



CORPORATE INDIA RISK INDEX

2023

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FROST & SULLIVAN

SECTOR REPORT 2023

AGRICULTURE & FOOD PROCESSING



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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

India has a diverse agriculture sector, with a wide range of crops grown across different regions of the country. Due to a diverse range of agro-climatic conditions and soil types, it is suitable for a wide variety of crops. The major crops grown in India include rice, wheat, maize, pulses, oilseeds, sugarcane, cotton, jute, tea, and coffee. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investment in agricultural infrastructure such as irrigation facilities, warehousing and cold storage.

The agriculture sector in India faced various risks in 2022 due to several factors such as climate change, water scarcity, pest infestations, and uncertainties in global markets. Climate change and its impact on weather patterns also affected crop yields and quality. Water scarcity and uneven distribution of water resources also impacted crop production. Pests and diseases led to crop losses and impact the livelihoods of farmers. Moreover, the pandemic has affected the supply chain and disrupted the market, leading to uncertainties and price volatility. This report encompasses the elements of risk exposure, risk management, and risk index for the agriculture sector in India.

India's agriculture and food processing sector saw a slight rise in its risk index, going from 59 in 2022 to 63 in 2023. Although this remains within an acceptable range, there's a concerning drop in risk management effectiveness. Market fluctuations, underutilized technology, operational inefficiencies, and security issues continue to plague the sector. These include everything from volatile markets hurting profitability to outdated technology hindering efficiency, along with persistent low productivity and high costs. Crime and security concerns further erode consumer trust, while natural hazards disrupt supply chains. To make matters worse, a lack of dedicated funds for risk mitigation leaves the sector exposed. This rise in the risk index, despite some progress, underscores the need for a more comprehensive approach to managing risks in India's agriculture and food processing industry.

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 Defence, 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

Operational & 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.

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

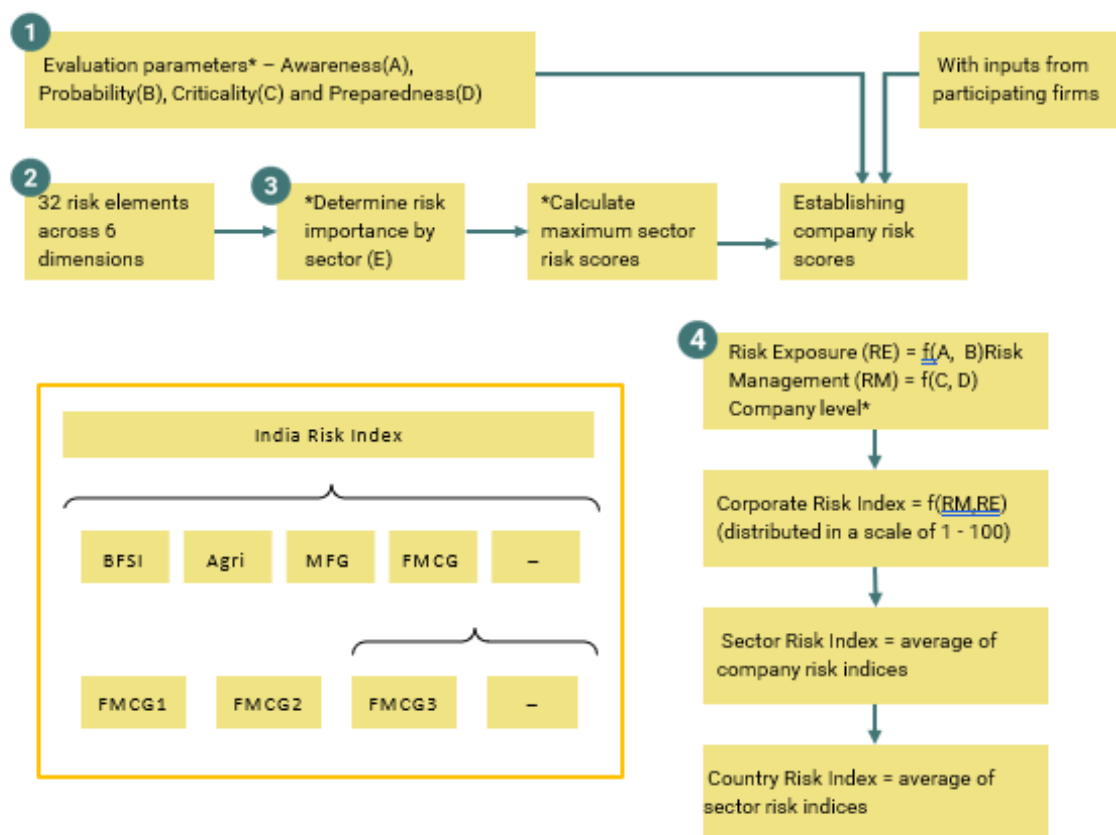


Figure 1: Risk Assessment Approach

- 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.
 - Probability - 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

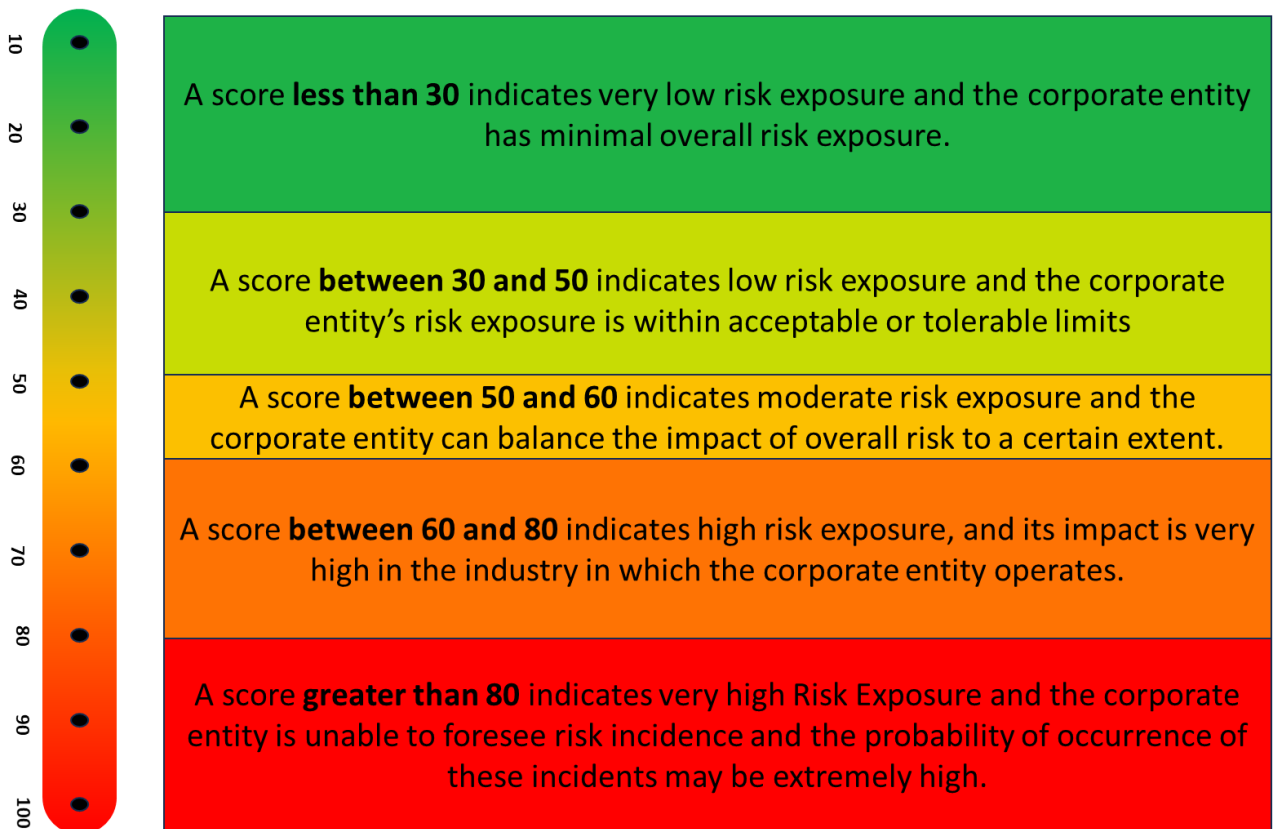
We have selected 20 sectors to understand the current stand of our country today in terms of risk. Risk for various sectors is measured on the risk exposure scale and risk management scale.

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.

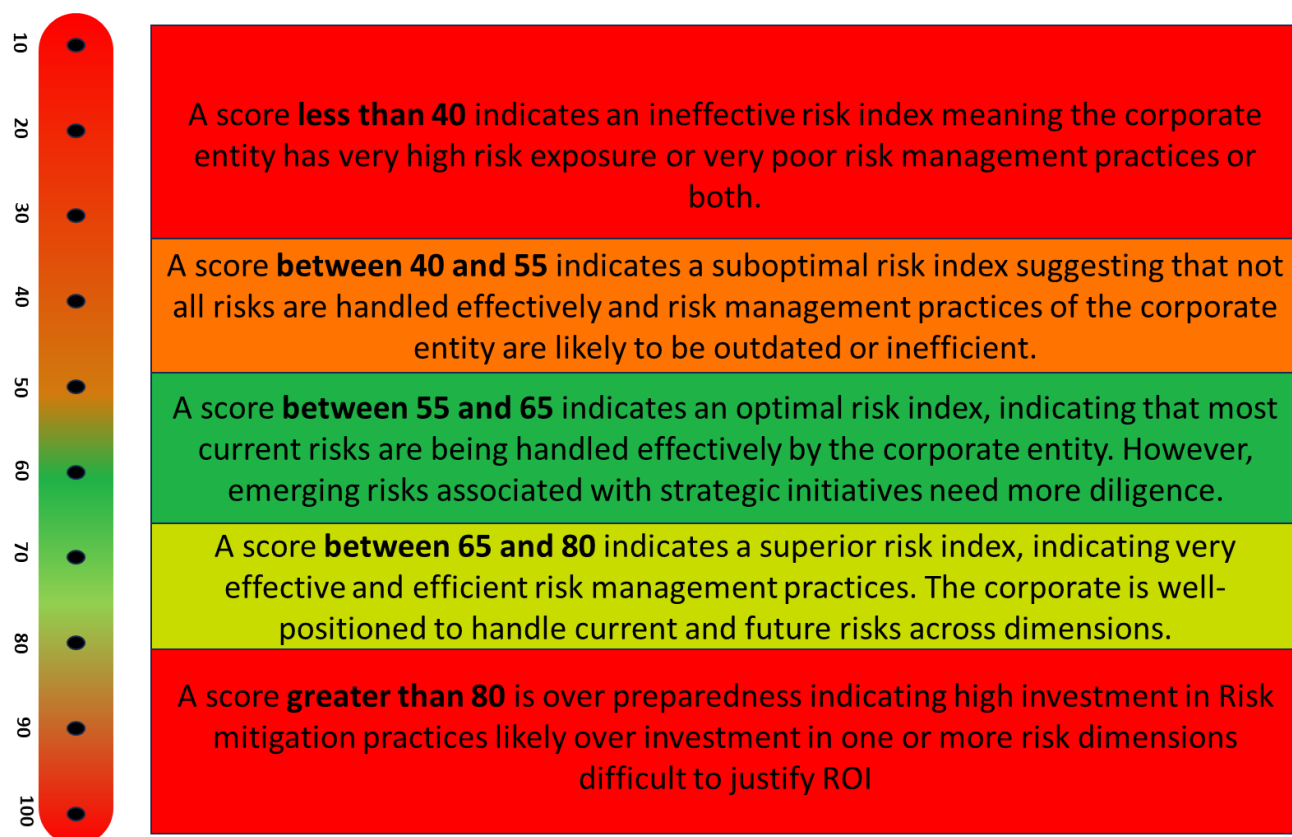
Let's look at the risk management scale.



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

In 2023, India witnessed a number of developments in various sectors, reflecting changes in consumer preferences, technological advances and regulatory trends. These developments shaped the industry and affected strategic decisions among industry players.

Electric vehicles (EVs) gained traction across sectors, driving investments in infrastructure and incentivized by government policies promoting electric mobility. The Automotive industry witnessed a surge in demand for EVs, while Logistics & Transportation embraced electric fleets to reduce carbon emissions and operational costs. Digital transformation accelerated across sectors, fueled by the COVID-19 pandemic. Telemedicine, online banking, and remote work solutions proliferated in Healthcare, BFSI, and IT/ITES sectors, enhancing operational efficiency and customer experiences.

In 2023, sustainability took center stage as sectors across India embraced eco-friendly practices. The Energy sector witnessed a shift towards renewable energy sources, with significant investments in solar and wind power. Industries like Manufacturing and FMCG prioritized energy efficiency and waste reduction initiatives. Hospitality and Real Estate sectors focused on green building practices, while Agriculture adopted precision farming techniques to conserve resources.

AI integration surged in 2023, revolutionizing business operations across sectors. Manufacturing companies leveraged AI for predictive maintenance and quality control, enhancing efficiency and reducing costs. Healthcare adopted AI-powered diagnostics and personalized treatment plans, improving patient care. Financial institutions utilized AI for fraud detection and risk assessment, bolstering security and compliance.

Social media emerged as a powerful tool for brand building and customer engagement in 2023. FMCG and Retail sectors capitalized on social media platforms to launch targeted marketing campaigns and drive product sales. Hospitality and Tourism industries utilized social media influencers to enhance brand visibility and customer loyalty. By leveraging social media analytics and customer feedback, companies across sectors tailored their strategies to effectively connect with their target audience and build brand reputation.

The "Make in India" initiative drove significant changes in supply chain operations in 2023. Sectors like Automotive, Manufacturing, and Pharmaceuticals emphasized local sourcing to reduce dependency on imports. Companies diversified their supplier base and optimized logistics networks to mitigate supply chain risks. This strategic shift towards domestic production enhanced resilience and competitiveness across industries.

Diversity, Equity, and Inclusion (DE&I) initiatives gained momentum in 2023, fostering inclusive workplaces across sectors. Companies in BFSI and IT/ITES led the way with diversity training programs and gender-neutral policies. Healthcare organizations focused on addressing healthcare disparities among marginalized communities. Manufacturing and Retail sectors prioritized inclusive hiring practices to tap into diverse talent pools, driving innovation and employee engagement.

Leadership risks emerged as a critical concern in 2023, prompting sectors to reassess their leadership strategies. Companies in BFSI and Technology faced challenges in adapting to rapid technological advancements and changing market dynamics. Healthcare organizations navigated leadership transitions amidst the COVID-19 pandemic, emphasizing the need for agile and resilient leadership. Strategic investments in leadership development and succession planning became imperative to mitigate leadership risks effectively.

Disruptive technologies like artificial intelligence, blockchain, 5G, and IoT reshaped traditional business models, offering new avenues for innovation and growth in sectors such as Telecom & Communication, Biotech & Life Sciences, and New Age Industries.

The scenario of the Indian economy in 2023 had a myriad of risks and opportunities in various sectors. Cybersecurity emerged as a pervasive risk, affecting industries from banking and finance to healthcare and IT/ITES. With more than 400 million cyber threats detected in nearly 8.5 million locations by 2023, organizations prioritized strong cybersecurity measures. Advanced threat detection systems, encryption protocols and employee training programs were implemented locally to enhance cyber resilience and protect sensitive data.

Another common risk was supply chain disruption, exacerbated by factors such as geopolitical pressures, natural disasters, and semiconductor chip shortages. To mitigate these risks, companies diversified their supplier base, invested in inventory management systems, and adopted agile supply chain practices to enhance resilience and flexibility.

Regulatory uncertainty was rife in industries such as Pharma, Energy, Telecommunications, which required active engagement with regulators. Furthermore, environmental risks emphasized the importance of sustainability and green technologies, renewable energy and waste management practices to reduce environmental impact around us and compliance with legal standards.

Despite the challenges posed by common risks, several sectors emerged as resilient performers in 2023, whose efforts helped us understand the situation in 2023 better. Noteworthy efforts included the "National COVID-19 Vaccination Drive" in healthcare, "Electric Vehicle Adoption Mission" in automotive, and "Green Freight Movement" in logistics. Additionally, initiatives such as the "Make in India Defence" program in aerospace and "Skill India Mission 2.0" in education underscored the nation's commitment to innovation and development.

The Automotive industry in India showed resilience in the face of supply chain disruption and regulatory uncertainty. Focusing on sustainability and innovation, the sector saw an increase in electric vehicle (EV) adoption, with sales reaching Rs 4.22 lakh crore. The Aerospace & Defence sector focused on developing indigenous manufacturing capacity and technology to strengthen national defence by investing Rs 1.5 lakh crore.

In the Healthcare sector, India has invested heavily in digital health solutions and infrastructure to combat the lingering effects of the COVID-19 pandemic. With a total investment of more than Rs 50,000 crore, companies have expanded telemedicine and implemented AI-powered diagnostics to improve patient care.

The Manufacturing sector prioritized digitalization and process optimization to enhance productivity and competitiveness amidst supply chain disruptions and inflationary pressures. Companies invested Rs 1.2 lakh crore in automation technologies and smart manufacturing initiatives to streamline operations and reduce costs. The Logistics & Transportation companies invested Rs 800 crore in blockchain-based traceability systems and cyber security protocols to secure supply chains and protect sensitive data from cyberattacks.

The Hospitality industry adapted to customer preferences and regulatory requirements through new service offerings and customer engagement strategies. With an investment of Rs 0.5 lakh crore, companies also focused on using contactless technology to improve health and safety measures, ensuring that guests have satisfaction and compliance.

The Agricultural & Food Processing sector embraced technological initiatives to increase agricultural productivity and ensure food security in the face of climate change and supply disruptions. With an investment of Rs 1 lakh crore, companies focused on precision farming and farm-to-fork traceability solutions to improve crop yield and quality.

The BFSI sector focused on digital transformation and risk management to address cyber threats and regulatory challenges. Banks and financial institutions invested Rs 2,50,000 crore to implement advanced cyber security measures and fraud detection systems to protect customer data and prevent financial fraud.

The Biotech & Life Sciences sector showcased innovation and resilience amidst regulatory complexities and supply chain disruptions. The Chemicals & Petrochemicals sector navigated environmental regulations and market volatility through sustainable practices and operational excellence initiatives. Digital learning and job training were adopted to meet workforce challenges and enhance productivity in the face of technological disruption and demographic changes in the Education & Skill Development sector.

The Energy sector has shifted towards renewable energy and sustainable development policies to mitigate the risks of climate change and reduce dependence on fossil fuels. Moreover, with investments of Rs 1.5 lakh crore in smart grid technologies and demand-side management initiatives to optimize energy consumption and reduce emissions, the sector prioritized grid modernization and energy efficiency.

The IT ITES sector continued to drive digital transformation and innovation to address cybersecurity threats and meet evolving customer demands. With investments of Rs 4 lakh crore, companies focused on cloud computing and cybersecurity solutions to protect data and ensure business continuity.

The Metals & Mining sector focused on sustainable practices and community engagement to address environmental concerns and social risks associated with resource extraction. With investments of over Rs 0.8 lakh crore, companies implemented reclamation and rehabilitation projects to restore mined areas and promote biodiversity conservation.

The New Age sector, comprising startups and technology companies, showcased innovation and resilience amidst market uncertainties and funding challenges. Additionally, the sector prioritized talent acquisition and retention, with investments of Rs 0.5 lakh crore in employee benefits and workplace diversity initiatives to attract top talent and foster a culture of innovation.

The Telecommunication sector continued to expand connectivity and digital infrastructure to meet growing demand for broadband services and IoT applications. With investments of over Rs 2 lakh crore, companies deployed 5G networks and fiber-optic cables to enhance network capacity and speed.

In summary, India's diverse sectors demonstrated resilience and innovation in navigating through a challenging operating environment in 2023. As India continues its journey towards economic prosperity, proactive risk management and innovation will remain critical drivers of success across diverse sectors.

India Showcasing an Optimized Risk Handling



Figure 2: Corporate India Risk Index 2023

A score of 64 on the Corporate Risk Index indicates optimal handling of risk by the Indian companies. However, to enter the superior risk handling territory, the Indian companies have scope to improve upon their risk management practices in the areas of crime & security risks and strategic risks. It was observed across sectors that there is an increased focus on cybersecurity and other technological risks.

In the sectorial analysis of risk exposure, it was found that companies were most affected by market & economy and operational & physical risks due to inflation, global volatility and geopolitical events like the Red Sea crisis, Israel Palestine conflict and Russia Ukraine War.

Another common risk was supply chain disruption, exacerbated by factors such as geopolitical pressures, natural disasters, and inflation. To mitigate these risks, companies diversified their supplier base, invested in inventory management systems, focused on localization and adopted agile supply chain practices to enhance resilience and flexibility.

It was observed that risk management is getting an increased focus in the growth strategy of every organization with companies having dedicated risk teams to manage their risk exposure. All the organizations fell either into 'Superior Risk Management' or 'Optimal Risk Management' category indicating good risk management practices.

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



Figure 3: Corporate India Risk Index 2023 Sector Score

Superior Risk Index

Superior risk handling was found in nine industrial sectors: Telecom & Communication, Pharmaceuticals, Healthcare Delivery, Automotive & Ancillary, Manufacturing, FMCG, Media & Gaming, New Age & Startups and Tourism & Hospitality.

Optimal Risk Index

Optimal risk handling was found in 11 industrial sectors: BFSI, Energy, Transportation & Logistics, Agriculture & Food processing, Metals & Mining, Aerospace & Defence, IT ITES, Education & Skill Development, Infrastructure & Realty, Biotech & Lifesciences and Chemicals & Petrochemicals.

Agriculture & Food Processing Sector Insights 2023

The agriculture and food processing sector in India in 2023 is experiencing significant growth and transformation, driven by various factors and government initiatives.

India's agriculture sector contributes significantly to the country's economy, with around 54.6% of the total workforce engaged in agricultural activities. The sector plays a crucial role in linking Indian farmers to consumers, contributing 17.8% to the Gross Value Added (GVA) of the country. The food processing industry, as the fifth-largest industry in terms of production, consumption, exports, and growth potential, adds value to farm output, creates employment opportunities, improves exports, and strengthens the domestic supply chain.

India has access to several natural resources that provides it a competitive advantage in the food processing sector. Due to its diverse agro-climatic conditions, it has a wide-ranging and large raw material base suitable for food processing industries.

India has the world's largest cattle herd (buffaloes), the largest area planted for wheat, rice, and cotton, and is the largest producer of milk, pulses, and spices in the world. It is the second-largest producer of fruit, vegetables, tea, farmed fish, cotton, sugarcane, wheat, rice, cotton, and sugar. According to IBEF, the agriculture sector in India holds the record for second-largest agricultural land in the world generating employment for about half of the country's population.

In the Union Budget 2023-24, INR 1326.07 billion to the Department of Agriculture, Cooperation and Farmers' Welfare, INR 91.74 billion to the Department of Agricultural Research and Education and INR 3311.84 crores have been allocated to Ministry for development of Food Processing Industries.

In 2023, the food market will generate INR 80.31 trillion in revenue and the market is anticipated to expand at a CAGR of 7.23% between 2023-27.

The demand for organic products in the Indian market is growing and is anticipated to rise with a CAGR of 25.25% between 2022 and 27. Trends indicate a sharp increase in on-the-go eating, snacking in between meals, switching to healthier eating alternatives, pre-cooked ready-to-eat meals, and increasing consumption of organic foods. This has led to a host of new opportunities in the consumer foods market for domestic companies to build a stake in this fast-growing processed food market.

The growth of the agriculture and food processing sector in India is driven by a multitude of factors. Rising household incomes, urbanization, and the growth of organized retail are significant drivers, along with favorable government policies that have propelled the sector's growth at an Average Annual Growth Rate (AAGR). Changing consumption patterns, export opportunities, and diverse climatic conditions with a mix of good rainfall. Additionally, investments in technology, workforce education, and long-term agricultural research have been primary propellers of productivity growth in the sector. These factors collectively contribute to the dynamic growth trajectory of India's agriculture and food processing industry.

Some of the key challenges include low-cost competitiveness, product quality concerns, limited brand strength in overseas markets, lack of infrastructure for processing, storage and logistics, limited access to finance, ineffective supply chain management, as well as limited compliance to sustainability and ethical requirements.

Government schemes have significantly impacted the agriculture and food processing sector in India in 2023. These schemes have played a crucial role in boosting the food processing sector, aligning it with global quality and safety standards, and fostering growth and development in the industry.

World Food India 2023 played a significant role in promoting agriculture and the food processing sector in India in 2023. The event was organized by the Ministry of Food Processing Industries, Government of India, with the objective of showcasing India as the 'food basket of the world' and celebrating 2023 as the International Year of Millets. The event aimed to bring together global food processing industry leaders, promote investments in the diverse food processing value chain, and highlight India's rich food culture. This global Food Event saw extensive participation from stakeholders across the board, including more than 1200 national and international exhibitors, representatives from 90 countries, 91 Global CXOs, 15 overseas ministerial and business delegations and MoU/ Investment promise of above Rs. 33,000 crores.

The Agriculture and Allied industry sector witnessed some major developments, investments and support from the Government in the recent past. Between April 2000-September 2023, FDI in agriculture services stood at INR 3 97.82 billion.

According to the Department for Promotion of Industry and Internal Trade (DPIIT), the Indian food processing industry has cumulatively attracted a Foreign Direct Investment (FDI) equity inflow of about INR 1030 billion between April 2000-September 2023. This accounts for 1.89% of total FDI inflows received across industries.

A new sub-scheme of PM Matsya Sampada Yojana with a targeted investment of Rs. 6,000 crore (INR 60.8 billion) to be launched to further enable activities of fishermen, fish vendors, and MSEs, improve value chain efficiencies and expand the market.

The Agricultural Technology Management Agency (ATMA) Scheme has been implemented in 704 districts across 28 states and 5 UTs to educate farmers. Grants-in-aid are released to the State Government under the scheme with the goal of supporting State Governments' efforts to make available the latest agricultural technologies and good agricultural practices in various thematic areas of agriculture and allied sector.

Agriculture & Food Processing Sector Risk Index 2023 Vs 2022

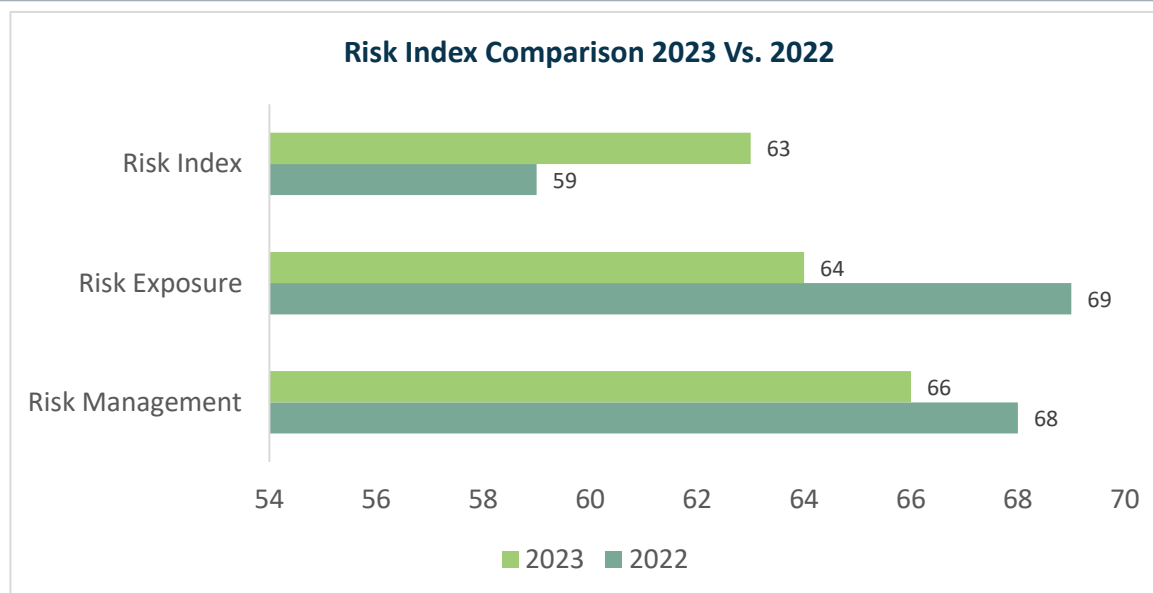


Figure 4: Detailed Comparative Analysis 2022 Vs. 2023

Agriculture and Food Processing Sector Risk Index 2023 Vs 2022

The agriculture and food processing sector in India saw its risk index increase from 59 in 2022 to 63 in 2023, both falling within the optimal risk index bracket. Despite a decrease in risk exposure, the sector faced challenges as risk management also decreased. Market and economy fluctuations impacted profitability, while underutilized technology hindered efficiency. Operational inefficiencies like low productivity and high costs persisted. Crime and security concerns affected consumer trust, while natural hazards and events posed threats to supply chains. Strategic risks, including inadequate risk mitigation funds, remained unaddressed, contributing to the sector's increased risk index despite its superior risk management status.

Agriculture and Food Processing Sector Risk Exposure 2023 Vs 2022

The decrease in the risk exposure score of the agriculture and food processing sector in India from 69 in 2022 to 64 in 2023 can be attributed to several factors. Market and economic conditions, such as enhanced domestic demand due to growth of population and fiscal incentives, have contributed to a more favorable risk outlook. Moreover, a decrease in natural hazards and events impacting the sector could have positively influenced the risk exposure score. Lastly, strategic risk management focusing on interconnected risks and future trends might have further reduced the overall risk exposure.

Agriculture and Food Processing sector Risk Management 2023 Vs 2022

The Agriculture & Food Processing Sector Risk Report 2023 shows a slight decrease in risk management score to 66 from 68 in 2022. Climate change, water scarcity, pests, and global market uncertainties pose significant challenges. Proactive risk management, investment in infrastructure like warehousing, and strengthening agricultural research and enhancing domestic strength in agricultural research and development are crucial for the sector's resilience and growth. Embracing digital technology for efficient technology transfer and adoption of smart farming practices can enhance sector sustainability.

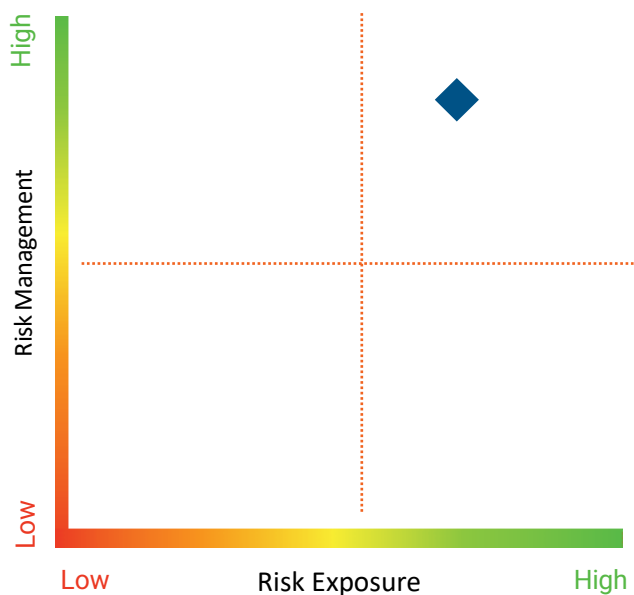
Key Highlights



Risk Dimension Analysis: Market and Economy

Risk Exposure Score: 70

Risk Management Score: 70



Inflation

- India's retail inflation accelerated to a four-month high of 5.7% in December 2023, from 5.55% a month earlier, led by an uptick in food prices that rose 9.5% nationally and breached the 10% mark for urban consumers, hitting 10.42%.
- Within the food basket, inflation picked up in pulses (20.73%), vegetables (27.6%), fruits (11.14%), and sugar (7.14%), while it was just fractionally lower for cereals and spices, which continued to record steep inflation of 9.9% and 19.7%, respectively, in December.

- Interestingly, while consumer food prices rose faster in urban areas at 10.4%, rural consumers witnessed greater inflation in some products such as cereals (10.3%), milk, spices, and sugar.
- While the efforts to control food prices are still on, the government is closely watching the prospects of rabi (winter) crops, especially wheat and pulses, which are sown around 2023 winters and will be ready for harvest closer to 2024 general elections in April-May.

Taxation

- Agricultural income is exempted from tax under the Income-tax Act, 1961. It is important to note that income from allied agricultural activities like poultry farming, wool rearing, etc. are not considered as agricultural income.
- While agricultural income itself isn't taxed, farmers might encounter indirect taxes on essential inputs like fertilizers, pesticides, and machinery. These taxes can increase overall production costs.

- In the Union budget for 2023, AgriTech industry executives called on the government to give tax rebates and subsidized loans in order to speed up private sector investment in agriculture with a view to allowing farmers to protect their crops against climate change.

Regulatory Risks

- Changes in regulations and laws affecting the industry, such as tariffs, trade policies, employment laws, financial regulations, and Foreign Direct Investment (FDI) policies, have impacted businesses.
- The government provided nearly Rs 1.71 trillion as fertilizer subsidy by January 2023, reflecting a substantial financial commitment to support the agriculture sector. The Nutrient Based Subsidy (NBS) policy for Phosphatic and Potassic (P&K) fertilizers has been instrumental in this regard, aiming to enhance agricultural productivity.

Foreign Exchange Rates

- In 2023, the agriculture and food processing sector in India faced significant impacts from foreign exchange risks. Fluctuations in exchange rates played a crucial role, influencing the prices of traded goods.
- Over-reliance on agricultural exports as a primary source of foreign exchange also posed risks, including prolonged price declines or highly volatile prices.
- The International Food Policy Research Institute (IFPRI) details the continuing repercussions of India's export restrictions on rice. The restrictions, implemented with the intention of stabilizing domestic prices, are still affecting global rice markets half a year later. A total of 521.27 Lakh Metric Tonnes (LMT) rice has been anticipated for procurement for the upcoming KMS 2023-24, up from 496 Lakh Metric Tonnes (LMT) produced during the previous KMS 2022-23.

Geopolitical Risks

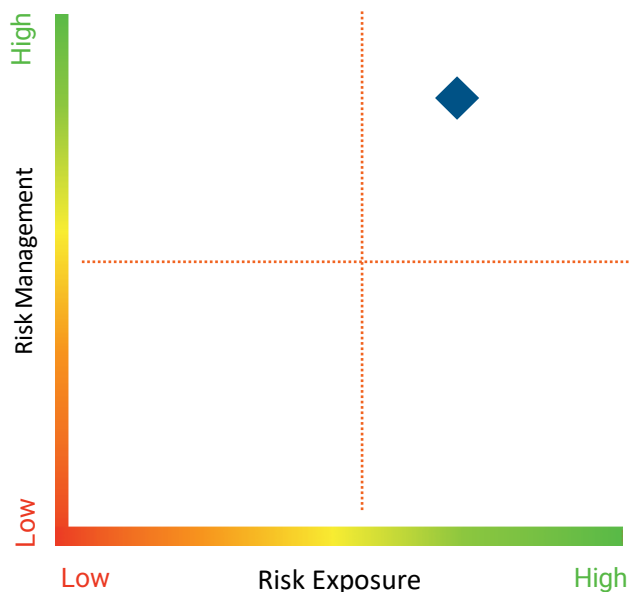
- Geopolitical crises, such as the Israel-Palestine conflict, Ukraine-Russia war, and Red Sea/Suez Canal crisis, led to inflation, changes in trade policies like export restrictions, and disruptions in production and transportation chains. These disruptions affected food prices, trade dynamics, and food security, impacting both domestic and international markets.
- Both Ukraine and Russia are major exporters of fertilizers. The war caused a global shortage, leading to a sharp increase in fertilizer prices in India, impacting production costs for farmers.
- Major disruptions in the Red Sea or Suez Canal could cause delays in global shipping, impacting the movement of agricultural products and food imports/exports for India.
- Domestic geopolitical issues within India also played a role in shaping the agriculture sector's landscape. These issues could include internal conflicts, policy changes, or regional tensions that impacted agricultural production, trade relationships, and food security within the country.



Risk Dimension Analysis: Technology

Risk Exposure Score: 60

Risk Management Score: 59



Disruptive Technology

- The increasing use of agricultural data for farm management or precision agriculture raises concerns about data privacy and ownership for farmers.
- Adopting some disruptive technologies can be expensive, potentially discouraging small and marginal farmers due to limited access to capital.
- Increased reliance on technology exposes the sector to cyberattacks that could disrupt operations or compromise sensitive data.
- New technologies require a skilled workforce. The lack of training programs for farmers and food processing workers could hinder adoption.

Innovation Risk

- The key to expanding India's transformation into a farming powerhouse is agricultural technology. India lags behind developed farming nations in agricultural technology.
- New technologies like precision agriculture, vertical farming, or advanced machinery might be expensive or require specific skills, limiting adoption by small and marginal farmers.
- Despite potential benefits, genetically modified crops (GMOs) face public skepticism and resistance in India. This uncertainty can hinder research and development in this area.
- Larger players with more resources might have been better positioned to adopt innovations, potentially widening the gap between large and small players in the sector.

Intellectual property

- Patents held by multinational corporations (MNCs) on seeds restrict farmers' ability to save seeds, a traditional practice.
- Concerns exist about the exploitation of traditional Indian crop varieties and indigenous knowledge. Companies might patent these resources without fair compensation to farmers or local communities.

- Encouraging collaboration between research institutions, universities, and food processing companies can foster innovation while managing IP concerns. This could involve joint research projects or technology licensing agreements.

Data compromise

- Precision agriculture techniques rely on collecting vast amounts of farm data, including soil health, crop yields, and weather patterns. A data breach could expose this sensitive information to unauthorized access.
- Concerns about data security could discourage farmers and processors from adopting new technologies that rely on data collection and transmission.
- Educating farmers and food processing workers about cyber threats and best practices for data security is crucial.

Counterfeiting

- Counterfeit agricultural inputs, such as pesticides and fertilizers, harm the harvest, soil, environment, and the economy of the country. The use of fake products can lead to reduced crop yields, soil degradation, environmental pollution, and economic losses for farmers and businesses involved in the sector.
- Businesses in the food industry dealing with counterfeit pesticides risk severe financial losses and damage to their reputation.
- Addressing these risks requires robust regulatory frameworks, enhanced monitoring mechanisms, public awareness campaigns, and collaboration between stakeholders to combat counterfeiting effectively.

Infringement/violation

- Improper sale, distribution, or multiplication of protected seed varieties by farmers or companies in violation of the Seed Act or PPV regulations can lead to penalties.
- Improper use or diversion of government subsidies meant for fertilizers, pesticides, or other agricultural inputs can be a punishable offense.
- Using a GI tag (e.g., Darjeeling tea) on a product that doesn't originate from that specific region is a violation of GI regulations.
- Robust quality control measures in food processing can help minimize the risk of FSSAI violations.

R&D/ Innovation failure

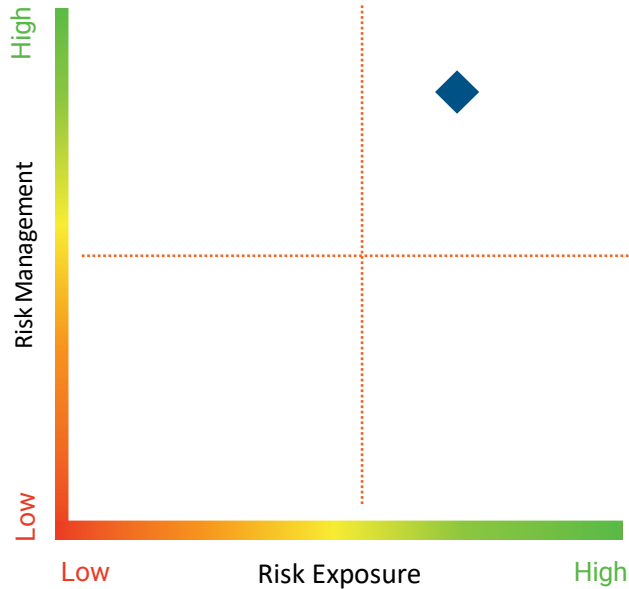
- The budget of Department of Agricultural Research & Education (DARE) has increased from Rs. 7846.17 crores in 2019-20 to Rs. 9504 crores in 2023-24.
- The absence of adequate investment in R&D and innovation poses a threat to the long-term growth potential of the agriculture and food processing sector in India. Without sufficient focus on research and innovation, the sector may struggle to adapt to changing market demands, technological advancements, and sustainability requirements.



Risk Dimension Analysis: Operational and Physical

Risk Exposure Score: 68

Risk Management Score: 72



Accidents/Fire Safety

- Tractor overturns, entanglement with equipment, and improper use of machinery can lead to serious injuries or fatalities for farmers.
- Accidental exposure to pesticides, herbicides, or fertilizers can cause health problems like skin irritation, respiratory issues, or even poisoning.
- Food processing often involves flammable liquids, gases, or dusts, increasing the risk of fire outbreaks.

- Encouraging the use of personal protective equipment (PPE) like gloves, goggles, and respirators can minimize risks associated with farm work and hazardous materials.

Strikes/Closure/Unrest

- The Delhi Chalo protest was announced in December 2023 demanding a legal guarantee of MSP, implementation of the Swaminathan formula etc. As this protest serves as a reminder of the farmers' protest that continued for a year on Delhi borders forcing the government to withdraw three farm laws, a lot has changed in the farmers' unions.
- Labor unions in food processing units might strike over issues like wages, benefits, job security, or working conditions, leading to production stoppages.
- Open communication and negotiation between farmers/workers, industry representatives, and the government can help resolve disputes and prevent strikes.

Supply Chain Risk

- The Indian agriculture and food processing sector faces a complex web of supply chain risks that can disrupt operations and impact food security. Droughts, floods, and extreme heat can damage crops, leading to shortages of raw materials for food processing.
- Congestion at ports, disruptions in transportation due to strikes or infrastructure issues, and a shortage of trucks can delay the movement of agricultural produce and processed food.
- Seasonal variations in agricultural production, coupled with fluctuating consumer demand, can lead to price volatility for both raw materials and processed food products.
- Approximately \$14 billion worth of crops are wasted annually in India due to inadequate cold chain facilities and disorganized logistics in 2022-23.

Environmental Risk

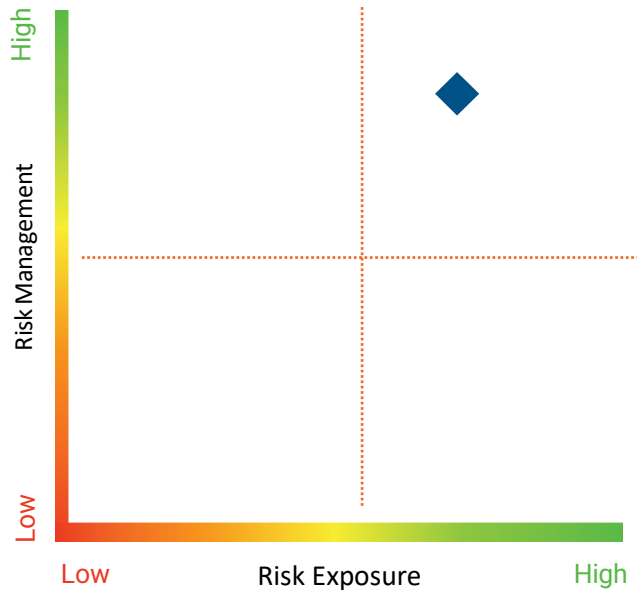
- Climate change posed a substantial risk to food security in India by influencing food production, costs, and overall security. Extreme weather conditions, such as excessive heat or water scarcity, could impede crop growth, reduce yields, impact irrigation practices, soil quality, and disrupt the ecosystem crucial for agriculture.
- Over-reliance on groundwater for irrigation due to inadequate water management practices can deplete water resources, impacting agricultural productivity in the long run.
- Excessive use of chemical fertilizers and pesticides, along with improper tillage practices, can lead to soil erosion, loss of fertility, and reduced crop yields.
- Agricultural practices like burning crop residue and use of nitrogen-based fertilizers contribute to greenhouse gas emissions, impacting climate change.



Risk Dimension Analysis: Crime and Security

Risk Exposure Score: 53

Risk Management Score: 54



Cyber-crimes

- Cybercriminals might target vulnerabilities in the interconnected supply chains of the sector, disrupting operations or compromising the integrity of food products.
- Deceptive emails or messages designed to trick farmers or food processing workers into revealing personal information or clicking on malicious links that can infect their devices with malware.
- Implementing robust cybersecurity measures like firewalls, data encryption, and regular backups can minimize vulnerabilities.

Executive threat/Impersonation

- Fraudsters impersonate senior executives (CEO, CFO) via email and trick employees into making unauthorized transactions or disclosing sensitive information.
- Scammers use social media or phone calls to manipulate employees into revealing confidential information or granting access to systems.
- Implementing MFA for email access, financial transactions, and other sensitive systems adds an extra layer of security. Establishing clear verification protocols for email communication, especially regarding financial transactions, can help prevent fraudulent activity.

Physical violence/abuse

- Laborers in food processing units, especially women and migrant workers, might be vulnerable to verbal or physical abuse, unfair working conditions, or withholding of wages.
- Conflicts over land ownership or inheritance can lead to violent clashes between farmers, families, or communities. Physical or verbal abuse towards workers by supervisors or colleagues can occur in some food processing units.
- Migrant workers in food processing units, especially women and children, can be particularly vulnerable to physical abuse and exploitation.

Harassment/Bribing

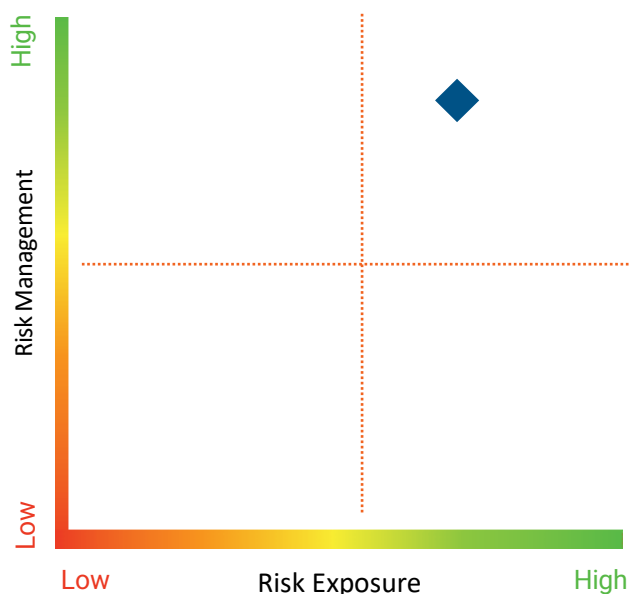
- Small and marginal farmers might face harassment from intermediaries, commission agents, or local authorities while selling their produce. This can include demands for unfair commissions, pressure to accept lower prices, or threats to delay payments.
- Supporting the formation of farmer producer organizations (FPOs) and strengthening labor unions can empower farmers and workers to collectively address issues of harassment and exploitation.



Risk Dimension Analysis: Natural Hazard and Event

Risk Exposure Score: 64

Risk Management Score: 62



Natural Hazards:

- The year 2023 has broken all existing records for the highest temperatures recorded on our warming planet and episodes of extreme floods, storms, droughts, wildfires, and pest and disease outbreaks are becoming daily features in global headlines.
- To address these risks effectively, it is crucial for the agriculture sector to focus on building resilience against natural hazards. Disaster risk reduction strategies need to be integrated into national agriculture development plans to reduce losses, protect food security, and enhance the resilience of vulnerable populations.

Pandemic and other global epidemic diseases

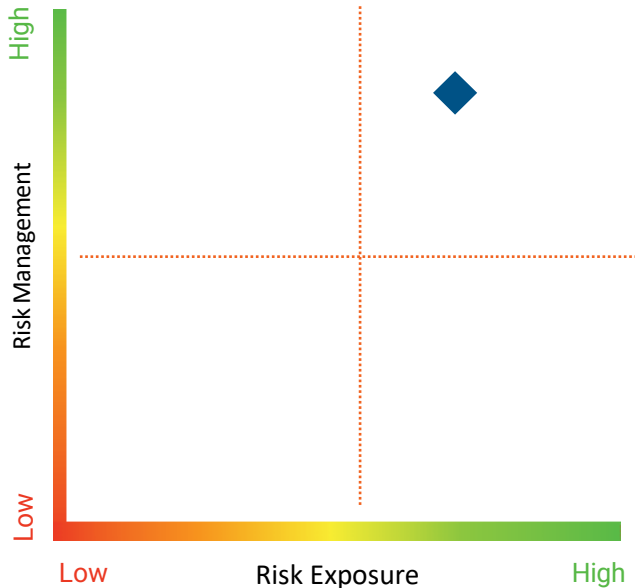
- Diseases like COVID-19 can impact the workforce in both agriculture and food processing, leading to labor shortages and disruptions in production and processing.
- Outbreaks of diseases like Avian Influenza (bird flu) or Foot and Mouth Disease (FMD) can devastate livestock populations, impacting meat and milk production. Emergence of new plant diseases or the spread of existing ones can significantly reduce crop yields, affecting food availability and prices.
- Pandemics can cause significant economic losses for farmers, food processors, and the nation as a whole due to lost production, disrupted supply chains, and increased operational costs.



Risk Dimension Analysis: Strategic Risk

Risk Exposure Score: 59

Risk Management Score: 64



Resource scarcity and/or misutilization

- The misutilization of resources in the agriculture and food processing industry can lead to inefficiencies, wastage, and environmental degradation. Inefficient use of water, land, energy, and other resources can not only impact productivity but also contribute to sustainability challenges within the sector.
- Conducting business impact analyses, identifying areas of exposure, and employing risk management tools are essential steps to mitigate the impacts of resource scarcity and misutilization. Embracing technologies like machine learning and artificial intelligence can aid in optimizing resource use and enhancing operational efficiency.

Soil Degradation

- Soil degradation is a pervasive and urgent issue affecting sustainable agriculture in tropical India. The agriculture sector is frequently impacted by soil loss, leading to unproductive soil and reduced crop yields.
- The lowered crop yields and productivity is associated with high external input usage, declining profits, changing cropping patterns, and soil-use intensity.

Public Sentiments

- Public perception of the agriculture and food processing industry in India can be significantly impacted by various factors, leading to potential risks in 2023.
- Farm union leaders are seeking guarantees, backed by law, a minimum support price (MSP) for crops.
- The government announces support prices for more than 20 crops each year to set a benchmark, but state agencies buy only rice and wheat at the support level, benefiting around just 7% of farmers.
- News of farmer suicides due to debt or financial problems can evoke negative public sentiment towards agricultural practices and government policies.

Failed/ Hostile M&A

- Complex regulations governing land ownership, food safety standards, and environmental permits can create unexpected roadblocks during integration, causing deals to fall apart.
- The presence of small and dispersed farmers and processors can make integrating supply chains post-merger a logistical nightmare, impacting efficiencies.
- Hostile bids can drive up the price of agricultural commodities, impacting the profitability of the target company and potentially the entire sector. It can create anxiety and uncertainty among farmers who might be concerned about the future of their land and livelihoods.

ICICI LOMBARD: Key Solution Offerings



Property

Evaluation of various risks to understand areas for improvement, such as fire preparedness, electrical safety, safety & emergency preparedness, maintenance and house-keeping, etc. By evaluating risks, we can identify potential hazards and advise on mitigating risks.

- **Property Loss Prevention:** We believe users should carry out detail risk visit followed by benchmarking of the industry good practices (Industry Risk Profiling). For instance, industries such as chemicals & petrochemicals impose a major challenge in manufacturing due to inherent risk. We recommend solutions for “Low Focus - High Loss Areas. This can help in minimizing severity losses. All the risk recommendations are grouped into four different segments based on cost-impact matrix and the priority is decided accordingly. Key decision makers at user’s end can ensure to get recommendations implemented.
- **Comprehensive Risk Assessment (CRA):** A Comprehensive Risk Assessment is a systematic approach to electrical safety specially designed for industries to evaluate potential hazards and recommend improvements, coupled with savings. It is an important tool for identifying risks, severity of hazards and avoid incidents arising out of electrical faults.
- **Electrical Risk Assessment (ERA):** An Electrical Risk Assessment is a basic solutions focused towards electrical safety designed to evaluate potential hazards and recommend improvements. Majority of fires in India are caused due to electrical installations. Ensuring safety of electrical installations of industrial unit or organization is critical to reduce risk and ensure safety compliance with Safety Standards and Regulation. ERA is an important tool which have 6 inbuilt activities such as Electrical Audit & Thermography built in with other such solutions.
- **Fire Hydrant IoT:** Fire hydrant monitoring is an automated solution that monitors key parameters such as Hydrant and Sprinkler line pressure, Main and Jockey pump on-off status. These can be interpreted to provide intelligence on unauthorized usage of water and leakage. This information pertaining to breach of above mentioned parameters is notified through dashboard & email alerts. Monitoring of such system is essential as these fire fighting systems are lifeline during any emergency.
- **Temperature & Humidity IoT:** Provides end to end plug & play ambient temperature and humidity monitoring Solution to manage temperature and humidity-controlled environment more efficiently. It generates - Automated reports (historical trends for different locations etc.). Intelligent Alerts - SMS & emails is sent to the concerned (one or multiple) stakeholders in case any anomaly.
- **Electrical IoT:** Electrical IoT is a patented solution (ILGIC Patented Solution) to avoid any instances of short circuiting due to abnormal voltage & current conditions. These are mainly built for application in warehouses. This solution has been created as these locations are having huge stocks with lesser manpower during emergencies mainly during non-business hours. The device automatically cuts off power in case of abnormality & restarts back when situation is normal.

- **Ultrasound technology for Gas Leak Detection:** Use of ultrasound technology for leak detection in process lines. The methodology recommends a non-destructive way of avoiding losses with no downtime. The main objective is to identify the leakages in all pressurized systems including pipelines by using ultrasound technology and tag them for rectification. It also includes listing leaks with individual CFM losses and cost savings possible. The outcome of the exercise will help the plant maintenance team to rectify the leaks and reduce the energy cost. This will also improve the process parameters and production quality.
- **Fire Mitigation Solutions:** Solutions have been designed based on their specific needs, keeping in mind the level of awareness and complexity of the location. These best in class solutions which are installed at correct places by risk assessors.
- **Renewable Solutions:** In line with our philosophy for recommending business solutions, we recommend advise on efficiency measurements for wind and solar power generating assets. Drones are used to provide high accuracy and the quick reach which is not possible through any traditional methodology. User get to know about the low performing module and ways to improve the same within the entire solar plant with latlong identification. We recommend advanced drone-based technology for inspection of wind turbines and solar PV modules.



Marine

In the dynamic realm of marine insurance, cargo faces a myriad of risks, from unpredictable weather conditions to unforeseen accidents, safeguarding against potential challenges at sea is paramount.

- **MLCE (Marine loss control engineering):** Frequent occurring losses due to Peril such as accident, wet damage, theft, non-delivery, pilferage, hijack of consignments, mishandling shall be examined with ground inspections, root cause analysis with MIS, claim assessment reports.
- **Technical engagements:** Uncertainty of the risk associated with the transit can be concluded with marine experts. Risk assessment of cargo from packing, handling, lifting, securing, transit and final delivery methodology shall be discussed with the logistics team. Vessel selection, stowage and securing methods can be jointly discussed with the User's logistics team for a safe transit, dispatch and delivery coverage after assessing the risk on desktop with a virtual or F2F engagement and / or a ground visit.
- **Transit Telematics:** With the government's constant agenda of upgrading to digitalized operations by introducing ULIP and NITI Aayog mode of operations, not having a visibility of transit will hamper your logistics operations. IOT and SAAS based products incorporating the design of a cost efficiency and loss mitigation system can help enhance delivery with safe operation. Additionally, a 24*7 risk control station and detailed post hijack recovery case studies is recommended to effectively monitor and mitigate theft / pilferage prone dispatches and ensure a safe transit delivery. Be it a temperature-controlled cargo, expensive cargo in transit or liquid bulk cargo in lorry tankers, it is essential to mitigate the risk and losses that might occur due to accidents caused by fatigue, unexplained conditions, or theft.



Liability

The growing adoption of technology in organizations has not only led to crucial data being stored and processed on digital platforms but also facilitated the automation of operations, thereby enhancing business efficiency. However, this shift also amplifies cyber risk, exposing sensitive information to potential threats and rendering organizations vulnerable to financial losses, reputational damage, and legal liabilities. As organizations delve deeper into the digital realm, fortifying cybersecurity measures becomes imperative to safeguard operational integrity and protect critical data from unauthorized access or breaches.

- **Phishing Simulation:** Experience cutting-edge phishing simulation tests to fortify your organization's defenses against cyber threats. You can enable phishing attack simulations to educate your employees on identifying and handling potential risks. Through engaging and interactive scenarios, you can raise awareness and equip your team with the necessary skills to detect and thwart phishing attempts.
- **Awareness Campaigns:** With Cyber Awareness Campaigns, you can go beyond just educating organizations about cybersecurity. The campaigns are meticulously designed to empower your team with essential best practices, insights into global incident trends and a comprehensive understanding of potential risks. Interactive designs help you captivate and engage your employees, fostering a cyber-aware culture within your organization. Customized campaigns can perfectly align with your unique needs and requirements and stay informed and vigilant.
- **Incident Response and Readiness:** A bespoke service that fortifies organizations with robust processes and clear communication channels for proficient cyber-incident management. This recommendation not only trims down the incident response time but also facilitates prompt, accurate action within the crucial initial hours. By meticulously assessing your organization's incident response policies and sculpting response systems in alignment with global industry benchmarks, this ensures you are thoroughly prepared to tackle the evolving digital threat landscape.
- **CXO's Session:** CXO's Session service provides immersive training sessions, personalized coaching & interactive discussions to empower your CXOs with cybersecurity knowledge that aligns with your business objectives. The subject matter experts recommend strategic guidance and in-depth insights into the ever-evolving threat landscape, translating technical jargon into practical language. Regular cybersecurity forums facilitate peer-to-peer learning and benchmarking against industry standards. CXO- focused approach ensures a cyber-aware leadership team that drives your organization's success securely into the future.
- **Weekly Threat Intelligence Bulletin:** Stay ahead of cyber threats with the Weekly Threat Intelligence Bulletin. We meticulously curate this comprehensive bulletin, providing timely insights on emerging threats, vulnerabilities, and attack trends. Delivered directly to your inbox, it recommends proactive advantage by promptly identifying potential risks. With continuous updates and ongoing support, you can confidently adapt your Defence strategies to combat the most sophisticated threats. It enables you to make informed decisions and protect your organization from emerging threats with Weekly Threat Intelligence Bulletin.
- **Email Security:** Safeguard your organization's communication channels with the Email Security

solutions. We recommend robust measures to protect against phishing, malware & other email-borne threats. The advanced email filtering and authentication technologies prevent malicious emails from reaching your users inbox. Implementing encryption protocols to ensure the confidentiality of sensitive data in transit is a good idea. With real-time monitoring and threat intelligence, email security measures provide proactive Defence, detecting and blocking suspicious activities promptly. You can protect your organization's reputation and sensitive information with comprehensive Email Security measures, ensuring a secure and reliable email environment.

- **Agent-less Patching:** Agent-less patching platform for companies and MSMEs who want a rapid solution to distribute critical security updates and vulnerability fixes without causing system downtime. The patching platform not only assists with patch deployment, but it also enables your system administrator in understanding the patches, Adjustments & impact of the patches on the system. Before applying the patch, the software generates a warning if the system requires downtime or a reboot. You can experience a hassle-free patching process with the platform recommending enhanced security for your organization.
- **EDR/MDR Services:** Elevate your organization's cybersecurity capabilities with the Endpoint Detection and Response (EDR) and Managed Detection and Response (MDR) services. These advanced solutions provide continuous monitoring, rapid threat detection & effective incident response, safeguarding your digital assets in real-time. With EDR, proactively detect and respond to threats at the endpoint level, while MDR service offers 24/7 monitoring and expert support. You can strengthen defenses against the most sophisticated cyber-attacks with EDR/MDR services, ensuring a resilient and secure digital environment.
- **All-in-one Operating System:** All-in-One Operating System is a true game-changing platform that provides a fortified desktop environment to foster secure collaboration and centrally managed cybersecurity resilience. Inbuilt endpoint security serves as a vigilant guard, blocking potential dangers. Effortless IT management provides with a user-friendly interface, leading to significant cost savings in IT infrastructure. It provides in-built end-point security, automated updates and patches along with extensive device reports. Organizations can unlock a secure and prosperous future by embracing the All-in-One Operating System in their IT infrastructure.
- **Cyber Risk Management & Compliance Dashboard:** Gain a clear understanding of your organization's cyber risk exposure with Cyber Risk Management & Compliance Dashboard. This powerful tool assesses your risk posture, quantifies potential financial Impact & evaluates compliance with industry standards and regulations. Armed with this information you can make informed decisions to prioritize cybersecurity investments and ensure compliance with relevant laws and regulations. The intuitive dashboard provides a comprehensive view of your cybersecurity performance enabling data-driven decision-making. This solution enables organizations to stay ahead of threats and ensure a resilient cybersecurity posture.
- **Security Score Card:** Track your organization's cybersecurity performance with a dynamic Security Score Card solution. This comprehensive rating provides a clear overview of your security posture, highlighting areas that require attention and improvement. It empowers data-driven decisions, allowing you to focus on strengthening key areas. Identify potential risks and compliance gaps with industry standards and regulations. With actionable insights, you can prioritize cybersecurity investments effectively, ensuring a robust and resilient Defence against cyber threats. This Security Score Card solution can be your strategic tool to proactively elevate your cybersecurity posture.

- **VAPT:** Enhance your organization's cybersecurity defenses with the Vulnerability Assessment and Penetration Testing (VAPT) service. Skilled professionals conduct rigorous assessments, simulating real-world attacks to identify potential vulnerabilities in your digital infrastructure. With detailed insights, you can fortify your defenses and proactively address weak points before malicious actors exploit them. This service goes beyond identifying vulnerabilities, you also get actionable recommendations to mitigate risks effectively. Organizations can be one step ahead of cyber threats, ensuring the security and resilience of your critical assets with the comprehensive VAPT service.

Engineering

In engineering risk management, it's vital to adopt a holistic approach that extends beyond immediate concerns to proactively tackle potential risks and uncertainties. Drawing upon considerable expertise in claims handling and risk evaluation, a robust and customized protection strategy can be ensured. Construction endeavors face a myriad of risks such as floods, cyclones, impact damage, fires, theft, and collapse. However, the adverse effects of these risks can be mitigated through the implementation of extensive loss prevention measures specifically tailored for engineering projects.

- **Engineering Loss Prevention Exercise (ELP):** To effectively manage losses in Engineering Risk, fostering a culture of loss prevention is crucial. It's widely acknowledged that each construction project is distinct, presenting specific challenges related to geography, geology, occupancy, and construction methodology, which in turn result in unique associated risks. To cater this challenge a specific risk management framework which deals about the unique requirement of each project could be created for the loss minimization with reference to some parameters of distinctive research and industries best practices.
- **Drone Solutions:** In recent years, the construction industry has undergone significant changes due to the introduction of drone-based construction solutions. These cutting-edge technologies are transforming the planning, design, and execution of construction projects. A major benefit of drone technology in construction is its capacity to conduct aerial surveys, providing extensive coverage and detail. Drones, equipped with advanced cameras and sensors, can rapidly capture precise images and data, offering project managers valuable insights into site conditions. This data can facilitate project planning, cost estimation and design optimization by providing a comprehensive understanding of the project's parameters.
- **CPM - Fleet & Fuel Management:** An advanced GPS-equipped sensor is available to precisely measure direct fuel consumption, evaluate engine efficiency, and detect potential tampering of diesel engines in both mobile vehicles and stationary machinery. This solution enables real-time alerts for service reminders and critical health issues, facilitating prompt resolutions and enhanced utilization. Additionally, it offers valuable insights into machinery and equipment performance through comprehensive analyses, resulting in optimized inventory usage and increased efficiency.

A small icon of a heart with a white pulse line running through it.

Health

We highly recommend exploring proactive and preventive healthcare solutions, which can make a significant difference in maintaining good health. Recognizing that majority of in-patient department (IPD) admissions could be prevented with timely interventions and regular healthcare, it is important to focus on health, not just during illness.

- **Pioneering Digital Platform:** We recommend exploring digital health innovations offered by industry leaders, which provide cutting edge health solutions through the IL TakeCare (ILTC) app. Our platform has transformed the way health services are delivered by introducing a fully digital and cashless Outpatient Department (OPD) and Wellness Program.
- **Health Advisory Services:** We recommend a suite of health advisory services on the IL TakeCare app. Users can access health risk assessments, diet and exercise trackers, health parameter tracking and trends and sleep, meditation & hydration reminders. In addition, the platform recommends a feature to upload health records up to 1GB, and provides informative health blogs.
- **IL TakeCare App:** IL TakeCare app is a One-Stop-Solution for users with insurance needs. This robust user engagement is a testament to the high-value features that the app provides. Unique to the app is the innovative self-health assessment feature, which includes Face scan technology that can measure blood pressure, heart rate, cardiac variance, and SpO2 levels. The platform provides seamless teleconsultations with medical practitioners and specialists, and even recommends access to mental wellness experts to the insured. The facility for cashless OPD services and the efficient claim settlement process further enhance user experience. By encapsulating a wide range of state-of-the-art health services and solutions, the IL TakeCare platform revolutionizes corporate health management and serves as a comprehensive digital health solution.



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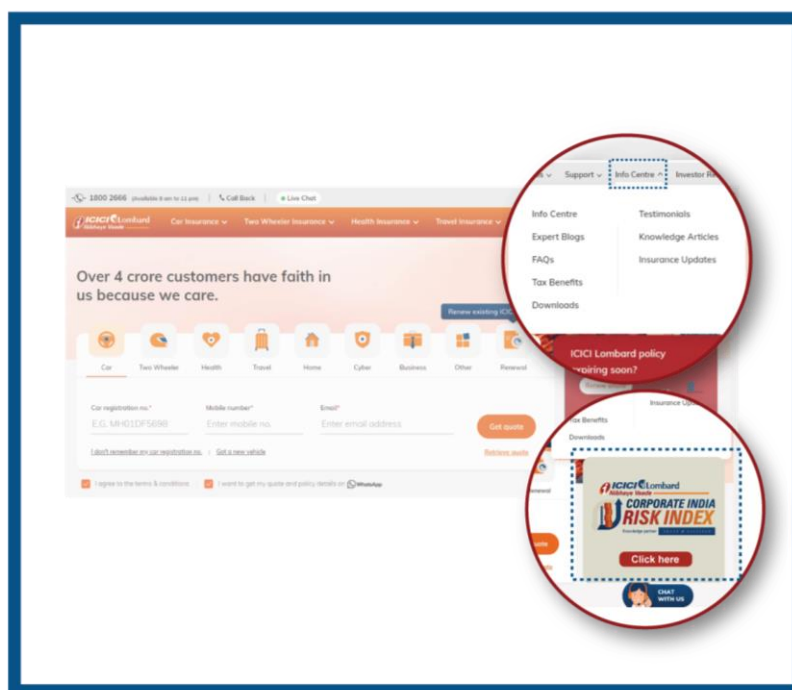
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