



CORPORATE INDIA RISK INDEX

2023

Intelligence partner

FROST & SULLIVAN

SECTOR REPORT 2023

PHARMACEUTICALS



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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 Indian pharmaceutical industry stands as a global leader, often hailed as the 'Pharmacy of the World.' By 2023, it anticipated surpassing the 1,00,000 crore mark in the global pharmaceutical market, with India ranking third in production by volume and fourteenth by value. Notably, India contributed significantly to the global biotech and pharmaceutical workforce, securing the second-largest position. The sector experienced robust growth in FY23, reaching 409,689.4 crores, driven by segments like Generic drugs, OTC Medicines, API/Bulk Drugs, Vaccines, Contract Research & Manufacturing, and Biosimilar & Biologics. India's dominance in vaccine production was evident, accounting for 60% of global production and fulfilling up to 90% of the WHO demand for critical vaccines.

Despite these achievements, the industry faces multifaceted risks, necessitating strategic management. Market and economic factors, including taxation policies and regulatory hurdles, pose challenges to sustained growth. Technology-driven risks, such as disruptive innovations and cybersecurity threats, underscore the need for robust cybersecurity measures. Crime and security threats, including counterfeiting and cybercrimes, jeopardize public health and industry revenues, demanding vigilant monitoring and enforcement. Geopolitical tensions and natural hazards further complicate risk management efforts.

In navigating these risks, innovation and reinvention are crucial. The industry must transition from volume to value leadership amidst pricing pressures in global markets. Collaborative efforts, regulatory compliance, talent development, and technological advancements will be pivotal in ensuring the industry's resilience and sustained growth trajectory. With the pharmaceutical sector expected to reach INR 5.3 lakh crores by 2024 and INR 10 lakh crores by 2030, strategic risk management will be imperative for unlocking its full potential and maintaining its status as a global powerhouse.

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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

- **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 and 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. 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 / Improper utilization / 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

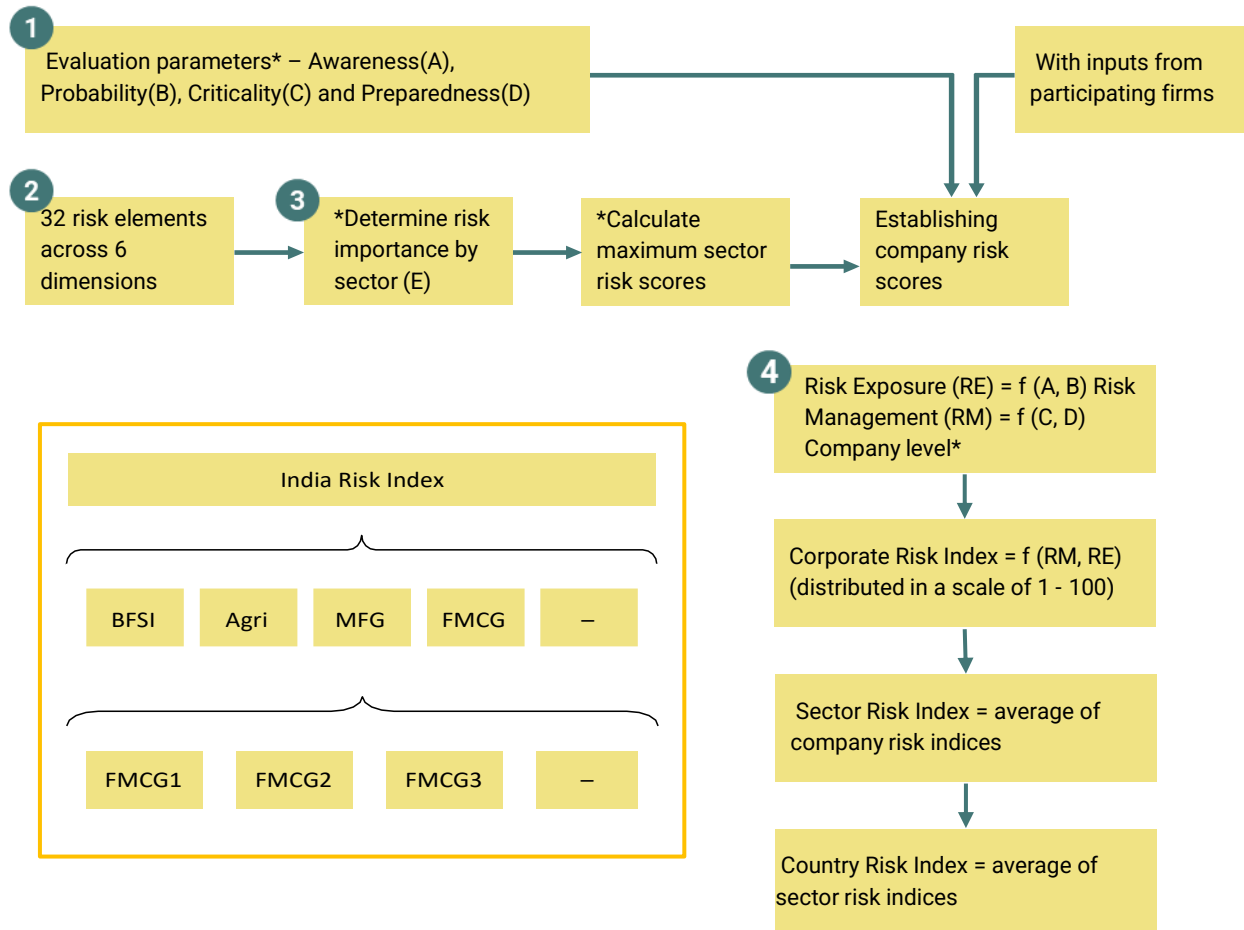


Figure 1: Risk Assessment Approach

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

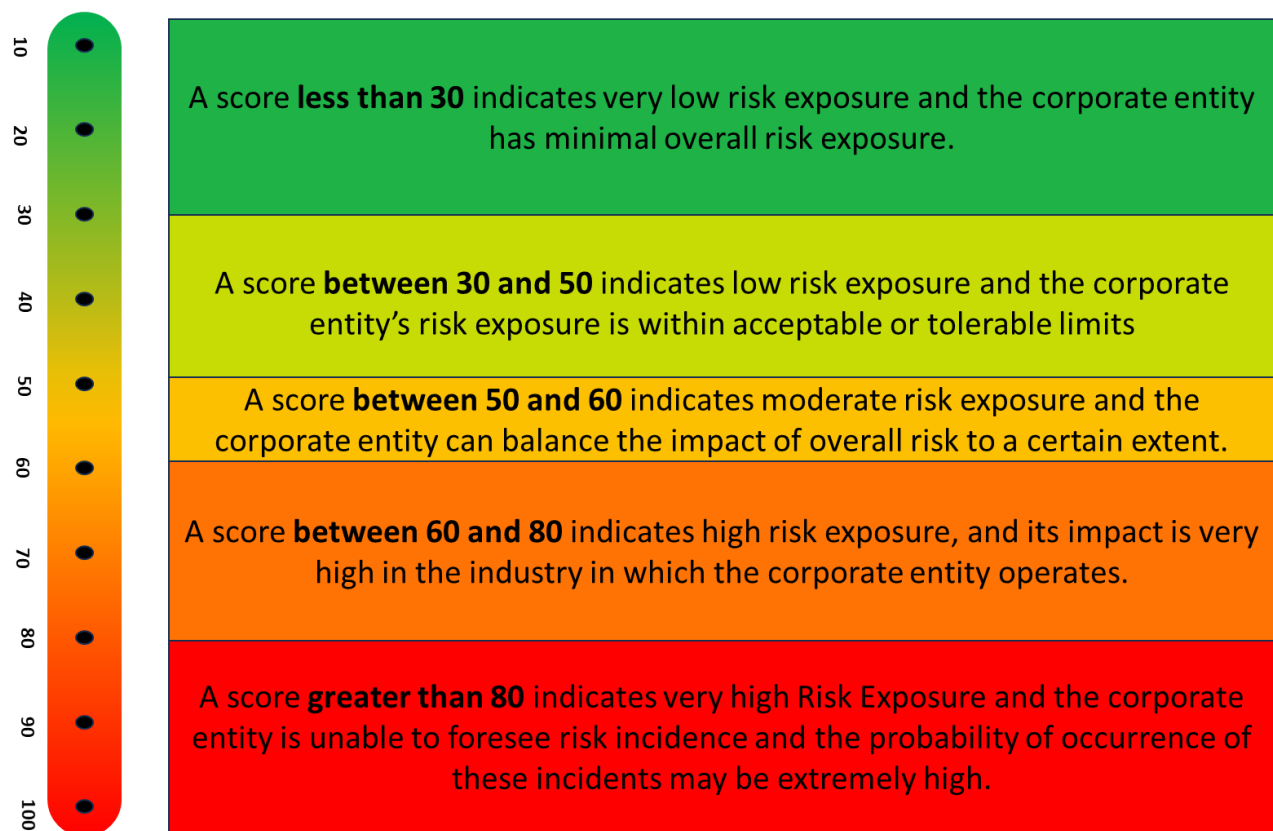
We have selected 20 sectors to understand the current stand of our country today in terms of risk. Risk for various sectors is measured on the risk exposure scale and risk management scale.

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.

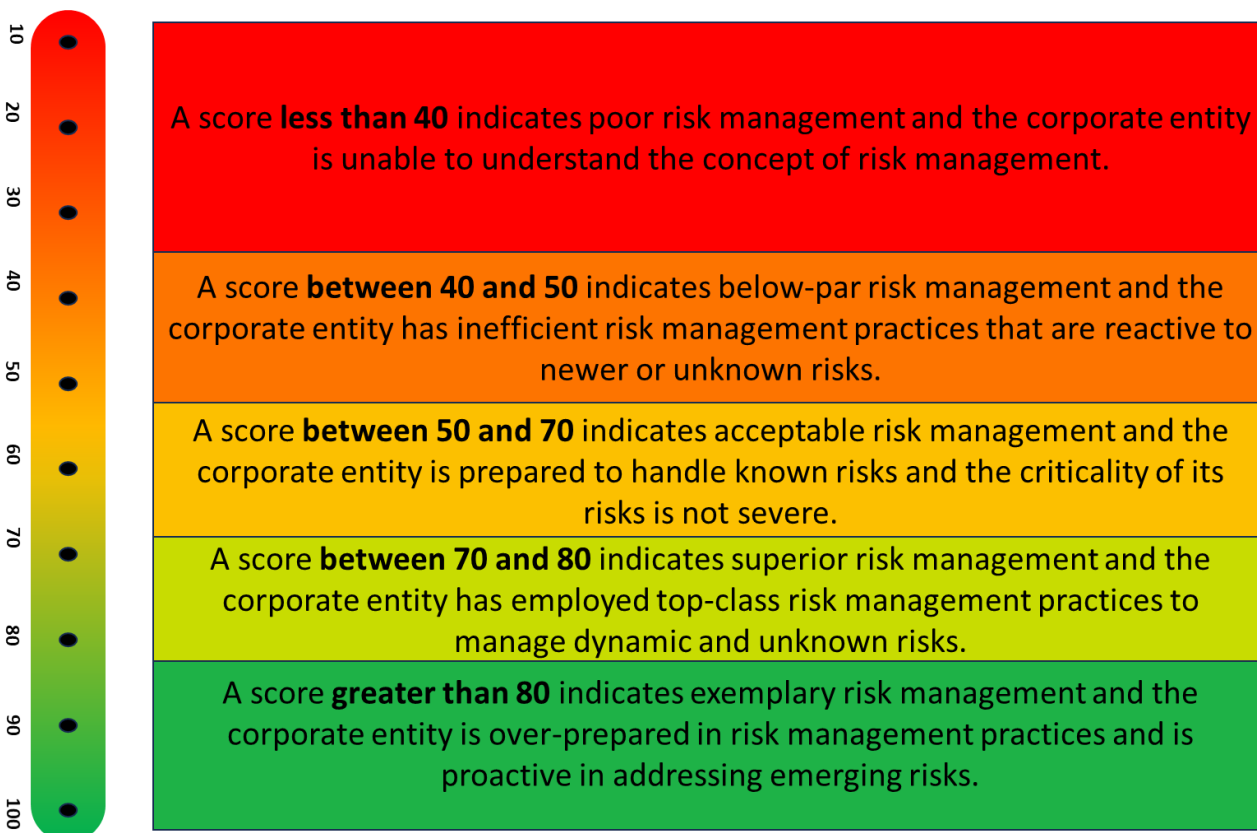


B. ICICI Lombard Corporate Risk Management – Scale

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.

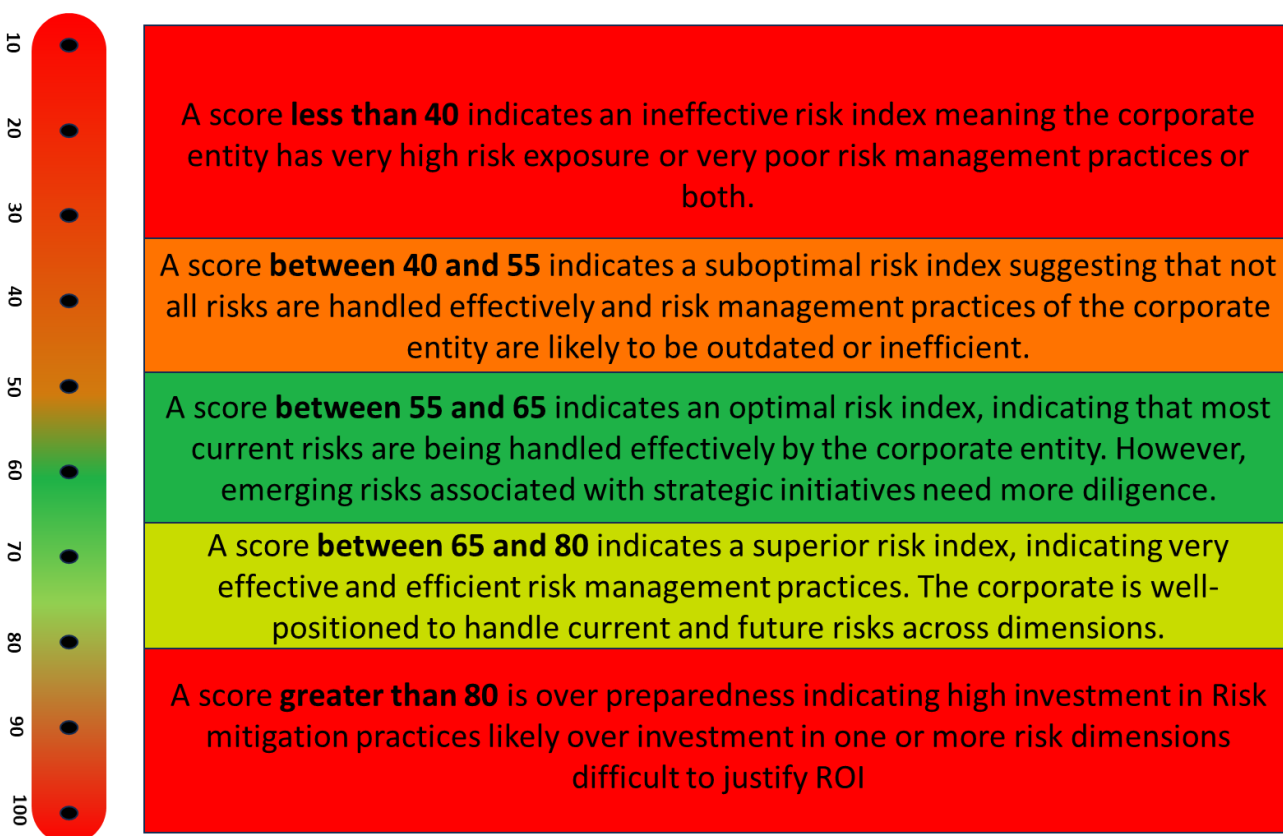
Let's look at the risk management scale.



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, block chain, 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 block chain-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:

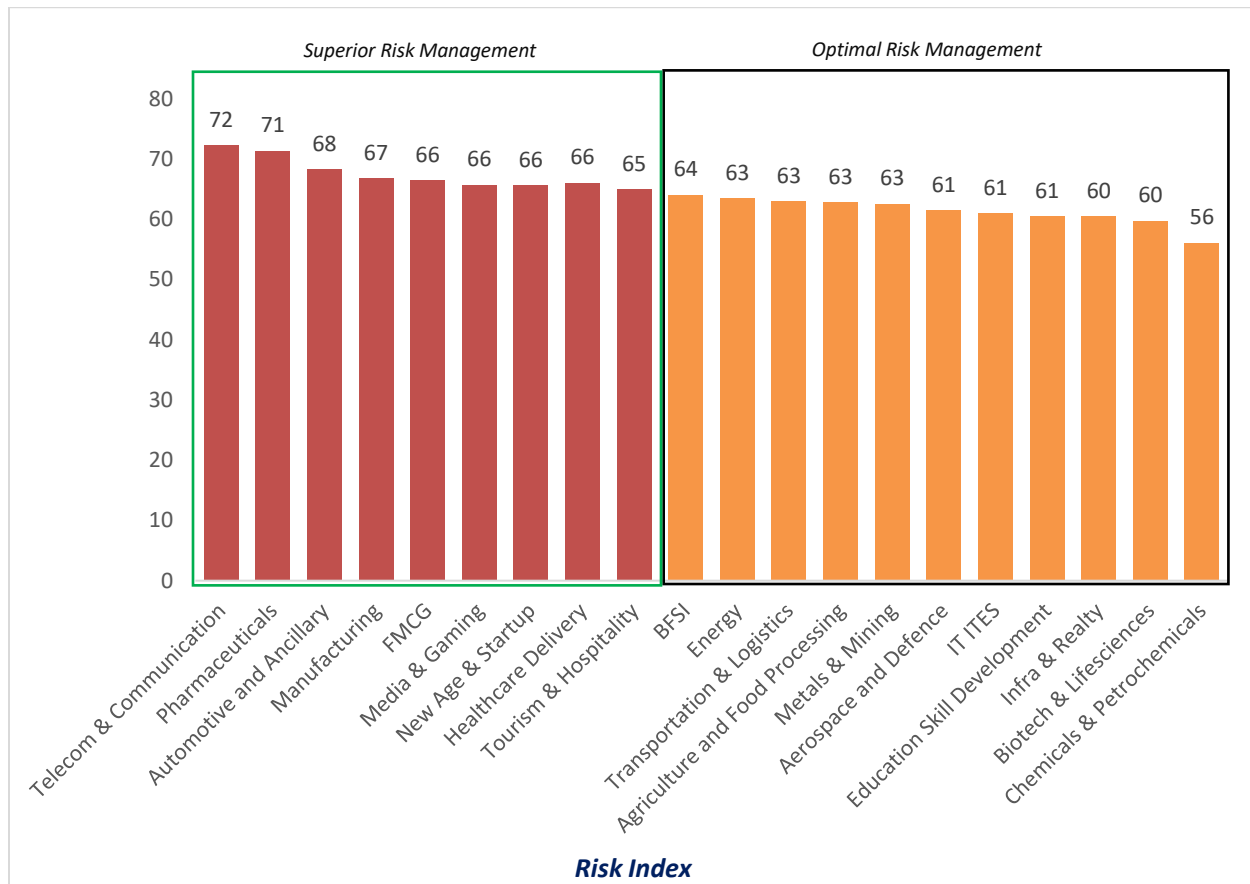


Figure 3: Corporate India Risk Index 2023 Sector Score

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.

Pharmaceutical Sector Insights 2023

India is one of the biggest suppliers of low-cost vaccines in the world. Because of the low price and high quality, Indian medicines are preferred worldwide, rightly making the country the 'Pharmacy of the World'. In 2023, the global pharmaceutical market was anticipated to surpass the 1,00,000 crore mark, with India holding the esteemed position as the third-largest producer by volume and fourteenth by value. Notably, India stood as the second-largest contributor to the global biotech and pharmaceutical workforce, reflecting its significant role in shaping the industry's landscape.

In FY23, the Indian pharma market saw year-on-year growth of nearly 5%, reaching 409,689.4 crores. with major segments being Generic drugs, OTC Medicines and API/Bulk Drugs, Vaccines, Contract Research & Manufacturing, Biosimilar & Biologics. India currently accounts for 60% of global vaccine production, contributing up to 70% of the WHO demand for Diphtheria, Tetanus and Pertussis (DPT) and Bacillus Calmette–Guerin (BCG) vaccines, and 90% of the WHO demand for the measles vaccine. The largest number of FDA-approved plants outside the US is in India.

The nation is the largest provider of generic medicines globally, occupying a 20% share in global supply by volume, and is the leading vaccine manufacturer globally. India also has the highest number of US-FDA-compliant Pharma plants outside of the USA and is home to more than 3,000 pharma companies with a strong network of over 10,500 manufacturing facilities as well as a highly-skilled resource pool. Up to 100%, FDI was allowed through automatic route for Greenfield pharmaceuticals projects. For Brownfield Pharmaceuticals projects, FDI allowed up to 74% through automatic route and beyond through government approval. Indian pharma companies had a substantial share of the prescription market in the US and EU. Along with this, the Market size of the Indian pharmaceuticals industry is expected to reach INR 5.3 lakh crores by 2024, and INR 10 lakh crores by 2030, paving the way forward for the Indian Pharma Industry.

However, amidst these achievements lie various risk dimensions that demand attention. Market and economic factors, including inflationary pressures, taxation policies, and regulatory hurdles, pose challenges to sustained growth. Moreover, technology-driven risks, such as disruptive innovations and data compromise, along with cyber security threats highlight the industry's vulnerability to cyber threats and the imperative for robust cybersecurity measures. Crime and security threats, ranging from counterfeiting of drugs to cybercrimes and terrorism, add layers of complexity to risk management efforts.

The proliferation of counterfeit drugs not only jeopardizes public health but also undermines industry revenues, necessitating vigilant monitoring and enforcement measures. Additionally, geopolitical tensions and terrorism risks may disrupt business operations and supply chain logistics, underscoring the importance of contingency planning and risk mitigation strategies. Natural hazards and events, including the impacts of climate change, pose further challenges to the pharmaceutical industry. Finally, strategic risks such as negligence in regulatory compliance and talent scarcity underscore the importance of fostering a culture of compliance and talent development to navigate evolving industry landscapes successfully.

In navigating these multifaceted risks, Reinvent and Innovate will be the key mantra for the Indian pharma industry in the New Year as the 'pharmacy of the world' looks to move from volume to value leadership, amid emerging challenges of inflation and pricing pressures in the global markets. The Indian pharmaceutical industry is an important contributor to the Indian economy and one of the largest pharmaceutical industries in the world. However, this industry faces several risks that can significantly impact its operations, profitability, and growth.

Pharmaceutical Sector Risk Index 2023 Vs 2022

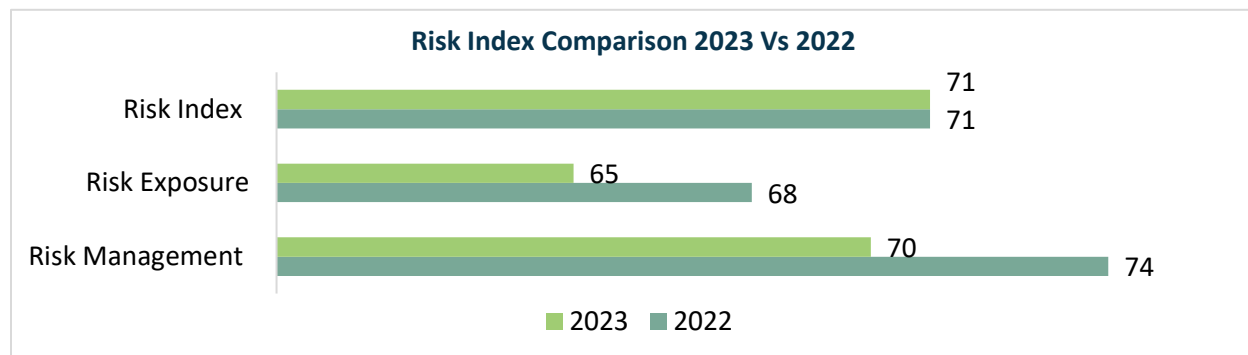


Figure 4: Detailed Comparative Analysis 2023 Vs. 2022

Pharmaceutical Sector Risk Index 2023 vs 2022

The pharmaceutical sector's risk index in India remained flat at 71 in 2023, compared to 2022, showing no significant change from the previous year. Several factors influenced this steadiness. The market and economic risks saw a slight improvement, signaling economic recovery post-pandemic disruptions. Conversely, operating and physical risks increased, likely due to ongoing challenges such as infrastructure shortages and worker safety concerns. Technology risks remained constant, showcasing the sector's resilience in leveraging technological advancements.

Crime and security risks showed a minor increase, suggesting heightened concerns around cybersecurity and regulatory compliance. Natural hazard risks saw a marginal rise thus indicating a heavy preparedness in this aspect. Notably, strategic risks decreased significantly, reflecting potential adjustments in long-term planning and risk mitigation strategies within the pharmaceutical industry. Overall, the sector's consistent Risk Index amidst these dynamic changes underscores its adaptability and proactive risk management approach.

Pharmaceutical Sector Risk Exposure 2023 Vs 2022

In 2022-23, the Risk Exposure for India's pharmaceutical sector remained stable at 65, showing no significant change from the previous year. This stability is attributed to improvement in economic and market conditions indicating a favorable economic environment. However, operating and physical risk exposure remained unchanged, reflecting ongoing challenges such as infrastructure shortages and worker safety concerns. Technology risk exposure also stayed consistent, showcasing steady performance in this aspect. Crime and security risk exposure saw a slight improvement, suggesting enhanced security measures or decreased security-related incidents within the pharmaceutical sector. The natural hazard risk exposure significantly decreased, indicating improved disaster preparedness or a decrease in natural calamities impacting the sector. The strategic risks remained stable as well for the year. Overall, this indicates a balanced risk profile but requires a bit more effort to limit the industry's exposure to ever-evolving risk categories.

Pharmaceutical sector Risk Management 2023 Vs 2022

In 2022-23, India's pharmaceutical sector witnessed a marginal decrease in its Risk Management Score from 71 to 70, with specific shifts attributed to post-pandemic recovery measures enhancing market and economic risk management slightly. Crime and security risk management score saw a slight improvement due to higher vigilance post the Russia – Ukraine War, while a significant decrease in natural hazard risk management impacted the overall risk management score negatively as it reduced the overall preparedness of the sector.

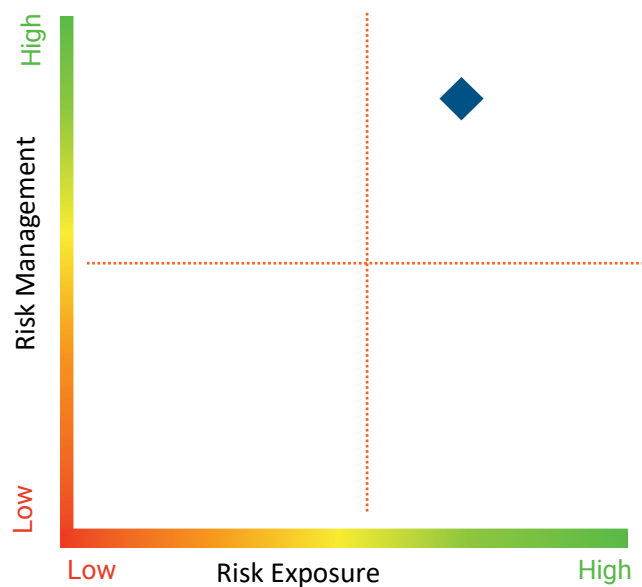
Key Highlights



Risk Dimension Analysis: Market and Economy

Risk Exposure Score: 75

Risk Management Score: 76



Taxation

- Changes in government tax policies can affect the profitability of pharmaceutical companies. High taxes can discourage investment in research and development (R&D).
 - Alterations in corporate tax rates or the implementation of new indirect taxes could affect the cost structure and pricing strategies of pharmaceutical products.
 - Additionally, changes in tax incentives or deductions for research and development (R&D) activities may influence companies' innovation initiatives and competitiveness.
- The tax bracket for pharma products is usually between 5%-12% and is unlikely to fluctuate a lot.
 - Government schemes and policies with respect to exemption of certain items from tax and exemption from custom duty for others makes the sector prepared for the coming shocks.

Regulatory Risks

- While Indian Pharma Industry continues to be a pivotal player in providing cost- effective and high-quality medications, its once-impeccable reputation is now scarred with concerns regarding following strict compliance norms.
- India faces increased dependence on imports and a dichotomy between fermentation and chemical synthesis-based APIs. There is a need to explore concepts like Accelerated Product Development and Implementation, which are present internationally.
- A consortium of 2-3 manufacturers could come together to develop the API and later technology can be shared with others.

- The Indian pharmaceutical industry finds itself confronting a pressing array of challenges, with compliance issues taking center stage. Scarred reputation, Global implications and more.
- Regulatory frameworks serve as the bedrock for pharmaceutical integrity and require continuous refinement. Harmonization of regulations, both domestically and internationally, is imperative for streamlining processes and ensuring global compliance.
- Rigorous adherence to quality standards is non-negotiable for sustaining Indian credibility in the pharma market.

Foreign Exchange Rates

- Fluctuations in foreign exchange rates present inherent risks to Indian pharmaceutical companies engaged in international trade.
- Currency fluctuations are a constant possibility. The Pharma companies having strong presence in USA, Europe etc. are having high vulnerability to this risk.
- Therefore, fluctuations in exchange rates, particularly the Indian Rupee (INR) against major currencies like the US Dollar (USD) and Euro (EUR), can influence revenue streams and profit margins.
- Monitoring currency markets, central bank policies, and global economic indicators is crucial for assessing and managing foreign exchange rate risks effectively.
- For forex risk, the companies must employ a comprehensive strategy involving forecasting, hedging tools, and proactive monitoring to minimize volatility.

Competitive Risk

- Price competition in generic formulations is the highest within the country as well as globally.
- The Indian pharmaceutical industry has major player in generics, but increased competition from other countries like China and Vietnam can put downward pressure on prices and profit margins.
- Efficiency improvement alongside R&D focus can help overcome the loss out of non-exclusive generics and biosimilar segment in the industry.

Geopolitical Risk

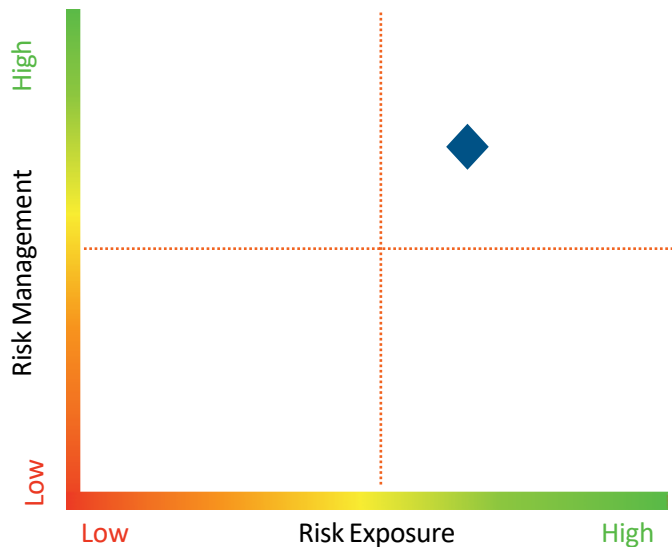
- Geopolitical fragmentation poses a significant risk to pharma businesses, especially as they operate in countries like the U.S. and India.
- This fragmentation can lead to increased regulatory complexity, trade barriers, and political risks, disrupting operations and impacting profitability. It can also affect the availability of medicines.
- The Economic Survey 2022- 23 further highlights geopolitical hostilities as a key risk to the global economic outlook. This can indirectly affect the Indian pharmaceutical industry through disruptions in global trade.
- To address the risk of geopolitical fragmentation, companies can implement several mitigation measures like diversifying supply chains, preserving benefits of global integration etc.



Risk Dimension Analysis: Technology

Risk Exposure Score: 70

Risk Management Score: 79



Disruptive Technology

- Indian Pharmaceutical industry has primarily been involved in creating formulations and production of generics rather than innovating new products. Digital therapeutics (DTx) are already changing the way we treat disease, targeting lifestyle changes that can be just as effective as medication, without the side effects. Future technologies, like nanobots, will have a significant impact on how we treat disease and lead to a greater number of cures.

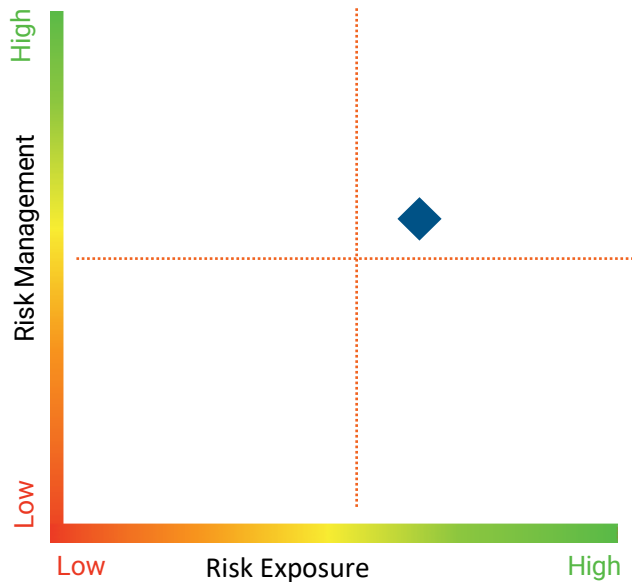
- Continuous advancements in AI technology will affect drug discovery, clinical trials, data analysis, and other processes in the world of Pharma; and many concerns regarding ethics and privacy must be addressed before companies start the process of AI transformation.
- Pharma boards must know that there are real financial impacts to investing early in solutions like block chain. Packaging and insert issues account for 13% of all pharma recalls, and can be avoided with the right technology in place.
- As the pharma industry keeps pace with emerging technologies like the Internet of Things (IoT), big data, cloud computing, artificial intelligence, machine learning, and block chain, it faces new cybersecurity risks. Although these technologies hold considerable advantages, pharma companies need to take into account their cybersecurity implications and implement suitable measures to mitigate potential risks.



Risk Dimension Analysis: Operational and Physical

Risk Exposure Score: 70

Risk Management Score: 75



Sustainability/ Business Continuity

- Covid-19 exposed significant weaknesses in the pharma supply chain. Some manufacturers have responded appropriately.
- Leading players have already started exploring block chain solutions for a more robust and transparent supply chain, but experience and studies have shown that such efforts are best made collaboratively, with multiple and diverse stakeholders participating in the final product.

Accidents/Fire safety

- Scientists are concerned about a recent spate of deadly fire incidents in the pharmaceutical and chemical industries. The regulatory bodies should own up to their mistakes and prioritize worker safety.
- The three main categories of occupational hazards in a pharmaceutical unit are: chemical (flammable materials, hazardous waste), biological (infection by pathogens through contamination), and physical (hypothermia, hyperthermia). Global pharma's emission intensity was 48.55 metrics tons of carbon dioxide equivalents per million dollars of revenue which was 155% of the automotive industry in 2015.

Human Resource

- The current talent digital pool in the Pharma industry is 14% lower than demand, and many companies are also struggling with the recruitment of technical talent.
- Companies can tackle this pharmaceuticals industry risk by offering more comfortable terms of employment and upskilling and reskilling opportunities, as well as finding new ways to not only attract talent but also retain it.

Commodity Price Risk

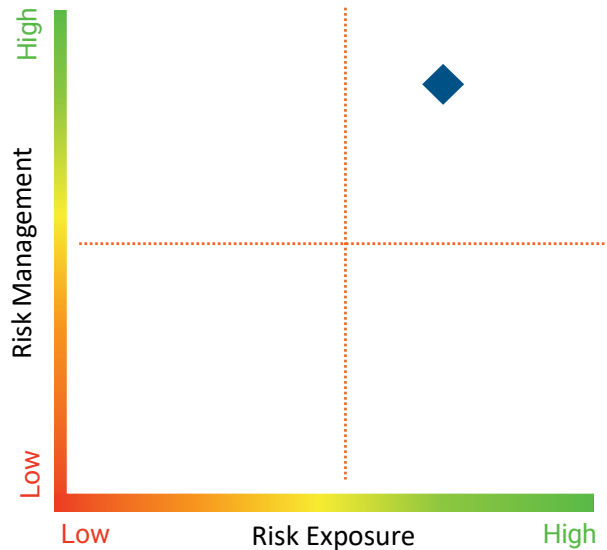
- Commodity price risk exists for the pharma industry in their activity of APIs/KSM acquisition as a raw material for production of final formulations, which usually follow a commodity cycle.
- Profit margins and cost control are hampered by commodity price risk, especially when it comes to raw materials and active pharmaceutical ingredients (APIs).
- Production expenses and pricing strategies may be impacted by changes in commodity prices, which are influenced by variables like supply-demand imbalances, geopolitical unrest, and exchange rate swings.
- Reducing the risk associated with commodity prices requires the use of forward contracts, hedging techniques, and strategic sourcing programs.



Risk Dimension Analysis: Crime and Security

Risk Exposure Score: 67

Risk Management Score: 75



Cyber-crimes

- As more R&D and internal operations become highly digitized, the risks for corporate cyber espionage, ransomware attacks, and theft or loss of mission-critical digital assets increase too.
- The growing use of digital twins, for example, means that the real-world, real-time data relating to more and more operational processes is being encoded in a format that's relatively easy to interpret if leaked or stolen.

- The recent instances of cyberattacks experienced by some of the biggest names in the pharmaceutical industry have raised the alarm concerning the poor state of cybersecurity in the pharmaceutical industry in India.

Counterfeiting

- Law enforcement agencies across the whole world have seen a spike in the manufacturing and distribution of counterfeit drugs that pose a serious risk to the health of millions. Counterfeit drugs can often be unnoticed by the public and even sold in pharmacies instead of generic, patented medicine.
- Due to the rise of internet pharmacies and other advancements in technology, it becomes possible for fake medicine to be sold online without any supervision.
- To block illegal trafficking, companies must act and make sure that the drugs they produce and distribute are easily tracked and that counterfeit drug are as easy to identify and remove from the chain.

Intellectual Property

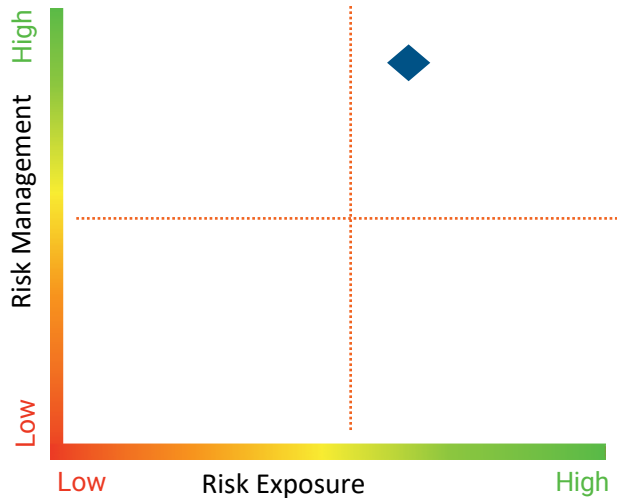
- In the upcoming years, many companies are expected to experience a drop-off in sales due to the patent cliffs. Following multiple patent cliffs, many pharmaceutical organizations lose their market share to generic companies that will be able to produce medication that was previously patented.
- As companies lose exclusivity, some of them will end up in a position where they will have to either develop new drugs or come up with new strategies to stay on the market.



Risk Dimension Analysis: Natural Hazard and Event

Risk Exposure Score: 59

Risk Management Score: 69



Natural Hazards:

- When calamities strike, they can cause heavy damage to critical infrastructure, such as manufacturing facilities and distribution networks. The physical damage inflicted on these facilities can lead to production delays, equipment breakdowns, and disruptions in the transportation of medications.

- Climate change is a driving force behind the changing dynamics of disease spread. Warmer temperatures and rainfall patterns create new environments that favor disease carrying vectors like mosquitoes and ticks, which play a crucial role in transmitting diseases to humans and animals.
- Extreme weather can physically harm manufacturing plants, storage warehouses, and transportation infrastructure. For example:
 - Equipment may malfunction, and production areas become unusable when floodwaters damage facilities.
 - Storms with strong winds can cause structural damage to buildings, affecting the integrity of the facilities.
 - Sensitivity to heat waves can lead to overheating and potential breakdowns in equipment. India is one of the ten most disaster-prone countries of the world.

Pandemic and other global epidemic diseases

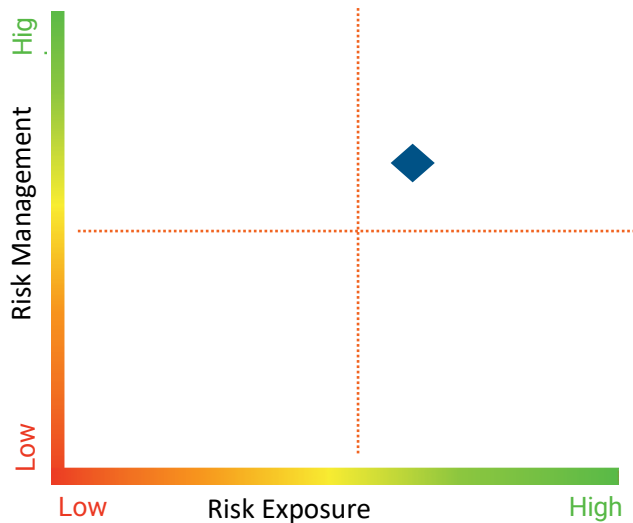
- In 2023, the Indian pharmaceutical industry continued to grapple with a myriad of risks stemming from the COVID-19 pandemic.
- One of the foremost challenges was the ongoing disruption to global supply chains, which impacted the procurement of raw materials, manufacturing processes, and distribution channels.
- The pandemic-induced restrictions on movement and trade led to delays in the transportation of pharmaceutical products, hindering timely delivery to markets worldwide.
- Furthermore, the pandemic accelerated the adoption of digital technologies in the pharmaceutical sector, leading to increased cybersecurity risks.



Risk Dimension Analysis: Strategic Risk

Risk Exposure Score: 27

Risk Management Score: 29



Negligence

- Negligence in manufacturing or quality control processes can lead to defective drugs or contamination. This can cause serious harm to patients and result in lawsuits, product recalls, and regulatory penalties.
- Promoting drugs for unapproved uses can be misleading and expose patients to potential risks not evaluated by regulatory bodies.

Public Sentiment

- Indian Pharmaceutical industry is treated with great respect not just in the country but globally by developed nations, because of its mass-production capabilities.
- Negative public sentiment towards pharmaceutical companies can arise from concerns related to drug pricing, safety issues, unethical marketing practices, and access to healthcare.
- High-profile controversies, such as drug recalls, litigation settlements, or allegations of misconduct, can erode public trust and damage brand reputation, leading to financial losses and regulatory scrutiny.
- There's a constant debate in India about the affordability of essential medicines. If the public perceives pharmaceutical companies prioritizing profits over access to affordable medications, it can lead to negative sentiment.
- Incidents of spurious drugs or quality control issues within the Indian pharma sector can raise public concerns about the overall safety and efficacy of Indian medicines.

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.



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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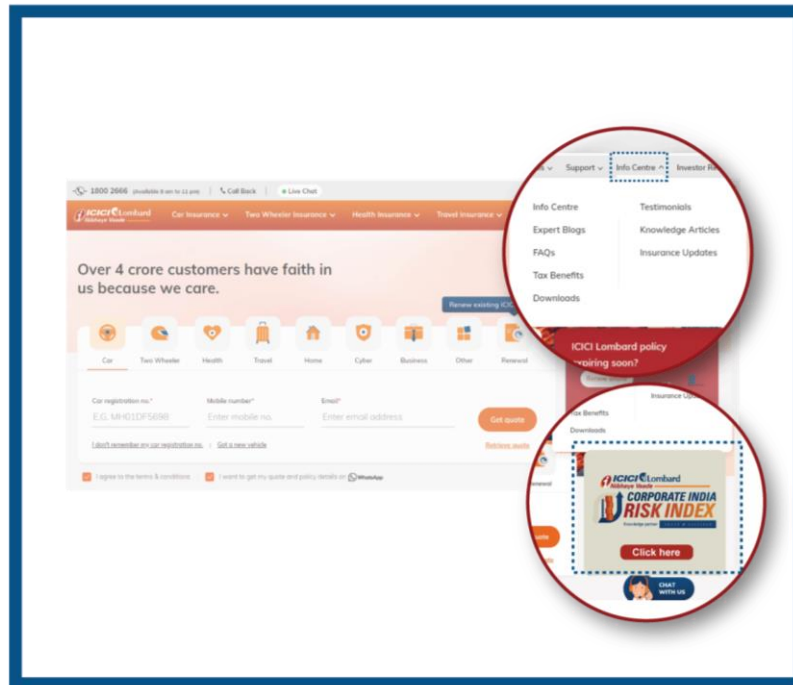
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