

IPO Note

December 13, 2021

Data Patterns (India) Limited



SELL BULLMARKET
BROKER OFFERING
COMPANY STOCK
GROWTH
UNDER WRITER
FLOW SHARES VALUE
IPO
PROCESS PROFIT
LARGE DISCOUNT VENTURE
TRADING PRICE MARKET
CAPITAL PERIOD
INVESTOR
MONEY SELLING
PUBLIC OFFERING
UNDER PRICING
OPPORTUNITY
SECURITY
FIRST



Issue Snapshot:

Issue Open: Dec 14 – Dec 16 2021

Price Band: Rs. 555 – 585

*Issue Size: Rs 588.22 cr (Fresh Issue of Rs 240 cr + Offer for sale of 5,952,550 eq sh)

Reservation for:

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

Face Value: Rs 2

Book value: Rs 46.28 (Sep 30, 2021)

Bid size: - 25 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity:	Rs.	9.56 cr
*Post issue Equity:	Rs.	10.38 cr

Listing: BSE & NSE

Book Running Lead Managers: JM Financial Ltd, IIFL Securities Ltd

Registrar to issue: Link Intime India Private Ltd

Shareholding Pattern

Shareholding Pattern	Pre issue %	Post issue %
Promoter and Promoter Group	58.6	45.6
Public	41.4	54.4
Total	100.0	100.0

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

Background & Operations:

Data Patterns (India) Ltd (DPL) is among the few vertically integrated defence and aerospace electronics solutions provider catering to the indigenously developed defence products industry. With net profitability growth of approximately 164% between Fiscal 2020 and Fiscal 2021, it is one of the fastest growing companies in the Defence and Aerospace Electronics sector in India. It has proven in-house design and development capabilities and experience of more than three decades (including through its erstwhile subsidiary) in the defence and aerospace electronics space. Its offerings cater to the entire spectrum of defence and aerospace platforms – space, air, land and sea. Between Fiscal 2019 and Fiscal 2021, it was amongst the highest growing companies in terms of revenues amongst key Indian defence and aerospace companies.

DPL has design capabilities across the entire spectrum of strategic defence and aerospace electronics solutions including processors, power, radio frequencies (“RF”) and microwave, embedded software and firmware and mechanical engineering. Its core competencies include electronic hardware design and development, software design and development, firmware design and development, mechanical design and development, product prototype design and development, functional testing and validation, environment testing and verification and engineering services opportunities. DPL’s capabilities across the spectrum of defence and aerospace electronics solutions from design to delivery allows it significant competitive advantage in terms of overall development time and cost and also allows to offer competitive pricing when bidding for defence and aerospace projects.

The Company has end-to-end capabilities to build and deliver complete systems, with its design and manufacturing capabilities being completely in-house. It has diversified its products and solutions mainly due to its design and development capabilities, and qualified and experienced workforce. As on September 30, 2021, DPL had 818 employees with more than 500 qualified engineers, including 416 members in its Design & Engineering department. Its design and development capabilities have allowed it to develop complete systems as well as sub-systems for various strategic defence and aerospace electronics solutions. It has invested in and developed a reusable building block model leading to capabilities / competence across various product domains. This approach has allowed to achieve better margins due to spreading out of development costs over multiple programmes, in addition to saving on development time for new products.

With an order book of Rs. 5,812.98 million as on September 30, 2021, which has increased from Rs. 1,786.98 million as on April 1, 2018, at a CAGR of 40.08%, indicating a scalable business model. DPL’s ability to obtain prospective orders on the on-going programmes are favourable as typically such processes have limited indigenous competition, and high entry barriers due to the development and qualification cycle of both product and platform. Its orders in hand reflect products that have progressed from the development to production phase, thereby enabling rapid growth of turnover and profits. It is also in the process of upgrading and expanding its facility, with a proposed doubling of available floor area and manufacturing capacity, as well as addition of capability of handling large and heavy equipment, integration of large radars and mobile electronic warfare systems and satellite integration facility. Its testing capabilities are also proposed to be further strengthened and is proposing to acquire an additional 2.81 acres of adjacent land for further expansion.



Objects of Issue:

The Offer comprises a Fresh Issue aggregating up to Rs. 2,400 million by DPL and an Offer for Sale of up to 5,952,550 Equity Shares by the Selling Shareholders.

Offer for Sale

The Selling Shareholders will be entitled to their respective portions of the proceeds of the Offer for Sale after deducting their respective proportion of Offer expenses and relevant taxes thereon. The Company will not receive any proceeds from the Offer for Sale and the proceeds received from the Offer for Sale will not form part of the Net Proceeds.

Fresh Issue

DPL proposes to utilise the net proceeds of the Fresh Issue, i.e., gross proceeds of the Fresh Issue less the Offer related expenses applicable to the Fresh Issue ("Net Proceeds") and proceeds from the Pre-IPO Placement towards funding the following objects:

- Prepayment or repayment of all, or a portion, of certain outstanding borrowings availed by DPL (Rs 608.3 mn);
- Funding working capital requirements (Rs 951.91 mn);
- Upgrading and expanding existing facilities at Chennai (Rs 598.39 mn); and
- General corporate purposes

Further, DPL expects to receive the benefits of listing of the Equity Shares on the Stock Exchanges and enhancement of the Company's visibility and brand image and creation of a public market for its Equity Shares in India.

Competitive Strengths

Indigenous integrated and strategic defence and aerospace electronics solutions provider which is well positioned to benefit from the Make in India opportunity: The Indian defence industry is rapidly evolving into a self-sustaining one with companies and DPSUs moving towards specialising into defence primes, integrators and component suppliers. Similarly, the space industry is expanding with new space participants offering services which were previously offered by the Indian government space organisation such as launch services, satellite operations and downstream services. With DPSUs focussing on specialisation and integration and subcomponent manufacture being outsourced to the private industry, there are resultant expanded opportunities for the private sector. Its focus on building complete systems from the building blocks and sub-systems already developed, provides a higher value addition while distributing development costs.

Since inception, DPL has focussed on designing and building its own products. It has extended its product focus across the manufacturing value chain from industrial and test automation to automated test equipment for space systems to developing products and sub-systems for defence and aerospace systems through DRDO. It is focussed on developing complete systems and sub-system solutions in domains such as radars, electronic warfare, communication systems, RF and microwave, Military COTS (such as VME and VPX processor boards, digital receivers, Input/Output modules of many functions and form factors), avionics, missile and torpedo electronics, fire and launch control systems, space based systems and automatic test equipment. DRDO is its valuable customer and have supplied several electronics based systems / sub-systems to DRDO for various applications.

Frost & Sullivan expects that countries will look at spending the available resources more efficiently through indigenization (for e.g., India's Atmanirbhar defence structural reforms), diversification of supply chains, and looking at new more cost effective equipment sources, in order to keep procurement levels commensurate with achieving technology and platform based tactical advantages. The defence expenditure will continue to rise in the medium term at a rate of 1.5% amounting to \$ 2,130 billion in 2026, largely influenced by the top 15 spenders even though some areas/ countries from the rest of the world may see a reduction in defence spending. Its competency and the focus of the Indian Government to enhance indigenisation, makes DPL well positioned to rapidly commercialise or scale-up a number of its existing products or building blocks to end systems or complete solutions, thereby garnering significant benefits from the Make-in-India programme.

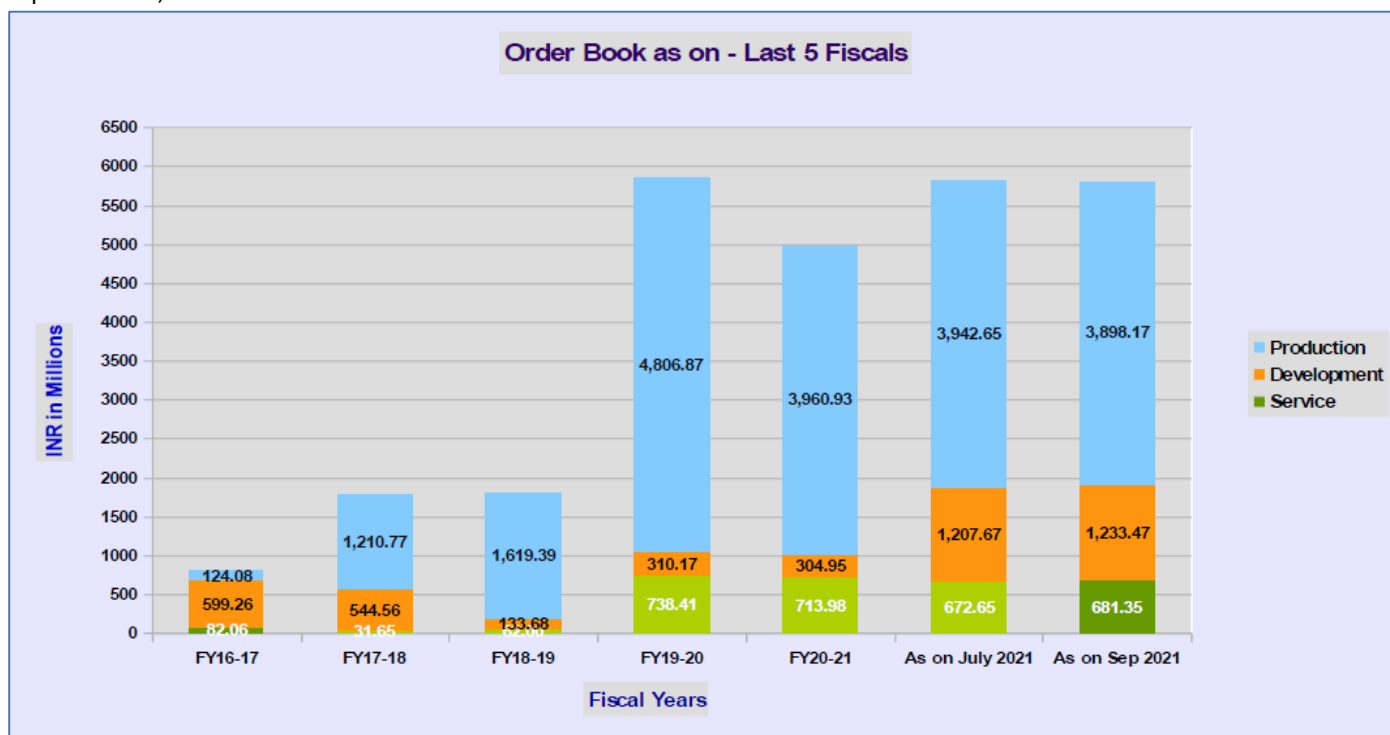
Having developed the building blocks across all electronics including RF and microwave, signal processing, etc. has allowed DPL to develop complete systems. With Indian defence requirements being opened out to indigenous manufacturers, opportunities are now available which can be addressed based on in-house capabilities to develop such large systems.

Innovation focused business model: Since inception, DPL has focussed on in-house development and manufacturing capabilities lead by innovation and design and development efforts. As on September 30, 2021, it had more than 500 engineers, many of whom serve in



both design and development departments. It has in the past initiated development of several projects, such as military grade processor modules, cockpit displays, actuator controllers for missiles and torpedoes, flight control computers, digital receivers and Up/Down converters for radars, with an aim to utilise these components in subsequent projects. Subsequently, it has able to utilise these pre-developed building blocks and sub-systems in the development of complete systems, thereby allowing for higher value addition while distributing development costs. Further, an ability to partner with the customers through the life cycle of a product, from conception till deployment and thereafter, allows it to be logical partner to the customers as a product moves from development to deployment. DPL design and develop a number of building blocks similar in specifications to imported modules to allow it to compete in local tenders of DRDO for military commercial-off-the-shelf (“COTS”) products. It has consciously built competencies to design and build building blocks across the defence and aerospace electronics spectrum, which allow it to build lower cost value added integrated systems with greater ease and in a cost competitive manner.

Sound order book across product categories supplying to marquee customers in the defence and aerospace industry: As on September 30, 2021, DPL had an order book of Rs. 5,812.98 million, with orders from several marquee customers in the Indian defence ecosystem, including the Indian government defence ministry, BrahMos, DRDO, the Indian government space organisation, HAL, BEL and a DPSU involved in the missile space. It is currently engaged in the supply of products to several prestigious defence projects in India, including the LCA, the HAL Dhruv, LUH and the BrahMos missile programme. In each of the above projects, its products form critical components, such as the launch systems for the ground based BrahMos missile launcher, flight and safety critical “take me home” displays for the Tejas. Due to DPL’s diversification of its products and services over the years, backed by the design and development capabilities, It has grown its order book from Rs. 805.40 million as on March 31, 2017 to Rs. 5,812.98 million, as on September 30, 2021.



DPL continues to invest in product development on various platform specific products which has an annuity requirement thus ensuring continuity of business in the years to come. As products and systems bought by Indian defence services need to have a life time of minimum 20 years, its systems are designed to meet such operational requirements with a clear policy on obsolescence management. It therefore has several customers with a history of reliable product service over many years.

Modern certified manufacturing facility of international standards: DPL’s in-house design and development capabilities are complemented by its 100,000 square feet manufacturing facility located on 5.75 acres of land at the SIPCOT Information Technology Park, Siruseri, Chennai, which has facilities for design, manufacturing, qualification and life cycle support of high reliability electronic systems used in defense and aerospace applications. Its facility allows to be self-sufficient in requirement of high quality and high complexity production while ensuring functional testing for all the products using internally developed automatic testing equipment. The Company is certified for or follow various standards across product life cycles, including for aerospace systems under AS9100D by



TUV-SUD, IPC Standards for PCB design, DO 178B for software for airborne systems, Software life cycle processes and environment standards MIL-STD-810, JSS-55555 and EMI-EMC standard MIL-STD-461. Further, its systems and processes are subject to periodic audit by its customers, such as the Indian government space organisation and HAL and by certain government departments. Its EMS line is also certified for production by the Indian government space organisation.

Consistent track record of profitable growth due to a scalable business model: With net profitability growth of approximately 164% between Fiscal 2020 and Fiscal 2021, DPL is one of the fastest growing companies in the Defence and Aerospace Electronics sector in India with excellent margins and return ratios. Between Fiscal 2019 and Fiscal 2021, it recorded higher growth in revenues, EBITDA margin, ROCE and ROE amongst key Indian defence and aerospace companies, with a growth in its revenues of 71% during this period. Between Fiscal 2019 and Fiscal 2021, DPL was amongst the highest growing companies in terms of revenues amongst key Indian defence and aerospace companies as captured in the Company Commissioned F&S Report, with a growth in DPL's revenues of 71% during this period. Further, between Fiscal 2020 and Fiscal 2021, it recorded the highest growth in revenues amongst key Indian defence and aerospace companies with a revenue growth of 43% in this period. Also, in Fiscal 2021, it recorded the highest EBITDA margin, ROCE and ROE amongst key Indian defence and aerospace companies. The Company has been focused on managing costs by leveraging the inherent efficiencies in its reusable building block driven business model while consistently growing revenues.

Further, DPL has spent considerable development expenses during previous years in designing building blocks and sub-systems. Its development costs are typically funded internally and are written off as revenue expenses as part of the delivered systems. Accordingly, when production contracts or repeat orders are secured from DPSUs, its overall margin tends to be better. Further, its overheads do not necessarily increase in proportion to the increased revenue from production contracts, allowing for increase in its EBITDA and PAT in line with increase in revenue.

Experienced management team and skilled workforce: DPL has a management team with extensive experience in the defence sector. The quality of its management team has been critical in achieving its business results and that its management's experience allows the Company make strategic and timely business decisions in response to evolving customer needs and market conditions. In particular, its management team has sound cross-functional expertise across product design and technology. Further, DPL's focus on skilled and qualified manpower has ensured that each of its 818 employees including more than 500 engineers, as on September 30, 2021 are certified by various industry bodies or educational institutions. The Company has also benefitted from the experience of marquee investors, including Florintree Capital Partners, who have invested in Fiscal 2021.

Business Strategy:

Continue expansion of product portfolio with complex technology-based products: DPL intends to continue to expand its capabilities and product portfolio to enhance offerings in the defence and aerospace electronics space, especially in complex technology based products. Its currently offers electronic solutions developed by specialist teams working on areas including complex 20+ layer PCB designs, FPGA based firmware algorithms, all layers of software including operating system porting, device drivers, networking layers, application software, graphical user interface, cartography, signal processing, streaming protocols and waveform engineering. Further, it intends to opportunistically bid for and engage in higher value projects which require significant use of complex technologies. Further investments are being made in AESA radars, modern EW Systems, Airborne sensors, among others. These complex technology-based products have wide ranging applications across defence and aerospace areas and would provide a higher value growth opportunity.

The Company also intends to avail the benefits from the Make-in-India programme by bidding for or participating in tenders for larger or more complicated projects. As per Frost & Sullivan, the government's latest policies seek to build greater self-reliance in Indian defence R&D and manufacturing through a combination of the Aatmanirbhar Bharat mission, DAP 2020, Offsets and the upcoming Defence Production and Exports Policy, is expected to be one of the key growth drivers for the Indian indigenous defence industry. Moving forward several high value tenders are expected to fall into these categories, giving both private Indian defence primes and sub-system supplier's ample opportunities in increasing revenue and technology base. Further, it is expected that the capital and stores allocation of the Indian defence budget to grow to \$ 33.19 billion and \$ 9.57 billion respectively by Fiscal 2031. The cumulative amount available during the forecast period would be \$ 339 billion.

Focus on repeat large volume production orders: Due to DPL's reusable building block model and pre-existing certification and platform specific products, the Company is able to distribute development costs over multiple programmes and also be the preferred OEM supplier for ongoing programmes. Of these, RWR and ELINT are currently in the testing and flight trial stage, while cockpit displays for LUH, antenna electronics for Ashwini Radars, etc. have entered the initial production phase, which will provide greater volumes and



increased orders over the coming years. It aims to focus on such orders or projects wherein the initial development stage has been completed and there is significant scope for high volume repeat orders or high value repeat orders. Similarly, DPL has in the past invested resources in developing a range on EW receivers with DRDO. Based on the successful development it has received subsequent contracts from DPSUs. It continues to invest resources in developing modern receivers for both communication and radar threats with DRDO, which will find applications in future and ongoing EW requirements of the Indian defence forces. Further, production contracts or repeat procurements provide order visibility over a few years as well as allow production and delivery spread over the year, allowing stable cash flow. DPL's available building block model and products and products in various stages of development, in its opinion, will allow it to gain significant future revenues from such projects.

Augmenting design and development capabilities and expanding manufacturing infrastructure: DPL intends to deploy up to Rs. 598.39 million from the Net Proceeds and proceeds from the Pre-IPO Placement of this Offer towards upgrading and expanding of its existing facilities located in Chennai. The proposed expansion of its facilities, which will include acquisition of an additional 2.81 acres of adjacent land for further expansion, large systems integration hangar, complete radar integration, electronic warfare vehicle integration, augmented environmental test infrastructure, multi ton material handling, additional EMS line and clean room for satellite integration. DPL also intends to augment its design and development capabilities for its various verticals, including its design verticals, through procurement of additional software, testing equipment or other related hardware. Augmentation of design and development capabilities through acquisition of further infrastructure is part of an ongoing process of increased capabilities. Its investment in infrastructure will enable it to cater to the growing demand from its customers and enhance its product portfolio, which in turn is expected to result in an increase in its profits and revenues.

Focus on increasing revenues by leveraging core competencies and grow services business: DPL's core competency is driven by robust process and quality standards. It intends to leverage this expertise and start providing engineering services to OEMs, including for electronic hardware development, embedded software and application development, algorithm and firmware development, testing and validation activities, obsolescence management and life extension of defence OEM products and other non-defence products. Its domain expertise helps it to understand the customer's requirements in a timely manner thereby leading to time and cost efficiencies for all parties. Further, the relatively long life of platforms or products in the defence and aerospace sector, there are significant growth opportunities for its sale of services. Accordingly, it intends to grow its portfolio of services and provide maintenance services, upgradation and other routine repair and upkeep services to customers, to allow it to expand its revenues from sale of services. In furtherance of this, DPL has also increased the head count of its Customer Support Services department from 22 employees in Fiscal 2019 to 41 employees as on September 30, 2021.

Focus on increasing export business: Global defence spending rose to \$ 1,981 billion in 2020 representing an increase of 2.6% over 2019 spending. The global defence expenditure has been steadily increasing in the last five years at a CAGR of approximately 3.6%. In 2020, the top 15 spenders accounted for 81% of the total global spend; with most countries in this group increased their defence expenditure over 2019. It intends to expand to high-end global markets similar to India, its core competency is in complete sync with requirements for various sectors, such as industrial automation, telecom, automobile (electronic sub-systems), medical (electronic sub-systems) and nuclear. Either its engineering services model or product development model shall be utilized to leverage sales from these markets. Given its design and manufacturing capabilities, there is significant potential for it to move into newer geographies and markets. It intends to identify market opportunities in overseas jurisdictions and tie up with local partners to utilise its existing product portfolio and further develop products suitable for meeting the respective country's native requirements.

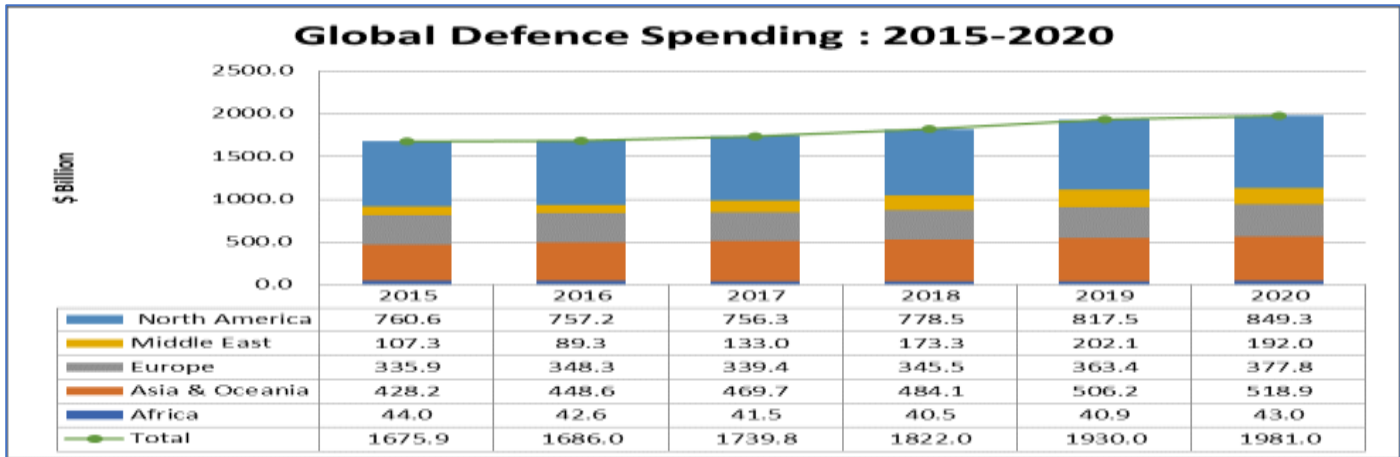
Industry:

DEFENCE SPENDING

Global Defence Spending

The global defence expenditure is expected to grow to \$ 2031 billion by 2025 due increased geo-political uncertainty even though countries face economic pressures due to COVID 19 disruption. The global defence spending rose to \$ 1981 billion in 2020 representing an increase of 2.6% over 2019 spending. The increase represents that the countries chose to spend more on defence even when they faced severe economic contraction due the COVID impact. As noted below, the global defence expenditure has been steadily increasing in the last 5 years at a CAGR of approximately 3.6%. As seen later, in this section the increase has been primarily due to the increased geo-political tension due Russian annexation of Crimea in 2014, followed by the aggressive actions of China in the wake of pandemic.

Global Defence Spending CY 2015-2020



The largest defence spender, US, is estimated to have spent \$ 778 billion in 2020 which was an increase of 4.4 % over 2019. China, the second largest spender, is estimated to have spent \$252 billion representing an increase of 1.4 % over 2019, while India was the third largest spender accounting for \$ 72.9 billion with an increase of 2.1% over 2019.

Other notable facets of defence spending in 2020 are:

- The top 5 spenders; US, China, India, Russia and UK accounted for 62% of the global defence spending. All five countries increased their spending by 1.9% to 4.4% over 2019.
- The top 15 spenders accounted for 81% of the total global spend; all the countries in this group increased their defence expenditure over 2019 except Saudi Arabia and Brazil which reduced defence spending.
- In 2020, military expenditure increased by 5.4% in Africa, 4% in Europe, 3.9% in Americas, and 2.5 % in Asia and Oceania. ME was the only region which registered a drop of 6.5%.
- Military expenditure in Africa was estimated at \$43.2 billion in 2020, Algeria, Morocco, and South Africa were the top three spenders in the region.
- Americas spend a cumulative \$ 855 billion in 2020 on defence representing an increase of 3.9% over 2019 US, Canada, and Brazil are the top three spenders in the region.
- In addition to China and India, Japan (\$49.1 billion), South Korea (\$45.7 billion) and Australia (\$27.5 billion) were the largest military spenders in the Asia and Oceania region. The region has shown an uptrend since due rise of China as a global economic and military power which in turn has influenced the spend by other countries.
- Military spending in Europe was \$378 billion; UK, Germany and France were the highest spenders in the region.

The combined spend of the countries in ME was \$ 143 billion. While the actual spending decreased, the military burden (military spending as percentage of GDP) increased due to the economic impact of COVID. The top three largest spenders in the region are Saudi Arabia, Israel, and Turkey. Frost & Sullivan estimates that the defence expenditure will continue to rise in the medium term at a rate of 1.5% amounting to \$ 2130B in 2026, largely influenced by the top 15 spenders even though some areas/ countries from the rest of the world may see a reduction in defence spending.

Global Defence Spending Forecast: 2021-2026

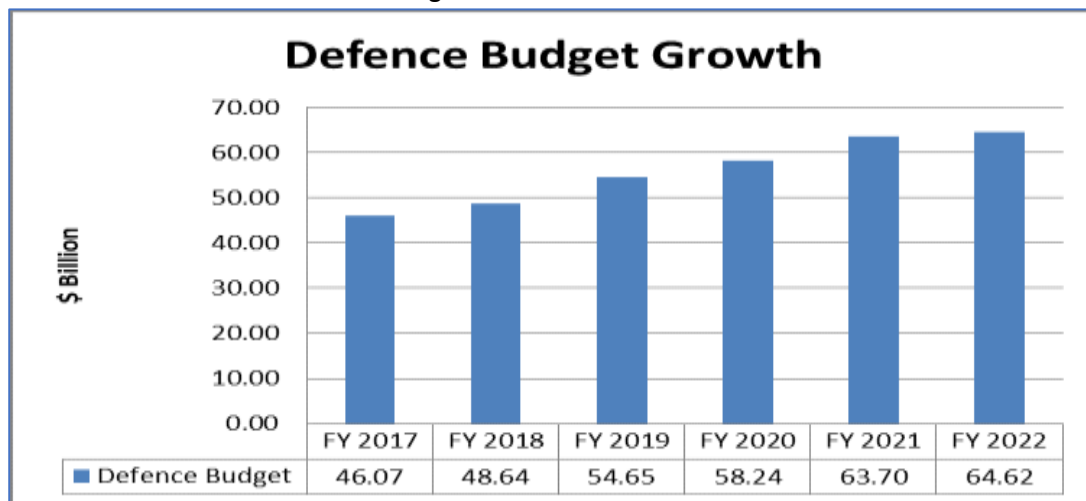


The projected rise is based on an assessment of global GDP projections, and on assumption of continued political tension for next two years followed by a gradual easing of relationships. Any flare up in geo-political uncertainty due rise in tensions between US – China, India – China, India – Pakistan, Russia – NATO, Israel – Palestine, and re-emergence of Taliban at global theatre following the current situation in Afghanistan would likely result in significant upsides to the forecast.

Indian Defence Budget Brief and Forecast

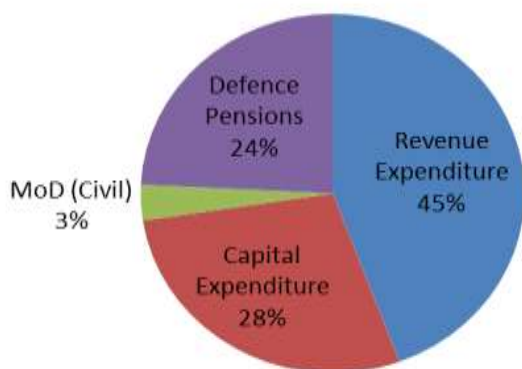
There is a structural shift in the defence budget with increased allocation for modernisation funds, and approval of nonrelapsable fund. The fund available to the defence industry participants during Fiscal 2022 to Fiscal 2031 is estimated at \$ 339 billion. The Indian defence budget has been growing at the rate of 7% in the past 5 years as below:

Defence Budget Growth Fiscals 2017-2022



The defence budget has 4 main components: MoD (Civil), Defence Services Revenue, Capital Outlay on Defence Services, and Defence Pensions, and not all of it is available to the defence industry participants.

Defence Budget Components - FY22



INDIA DEFENCE MODERNISATION PROGRAMMES

Delays in modernisation caused a major reduction in offensive capabilities of the Indian forces. Considering the escalating geopolitical scenario in the Indian subcontinent, process improvement and industry push mechanisms to accelerate defence procurements is expected. Most modernisation programmes are either totally indigenous or are planned to have a large indigenous component which will drive the indigenous growth. DRDO is the research and development agency which develops the indigenous programmes. Companies like Data Patterns which supplies to DRDO for the developmental programmes gain a competitive advantage it becomes the preferred (and often sole source) supplier as the programme shifts to production stage.



INDIGENOUS INDUSTRY GROWTH DRIVERS

Indian Defence Industry Antecedents

The Indian Defence industry is at an inflexion point, with the increased private sector participation being the way forward. India's defence industry has come a long way since it embarked on a mission of self-sufficiency in the 1950s. The initial model was designed with enhancing the production of low technology weapons in mind, with production and manufacture being led by DPSUs. During the early years, as defence spending and R&D capability was low, major military programmes were executed with help from foreign OEMs. The wars with China and Pakistan in the 1960s catalysed a change in defence policy and increased expenditure in defence procurement. India continued to rely on foreign support; however, the onus shifted towards licensed production – especially of more technologically advanced platforms. In the 1980s and 1990s, the Indian government wanted to bolster self-reliance and embarked on programmes led by the DRDO such as the Light Combat Aircraft programme and the Integrated Guided Missile Development programme. A joint venture, which became BrahMos, was also set up between India and Russia to develop and produce advanced cruise missiles. This model of “joint venture led development” was pursued in other ventures such as the Long-Range Surface to Air Missile (“LRSAM”) programme, initialised between DRDO and Israel Aerospace Industries (“IAI”).

Drivers

The government's latest policies seek to build greater self-reliance in Indian defence R&D and manufacturing through a combination of the Aatmanirbhar Bharat mission, DAP 2020, Offsets and the upcoming Defence Production and Exports Policy.

The Indian government's approach to promoting more indigenous industry inclusion has been becoming more calibrated in the last few years. The drivers used are indicated in Figure 21. Whilst the onus has been on increasing prioritisation for Indian company led procurement mechanisms, several other policies have also been initiated to simplify entry into the defence sector and devolving more freedoms in avenues such as export selection to Indian companies.

Aatmanirbhar Bharat

Aatmanirbhar Bharat envisions promoting policies and regulations that leads to self-sustainment in key areas on industry, including defence, through a wide raft of new measures including a Defence Production and Export Policy and import protection. The major measures under the ambit of Aatmanirbhar Bharat in defence are as follows:

Negative Import List – In order to incentivise domestic production and limit imports, the Defence Ministry has banned the import of 209 defence related equipment/ components. Services can only source the listed equipment from Indian vendors. Equipment covered includes segments such as electronic warfare, sensors, radars, Unmanned Aerial Systems etc.

Budget Allocations – An outlay of \$ 9.48 billion has been earmarked for domestic procurement in Fiscal 2021-2022 in order to mitigate procurement delays stemming from non-availability of capital.

Corporatisation of Ordnance Factory Board (“OFBs”) – The government aims to corporatize OFBs in a bid to improve production efficiency and transparency. There are 41 ordnance factories in India, which source components from Tier 2 and Tier 3 suppliers.

Foreign Development Investment (“FDI”) – The FDI limit under the automatic route has been increased from current 49% to 74%. The increase will encourage foreign manufacturers to invest in India with confidence as they will have a controlling stake in a joint venture.

Defence Acquisition Policy 2020 (“DAP 2020”)

The DAP 2020 focuses on improving indigenous manufacturing by streamlining procurement processes and on introducing “innovation” oriented clauses to further prototype development in India. Other new measures include incentivising foreign OEMs and service providers to set up their own manufacturing/ MRO facilities and a specialised category for “leasing” of equipment which could potentially speed up capability acquisition. The top 3 capital acquisition categories – Buy (IDDM), Buy (Indian) and Buy and Make (Indian) emphasize on Indian company led defence modernisation with an IC category of at least 50%. Moving forward several high value tenders are expected to fall into these categories, giving both private Indian defence primes and sub-system supplier's ample opportunities in increasing revenue and technology base.

Defence Offsets

Though India has extensively pursued defence offsets through an official policy in 2005, the earlier policies did not concentrate on technology and R&D capability dispersion from foreign to Indian defence companies. The Defence Acquisition Policy 2020 aims to redress such deficiencies by shifting the focus away from “components” to “technology investments” and “export of platforms”. Avenues for expanding offsets have been expanded in the DAP 2020, giving foreign entities direct credit in transferring critical technologies to the Indian industry. Though certain critical technologies such as hypersonic flight related technology, electromagnetic



rail guns etc. has been reserved only for DPSUs and DRDO, the vast majority of technologies used in defence equipment are now open to private players.

Defence Production and Export Policy 2020 (Draft)

The Defence Production and Export Policy is another ambitious step towards Aatmanirbhar Bharat and aims to achieve an industry turnover of \$ 25 Billion, including exports of \$ 5 Billion by 2025, doubling the size of India’s aerospace and defence industry in a timespan of five years.

Rising Defence Exports

The Indian defence exports are likely to grow at a fast rate due easing of export restrictions and policy changes. This is also being compounded by rising prowess of the Indian defence suppliers. The Indian defence exports are now dominated by the private sector as compared to defence public sector units and are expected to drive revenue opportunities Companies in niche products such as Data Patterns are well positioned to capture the growth in exports. India continues to be among the top 5 importers of armed equipment in the period 2016-2020 as per SIPRI report; “Trends in International Arms Transfer” released in 2021. However, it is heartening to note that its share of the global arm imports dropped from 14% in 2011-2015 to 9% in 2016-2020, a drop of 33%. This is a clear indicator of the fruition of efforts to promote the capability and sourcing from domestic defence industry.

While India continues to remain a net importer, the country also figured in the top 25 exporters in the same list for the first time in 2019. India was ranked as # 23 in 2019, and # 24 in 2020 (the drop is attributable to manufacturing disruptions due a stringent lockdown) in the overall list of arms exporters. The share of India in global defence exports was pegged at 0.2% for the period of CY2016-2020 as compared to 0.1 % in the period CY 2011-2015; up by 288%.

The defence exports from Fiscal 2015 to Fiscal 2021 are shown below:



Indian defence exports crossed the \$ 1 billion mark in 2018-2019. There was a dip in the exports in 2020-2021 largely attributable to supply chain and manufacturing disruptions which have eased now. A few years back, India’s export customers were only small economies such as Seychelles, Suriname, Myanmar, Sri Lanka etc. Now, exports stand more diversified both in terms of product and their markets.

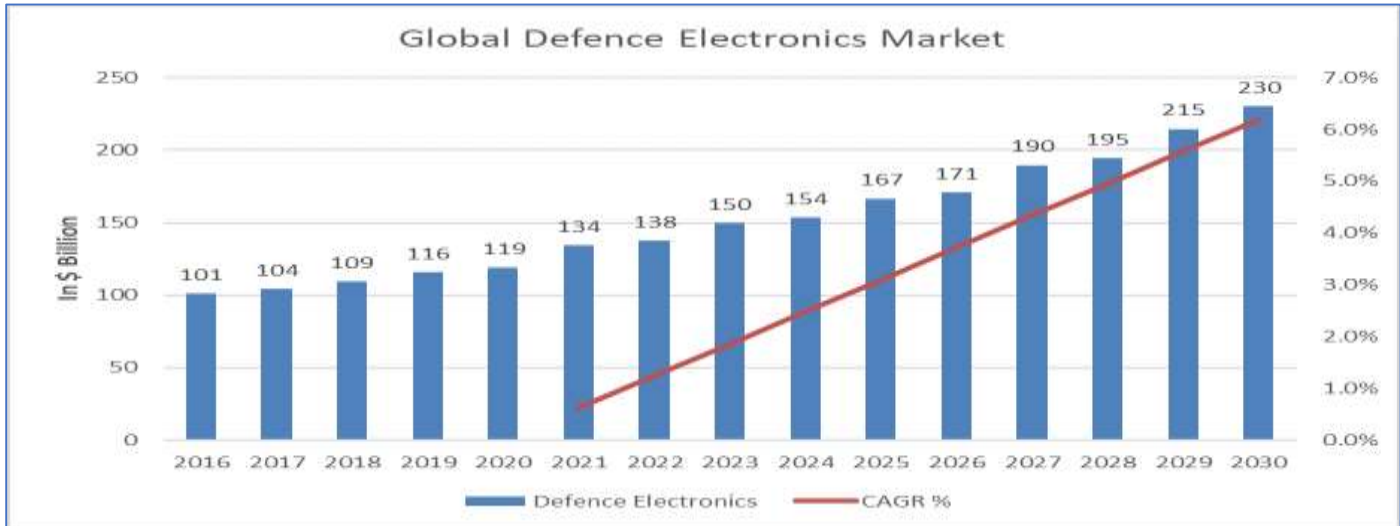
Global & Defence Electronics Market

Global Defence Electronics Market

At present there are over 150 active conflicts ongoing in different regions primarily over the last decade. This has meant that the complexity and diversity of the conflict has evolved, forcing armed forces across the globe to revisit their force structure, concept of operations and invest in evolving technologies. As operators are exploring hybrid warfare and multi domain operations, increasing investment in defence electronics will ramp up towards the later part of the decade. Defence electronics will have to evolve to enable more complex and dynamic operations that provide operators with force multiplier capabilities. Globally defence electronics procurement is going to become a core component for defence procurement as the amount of electronics that are fitted onto platforms continues to grow. Over the last decade the defence electronics component has consumed a larger share of the value of the platforms overall value as defence capabilities evolution continues through evolution of the electronics systems and embedded

software rather than the platform itself. Aircrafts have seen a large adoption of new optronics systems, communication systems and battle management systems that exploit the new multi domain concept of operations. Naval platforms have been increasingly adopting new electronic warfare, radar, command and control systems as platforms have been required to undertake multi-role operations. The increase in defence electronics spending is a symptom of a wider shift in battle engagement philosophy from combat mass – where having numerical superiority was key towards a smaller number of capable platforms supported by sophisticated defence electronics systems.

Global Defence Electronics Market



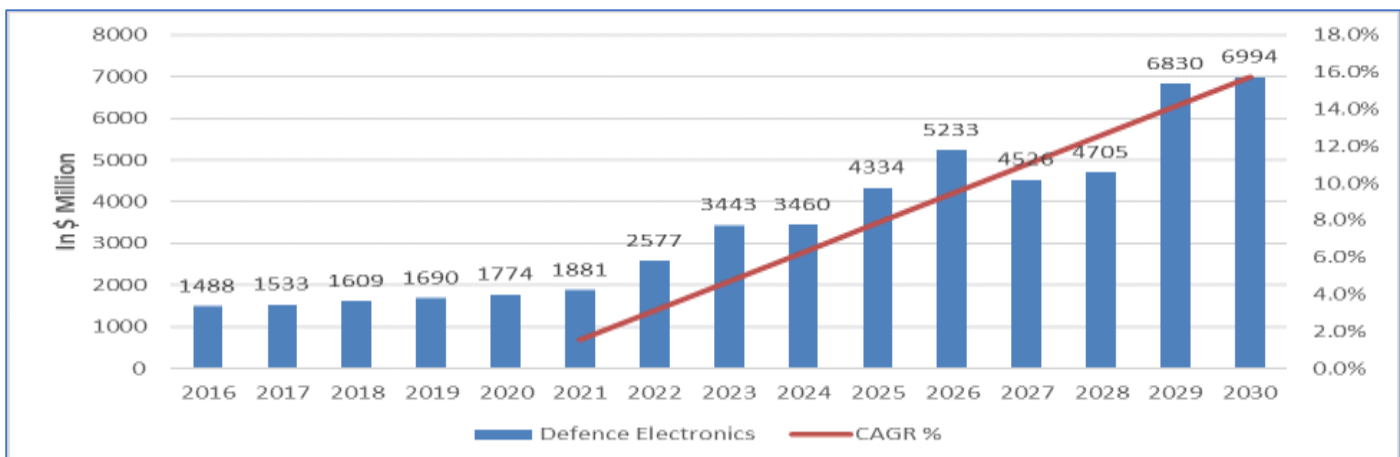
Indian Defence Electronics Market

Defence Electronics

The Indian Defence Electronics segment will witness large scale indigenization efforts over the next decade leading to improved manufacturing and quality standards. This will further increase the presence of Indian components in global supply chains which are already being used in Israeli UAS and European combat aircrafts. At present Defence Electronics make up only 25- 35% of the cost of platforms used by the Indian armed forces, which is expected to increase in the future. However, at present over 60% of the electronic components used are supplied by foreign OEM's. As indigenisation efforts continue, future procurement will see a large portion of defence electronics sourced locally, and as such platform recapitalization programmes across all three forces such as new combat aircraft acquisition, submarine building and T-72 replacement will be key contributors to future market valuation of this product segment.

The Defence Electronics market was cumulatively worth approximately \$ 8.09 billion from 2016-2020 and grew at a CAGR of 4.5% during the period. At present the market is evaluated to be worth approximately \$ 1.88 billion in 2021 and is expected to grow to approximately \$ 6.99 billion in 2030 with a cumulative market opportunity for this segment in the order of approximately \$ 43.98 billion and a CAGR of 15.71% during the period.

India Defence Electronics Market





Military Radar Market

The military radar market was cumulatively worth approximately \$ 5.02 billion from 2016-2020 and grew at a CAGR of 7% during the period. The Radar market is estimated to be worth approximately \$ 1.25 billion in 2021 made up of radars for ground, naval and radars for airfield. India has approximately 14.5 thousand kilometres of land borders to monitor of which approximately seven thousand kilometres is critical. With a naval fleet size of 133 platforms, they represent a significant opportunity for radar modernization and upgrades in the future. The market is expected to grow to approximately \$ 3.18 billion in 2030 with a CAGR of 10.9% and a total market opportunity of approximately \$ 20.59 billion.

Military Radar Market



New procurements for precision approach radars are expected to modernise airfield, with radars older than 20 years expected to be gradually phased out over the next decade. Data Patterns already having sold Precision approach radars, wind profile radars and Doppler weather radars to the Indian government has positioned themselves for success for future programmes in the next decade having the technological and delivery capability for success. Data Patterns won the Array Group Receiver Unit (“AGRU”) as part of the Arudhra - Medium Power Radar programme. Data Patterns will supply approximately 55 units of AGRU/ Arudhra radar. RFP for 18 Ashwini - Low Level Transportable Radar (“LLTR”) are expected from Air Force next year. The 18 radars are expected to cost around \$ 270 million, with IA has requesting budgetary quotes from Data Patterns, Astra Microwave and BEL. The development of new-generation missiles with high-end technologies is a major threat to strategic locations and platforms, such as military airbases and ships. Some of these new developments include nuclear-capable ballistic missiles and high-speed cruise missiles. New radar procurements will be required to counter evolving threats and thus have features such as multiple-bands, AESA radars, etc. Naval vessel upgrades such as the Talwar-class frigates, procurement of additional Shivalik-class frigates and replacement of the Godavari-class will drive radar procurements. Data Patterns has delivered airborne surveillance radar (all of the hardware) for helicopters and fixed wing aircrafts to LRDE on a single vendor basis. LRDE is expected to flight test this radar in the next few months. This will be offered for Navy’s Dornier upgrade and as buyer nominated equipment for the new helicopter programmes.

Airborne EW

The Airborne EW was cumulatively worth approximately \$ 1.8 billion from 2016-2020 and grew at a CAGR of 7% during the period. The Airborne EW market is expected to be worth approximately \$ 378 million in 2021 and grow to approximately \$ 606 million in 2030 at a CAGR of 5.4% driven by modernization of platforms such as the IAF’s requirement for 200+ single engine fighters, acquisition of the HAL Tejas, Dassault Rafale, procurement of A330’s and C-295 and future procurement of the HAL AMCA. Modernization of existing platforms will also contribute towards this market evaluation. Indian companies that have existing RWR, COMINT, ELINT and EW systems like Data Patterns are well positioned to capture the opportunity having already built systems in partnership with DRDO. For e.g., Data Patterns’ next gen RWR meets the requirements for the LCA MK IA and is under testing. With an increased focus on EW systems, they are undergoing a modernization phase due to the emergence of Next Generation Jammers and AESA that is being explored for EW equipment. These technologies allow generating complex jamming waveforms, in addition to being modular to be installed on platforms as per the operational requirements. There is also a shift towards integrated EW solutions with advanced signal processing and miniaturisation with complex and powerful digital wideband receivers that are able to instantaneously process GHz of signals in complex spectrum environments. The market will also be drive by an increasing need for a distributed, adaptable network Electronic Warfare capability to facilitate the integration of several EW technologies on both manned and unmanned aircrafts. This will enable a complete horizontal integration of multiple payloads, leading to increased situational awareness.



Global and Indian Space Industry Trends

The global trends are also being replicated in the Indian ecosystem as the Indian Space Research Organisation (“ISRO”) is making a concerted effort to evolve the Indian ecosystem with transfer of manufacturing technology and shift in policy framework. The discussion of the space industry trends with respect to global and Indian ecosystem is placed in succeeding paragraphs.

Small Satellites and Mega Constellations

Small satellite mega constellations are driving the demand for satellite and sub-systems manufacturing

Serial Production of Satellites

The rise in demand of small satellites is leading to serial production of satellites. Domestically, the small satellite demand will add to ISRO demand. Indian private industry will also benefit from the ISRO initiative of outsourcing manufacturing.

Uberization of Ground Stations

The ground stations have not yet evolved to catch up with the exponential increase of data transfer demand which has led to new business models such as uberization of ground stations. The same is especially applicable to India as there are no existing private industry providers. Early entrants will benefit from first mover advantage.

Domestically, there are no players addressing the ground station capacity demand through aggregator models, and early entrants are likely to benefit from first mover advantage.

Space System Testing

The mass production of satellites also necessitates the need for testing and validation. The industry has shifted to model of end of assembly line testing as seen in the automotive industry. Domestically, the testing demand will be driven by ISRO missions, and testing equipment suppliers to ISRO will benefit from the increased demand.

COTS for Space

The demand for COTS components in low weight satellites has increased due adoption of Pico, Nano and Micro satellites. Data Patterns is well positioned to capture this demand owing to its capability of building nano satellites from scratch including the required components.

The demand for the light satellite solutions is increasing significantly due to multiple planned satellite constellations and easy plug and play approach possible to assemble CubeSats.

Indian Space Industry

Indian Space Evolution

The Indian space industry has evolved with ISRO outsourcing manufacturing to private industry. The evolution has helped private players like Data patterns to evolve their technical capability in addressing domestic and global demand.

Indian Space Industry Expenditure and Forecast

The ISRO revenue expenditure is forecasted to increase to \$ 2,085.68 million in Fiscal 2025-2026 on back of increased missions. ISRO’s establishment expenditure has been increasing due to the incorporation of NSIL and IN-SPACe. About \$132.09 million have been allocated as part of budget for establishment expenditure since Fiscal 2019 up to Fiscal 2021. This indicates government’s agenda to drive further ISRO’s efforts of engagement of private participants in Indian space industry. The creation of these entities has led to new opportunities for Indian private players through technology transfer and contract manufacturing opportunities through NSIL and regulating body like IN-SPACe, which will enable private participants to establish their own services, establish own launch facilities and satellite operations. In Fiscal 2018 ISRO’s revenue expenditure was about \$1.39 Billion and about \$1.86 Billion in Fiscal 2020 i.e., growing at CAGR of 15.68%. However, a sudden spike in expenditure is seen in Fiscal 2019 due to expenditure on INSAT operational which amounted to 57.4% of the total expenditure. ISRO’s Indian National Satellite (“INSAT”) system had about 200 transponders boosted. The system provides services for broadcasting, telecommunications, weather forecasting, search and rescue operations and disaster warning.

There is a shift of focus of ISRO of being a key driver for new technology development which is reflected from the increased space technology budget by 56.7% in Fiscal 2022 when compared to Fiscal 2020 revised budget and about 14% increase when compared to Fiscal 2021 budget. Another factor contributing to rise of budget for space technology is increased contract manufacturing and serial production requirements of ISRO for satellites and Launch Vehicles. Space applications expenditure will see constant growth until Fiscal 2026, as will space sciences and space applications, with an increasing focus on these missions.

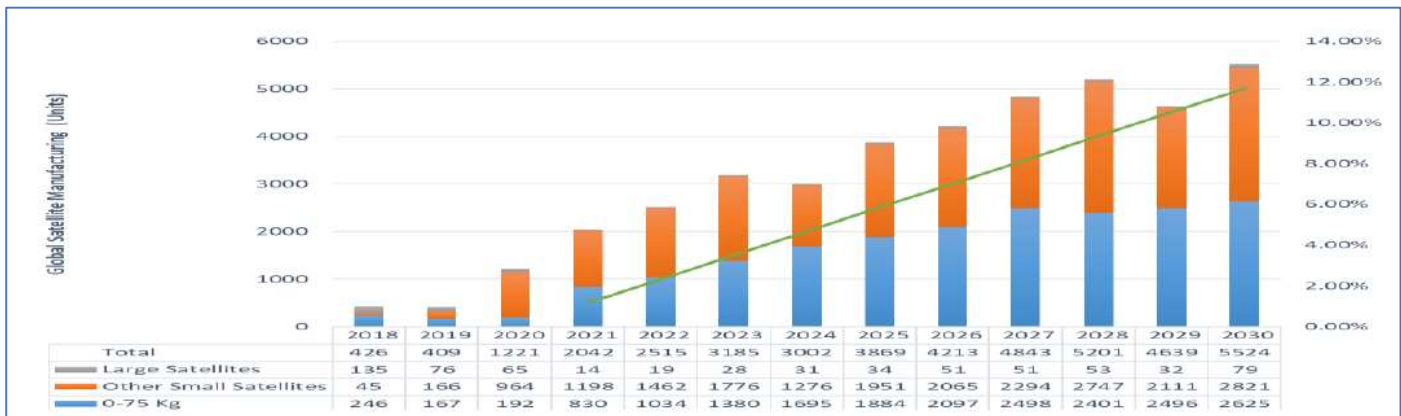


Global & Indian Space Electronics Market

Global Satellite Manufacturing Market Opportunity

Frost & Sullivan estimates 39,033 satellites to be launched from 2021-2030. About 98.99% of the demand is from small satellites of which 49.01% of the demand is from satellites weighing less than 75 Kg. The growth in number of satellites has been phenomenal in 2020 i.e., about 1221 satellites were launched in 2020 as compared to 406 in 2019, which is a 300% rise in total number of satellites launched. Similar spike has been observed in H1 of 2021, and about 1281 satellites have already been launched till now. This is more than the total number of satellites launched in 2020. The exponential rise is due to the growth of mega constellations as discussed earlier. Frost & Sullivan estimates that 39,033 satellites will be launched from 2021-2030 as shown below. Small satellites (satellites weighing <500Kg) are driving this demand as 98.99% of the demand is from small satellites, of which 49.01% of the demand is from satellites weighing less than 75 Kg. This mass class (0-75Kg) covers all key user segments such as university, commercial, military and civil government. The total demand consists of the new satellites as well as the replacement satellites for continued offering of services. The peak in 2023 and 2028 in the forecast is a consequence of overlap of new and replacement satellites. The demand in 2030 is mainly driven by subsequent phases of satellite constellations being launched.

Global Satellite Manufacturing Forecast (Units; No. of satellites), CY 2021-2030



Historically the revenue for satellite manufacturing was predominantly by large satellites i.e., about 94.4% of the total revenue in 2018 and there has been a decrease in percentage revenue to about 61.25% in 2020 and further decrease of revenue is anticipated for larger satellites during the timeline. This is mainly due to shift towards utilization of small satellites and associated lower manufacturing costs per satellites. Frost & Sullivan’s satellite manufacturing database estimates that the global satellite manufacturing revenues for 2021 is \$29.62 Billion, and is expected to grow to \$97.94 Billion by 2030, at a CAGR of 14.21% as shown below. Within this forecast, 80.72% are small satellites. The demand from 0-75 Kg mass class is \$1.63 Billion in 2021 and is expected to grow up to \$3.82 Billion by 2030, growing at a CAGR of 9.93%.

About 54.55% of the total market revenue from 2021-2030 is estimated to be from North American Region which accounts for about 50.53% of total global demand in terms of number of satellites. The major mass segment in the region is 150-250Kg which has market share of 79.74% of the total market revenue. Key satellite operators in the region are SpaceX, Telesat Canada and Lynk. Satellite manufacturers from this region are Blue Canyon Technologies, Boeing, Harris, and Magellan Aerospace.

Asia Pacific region is estimated to have market share of 32.64% (2021-2030) in terms of revenue driven by demand of 9555 satellites. Key Mass Class is 150-250 Kg segment followed by 75-150 Kg segment which contribute to 20.60% and 13.96% of revenue respectively. Key satellite operators driving the demand are Galaxy Space, Axel Space, Chang Guang Satellite Technology, Synspetive and Xingyun Satellite Co. Satellite Manufacturers in the region are Alpha Design Technologies,

Inovor and Data Patterns.

The demand from commercial segment is the highest and accounts for a market share of about 82.02%. This segment is growing at a CAGR of 12.21%. Next key segment is military which is growing at CAGR of 48.70%. Other user segment such as university (0.20%) and non-profit organizations (0.01%) have a lower demand. The highest demand from 0-75Kg mass class is commercial followed by Civil Government. The demand for 0-75 Kg mass class is expected to grow at CAGR of 10.46% for commercial user segment and 0.44% for Military.

The global demand by application is highest for communication applications followed by EO and IoT/M2M applications. The total demand for communication is about \$21.75 Billion in 2021 and \$70.69 Billion in 2030. Key user-segment for this application is commercial and accounts to about 96.98% of communication satellite manufacturing market share and civil government of up to 1.92%.



The demand for EO is about \$4.59 Billion in 2021 and \$17.76 Billion in 2030 growing at CAGR of 16.22%. This demand is mainly driven by the commercial players such as SpaceX and OneWeb. The demand for EO missions is from combination of planned satellite constellations and replacement mission from operational constellations.

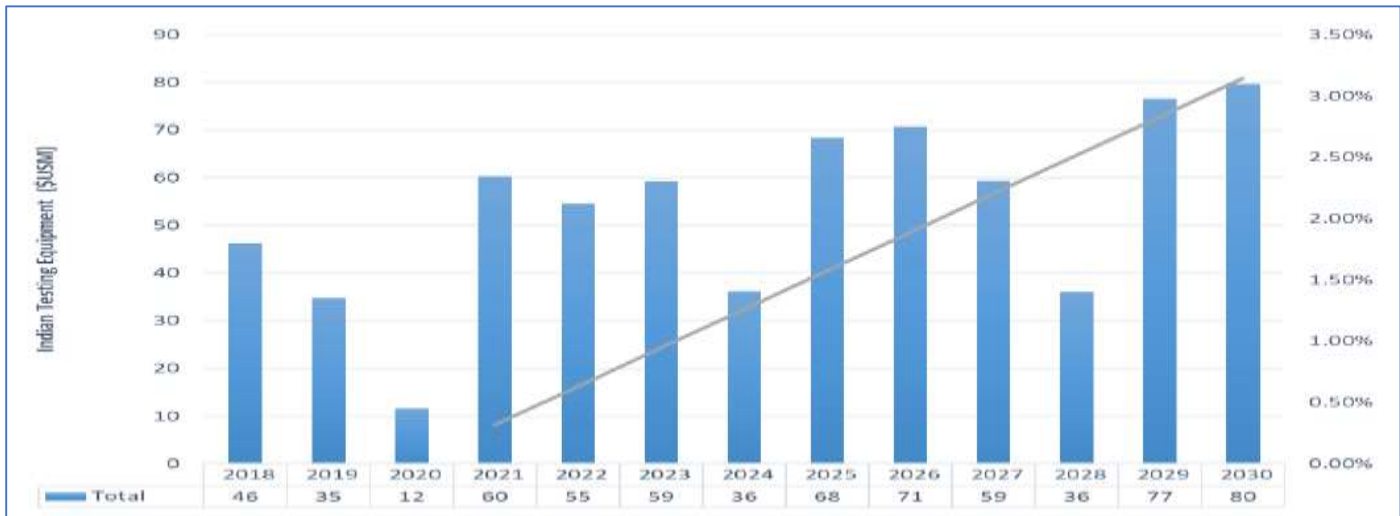
Indian Satellite Manufacturing Market Opportunity

Historically, the number of satellites launched by ISRO has been declining from 2018 to 2020 from 9 satellites to about 2. The decline in 2020 is a consequence of revision of ISRO’s budgets leading to delay in missions. However, ISRO has contracted about 27 satellites to be assembled to consortium of 3 companies: Alpha design technologies, BEL and Tata advanced systems, indicating increase in number of satellites to be launched by ISRO in the future. Figure below shows the market opportunity for satellite manufacturing in India. In short-term the market opportunity is mainly driven by ISRO followed by shift in 2025 where the opportunity is driven by private players in terms of number of satellites by Indian start-ups such as Pixxel, Satsure, Vesta Space Technologies and Astrome who are aspiring for small satellite constellations, and this indicates the possibility of a growing Indian small satellite market involving commercial players besides ISRO. Pixxel is aiming to achieve an earth observation constellation of 30 small satellites. The total opportunity for India is about 161 satellites from 2021-2030.

Global Market Opportunity for Testing Equipment

The demand for testing equipment is mainly at two stages. One is functional and other is end of the line testing. The demand for end of the line testing is expected to grow due to serial production of satellites which will require continuous testing after satellite integration. In addition, the demand for testing players will be driven by launch service providers as 62.77% of launch vehicles are under development stage and will need testing equipment. The market for testing equipment for space was about \$3.06 Billion in 2018 and \$4.71 Billion in 2020 growing at CAGR of 24.07%. The spike in 2020 is consequence of multiple deep space missions planned and serial production of satellites. The demand for testing Equipment is shown below and is projected to be \$2.22 in 2021 and expected to grow to \$7.34 in 2030 at a CAGR of 14.21%.

Global Testing Equipment Revenue Forecast (CY 2021-2030)



Key Industry Growth Drivers

Aatmanirbhar Bharat

ISRO’s efforts to enable domestic private players coupled with ‘Aatmanirbhar Bharat’ initiative will foster growth environment for domestic players.

ISRO’s model has evolved and now also involves external agencies to conduct multiple programmes and missions simultaneously. The ‘Aatmanirbhar Bharat’ initiative has distinct focus on domestic players which will drive prioritization of Indian participants over international supply chain for procurement. International players will remain eligible for the opportunities in case they have partnership with domestic players. This indicates the opportunity for increase in international partnerships and inflow of investment. ISRO’s focus on enabling domestic private players through outsourcing of space systems manufacturing and Aatmanirbhar Bharat provisions will create an environment for growth opportunities for Indian participants.

Expansion of domestic private space industry landscape

Entry of private players in the market, the demand for manufacturing, testing and ground equipment will grow across system, sub-system, and component levels due to expansion of the customer base investing in space capabilities other than ISRO. This will further



increase the opportunities for international space market participants and investment groups as technological and financial support from the global space value chain participants will be in demand.

Setting up of NSIL and In-SPACE

Expansion of commercialization effort by government by setting up of New Space India Limited (“NSIL”) is enabling the growth of space industry ecosystem. Department of Space is creating opportunities to engage with existing and new private participants for Indian space programme by evolving from supply-based model to demand-based model. NSIL was created for expansion of commercialization effort and integration of new space participants with Indian space programmes and exploratory missions. This has created multiple opportunities for private space participants. Data Patterns is likely to benefit from these new opportunities from new model.

Opportunities for Data Patterns Space Portfolio

Satellite Manufacturing

Data Patterns has proven reliability of being a supplier to ISRO and has gradually expanded its role from sub-system manufacturer to complete satellite manufacturer. The technical competence and reliability positions Data Patterns well to compete in domestic and global space markets. New participants need to prove their product reliability through successful satellite launch and operations, but, as Data Patterns has worked with ISRO on multiple missions they have competitive edge over their competitors in the new space industry. Data Patterns has an experience of design and development of hyperspectral satellite for Pixxel. During the process of development, Data Patterns has successfully developed sub-systems and components such as on-board computer, electric power systems, Li-ion batteries, power distribution module, transmitter and transceiver, Gyroscope, magnetometer, sun sensor, magnetic wheels, magnetorquers, antenna and GPS receiver.

The global demand for on-board computers is about \$1.82 Billion in 2021 growing up to \$6.08 Billion in 2030 growing at CAGR of 14.34%. The demand for on-board computers is mainly driven by the 150-250 Kg mass class followed by >2500 Kg mass class. The demand from 0-75 Kg is growing from \$31.28 Million in 2021 to \$73.98 Million in 2030 growing at a CAGR of 10.04%. The exponential growth is a consequence of increased number of satellites planned within this mass class. The respective Indian opportunity is about \$29.79 Million in 2021 and about \$51.18 Million in 2030 growing at a CAGR of 6.2%. One of the key features that is becoming crucial for on-board computers to support on satellites is software reconfigurability in order to meet changing demand of the end users. The software defined satellites allow alteration of satellite parameters such as power, coverage, frequency, bandwidth with satellite being in-orbit. This element of flexibility to meet demand of end users is quintessential for satellite operators to cater to end user requirements. Thus, Data Patterns on-board computer system supporting on-board software upgradation and full redundant configuration with two OBCs and redundant bus switch module, permits satellite software reconfigurability and increased system redundancy. This is in-line with the emerging global trend which positions Data Patterns well to compete in global market in addition to domestic market.

The demand for power electronics is about \$22.45 Million in 2021 and grows up to \$163.34 Million growing at a CAGR of 24.67%. The demand for this component is mainly driven by large satellites >2500 Kg about 40.79% followed by 150-250 Kg satellites at 19.82% and 0-15Kg at 10.30%. The key application driving the demand for 0-15 Kg segment is Earth observation. Data Patterns previous experience with hyperspectral satellite positions it well to cater to demand for power electronics for the key application. Data Patterns component portfolio offering includes electrical power systems, power distribution modules and power distribution expander.

The demand for batteries is growing at CAGR of 17.22% globally from \$360.73 million in 2021 to \$1.50 Billion in 2030. The demand for batteries is mainly driven by 150-250 Kg mass class with market share of 45.84%. The opportunity for 0-75 Kg segment is about 2.6% of the total market revenue. Batteries are critical component to operation of satellite and hence margin of error should be low. This demands tedious qualification and certification process to prove their ability to sustain in extreme environmental conditions, extreme temperatures, vacuum, vibration shocks and radiation. As light weight batteries are necessary with balance between higher specific energy and specific power, lithium-based batteries are preferred, as lithium is most electropositive metal with light weight. Also, they offer lower self-discharge rate and longer life cycle. Data Patterns product offering is Li-ion batteries for small satellites which are preferred solution. Thus, Data patterns is well positioned to offer batteries both domestically and globally.

The demand for transmitter, receiver and transceiver is growing at CAGR of 10.63%, 10.63% and 10.48% respectively. Key mass classes for transmitter are 0-250 Kg with key application being communication and user segment is commercial. Data Patterns offers S-Band and UHF-Band payload transmitter modules which are commonly used on nano satellites due to their ability to transmit easily in bad weather or rain. Ability of Data Patterns to offer the solution at lower cost places them in unique position for offering this solution in the global and domestic market.



Ground Stations

The demand for satellite ground station equipment is mainly driven by upcoming demand for satellite constellations being planned and launched. As the number of satellites increases the necessity to ground station capacity is increasing in-turn increasing demand for ground station equipment. Data Patterns product portfolio mainly includes antenna in VHF, UHF and S-Band, which is frequently used antennas for nanosatellites. Data Patterns experience working with ground station equipment positions it uniquely to offer products at lower cost and higher reliability suitable for the small satellite operators. In addition, Data Patterns has experience of working on upgrades of 6 tracking radars for ISRO with contemporary Electronics and software algorithms. They have developed coastal surveillance radar for ISRO, which is the first in India. They have future ready products such as X-Band Doppler weather radar, C-Band Doppler weather radar and wind profile radar. With the experience of building the complete solution for weather radars, Data Patterns is well positioned to build similar solutions for domestic and international market.

Testing Equipment

Data Patterns has successfully built cable tester for Gaganyaan mission and delivered to ISRO in 2020. Other products developed include single axis and three axis test station for ring laser gyro and strain data logger system. The market for Testing domestically is driven by ISRO and with the existing experience of working on similar solutions for ISRO. Data Patterns has well established its position in the domestic market.

Key Concerns

- Business is largely dependent on contracts from the GoI and associated entities including defence public sector undertakings and government organizations involved in space research. A decline or reprioritization of the Indian defence or space budget, reduction in orders, termination of existing contracts, delay of existing or anticipated contracts or programmes or any adverse change in the GoI's defence or space related policies may have a material adverse impact on the business.
- Depend on a limited number of customers such as DRDO Defence PSUs such as MoD, BrahMos Aerospace and the Indian government space organization for a significant portion of the revenue.
- Any failure to comply with the provisions of the contracts entered with DPL's customers, especially the GoI Entities, could have an adverse effect on the business, financial conditions and results of operations.
- DPL is subject to strict quality requirements, customer inspections and audits, and any failure to comply with quality standards may lead to cancellation of existing and future orders and could negatively impact the reputation and business and results of operations and future prospects.
- The loss, shutdown or slowdown of Design and Engineering and manufacturing facility may have a material adverse effect on DPL's business, results of operations and financial condition.
- DPL may not qualify for or win bids to further expand its business, which may have an adverse effect on the business, financial condition, results of operations and prospects.
- The continuing effect of the COVID-19 pandemic on the business and operations is uncertain and cannot be predicted
- DPL is subject to government regulations and if it fails to obtain, maintain or renew statutory and regulatory licenses, permits and approvals required for the business, its results of operations and cash flows may be adversely affected.
- DPL has significant working capital requirements. If it experiences insufficient cash flows from its operations or are unable to borrow to meet its working capital requirements, it may materially and adversely affect the business, cash flows and results of operations.
- The amount of orders DPL has received in the past, its current order book and growth rate may not be indicative of the number of orders it will receive in the future.
- If DPL is unable to manage its growth effectively, its business, future financial performance and results of operations could be materially and adversely affected.
- If the Company do not continue to innovate and further develop business, or it is not able to keep pace with technological developments, it may not remain competitive and its business and results of operations could suffer.



- DPL could incur losses under fixed price contracts as a result of cost overruns, delays in delivery or failures to meet contract specifications which may have an adverse effect on the business, financial condition and results of operations.
- Financing agreements impose certain restrictions on DPL operations, and its failure to comply with operational and financial covenants may adversely affect the reputation, business and financial condition.
- Success depends significantly on the Promoters, Key Management Personnel and other senior management and skilled personnel. The loss of their services may have a material adverse effect on its business, financial condition and results of operations.
- Availability and cost of import and acquisition of raw materials could adversely affect the business, financial condition, results of operations and prospects.
- DPL has significant power, and fuel requirements and any disruption its power sources could increase production costs and adversely affect the results of operations.
- If DPL is unable to establish and maintain an effective system of internal controls and compliances, its business and reputation could be adversely affected.
- Design, develop and manufacture products and solutions that incorporate advanced technologies. Many of its contracts contain performance obligations that require innovative design capabilities, are technologically complex or involve developmental costs.
- Ability to complete projects in a timely manner and maintain quality standards is subject to performance of DPL's sub-contractors.
- Failure or disruption of information and technology ("IT") and/ or enterprise resources planning systems may adversely affect DPL's business, financial condition, results of operations and future prospects.
- Business, results of operation and financial conditions could be materially and adversely affected if any fault of DLP causes any accidents at its customers' units.
- If DPL fails to keep technical knowledge and process know-how confidential, it may suffer a loss of its competitive advantage or it may negatively impact the overall implementation of the programmes being worked on.
- Operates in a competitive business environment. Failure to compete effectively against competitors and new entrants to the industry in any of the business segments may adversely affect the business, financial condition and results of operations.
- Cyber-attacks or other security breaches could have a material adverse effect on the business, results of operation or financial condition.
- If additional stringent labour laws, involve additional compliance requirements or other industry standards in India become applicable to DPL, its business, profitability and results of operations may be adversely affected.
- DPL appoint contract labours for carrying out certain operations and it may be held responsible for paying the wages of such workers, if the independent contractors through whom such workers are hired default on their obligations, and such obligations could have an adverse effect on the results of operations and financial condition
- Any failure to protect or enforce rights to own or use trademarks and brand name and identity could have an adverse effect on the business and competitive position.
- DLP face foreign exchange risks, primarily in export and procurement operations that could adversely affect its results of operations.
- DPL may continue to undertake strategic investments and alliances, acquisitions and mergers, expansion into new product segments and into new geographies and exports in the future, which may be difficult to integrate and manage.
- Ability to pay dividends in the future will depend on future cash flows, working capital requirements, capital expenditures and financial condition.



- Operations are dependent on the performance of the Indian economy and securities market.
- Political, economic or other factors that are beyond control may have an adverse effect on the business and results of operations.
- A downgrade in ratings of India, may affect the trading price of the Equity Shares.
- High levels of inflation in the Indian economy may shift the trend of savings and investments adversely.

Profit & Loss

Particulars (Rs in million)	H1FY22	FY21	FY20	FY19
Revenue from Contract with Customers	964.5	2239.5	1561.0	1310.6
Other income	7.3	26.0	40.9	14.5
Total Income	971.7	2265.5	1601.9	1325.1
Total Expenditure	586.3	1319.6	1129.4	1055.2
Cost of materials consumed	262.2	629.8	532.1	454.3
Changes in inventories of finished goods, work in progress and stock-in-trade	-51.9	74.3	28.8	35.2
Employee Benefits Expenses	281.2	484.2	422.7	376.5
Other expenses	94.8	131.4	145.8	189.2
PBIDT	385.5	945.9	472.5	269.9
Interest	48.1	145.0	133.4	107.8
PBDT	337.3	800.9	339.1	162.2
Depreciation and amortization	29.6	55.5	54.8	58.6
PBT	307.8	745.3	284.3	103.6
Tax (incl. DT & FBT)	75.7	189.6	73.8	26.6
Current tax	74.0	189.1	75.5	33.9
Tax pertaining to earlier years	0.0	0.0	0.0	0.8
Deferred Tax	1.7	0.5	-1.7	-8.2
PAT	232.1	555.7	210.5	77.0
EPS (Rs.)	5.0	11.9	4.5	1.7
Face Value	2	2	2	2
OPM (%)	38.9	40.6	26.9	19.3
PATM (%)	23.9	24.5	13.1	5.8

Balance Sheet

Particulars (Rs in million) As at	H1FY22	FY21	FY20	FY19
ASSETS				
Non-current assets				
Property, plant and equipment	354.9	292.1	278.2	294.2
Right of use assets	24.9	32.2	53.7	67.9
Capital Work-in-Progress	20.0	0.0	0.0	0.0
Intangible assets	11.9	5.6	1.6	2.3
Financial assets				
<i>Other financial assets</i>	599.4	340.7	464.8	390.4
Total non-current assets	1011.0	670.6	798.2	754.8
Current assets				
Inventories	868.2	737.5	794.1	866.9
Financial assets				
<i>Trade receivables</i>	1345.3	1559.4	1156.3	1029.4
<i>Cash and cash equivalents</i>	76.9	88.1	15.1	3.1
<i>Other financial assets</i>	46.8	51.0	37.2	3.1
Other current assets	209.8	177.3	152.6	117.0
Total current assets	2547.0	2613.2	2155.4	2019.5
TOTAL ASSETS	3558.0	3283.7	2953.6	2774.3
Equity and liabilities				
Equity				
Equity Share Capital	93.5	17.0	17.0	17.0
Other equity	2072.8	2060.7	1518.0	1311.9
Total equity	2166.2	2077.7	1535.0	1328.9
Non-current liabilities				
Financial liabilities				



<i>Borrowings</i>	88.6	97.7	5.5	0.0
<i>Lease liabilities</i>	17.0	24.4	38.5	59.3
Other Non-Current liabilities	279.8	273.7	143.2	251.9
Deferred tax liabilities	9.8	8.1	7.6	9.3
Provisions	91.8	85.2	56.4	47.8
Total non-current liabilities	486.9	489.0	251.2	368.3
Current liabilities				
Financial liabilities				
<i>Borrowings</i>	435.6	234.5	600.1	601.3
<i>Lease liabilities</i>	14.8	15.2	20.8	10.8
<i>Total Outstanding dues of micro and small enterprises</i>	9.5	2.4	5.5	13.8
<i>total outstanding dues of creditors other than micro enterprises and small enterprises</i>	91.0	117.6	167.1	144.8
<i>Other Financial Liabilities</i>	64.4	40.1	79.2	36.0
Provisions	4.3	9.6	14.9	14.4
Current tax liabilities (net)	122.0	51.3	55.2	8.3
Other current liabilities	163.3	246.4	224.7	247.7
Total current liabilities	904.8	717.0	1167.5	1077.1
Total liabilities	1391.8	1206.0	1418.7	1445.3
Total equity and liabilities	3558.0	3283.7	2953.6	2774.3

(Source: RHP)

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