcare professionals. Some of the claims, however, could exceed the scope of the coverage in effect or coverage of particular claims could be denied. As Aster also operates and provides services in the GCC states, claims under the laws of the GCC states may expose it to far greater liability than would be the case in India, and it may not have adequate insurance to cover such liability. Its professional and other liability insurance has been adequate in the past but there can be no assurance that its insurance coverage will be sufficient to cover all future claims. If its arrangements for insurance or indemnification are not adequate to cover claims, it may be required to make substantial payments and its financial condition and results of operations may be adversely affected. In addition, some doctors, including those who practice at some of its hospitals and clinics, face increases in malpractice insurance premiums and limitations on availability of insurance coverage. The inability of Aster's doctors to obtain appropriate insurance coverage could cause those doctors to limit their practice. That, in turn, could result in lower admissions to its hospitals and clinics.

Aster's business may be materially adversely affected if the U.S. Dollar/AED-pegged exchange rate were to be removed or adjusted*:* Although the U.S. Dollar/AED exchange rate is currently pegged, it may not be so in the future. The existing fixed rate may be adjusted in a manner that increases the costs of purchasing hospital and medical supplies used in its business or increases repayment obligations under any of its indebtedness that is denominated in U.S. dollars. As such AED currency sales are translated into INR at the applicable exchange rate for inclusion in its consolidated financial statements, Aster will be exposed to fluctuations in the currency exchange rate between AED and INR. Any removal or adjustment of the U.S. Dollar/AED fixed rate or a significant depreciation in the value of the AED or the U.S. Dollar against the INR, could cause Aster's operations and reported results of operations and financial condition to fluctuate due to currency translation effects, which could have a material adverse effect on its business, financial condition and results of operations.

If the company fails to achieve favourable pricing on medical equipment, drugs and consumables or are unable to pass on any cost increases to its payers, its profitability could be materially and adversely affected*:* Aster's profitability is susceptible to the cost of medical equipment, drugs and consumables. The complex nature of the treatments and procedures it perform at its hospitals and medical centres requires to invest in technologically sophisticated equipment. Its profitability is affected by its ability to achieve favourable pricing on medical equipment, drugs and consumables from its vendors, including through negotiations for vendor rebates, as well as other vendor financing received with respect to its medical equipment in the normal course of business. Because these vendor negotiations are

continuous and reflect the ongoing competitive environment, the variability in timing and amount of incremental vendor discounts and rebates can affect the profitability. These vendor programmes may change periodically, potentially resulting in higher cost of medical equipment, drugs and consumables and adverse profitability trends, if Aster cannot adjust its prices to accommodate such increase in costs. Further, such increased costs may negatively impact the ability to deliver quality care to its patients at competitive prices, or at all. If it is unable to adopt alternative means to deliver value to its patients, its revenue and profitability may be materially and adversely affected.

The prices of prescription and generic pharmaceutical products are regulated by the governments of India and various GCC states and its operating margins may be adversely affected by initiatives to reduce prices for end consumers: Under the Drugs (Price Control) Order, 2013 ("DPCO"), the Government of India may issue directions to the manufacturers of active pharmaceutical ingredients or bulk drugs and formulations to increase production or sell such active pharmaceutical ingredient or bulk drug to such manufacturer of formulations and direct the formulators to sell the formulations to institutions, hospitals or any agency, procedures for fixing the ceiling price of scheduled formulations of specified strengths or dosages, retail price of new drug for existing manufacturers of scheduled formulations, method of implementation of prices fixed by Government and penalties for contravention of its provisions. The Government of India can also notify the ceiling price for drugs and recover amounts charged in excess of such notified price from the relevant manufacturer, importer or distributor and the said amounts are to be deposited in the drugs prices equalization account. The Ministry of Health in the UAE regulates medical devices and medicines that can be imported into the UAE. All medical devices and medicines sold in the UAE must be registered with the Ministry of Health and imported through companies also registered with the Ministry of Health. The Ministry of Health also regulates the prices at which certain medicines can be sold to the public in accordance with the Supreme Council Decision, together with the prices and the profit margins to which suppliers can sell medicines to healthcare facilities. Each year the Ministry of Health provides an updated list as to the prices for all registered medicines being sold in the UAE.

In India, the National Pharmaceuticals Pricing Authority ("NPPA") has implemented caps on pricing of coronary stents. Any ceiling price imposed on medical devices, formulations or procedures may adversely affect our business and results of operations: The NPPA, Department of Pharmaceuticals, the Government of India which is responsible for inter alia, fixing, revising, monitoring the prices of drugs and formulations and overseeing the implementation of the DPCO, has pursuant to its order dated February 13, 2017 notified the ceiling prices, exclusive of local tax applicable, if any, in respect of coronary stents. Coronary stents are used in the treatment of heart ailments or to open blocked blood vessels elsewhere in the body. In the event that the Government introduces ceilings on the prices of other medical devices, formulations or procedures Aster's business and results of operations could be adversely affected.

Introduction of a new Value Added Tax regime into the GCC may adversely affect the business and financial performance: VAT has been introduced in Saudi Arabia and the United Arab Emirates from January 1, 2018, and it is expected to be implemented in the other GCC countries in January 1, 2019. The GCC VAT Framework agreement sets out broad principles to be followed by all the GCC countries, while giving individual member States some freedom to adopt a different VAT treatment in respect of certain matters. Each GCC country has or will issue its own domestic legislation to implement VAT based on the underlying principles in this common framework. It is not yet clear whether the other GCC countries will subject healthcare services to VAT at zero rate or exempt them. In the case VAT is exempted, any VAT incurred by the business would not be recoverable and this would result in a cost to the business. Similarly, if the services do not fall within the definition of "healthcare" or if all requirements are not complied with, VAT will apply at the standard rate of 5%. In such cases, Aster will need to decide on whether to bear the burden of the VAT cost or pass on the cost to customers. However, the latter would require the agreement of the customers which may adversely impact the competitiveness. The lack of adequate protection in the agreements may have the unintended consequence of itsr business bearing the VAT cost instead of the customers. Contracts with long payment terms should also be renegotiated to manage cash flows; otherwise, Aster will end up funding the VAT cost. Therefore, it will need to put appropriate measures in place to help reduce compliance costs, maintain margins and minimise cash flow issues.

Profit & Loss — **Rs in millions**

Particulars	H1FY18	FY17	FY16	FY15
Revenue from Operations	31225.9	59312.9	52498.9	38758.4
Other Income	187.9	366.2	252.7	232.1
Total Income	31413.7	59679.0	52751.6	38990.5
Total Expenditure	29444.3	55991.7	48043.3	33698.5
Purchase of medicines and consumables	9903.1	20021.6	17230.4	13377.7
Changes in inventories	-176.2	-1148.4	-998.9	-1156.0
Employee benefits expense	11275.9	20545.0	16289.8	11535.8
Other expenses	8441.5	16573.4	15522.0	9940.9
PBIDT	1969.5	3687.4	4708.4	5292.0
Interest	892.7	3536.0	1894.1	790.5
PBDT	1076.8	151.4	2814.3	4501.5

Depreciation	1736.0	3224.4	2430.0	1439.6
PBT	-659.3	-3073.1	384.3	3061.9
Exceptional items	0.0	-5960.7	0.0	0.0
Tax (incl. DT & FBT)	165.3	217.9	294.2	341.5
Tax	183.0	106.0	391.7	321.1
Deferred Tax	-17.7	111.8	-97.6	20.4
Reported Profit After Tax	-824.6	2669.8	90.1	2720.4
Share of profit/(loss) of equity accounted investees	2.5	2.3	8.0	-0.7
Adj. Profit	-827.1	2667.5	82.1	2721.1
EPS (Rs.)	-2.05	6.6	0.2	7.0
Equity	4032.2	4032.2	4030.5	3886.4
Face Value	10.0	10.0	10.0	10.0
OPM (%)	5.7	5.6	8.5	13.1
PATM (%)	-2.6	4.5	0.2	7.0

Balance Sheet: **Rs in millions**

Particulars	H1FY18	FY17	FY16	FY15
Assets				
Non-current assets	**44817.8**	**43348.2**	**32501.9**	**26113.0**
Property, plant and equipment	29,656.01	27668.1	20374.0	17852.3
Capital work in progress	2333.2	2897.6	3581.3	1973.6
Goodwill	6784.3	6739.8	4418.9	4328.8
Other intangible assets	719.3	789.0	281.9	188.5
Equity accounted investees	105.1	107.6	111.0	116.2
Financial assets				
Investments	0.0	0.0	10.2	0.0
Other financial assets	2650.7	2220.0	985.2	841.2
Deferred tax asset	48.0	30.3	127.75	26.82
Other non-current assets	2094.7	2,523.28	2,443.77	709.28
Income tax asset	426.5	372.57	167.92	76.34
Current Assets	**26123.2**	**24724.6**	**25056.0**	**18007.3**
Inventories	5431.6	5255.4	4107.0	3108.2
Investments	257.0	215.6	377.4	27.2
Trade receivables	14881.8	12876.2	13422.6	8843.1
Cash and cash equivalents	1008.3	1373.2	2573.6	2497.7
Other bank balances	258.9	147.5	93.1	544.1
Other financial assets	843.1	2328.6	1727.1	1260.7
Other current assets	3442.6	2,528.09	2,755.11	1,726.37
Total Assets	**70941.0**	**68072.8**	**57557.8**	**44120.3**
Equity & Liabilities				
Equity	**21768.9**	**22506.8**	**5966.7**	**22461.3**
Equity share capital	4032.2	4032.2	4030.5	3886.4
Other equity	14098.2	14721.9	165.7	10957.6
Non-controlling interest	3638.5	3752.7	1770.5	7617.3
Non-Current Liabilities	**26286.2**	**23553.8**	**31925.7**	**9269.7**
Financial liabilities				
Borrowings	21499.5	18905.1	25774.1	6118.3
Derivatives	869.6	861.3	0.0	0.0
Other financial liabilities	166.1	158.6	3040.2	616.4
Provisions	1829.0	1748.1	1474.0	1052.8
Deferred tax liabilities	1436.6	1436.6	1320.1	1313.9
Other non-current liabilities	485.4	444.1	317.2	168.2
Current Liabilities	**22885.9**	**22012.2**	**19665.5**	**12389.3**
Financial liabilities				

Borrowings	7205.8	8304.4	5841.4	2893.7
Trade payables	8259.5	7825.0	6970.3	4324.2
Other financial liabilities	6384.6	5003.1	5835.7	4503.8
Provisions	433.5	297.2	404.0	385.4
Income tax liabilities	262.1	253.0	238.7	34.8
Other current liabilities	340.4	329.6	375.4	247.5
Total Equity & Liabilities	**70941.0**	**68072.8**	**57557.8**	**44120.3**

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