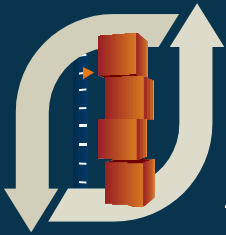


**ICICI Lombard**  
*Nibhaye Vaade*



**CORPORATE INDIA  
RISK INDEX**  
2022

Intelligence partner

FROST & SULLIVAN



**SECTOR REPORT 2022  
AEROSPACE & DEFENCE**





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## Preface

Corporate India Risk Index is primarily an academic exercise to understand the level of risk that companies are facing and also assist in developing a successful risk aversion plan, CIRI is a first-of-its-kind risk measurement tool to gauge the level of a company's risk exposure and preparedness.

This Corporate risk comprises of various aspects of the business—spanning customer, competition, regulatory environment, business operations, technology finances, environmental factors etc. The impact of unprecedented events is significantly higher now.

This Index is a comprehensive framework that draws upon global risk management best practices and comprises of 32 risk elements across 6 broad dimensions. The Risk Index is based on the principles of Lean and Six Sigma that qualify business processes by measuring effectiveness and efficiency.

ICICI Lombard's Corporate India Risk Index provides a crucial tool for assessing and addressing risks, fostering resilience and adaptability in the ever-evolving global landscape. In the current climate of increasing macroeconomic uncertainties, it is essential for corporates to prioritize robust risk management. We believe that a proactive approach to risk management not only fortifies individual businesses but also contributes significantly to India's overall economic growth and stability.

# Executive Summary

The aerospace and defense sector in India is a critical industry that plays a significant role in the country's economic and national security. However, this sector is also exposed to various risks that can have significant consequences for the industry and the country as a whole. This executive summary provides an overview of the risks faced by the aerospace and defense sector in India.

India is a strategically important country in the region, and its geopolitical position makes it vulnerable to a range of risks. The country shares borders with China and Pakistan, two countries that have long-standing territorial disputes with India. The tensions between India and its neighbors could escalate into a military conflict that would impact the aerospace and defense industry in India. Additionally, the geopolitical risks also pose a threat to the supply chain, with disruptions in the availability of critical components.

The aerospace and defense sector in India is highly regulated, and any changes in the regulatory framework can impact the industry's operations. The government plays a crucial role in the industry's growth, and any changes in policies or regulations can impact the industry's investment plans. Additionally, India is a signatory to various international conventions and agreements that regulate the export of defense-related products. Any violation of these agreements could result in significant penalties and loss of reputation for the industry.

The aerospace and defense industry is a highly technology-driven industry, and any disruption in technology can significantly impact the industry's operations. India has made significant progress in developing indigenous capabilities in the aerospace and defense sector, but the country still relies heavily on imported technologies. The industry's dependence on foreign technology exposes it to the risks of technological obsolescence and supply chain disruptions.

The aerospace and defense sector in India is capital-intensive, and any financial instability in the industry can have significant consequences. The industry is heavily reliant on government funding, and any budget cuts or delays in funding can impact the industry's growth plans. Additionally, the industry's exposure to foreign currency fluctuations can impact its profitability and financial stability.

The aerospace and defense industry is highly dependent on skilled manpower, and any shortage of skilled workers can impact the industry's operations. India has the industry faces challenges in attracting and retaining skilled also poses a challenge, as it could result in a skills gap in the fut

The aerospace and defense sector in India is an essential industry that plays a crucial role in the country's economic and national security. However, the industry is exposed to various risks that could impact its operations and growth plans. These risks include geopolitical risks, regulatory risks, technology risks, financial risks, and human capital risks. It is essential for the industry to develop robust risk management strategies to mitigate these risks and ensure its long-term sustainability.

# Introduction

ICICI Lombard Corporate India Risk Index is a one of its kind, unified, credible, standardized corporate Risk Index that spans over the country level, the industry level, and the company level. The index has a comprehensive sector coverage.

Aerospace and Defense, Agriculture and Food Processing, Automotive and Ancillary, BFSI, Biotech & Life sciences, Chemicals and Petrochemicals, Education Skill Development, Energy, FMCG, Healthcare Delivery, Infra and Realty, IT/ITES, Manufacturing, Media and Gaming, Metals and Mining, New Age & Startup, Pharmaceuticals, Telecom and Communication Technology, Tourism and Hospitality, Transportation and Logistics.

The impact is identified across key business risk (internal and external) under the following 'Strategic Risk Areas', The ICICI Lombard Corporate India Risk Index Framework comprises of 32 risk elements across 6 broad dimensions.



## Market and Economic Risk

Corporate Risks arising due to market and economy related factors, such as internal or external political uncertainty, global slowdown, taxation-regulatory changes etc. Market and economy related risks are also identified as 'Systematic Risks', we have further classified the risks into below mentioned categories.

- **Inflation:** Inflation is the general increase in prices within the economy. The rising prices for businesses could result in bigger production spending and a fall in profitability. The companies should be attentive, acute, and responsive to changes in inflation to efficiently manage the prices of final products.
- **Taxation:** In a large democracy like India, complexity of multiple taxes (multiple taxes like GST, custom duties, central excise duty, etc.) is a major concern. The changing legislations, increased scrutiny by tax authorities and increasing public attention are together resulting in tax risks for organizations. There is, thus an increasing urgency for firms to manage their tax affairs efficiently to minimize tax risks.

- **Regulatory Risks:** Regulatory risk is the risk of changes in regulations and laws that might affect an industry or businesses. The regulatory changes can pertain to tariffs and trade policies, business laws pertaining to employment, minimum wage laws, financial regulation, Foreign Direct Investment etc.
- **Foreign Exchange Risk:** The exchange rate plays an important role for firms who export goods and import raw materials. The fluctuations in foreign exchange will have great impacts on the prices of traded goods. For example, if the currency depreciates (devaluation), the exporting firms will benefit. However, the firms importing raw materials will face higher costs on imports. The firms need to hedge their exposure to foreign exchange risks to insulate themselves from the impact from forex changes.
- **Geo-political Tension:** Geopolitical risk means the political and economic risks that are a potential threat to the financial and operational stability of companies.
- **Competitive risk:** Competitive risk is the risk associated with the fact that there are multiple companies competing in the market, each seeking to obtain the highest position and consumer ratings, to gain maximum benefits for themselves. The companies devise different strategies to garner a higher market share and acquire customers from competitors. Any failure in managing the competitive stand could lead to losses in business, thereby making marketing and competition a major risk in market.

## Technology Risk

Technology risks are also identified as information technology related risks which may arise due to failure of any installed hardware or software system, spam, viruses or any malicious attack. Also delay/over/under adoption of trending disruptive technologies can lead to technology related risks. We have classified the risks in below mentioned categories.

- **Innovation Risk / Obsolete Technology:** Innovation is the key to success in all the industries. Risk of redundancy and losing out to competition on account of poor R&D is a major concern.
- **Intellectual Property risk:** Dependence on trade secrets and unpatented proprietary know-how.
- **Disruptive Technologies:** These will fundamentally alter the financial prospects of the industry.

**Data Compromise:** Hardware failure refers to malfunctions within the electronic circuits or electromechanical components (disks, tapes) of a computer system; Software failure refers to an operating system crash. Such failures lead to stoppage of entire computer or operating systems creating substantial losses to business.

## Operational and Physical Risk

Risk of losses caused due to faulty or failed processes, systems or human resource related inefficiencies are classified as operational and physical risks. We have classified Operational & Physical risks in below mentioned categories.

- **Critical Infrastructure Failure / Machine Breakdown:** Industries with a heavy dependence on machinery consider any rise in machinery breakdowns a hindrance to their businesses operations. An untimely equipment breakdown can bring businesses to a standstill or be the root cause for fires and explosions. Mostly, human errors and deferred maintenances are the major reasons for such breakdowns. The companies should actively invest in timely maintenance of all machineries.
- **Business Continuity / Sustainability:** Non adoption of Business Continuity/ Sustainability Plans and Lack of Internal Control tools would result in: Failure of businesses, Brand Equity / Loss of reputation, Financial Loss, Business model Failure, Ineffective engagement/communication with stakeholders, Losses in productivity, Lack of opportunity monitoring.
- **Supply chain risk:** Raw Material unavailability and Heavy Dependence on Global Supply Chains / Supplier concentration risk. Unavailability of raw materials owing to disruption in the supply chain or heavy dependency on one source (company/country) which is unable to supply owing to some geo-political tensions, fires, or any other incidents. Transportation is one of the key activities for companies making it an important risk to mitigate. The loss of goods in transit and spillage is one of the major concerns as it accounts for a sizeable loss of revenue to companies.
- **Commodity Price Risk - Volatility in prices of raw materials:** The fluctuations in raw material prices creating a margin pressure / top-line pressure in the scenario of rising input costs.
- **Portfolio Risk:** Loss of key customers, Customer concentration - Key customers accounting for a larger share of revenue, Over-dependence on suppliers, Business Model Risk: Transformative changes in business model, Tail Risks: Ability to overcome or manage extreme worst-case scenarios.
- **Environmental Hazard Risk:** Any environmental hazard having the potential to affect the surrounding environment.
- **Workplace Accident:** Fire and Explosion Hazards, Containment Incidents, Workplace Injuries
- **Human Resource:** Key person risk: This risk occurs when a business or business unit becomes heavily reliant on a key individual. Talent acquisition and retention - The companies require a highly skilled labor force for R&D as well as continuous production. Accessing skilled resources and expertise on an on-going basis is one of the major challenges; moreover, retention of trained staff is imperative. Labor shortages, Union Strikes & Industrial Actions, Employee health, safety, and security (SHE/Sustainability risk).
- **Financial Risk:** Financial Reporting Risk: Material misstatement of Financial Statements, whether due to fraud or error. Interest rates and equity prices: Interest rate risk arising out of working capital borrowings at variable rates. Equity price fluctuations affect the Company's income or the value of its holdings of financial instruments. Liquidity Risk (Credit Risk / Receivables).
- **Breaches of law (local/ international):** Voluntary/ involuntary breaches of law can lead to costly lawsuits.





## Crime & Security Risk

Cybersecurity risks relate to the loss of confidentiality, integrity, or availability of information, data, or information (or control) systems and reflect the potential adverse impacts to organizational operations. These attacks can cause major financial losses, reputational harm, and a loss of client trust. Regarding cybersecurity, the BFSI industry in India has several difficulties, including difficult-to-secure legacy systems, a shortage of qualified cybersecurity personnel, and the requirement for ongoing system and network monitoring. There is a significant investment in cybersecurity tools like network monitoring, endpoint security, access control, and threat intelligence. Many organizations are also implementing cutting-edge technology like artificial intelligence and machine learning to strengthen their security posture. Around 7.4% of the attacks in the Asian region were targeted at India in 2022.

We have classified Crime & Security risks in below mentioned categories.

- **Cyber Crimes:** Data Theft, Spam, scams and phishing, Hacking, Malwares and Viruses, Piracy, Fraud, Corruption, Malicious attacks
- **Counterfeiting:** Counterfeiting of goods/services leads to loss of revenues, profits and ultimately affects the brand equity
- Threat to Women Security
- **Terrorism:** Un-lawful use of violence and intimidation, especially against civilians, in the pursuit of political aims.



## Natural Hazard Risk

A natural hazard is the threat of an event that will likely have a negative impact. A natural disaster is the negative impact following an actual occurrence of natural hazard if it significantly harms a community. Due to India's geographical structure, it is one of the most disaster-prone countries in the world. Natural hazards like floods, earthquakes, landslides, and cyclones are common risks faced by India. The situation has worsened due to rise in GHG emissions, loss of biodiversity, deforestation, and degradation of environment. From Surat Gas leak to landslides in the north and cyclones in Bay of Bengal, the year 2022 was no exception. Such natural disasters hamper the day-to-day operations of corporates, and it is important for them to understand that such risks cannot go unheeded. Over the years, Indian corporates have learnt to mitigate such risks by diversifying their supply chains, having multiple logistics partners, diversified geographical presence and multiple vendors.

- **Pandemic and other global epidemic diseases:** Risk to business owing to disruptions caused by COVID-19 pandemic and similar another global epidemic.

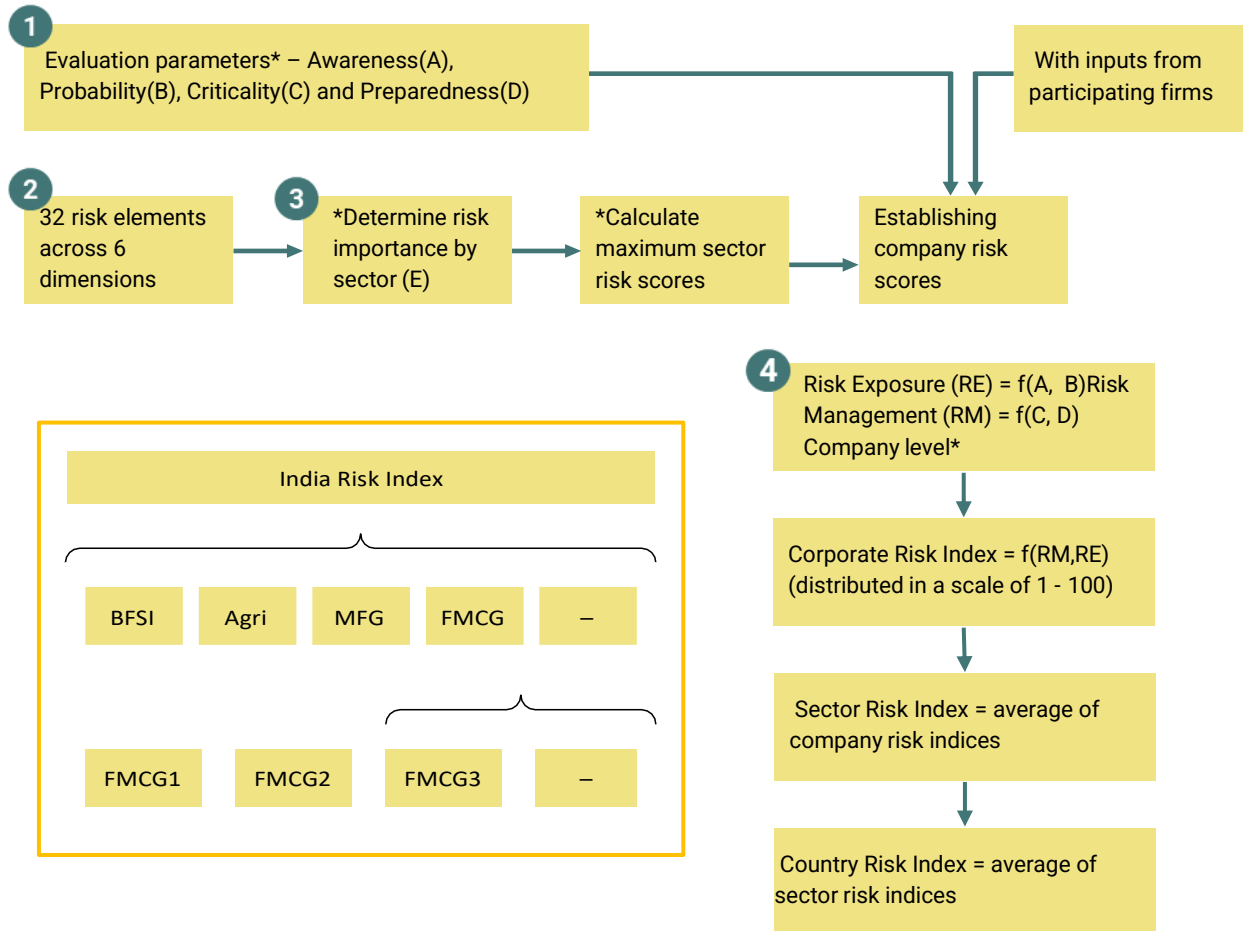


## Strategic risk

Strategic risk is the risk that failed business decisions may pose to a company. Strategic risk is often a major factor in determining a company's worth, particularly observable if the company experiences a sharp decline in a short period of time. Several factors, such as unethical or unlawful activities, poor customer service, product recalls, data breaches, or unfavorable media coverage, can lead to strategic risk. An organization's reputation can be severely harmed by a single negative incident, such as a high-profile data breach or fraud scandal, resulting in a loss of clients, income, and market share.

- **Resource scarcity / Misutilization / Overall Utilization:** Difficulties in acquisition of land, water, fuel, or other resources for operations of business.
- **Public Sentiment:** Current events playing out in the public scene can change the public sentiment.
- **Delay in execution of projects:** Delays in execution of projects can surge in the capex.
- **Increased number of recalls and quality audits:** Impacts both the brand equity and increased operational expenses.
- **Failed / Hostile Mergers & Acquisitions:** High dependence on inorganic growth.

# Bottom-Up Risk Assessment Approach



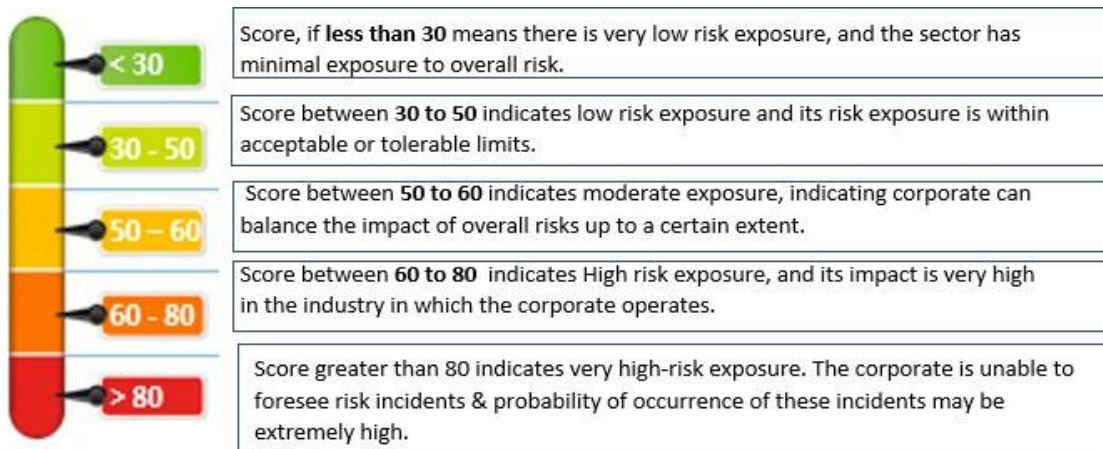
- 1. Evaluation Parameters\*:** The index maps the risks faced by any enterprise basis of Awareness, Probability, Criticality and Preparedness against the defined Risk elements. The evaluation Parameters are defined as: Awareness - Level of awareness of potential risk affecting the firm. - Likelihood of risk to affect the business goals of the firm adversely. Criticality - Level of impact of the identified risk on the success of business goals. Preparedness - Risk handling practices/ mechanisms already in place to handle the risk.
- 2. Determining Risk Importance\*:** Importance/Impact of individual risk element is established against individual sector based on the published corporate risk reports, in depth sector understanding by F&S team and SMEs.
- 3. Calculating Maximum Sector Risk Score:** Weighted Sum of all risk elements based on their importance to the respective sector.
- 4. Company Level\*:** All the Risk Index scores for companies in a sector are averaged to represent the sector; and sectors average to India. Risk Exposure is defined as the function of corporate's Risk Awareness and Probability of risk occurrence. Risk Management is defined as the function of an enterprise risk preparedness and criticality risk impact assessment.

# Defining the Risk Scale

We have selected 20 sectors to understand the current stand of our country today in terms of risk. Risk for various sectors is measured on the risk exposure scale and risk management scale.

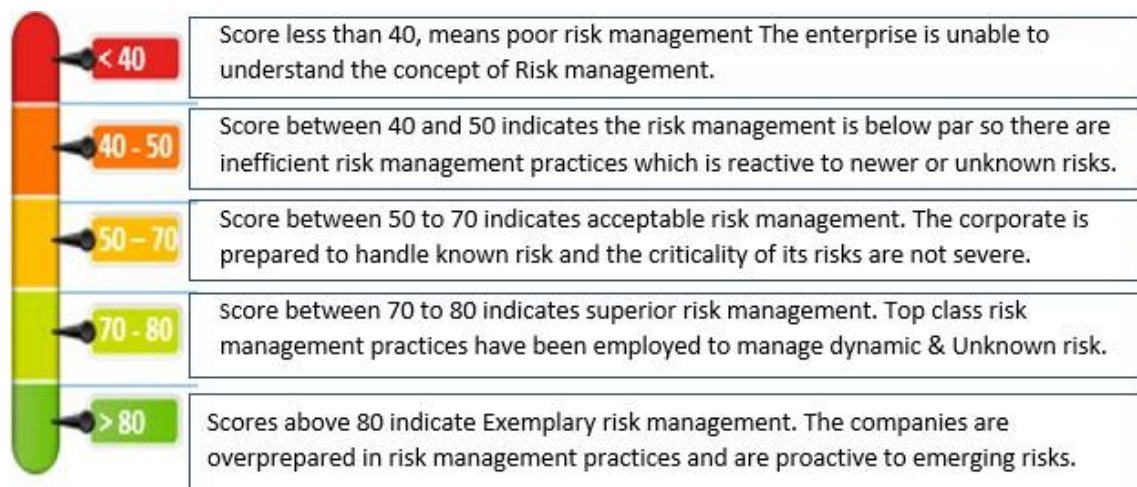
## A. ICICI Lombard Corporate Risk Exposure – Scale

**Risk Exposure:** The impact of any internal, external or strategic occurrence on the financial performance of an organization is defined as the corporate risk exposure. Risk has traditionally been seen as something to be avoided – with the belief that if behavior is risky, it’s not something a business should pursue. But the very nature of business is to take risks to attain growth. Risk can be a creator of value and can play a unique role in driving business performance. Let’s look at the risk exposure scale.



## B. ICICI Lombard Corporate Risk Management – Scale

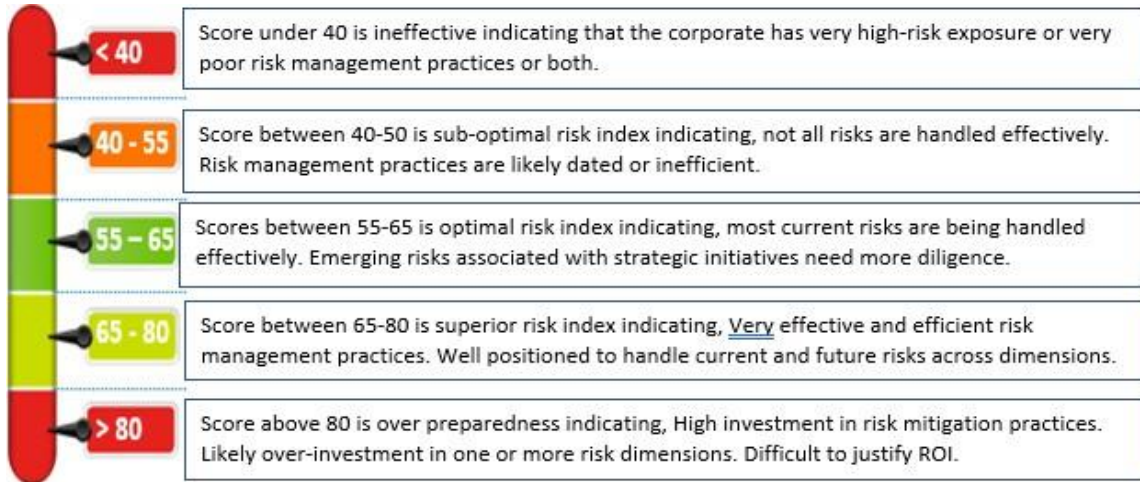
**Risk Management:** Identification, Evaluation and Prioritization of corporate risks followed by well-coordinated steps to minimize the occurrence of uncertainties in the foreseeable future is defined as the Corporate Risk Management. The risk management scale works in the opposite to that of the risk exposure scale. Let’s look at the risk management scale.



### C. ICICI Lombard Corporate Risk Index – Scale

**Risk Index:** Risk Index is a measurement tool to gauge the level of Risk Exposure against Risk Preparedness. The score intends to give companies/Sector/Country access to an extensive and quantifiable metrics of risk management.

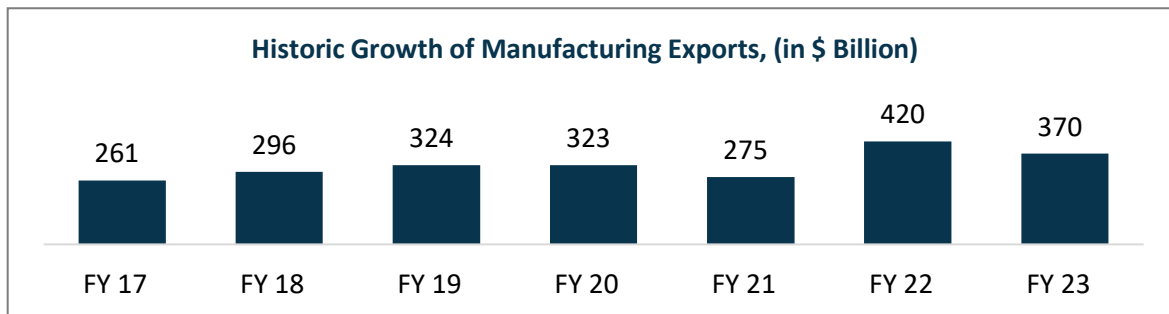
Let’s look at the risk Index scale.



# India - Emerging Superpower with Optimized Corporate Risk Handling

Manufacturing sector contribution to India’s GDP in 2022 stands at 17% and is expected to grow to 25% by 2025, the expected growth is attributed to various favorable schemes initiated by Government of India like ‘Make in India’, ‘Digital India’, Improved Road Infrastructure, implementation of modern technologies of manufacturing resulting in optimized and effective production, Also the pandemic has made business realize that they cannot just rely on a single manufacturing hub; hence notion of “China+1” is making the world realize the significance of India. China is in a trade war with the USA, which is positively shaping the role India will play in the global arena.

The below chart showcases the gradual increase in India’s manufacturing exports.



**Figure 1: India’s Growth of manufacturing exports. (Source: Redseer)**

Indian manufacturing sector is also focusing on electronics manufacturing like mobile phones, industrial electronics consumer electronics, etc. due to government initiatives the production has doubled since 2015.

Aerospace and defense sector in India have evolved significantly, Govt. of India have identified A&D as area of focus due to the belligerent neighborhood, steps like Make in India (Atmanirbhar Bharat) is helping the overall defense sector, however India still remains the largest importer of arms and ammunition, favorable policies and ease in regulations is helping the drone industry in India and many new start-ups and big players are entering in this space.

Urbanization is another phenomenon evolving in India and it is estimated that by 2030 more than 400 million people will be living in cities, due to this megatrend huge push towards realty and infra sector is observed which is also the growth of ancillary industries like metals, cement, water availability, sanitation, mobility etc., the government along with the private sector is working on multiple initiatives to manage the huge inflow.

India has observed a steady adoption towards EVs in recent years, though India adoption still remains very low in comparison to Europe, Canada, China, however all big auto players are coming with new lines of EVs, and significant strategic investment have been made. The adoption is primarily due to lower running

costs, lower maintenance, zero tailpipe emissions, tax and financial benefits by the government, convenience of charging.

BFSI sector in India is showcasing a significant robustness in the time of global crisis, there is a growing demand for financial services as there is a gradual rise in income across income brackets, with a rapid increase in mobile penetration and internet availability more than 2100 fintech companies have emerged in India, the traditional banks are also adopting the digital technologies at a required pace, investment on making the systems secured from cyber threats is utmost priority. Policy support by the government in the union budget 2021-22 is taking up shape and is helping the BFSI sector in 2022 and coming years, like government approval of 100% FDI for insurance intermediaries have increased the FDI limit to 74% from 49%.

Healthcare sector is also continuously growing healthcare has become the one of the India's largest employers, employing around 4.7 million people, though in 2021-22 India only spends 2.1% of its GDP in healthcare, in the union budget 2022-23, US\$ 11.28 billion was allocated to the Ministry of Health and Family Welfare (MoHFW). there is still huge room for improvement in the overall healthcare system in India. Efforts towards having well trained medical professionals in India is top priority. There were exemplary development in the vaccine manufacturing by India, Bharat Biotech Covaxin and Oxford AstraZeneca's Covishield manufactured by SII, helped India get a protection shield against Covid. There is a plan by the government of India to infuse US \$ 6 billion to boost the healthcare infrastructure in India.

The IT/ITes sector is a key engine for fueling India's economic growth and contributing to 7.5% of India's GDP in 2021-22, the Big four IT firms in India have recruited over 1 million employees, As the world is moving towards era of digital economy Indian IT-sector will be contributing significantly towards this journey, the rollout of 5G communication technologies and adoption of new age technologies across industries; like AI, Robotics, Internet of Things will further increase the size of Indian IT sector.

Indian enterprises are also concerned about the risks emerging out of the growing economy and the globalization India is heading towards, its observed that Indian enterprises are taking significant steps towards risk management and keeping budget allocated to implement best in class risk mitigation practices.

# India Showcasing an Optimized Risk Handling



**Figure 2: Corporate India Risk Index 2022**

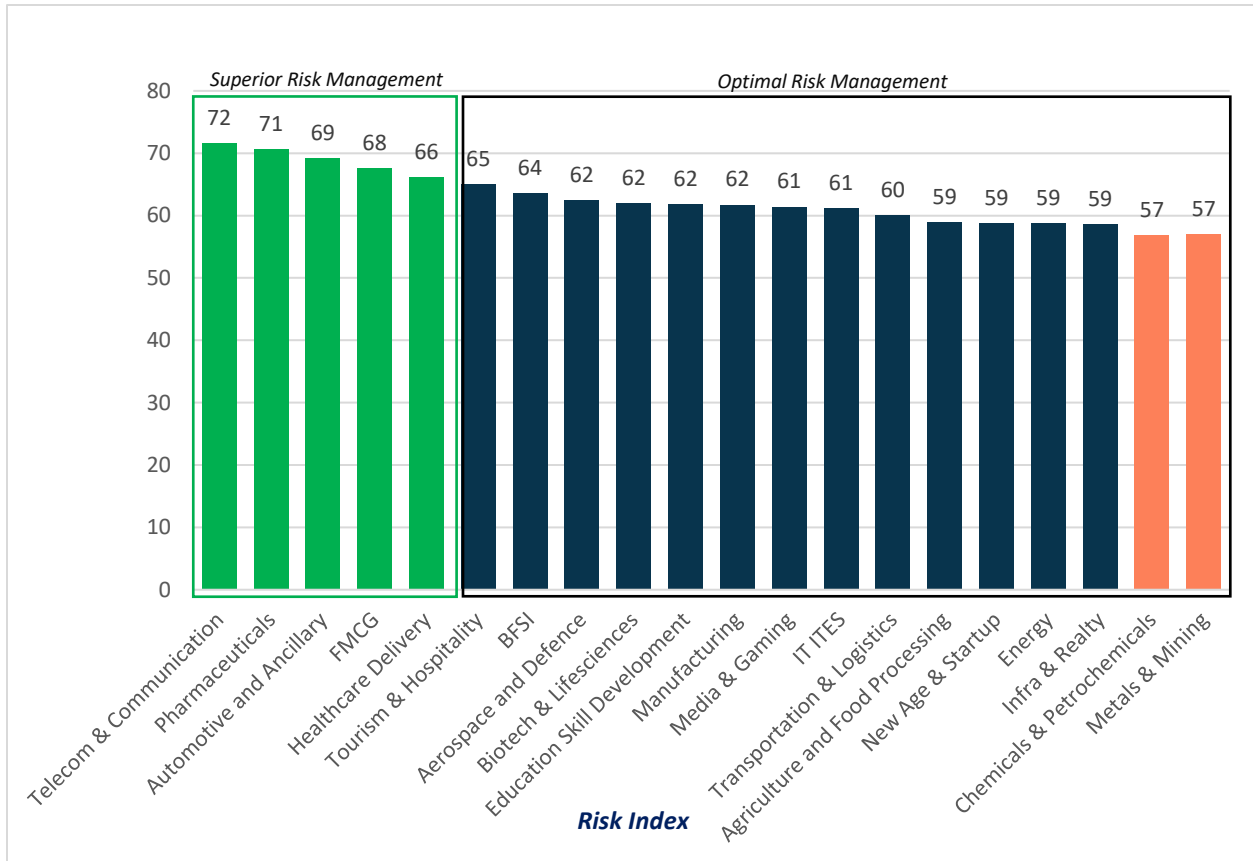
Corporate Risk Index Score of 63 implies that Indian enterprises are handling the risk in an optimal way but still there is scope of improvement to get into superior risk handling territory, Indian enterprises have a well-defined risk management practice in place for inherent risks, however risk management can be improved further as a potential buffer against potential risk events arising from market & economy, operational and technology related Risk events, openness towards adoption of technology and having a well-defined risk management team was observed across enterprises in India.

Sectorial categorization across above stated five categories, it was found that risk management is getting a paramount importance in the growth strategy of every organization and all the organization fell either into 'Superior Risk Management' or 'Optimal Risk Management' category.

From a risk exposure front the intensity of impact due to market and economy related risks increased due to the heightened inflation, global recession, and geopolitical tensions though from a regulation point these sector specific policies by the government helped the industries. Some of the inherent risks exposure due to the operational aspect did not see a significant change as compared to previous year, however companies are adopting diversification, technologically enabling the supply chain, and creating better hedging against financial related risks, whose results will be seen in coming years.



Below is a broader categorization of sectors in terms of risk index:



**Figure 3: Corporate India Risk Index 2022 Sector Score**

### Superior Risk Index

Superior risk handling was found in five industrial sectors: Telecom & Communication, Pharmaceuticals, Automotive & Ancillary, FMCG, Healthcare Delivery.

### Optimal Risk Index

Optimal risk handling was found in 15 industrial sectors: Tourism & Hospitality, BFSI, Aerospace & Defence, Biotech & Lifesciences, Education Skill Development, Manufacturing, Media and Gaming, IT & ITES, Transportation & Logistics, Agriculture and Food Processing, New Age & Startup, Energy, Infrastructure & Realty, Chemicals & Petrochemicals, Metals & Mining.

# Aerospace & Defence Sector Insights 2022

The aerospace and defense sector in India is a crucial industry that plays a significant role in the country's national security and economic development. The sector includes a range of activities, including research and development, manufacturing, and services related to aerospace and defense equipment. In 2020, the aerospace and defense sector in India had a market size of \$11.1 billion, and it is expected to grow at a CAGR of 3.5% from 2021 to 2028, reaching a market size of \$15.1 billion by 2028. The industry is dominated by public sector enterprises such as Hindustan Aeronautics Limited (HAL), Bharat Electronics Limited (BEL), and Bharat Dynamics Limited (BDL). However, the industry also includes private sector players such as Tata Advanced Systems, Mahindra Aerospace, and L&T Aerospace.

There are several factors driving the growth of the aerospace and defense sector in India. One of the significant growth drivers is the Indian government's initiatives to promote the growth of the industry. These include the Make in India program, which aims to make India a global manufacturing hub, and the Defense Procurement Policy (DPP), which promotes the indigenization of defense equipment production. India's strategic location and geopolitical situation make it a crucial player in the region. The country's defense modernization plans have led to increased demand for aerospace and defense equipment, creating opportunities for the industry. Moreover, India has been increasing its defense budget in recent years, with a 6.8% increase in the 2021-22 budget, reaching a total of INR 4.78 trillion (US\$64.9 billion). The increased budget provides the industry with the necessary funding to invest in research and development and expand its manufacturing capabilities.

Despite the growth drivers, the aerospace and defense sector in India also faces several challenges. One of the significant challenges is the shortage of skilled workers required for the industry. The industry requires a highly skilled workforce, which is in short supply in India. The shortage of skilled workers can lead to delays in production and impact the quality of the products. Additionally, the Indian aerospace and defense industry is heavily dependent on imports of critical components and technologies. The industry's dependence on imports exposes it to the risks of supply chain disruptions and technology obsolescence. The Indian aerospace and defense industry is subject to a complex regulatory framework, which can lead to delays and cost overruns in production. The regulatory framework also poses a challenge for foreign companies looking to invest in the industry.

Despite the challenges, the aerospace and defense sector in India also presents several opportunities. One of the significant opportunities is the Indian government's focus on indigenization, which presents an opportunity for the industry to develop indigenous capabilities in research and development, manufacturing, and services related to aerospace and defense equipment. The Indian aerospace and defense industry has significant export potential, with the country's low-cost manufacturing capabilities and growing capabilities in research and development. Collaborations and partnerships with foreign companies can provide the Indian aerospace and defense industry with access to critical technologies and markets.

Indian government's initiatives to promote the growth of the industry, increasing defense budget, and the country's strategic location and geopolitical situation make it a crucial player in the region.

Another significant opportunity for the aerospace and defense sector in India is the growing demand for unmanned aerial vehicles (UAVs) or drones. The Indian government has been increasing its use of UAVs for surveillance and reconnaissance purposes. The growing demand for UAVs presents an opportunity for the industry to develop indigenous capabilities in the design, development, and production of UAVs. The Indian UAV market is expected to grow at a CAGR of 18.3% from 2020 to 2027, reaching a market size of \$886.4 million by 2027. Indian companies such as Tata Advanced Systems and Bharat Electronics Limited have already entered the UAV market and are developing indigenous capabilities in the field.

The aerospace and defense sector in India is also increasingly focusing on innovation and technology development. The Indian government has launched several initiatives to promote innovation and technology development in the industry, such as the Technology Development Fund (TDF) and the Innovation for Defense Excellence (iDEX) program. The TDF provides funding for research and development projects in the aerospace and defense sector, while the iDEX program promotes innovation and technology development by providing startups and innovators with funding, mentoring, and incubation support. The focus on innovation and technology development presents an opportunity for the industry to develop new products and services and enhance its competitiveness in the global market.

The Indian aerospace and defense sector is also increasingly focusing on sustainability and environmental responsibility. The industry has been developing environmentally friendly technologies such as biofuels and electric propulsion systems. The development of environmentally friendly technologies presents an opportunity for the industry to reduce its carbon footprint and enhance its competitiveness in the global market. The Indian government has also launched several initiatives to promote sustainability and environmental responsibility in the industry, such as the National Biofuel Policy and the National Electric Mobility Mission Plan.

In conclusion, the aerospace and defense sector in India is a crucial industry that presents several opportunities and challenges. The sector is expected to grow at a steady pace, driven by the Indian government's initiatives to promote the growth of the industry and increasing defense budget. The industry faces several challenges, such as the shortage of skilled workers, dependence on imports, and a complex regulatory framework. However, the industry also presents several opportunities, such as indigenization, export potential, collaborations and partnerships with foreign companies, growing demand for UAVs, focus on innovation and technology development, and sustainability and environmental responsibility. The Indian aerospace and defense industry has significant potential to become a global player in the industry, and the industry and the Indian government need to work together to overcome the challenges and seize the opportunities presented by the industry.

# Aerospace & Defence Sector Risk Index 2022 Vs 2021



**Figure 4: Detailed Comparative Analysis 2021 Vs. 2022**

## Aerospace & Defence Sector Risk Index 2022 Vs 2021

India Risk Index (Optimal Risk Handling): The overall Risk Index for Aerospace & Defence sector increased from 52 to 63 in 2022, this was driven by significant changes in geopolitical inclinations and the Russia Ukraine war, crime and security risk and technology risk.

There was no significant change in the market and economy risk, operational and physical risk and other risks. This was due to the rising inflation primarily led by the increase in fuel prices and the change in regulations due to the launch of the policies and programmes introduced by the government. Operation risk reduced only slightly due to the continued shortage of infrastructure facilities and high risk of accidents while operation of necessary machine.

## Aerospace & Defence sector Risk Management 2022 Vs 2021

There was no significant change in the India Risk Management, however it slightly fell to 62 from 64 in 2022. Factors like Inflation, Taxation and Regulatory Risks faced major disruption due to the fuel price hike and post Covid era effects. A dip in the risk management is there due to external macro-economic factors like geopolitical tensions, global rise in inflation and reduced industrial activities.

## Aerospace & Defence Sector Risk Exposure 2022 Vs 2021

Aerospace & Defence Sector Risk Exposure went up a little due to heightened geopolitical tensions, global slowdown in GDP growth resulting in reduced industrial activities, all-time low rupee valuation and high CPI inflation. The Risk exposure for Aerospace & Defence Sector went up to 63 vs 62 in 2021. The Market and Economy dimension showed the highest increase in the risk exposure, the major increase is accounted due to the slowed-industrial activities resulting in financial risks and geo-political tensions arising due to the Russia-Ukraine tensions.

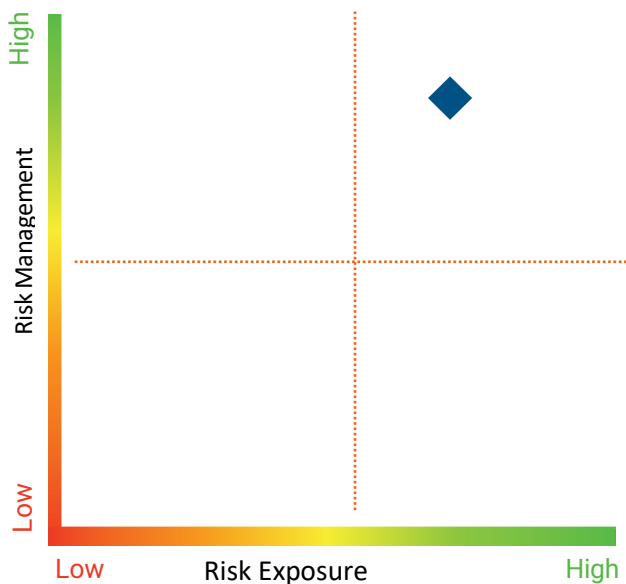
# Key Highlights



## Risk Dimension Analysis: Market and Economy

**Risk Exposure Score: 64**

**Risk Management Score: 67**



### Inflation

- Inflation in India has risen to a 10-month high of 5.59% in December 2021.
- Fuel prices in India have increased by over 30% for petrol and over 35% for diesel in the past year.
- In practically every area of the aviation sector, inflation is a factor. It has an impact on the cost of aircraft, debt, as well as the general operations of the airlines and other aviation stakeholders. Other than fuel, the aircraft itself makes up one of the biggest parts of airline's cost base. The constant rise in the official list prices of the major manufacturers (Boeing and Airbus) and their suppliers, which are made public, is an indication of inflation.

- Rising Aviation fuel prices reaching all time high prices has a big impact on the sector with ATF, making up 30-40% of the airlines running cost.
- The highest hike in ATF was 16% in June 2022, and the most recent hike was in February 2023 of around 4%.
- Domestic Prices of natural rubber rose 20% in 2022 and that of crude derivatives rose by 50%.

### Taxation

- The Indian Budget 2022-23 has proposed an increase in excise duty on petrol and diesel, which will increase the cost of fuel for aerospace and defence companies.
- The Budget has also proposed an increase in customs duty on auto parts and tires, which are major inputs for the logistics and transportation industry.

- 68% of Defense budget was earmarked for domestic industry to boost defence manufacturing in the country.
- Budgetary spend for defense and aerospace manufacturing is Rs 85,000 crore and India would become a net exporter of defense products by 2024-25.
- To facilitate consortiums for defence and aerospace manufacturing, the surcharge on Association of persons had been capped at 15% in 2022.
- Earmarking 25% of R&D budget in the defense sector for private players, startups and academia. The Special Additional Excise Duty (SAED) and the Additional Excise Duty (Road and Infrastructure Cess) additionally apply to gasoline and diesel fuel.

### **Regulatory Risks**

- The impact of gasoline on the whole cost structure may be further amplified by the rising oil prices and a falling currency.
- The Indian government's IP laws can impact the development and implementation of new technologies in the defence and aerospace sector. Companies may be hesitant to invest in research and development if they feel that their IP rights are not adequately protected.
- Corruption and bribery remain a significant concern for the Indian defence and aerospace sector. Companies may face regulatory and reputational risks if they are found to be involved in such practices.
- One significant regulatory risk is the changes in the Foreign Direct Investment (FDI) policy. The Indian government has announced several changes to the FDI policy over the past few years, including the raising of the FDI cap from 49% to 74% in the defence sector. However, a report by FICCI and Roland Berger suggests that India's defence and aerospace sector received only \$2.18 billion in FDI from 2014 to 2020. The report notes that regulatory uncertainty, slow decision-making, and a lack of a level playing field are some of the reasons for the low FDI inflows.
- Another regulatory risk is the Defence Procurement Procedure (DPP) changes. India has recently announced a new Defence Acquisition Procedure (DAP) that aims to simplify the procurement process and reduce the timeline for acquisitions. However, there are concerns that the new DAP could lead to increased bureaucratic processes and may not address the root causes of delays in procurement. A report by Deloitte suggests that delays in procurement have led to an average delay of 4-5 years in the implementation of defence projects in India.
- The Indian defence and aerospace sector also faces regulatory risks related to export control regulations. India is a member of the Wassenaar Arrangement, which regulates the export of dual-use items, including aerospace and defence technologies. However, the regulatory environment is complex, and compliance can be challenging. A report by the Centre for Air Power Studies notes that India's aerospace and defence sector is facing difficulties in exporting its products due to the lack of a clear policy framework and procedural delays.

### Foreign Exchange Rates

- Depreciating rupees increase the woes of this sector as most of the trade of this sector's services are in dollar denominated currency.
- Services include payments paid abroad for aviation turbine fuel (ATF), landing impacts, parking and accommodation costs, maintenance, repair & overhaul (MRO) services, and the acquisition of replacement parts and other necessary things. The cost of having a sizable portion of their fleets maintained at international MRO centres like Singapore, Hong Kong, Malaysia, Indonesia, and Australia is what is anticipated to have the most impact on Indian airlines in this situation.
- Due to currency exchange rate uncertainty coupled with ever-rising fuel prices, airlines struggle to pay lease rentals and maintenance reserves to overseas lessors as all such payments are made in USD. Servicing international loans becomes an issue for companies with the currency depreciation.

### Geopolitical Risks

- Due to problems with the supply chain, Indian airlines are experiencing some obvious difficulties. According to a data study by Mint from Flightradar24, around 35 aircraft, or more than 12% of IndiGo's fleet, have been grounded for at least seven days. IndiGo is the largest airline in the nation with a 58% market share.
- The ongoing border tensions with China and Pakistan pose a significant risk to the Indian defence and aerospace sector. Any escalation in these tensions could lead to an increase in defence spending, but it could also result in project cancellations or delays due to the focus on national security.
- The trade tensions between the US and China could also impact the global supply chain, potentially creating new opportunities for the Indian defence and aerospace industry. However, international sanctions could also impact India's defence ties with other countries, and alternative suppliers may not have the same level of expertise or cost competitiveness.
- Political instability in the region is another geopolitical risk that could impact the Indian defence and aerospace sector. The recent military coup in Myanmar could affect India's access to the Southeast Asian market.

### Competitive Risk

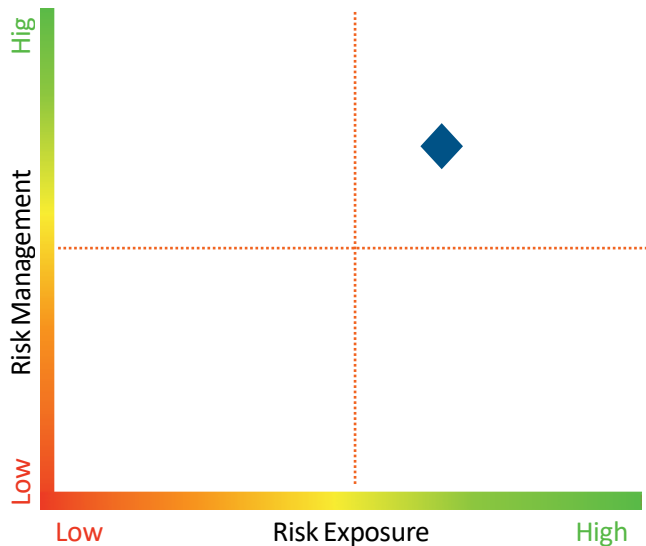
- The Indian defence sector's share in the global defence market was only 3.7% in 2019, according to SIPRI data. In contrast, the US, Russia, and China held the largest market shares at 38%, 21%, and 13%, respectively.
- One of the competitive risks is the ability of foreign players to offer lower costs and better technology. For instance, Russia offers competitive pricing and a range of technology that India has found attractive. Similarly, Israeli companies have established themselves as reliable suppliers of high-tech defence equipment, and the US offers advanced technology in several areas. In contrast, the Indian defence industry has been criticized for its inefficiencies, bureaucratic procedures, and delays in project implementation, which can increase costs.
- Another competitive risk is the need for the Indian defence industry to invest in research and development to keep up with technological advancements. The Indian defence industry's investment in research and development is only about 5% of its revenue, which is low compared to other countries like the US, which invests around 10-12% of its revenue in research and development.



# Risk Dimension Analysis: Technology

**Risk Exposure Score: 67**

**Risk Management Score: 64**



## Disruptive Technology

- Firstly, the sector relies heavily on imported technology, making it vulnerable to geopolitical and economic uncertainties. For instance, the US sanctions on Russia in 2018 had a significant impact on India's defence procurement plans, as Russia is one of India's major defence suppliers.
- Secondly, the sector lacks in-house R&D capabilities, resulting in low indigenization levels and a limited ability to develop critical technologies. This increases the sector's dependence on foreign suppliers and exposes it to potential supply chain disruptions.
- Thirdly, the sector's technological capabilities are outdated and require modernization, which can be a costly affair. A report by the Confederation of Indian Industry (CII) states that the Indian defence industry needs to invest around \$50-60 billion in modernization efforts over the next decade to remain competitive.
- Lastly, the sector also faces cyber threats, as the adoption of digital technologies has increased its vulnerability to cyberattacks. According to a report by FICCI and PwC, the Indian defence industry is at high risk of cyber threats due to its heavy reliance on technology and inadequate cyber security measures.

## Intellectual property

- The sector's heavy reliance on foreign technology often leads to IP disputes and legal challenges, as foreign suppliers may have proprietary rights over the technologies they supply. This can result in delays and disruptions in the procurement process, as seen in the case of the Rafale fighter jets, where Dassault Aviation's refusal to transfer technology led to controversy and allegations of corruption.



- The sector's indigenization efforts are hindered by weak IP protection laws and inadequate enforcement mechanisms. This discourages innovation and R&D investments, as companies are not assured of the protection and commercial benefits of their inventions. A report by the US Trade Representative's Office lists India as a priority watchlist country for IP violations, citing concerns over inadequate protection of trade secrets, patentability criteria, and enforcement measures.
- The sector's supply chain vulnerabilities also expose it to IP risks, as subcontractors and suppliers may misappropriate or disclose confidential information. The recent case of Chinese hackers targeting Indian defence companies highlights the growing threat of IP theft and espionage.

#### **Data compromise**

- In 2020, sensitive information related to the Indian Navy's Scorpene-class submarines was leaked online, reportedly by a French company that was involved in the project.
- In 2019, the Indian Space Research Organization (ISRO) confirmed that it had suffered a cyberattack, with hackers attempting to steal classified information on the Chandrayaan-2 mission.
- India suffered second-highest data breaches in 2022 with 450 million records exposed accounting for 20% of all the data breaches.
- Ransomware attacks on the airline companies have been the most common form of data breaches faced by the sector

#### **Counterfeiting**

- In 2014, the Indian government cancelled a \$750 million contract with AgustaWestland for the supply of 12 VVIP helicopters, following allegations of corruption and the use of counterfeit parts. An investigation by the Central Bureau of Investigation (CBI) found that the company had used fake invoices and bills to justify the payment of kickbacks to Indian officials.
- To address the issue of counterfeiting, the Indian government has implemented several measures, including the creation of a dedicated anti-counterfeiting cell within the Directorate General of Quality Assurance (DGQA). The cell is responsible for conducting inspections, audits, and testing of products procured by the defence forces to ensure compliance with quality standards.
- Counterfeiting is not limited to equipment and components but also extends to intellectual property, including software and firmware. In 2017, the Indian Navy reported that it had detected counterfeit software installed on its computers, which could have compromised its data security.

#### **R&D/ Innovation failure**

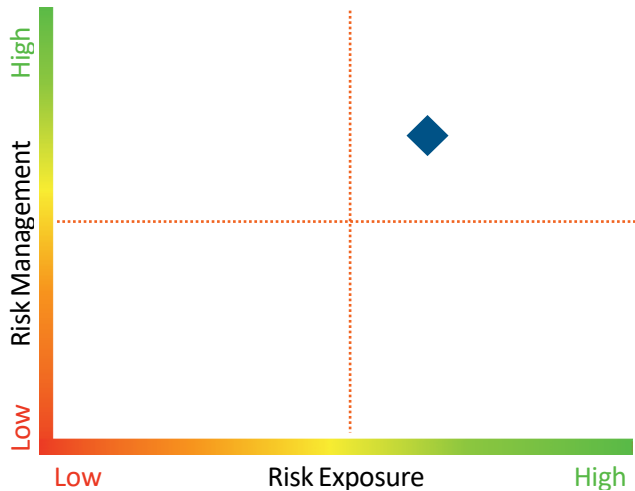
- The uncertainty surrounding intellectual property rights in India's aerospace and defence industries is a significant barrier. Due to this, there has been little to no aeronautical R&D conducted by Indian private enterprises, while public sector R&D has been subpar. Since its founding in 1959, the huge Bengaluru facility known as the Gas Turbine Research Institute (GTRE) has been unable to manufacture an engine for domestic aviation programmes.
- India's R&D has not picked up because of the lobbying powers of the public sector players whose performance in R&D has been mediocre and sluggish.



# Risk Dimension Analysis: Operational and Physical

**Risk Exposure Score: 69**

**Risk Management Score: 68**



## Critical Infrastructure Failure / Machine

### Breakdown

- The main problem that has forced the majority of IndiGo and GoFirst aircraft out of service is the lack of spare engines and components. It's not like there aren't any spare engines available. The lockdowns caused by COVID that affected industrial lines throughout the world and the subsequent delay brought on by the Ukrainian war both had a significant negative influence on the speed of supply.

- In 2020, a fire broke out at the Ammunition Factory in Maharashtra, India, which led to the death of 20 workers and injured several others. The factory was responsible for producing ammunition for the Indian Army and Navy, and the incident had a significant impact on the country's defence preparedness.
- In 2019, a Mirage 2000 fighter aircraft crashed during a test flight due to a technical failure, leading to the death of two Indian Air Force pilots.
- In 2018, a MiG-21 fighter jet crashed during a routine mission, leading to the death of the pilot. These incidents highlight the risks associated with machine breakdowns and technical failures in the defence and aerospace sector, which can have severe consequences for national security and human lives.

### Accidents/Fire Safety

- Delays in the project's development highlight the challenges of R&D in the defence sector and the need for robust project management and risk mitigation strategies.
- The failure of the Kaveri project highlights the need for a sustained focus on R&D in the aerospace industry and the need for investment in indigenous capabilities and infrastructure.

### **Strikes/Closure/Unrest**

- The Indian government has taken steps to address the issue of strikes and closures in the aerospace and defence sector. In 2019, the government approved a new labour code aimed at simplifying and rationalizing labour laws in the country. The code aims to provide greater flexibility to employers and improve the ease of doing business in the country. The code also provides for a dispute resolution mechanism to address labour disputes and strikes.
- In 2020, the government announced a new defence production and export promotion policy aimed at boosting the domestic defence industry's growth and competitiveness. The policy includes measures such as the establishment of a dedicated defence export promotion organization, the creation of a level playing field for private sector participation in defence production, and the promotion of R&D in the sector.
- The sector needs to focus on effective dispute resolution mechanisms to address labour disputes and strikes. The Indian government's efforts to promote the ease of doing business in the sector, including the labour code and the defence production and export promotion policy, are positive steps towards improving the sector's competitiveness and growth.

### **Supply Chain Risk**

- One of the challenges facing the Indian aerospace and defence supply chain is the country's limited domestic manufacturing capabilities. The country's defence industry has long relied on imports to meet its requirements, resulting in a significant dependence on foreign suppliers.
- Another challenge is the fragmented nature of the supplier base, with many small and medium-sized enterprises (SMEs) operating in the sector. These SMEs face several challenges, including access to finance, technology, and skilled manpower, which can impact their ability to compete in the global market.
- The emergence of private players and clusters aimed at promoting collaboration among various stakeholders are positive steps towards building a robust supply chain ecosystem in the sector.

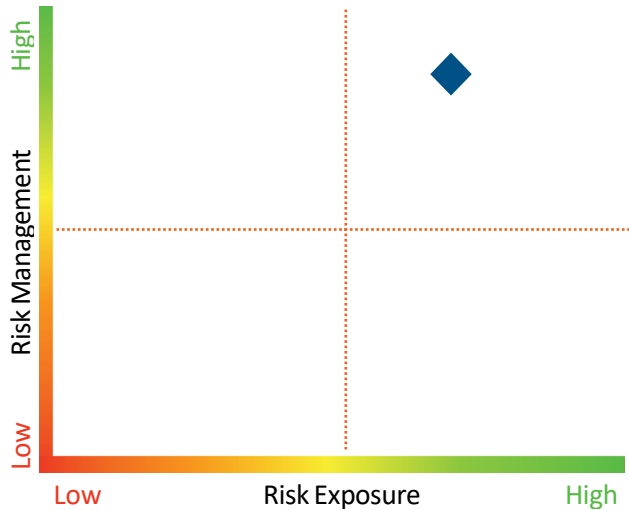
### **Environmental Risk**

- Another environmental risk is noise pollution. Aircraft and spacecraft generate significant noise levels during take-off and landing, which can have adverse effects on local communities. The Indian government has implemented regulations to limit noise pollution from aircraft and has also set up noise monitoring stations near airports.
- In India, the civil aviation sector alone is responsible for around 2.5% of the country's total greenhouse gas emissions.
- The aerospace and defence sector also generates significant amounts of waste, including hazardous waste. The sector's manufacturing processes generate waste, such as metals, chemicals, and electronic components, which can have adverse environmental impacts if not managed properly.
- The sector has also seen the emergence of several startups focused on developing sustainable technologies for the aerospace industry. For example, the Bengaluru-based startup, Bellatrix Aerospace, is developing electric propulsion systems for satellites, which could reduce the sector's reliance on traditional rocket engines.

# Risk Dimension Analysis: Crime and Security

**Risk Exposure Score: 64**

**Risk Management Score: 66**



## Cyber-crimes

- Civil aviation has been a particularly appealing target. As the sector has developed, the threats issuing faces, have changed in both measurement and methodology, far from customary physical attacks on aircraft and airports to new sorts of occasions that incorporate the various cyber threats. The aviation industry faces increase issues passengers' control structures, to the plane, to the airline agencies and airports and fringe intersections.
- The recognized threats originate from the prevailing concept of aviation industry structures that are interconnected and reliant. By 2020, ADS-B17, a reconnaissance technology will supplant radar as the essential methods for following aircraft and will be a mandatory prerequisite on the dominant part of aircraft.
- It's going to supply passengers and climate facts, providing better verbal exchange among the plane and air traffic management. The ADS-B structure stays unprotected and defenceless in opposition to cyber-attacks. Communications amongst aircraft and air traffic controllers stay decoded and unbound, making it open for attacks that may disappoint air passengers. It remains helpless in contrast to sticking and satirizing information.
- The Indian defence and aerospace sector is vulnerable to cybersecurity threats, which could impact its operations and reputation. The number of cyberattacks on critical infrastructure in India has increased significantly over the past few years, according to a report by the Indian Computer Emergency Response Team (CERT-In).

## Harassment/Bribing

- The defence sector the world over struggles to find a balance between the secrecy linked to national security considerations and transparent oversight/accountability. Complex technical and commercial deal structures, exacerbated by high value stakes, make the procurement process susceptible to influence peddling and corruption.

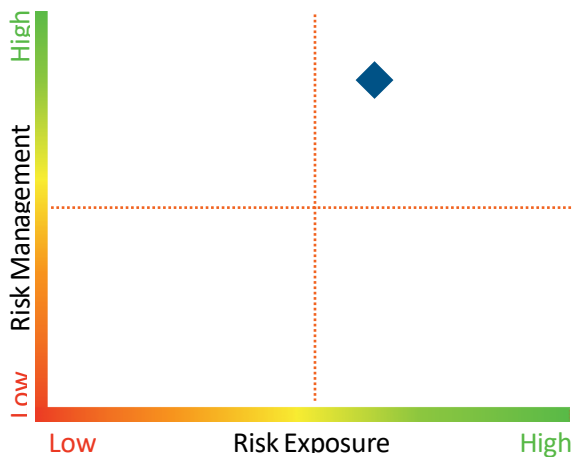
- As Per Section 447 of Companies Act 2013, imprisonment for a term not less than 6 months and up to 10 years and fine, which shall not be less than the amount involved in the fraud and may extend to thrice such an amount.
- 49% of organisations globally said they've been a victim of fraud and economic crime - up from 36%. 31% of respondents that suffered fraud indicated they experienced cybercrime
- Aerospace and defence companies have unique risks due to the large scale and value of contracts, fierce competition and the complexity of the regulatory and compliance environment.



## Risk Dimension Analysis: Natural Hazard and Event

**Risk Exposure Score: 55**

**Risk Management Score: 60**



### Natural Hazards:

- Certain discernible megatrends are impacting the Defence, Security and Disaster Management firmament. The first is that there is a growing shift in global economic power from West to East. Secondly, the rate of demographic changes taking place all over the world due to migration and varying birth rates is giving rise to new conflicts. It triggers a further demographic change-conflict cycle. Thirdly, rapid urbanization fueled by growth is creating social tension and conflicts. Fourthly, new technologies are changing/driving the nature of conflicts. Lastly, climate change and resource scarcity give a whole new dimension to conflict. It has succeeded in bringing disaster management on par with security.
- Recent events are proving that disasters happen with greater frequency than wars. Hence militaries and societies are preparing accordingly. Largely, the response mechanism and capabilities required for conflicts and disaster are virtually the same and can no longer be developed separately. These megatrends are driving a change which opens opportunities for India in becoming a hub of the Defence, Aerospace and Disaster Management industry.

- India is a growing power. Its GDP is predicted to shortly overtake that of Great Britain. By 2050 it is expected that its GDP will be third behind the US and China. As a growing power it has huge domestic demands of defence, aerospace and disaster management equipment. The demand straddles capital as well as revenue channels. As of now the country is a net major importer of defence equipment. Increasingly procurements from foreign sources have bedevilled the establishment and putting big ticket items through is being thwarted due to one reason or the other.

### Pandemic and other global epidemic diseases

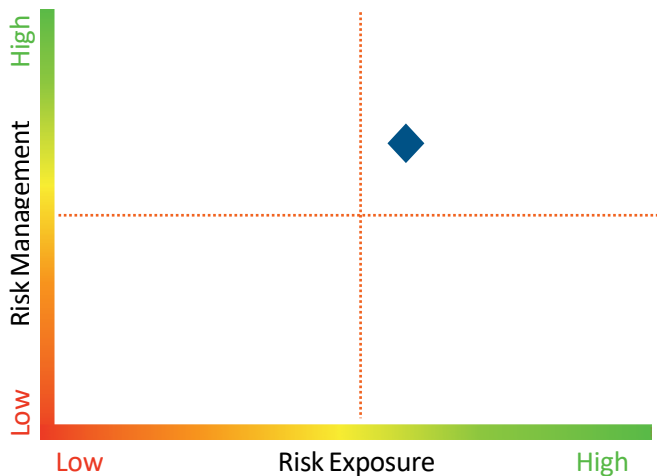
- In commercial aviation, companies are experiencing disruption in production and slowing demand as workers go home, passengers stop traveling, and customers defer delivery of new aircraft. Demand for spare parts is also down since less maintenance is currently required. Aircraft manufacturers are capital intensive by nature, thus raising short-term concerns about cash flow and liquidity.
- On the defense side, contractors are better positioned, since they will not feel the impact of COVID-19 in the short- to mid-term. While production may slow for the same reasons as in aircraft manufacturing, demand over the next two years is unlikely to be affected since budgets for these projects had been allocated prior to the pandemic and the projects are critical to national defense.



## Risk Dimension Analysis: Strategic Risk

**Risk Exposure Score: 63**

**Risk Management Score: 60**



### Increased number of recalls and quality

#### audits:

- One of the critical resources in the aerospace and defence sector is rare earth metals. These metals are essential for the production of high-performance magnets, which are used in a range of applications, from electric motors to guidance systems. However, China currently dominates the global rare earth metals market, and the Indian aerospace and defence sector is highly dependent on imports of rare earth metals from China.

- Another critical resource is high-performance alloys. These alloys are used in the production of aircraft engines, turbines, and other critical components. However, many of these alloys are becoming increasingly scarce, and the Indian aerospace and defence sector is highly dependent on imports of high-performance alloys from countries such as the United States and Europe.
- The Indian aerospace and defence sector is also highly dependent on advanced composites, which are used in the production of lightweight aircraft and spacecraft components. However, many of the materials used to produce advanced composites are becoming increasingly scarce, which poses a significant risk to the sector's growth and development.

#### **Public Sentiments**

- One of the significant concerns regarding the aerospace and defence sector in India is its impact on the environment. Many people in India are becoming increasingly concerned about the sector's impact on the environment, particularly regarding issues such as pollution and the depletion of natural resources.
- Another significant concern is transparency. Many people in India are concerned about the lack of transparency in the aerospace and defence sector, particularly regarding issues such as procurement and pricing. This lack of transparency can lead to a perception of corruption and undermine public trust in the sector.
- Public sentiment can also impact the sector's ability to attract and retain talent. Many people in India are becoming increasingly concerned about the ethical implications of working in the aerospace and defence sector, particularly regarding issues such as the use of weapons and their impact on civilians.

#### **Failed/ Hostile M&A**

- One of the significant M&A deals in the aerospace and defence sector in India was the merger between Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited (ECIL). The merger was completed in April 2020 and created a new company called BEL-ECIL Technologies Limited (BEL-ECIL). The merger was aimed at strengthening the two companies' capabilities and improving their competitiveness in the aerospace and defence sector.
- Another significant M&A deal in the sector was the acquisition of Quest Global Services by Cyient Limited. The acquisition, which was completed in March 2021, was aimed at expanding Cyient's capabilities in the aerospace and defence sector. Quest Global Services is a leading provider of engineering services to the aerospace and defence sector, and its acquisition by Cyient is expected to help the company to expand its footprint in the sector.
- The Indian aerospace and defence sector is also attracting significant interest from foreign companies looking to enter the market or expand their operations.
- Lockheed Martin has established a joint venture with Tata Advanced Systems Limited to produce F-16 fighter jets in India. The joint venture is expected to create significant opportunities for the Indian aerospace and defence sector and help to strengthen the country's defence capabilities.
- The M&A activity in the Indian aerospace and defence sector is expected to continue in the coming years. The Indian government has announced several initiatives to promote investment in the sector, such as allowing up to 74% foreign direct investment (FDI) in defence manufacturing under the automatic route.



# ICICI LOMBARD: Key Solution Offerings



## Property

- a. Businesses are always prone to risks and fire eruption and fire insurance provides a comprehensive protection against damages caused due to fire explosion and other risks. Besides fire related perils, it also protect damages caused due to any natural calamity, bursting of water tanks, theft etc. The built in covers include alterations or extensions, stocks on floater basis, temporary removal of stock, cover for specific contents, start-up expenses, professional fees, costs for removal of debris etc
- b. **Solutions**
  - i. **Property Loss Prevention exercise** - We have developed the methodology of Property Value Added Services for corporate customers which focuses on technical engagement with detail risk visit, followed by benchmarking of the risk (Industry Risk Profiling).
  - ii. **Fire Hydrant IoT** - Fire hydrant online monitoring devices use IoT to monitor fire hydrants and assure their availability in emergencies. We've helped multiple corporate customers maintain and monitor this important fire safety component in real time.



## Marine

- a. We offer specially curated plans for covering the risk of theft, malicious damage, shortage, and non-delivery of goods, damages during loading and unloading, and mishandling of goods/cargo
- b. Marine Cargo insurance primarily covers loss during transit caused due to fire, explosion, hijacks, accidents, collisions, and overturning
- c. **Solutions**
  - i. **GPS Device Tracking:** With the help of our advance GPS devices we can have bird eye view on the consignment and vehicle from anywhere in the world. OurSAAS allows us to track and get the visibility of the vehicle on the basis of our requirements which is fully customizable





## Liability

### a. **Comprehensive general liability:**

- i. This policy is important for every small and medium sized businesses to protect the insured entity against claims arising out of legal liability where they are held responsible for third party bodily injury or property damage due to insured's business, premises or products. It should be taken by every new business as it covers all risk a business may face.

### b. **Cyber** - With cyber risk steadily increasing, security/ data breaches affect millions of records a year. Cyber Risk insurance coverage is designed to help an organization mitigate its risk exposure by offsetting costs involved with recovery after a cyber-related security breach or similar event.

### c. **Solutions**

- i. **Simulated phishing tests** - Simulated real looking phishing tests and record employee behavior to phishing attacks along with training collateral in form of co-brandable posters, infographics and videos
- ii. **Cyber maturity assessments** - Assess the security posture of your organization and identify the potential risks with our assessment based on ISO 27001 Control measures for Information security
- iii. **D&O** - The need of Directors & Officers Insurance is more than ever before. Any breach or non-performance in the duties can result in claims against directors, officers and employees by reason of wrongful act and need to incur various expenses like defense costs, damages or compensation and other incidental costs. This can affect company's growth and performance.



## Group Health

- a. Employees are the backbone of an organization and the most valued asset. Our Group health insurance product is designed to offer health coverage to suit employees of all business types ranging from small & medium enterprises to large organizations.
- b. **Solutions:**
  - i. **IL Take Care** - AI enabled mobile app for employees
  - ii. **Health assistance services** - Health Assistance is a dedicated medical care service that assists you in all your health related queries for identifying specialist/hospital/fixing an appointment with doctors/nutritionist /facilitating 2nd opinion
  - iii. **Tele Consultation** – Hello Doctor
  - iv. The insured is eligible to avail unlimited General Physician consultations for routine health issues over the phone by a qualified doctor
  - v. **Diagnostics & pharmacy services** – Book a lab test or home delivery of medicines



# Bibliography

<https://www.forbes.com/sites/davidyu/2022/04/26/inflation-hits-new-aircraft-deliveries-escalating-the-problem-or-inflating-a-solution/?sh=5e346bf43114>

<https://www.ndtv.com/business/air-fares-set-to-rise-as-jet-fuel-prices-are-hiked-3071760>

<https://economictimes.indiatimes.com/industry/energy/oil-gas/jet-fuel-price-hiked-4/articleshow/97513742.cms?from=mdr>

<https://www.financialexpress.com/industry/tyre-manufacturers-mulling-price-hike-as-input-costs-soar/2511766/>

<https://news.abplive.com/business/budget/budget-2022-68-defence-budget-earmarked-for-domestic-industry-to-boost-atmanirbhar-bharat-says-fm-sitharaman-1510175>

<https://www.thehindubusinessline.com/specials/flight-plan/compliance-with-regulation-staying-ahead-is-key/article66073836.ece>

<https://www.thehindubusinessline.com/specials/flight-plan/compliance-with-regulation-staying-ahead-is-key/article66073836.ece>

<https://www.infosys.com/industries/aerospace-defence/industry-offerings/regulatory-compliance.html>

[https://www.sipri.org/sites/default/files/2020-04/fs\\_2020\\_04\\_milex\\_0.pdf](https://www.sipri.org/sites/default/files/2020-04/fs_2020_04_milex_0.pdf)

<https://www.financialexpress.com/opinion/defence-rd-spending-in-india-needs-urgent-boost/2060326/>

<https://www.livemint.com/companies/news/airlines-brace-for-impact-as-supply-chain-issues-emerge-11667242063905.html>

<https://economictimes.indiatimes.com/news/defence/maharashtra-ammunition-factory-fire-death-toll-rises-to-20/articleshow/79255416.cms>

<https://www.thehindu.com/news/national/mirage-2000-aircraft-crashes-in-bengaluru-two-killed/article26125245.ece>

<https://timesofindia.indiatimes.com/india/mig-21-fighter-jet-crashes-in-himachal-pradesh-pilot-killed/articleshow/64419906.cms>

<https://www.pwc.com/gx/en/industries/aerospace-defence/publications/aerospace-defence-trends-2021.html>

<https://assets.kpmg/content/dam/kpmg/in/pdf/2021/03/building-a-robust-supply-chain-for-the-aerospace-and-defence-industry.pdf>

<https://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/us-a-and-d-managing-the-impact-of-supply-chain-disruption.pdf>

<https://www.businesstoday.in/current/economy-politics/indias-self-reliant-defence-manufacturing-plan-ambitious-or-overambitious/story/438940.html>

<https://assets.kpmg/content/dam/kpmg/in/pdf/2019/09/Indian-defence-sector.pdf>

<https://www.iata.org/en/pressroom/pr/2020-03-02-01/>

<https://www.cdc.gov/niosh/docs/2016-119/default.html>

<https://www.cnbctv18.com/technology/india-suffered-second-highest-data-breaches-in-2022-with-450-million-records-exposed-report-16088781.htm>

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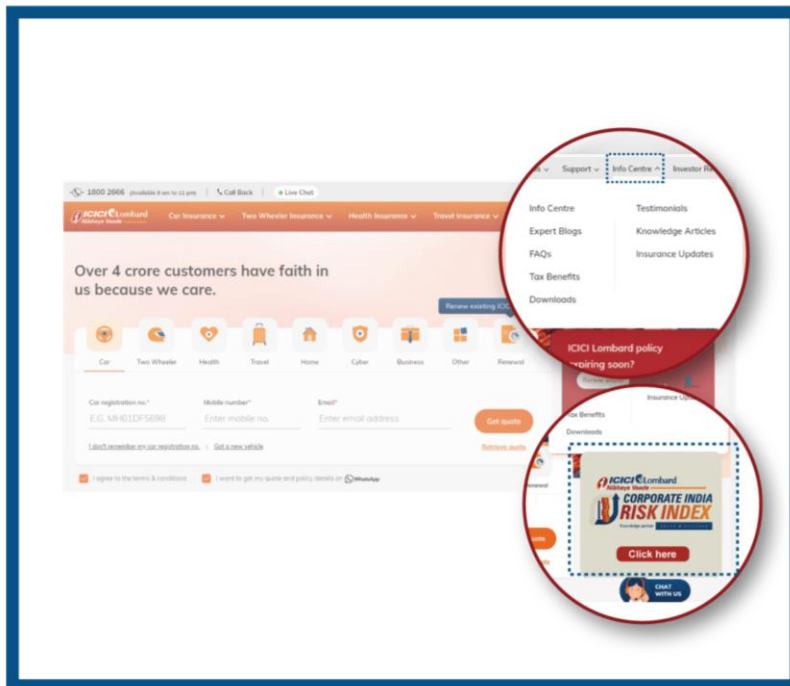


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