



Intelligence partner FROST & SULLIVAN

Navigating Risks, Powering India's Growth

SECTOR REPORT 2024

New Age & Startup





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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's new age sector is emerging as a key driver of economic growth and technological advancement, powered by a youthful demographic, increased internet penetration, and a government ecosystem that supports innovation. This sector spans a broad spectrum of industries, from e-commerce and fintech to edtech and healthtech, all harnessing cutting-edge technologies to transform both business models and everyday life. The rapid growth of this sector holds immense potential to reshape industries, generate jobs, and elevate India's global competitiveness.

However, this promising sector faces several challenges. Geopolitical uncertainties and shifting global trade dynamics pose risks to international expansion and supply chains, particularly for businesses dependent on imported components or overseas markets. The evolving regulatory landscape around data privacy, consumer protection, and emerging technologies also requires businesses to navigate complex compliance requirements. Moreover, the capital-intensive nature of scaling new-age ventures, along with fluctuations in investor sentiment and the challenges of attracting top talent in specialized fields like AI and cybersecurity, could impact growth trajectories.

Despite these hurdles, the sector's potential remains immense, especially with the adoption of artificial intelligence and other disruptive technologies driving innovation across various verticals. To capitalize on this opportunity, new-age businesses must continue investing in technological advancements, embracing sustainable practices, and developing a skilled workforce. With the right strategies in place, India's new age sector is well-positioned to contribute significantly to the nation's economic future and global standing.



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

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. 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 global pandemic scale events like the COVID-19 pandemic

Strategic Risk

Strategic risk is the risk of undesirable outcomes of business decisions which may impact 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

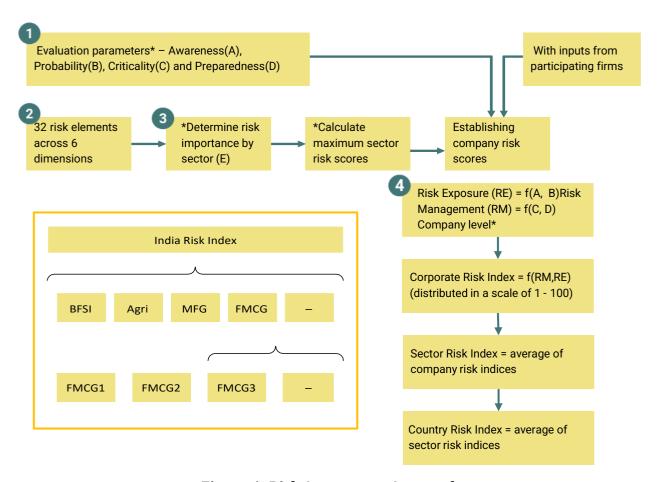


Figure 1: Risk Assessment Approach

- 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

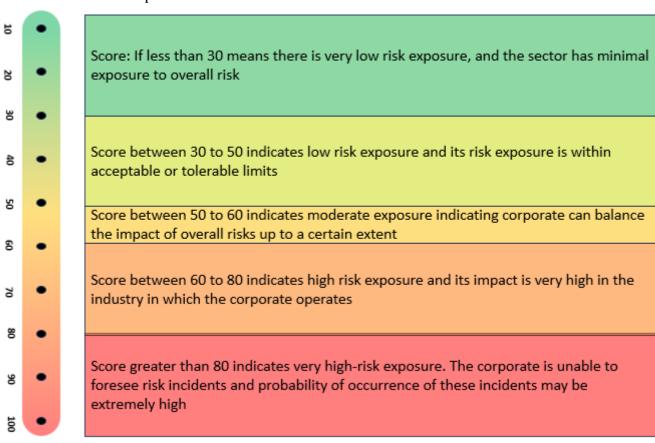
We have selected 20 sectors to understand the current stand of our country today in terms of risk. Risk for various sectors is measured on the risk exposure scale and risk management scale.

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.



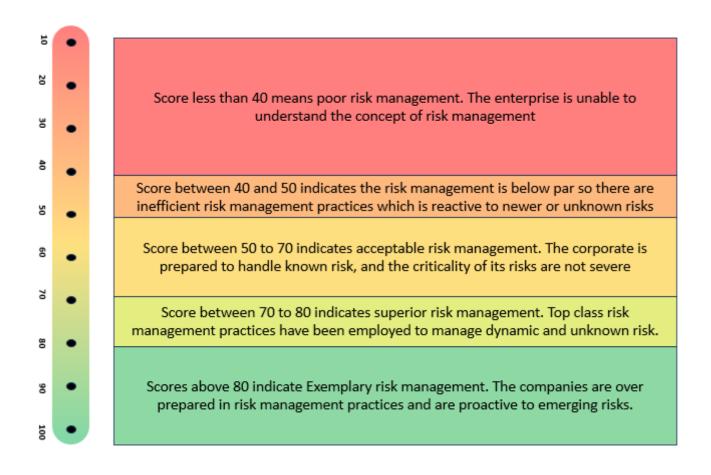


B. ICICI Lombard Corporate Risk Management - Scale

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.

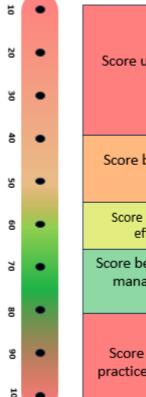




c. ICICI Lombard Corporate Risk Index - Scale

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.



Score under 40 indicates Ineffective Risk Index which means the corporate has very high-risk exposure or very poor risk management practices or both.

Score between 40 - 55 is Sub-optimal risk index, indicating not all risks are handled effectively. Risk management practices are likely dated or inefficient.

Score between 55 - 65 is optimal risk index indicating most current risks are being handled effectively. Emerging risks associated with strategic initiatives need more diligence

Score between 65 - 80 is superior risk index indicating very effective and efficient risk management practices well positioned to handle current and future risks across dimensions

Score above 80 is over preparedness indicating high investment in risk mitigation practices likely over investment in one or more risk dimensions difficult to justify ROI



India - Resilient Growth and Superior Risk Management

In 2024, India's diverse sectors demonstrated significant growth and resilience, leveraging technological advancements, strategic reforms, and proactive risk management to navigate an evolving economic landscape. Despite global challenges, industries embraced innovation, digital transformation, and sustainable practices, positioning themselves for long-term success.

In this year, the integration of Artificial Intelligence (AI) across various sectors presented both significant opportunities and risks. While AI-driven innovations enhanced productivity, decision-making, and customer engagement, the adoption also raised concerns around data privacy, cybersecurity, and workforce displacement. India navigated these risks by implementing robust data protection regulations and promoting AI ethics in the development and deployment of technology. Additionally, the government and private sector invested in reskilling programs, ensuring the workforce was equipped to adapt to the evolving digital landscape. AI's strategic implementation across sectors like BFSI, healthcare, and manufacturing helped India enhance operational efficiency while balancing the challenges posed by rapid technological transformation. The Aerospace & Defence sector saw substantial advancements as India attracted global aerospace companies seeking to strengthen supply chains. Local firms expanded their capabilities, particularly in the growing private space sector, driving both revenue growth and global competitiveness. The Agri & Food Processing sector turned to precision farming and AI-driven analytics to enhance productivity, while renewable energy solutions like solar-powered cold storage reduced post-harvest losses, improving sustainability and efficiency.

In the Automotive sector, the shift toward electric vehicles (EVs) gained momentum, supported by government schemes aimed at promoting EV adoption. Major manufacturers expanded their EV portfolios, addressing both sustainability goals and evolving consumer demands. The BFSI sector continued its digital transformation, with AI integration enhancing fraud detection and compliance, further improving security and efficiency.

The Biotech & Lifesciences sector experienced accelerated growth, particularly in genomics and vaccine development, with India solidifying its role as a global leader in pharmaceutical manufacturing. The sector's innovation, supported by public and private investments, enhanced healthcare technology and medical devices. In Chemicals & Petrochemicals, India attracted significant investments to meet rising demand, driven by growing consumption from its expanding middle class, while the Education sector embraced AI and digital learning platforms, expanding access to quality education and equipping the workforce for future demands in emerging technologies.

The Energy sector made substantial progress towards sustainability, with a focus on renewable



energy, including ultra-mega solar parks and offshore wind projects. These initiatives were supported by favorable government policies and decreasing costs of clean energy technologies. The FMCG sector adapted to inflationary pressures by shifting focus towards premium products and ecommerce platforms, which were increasingly driving sales, particularly in rural markets.

In Healthcare, there was significant growth fueled by digital innovations such as telemedicine and AI-driven diagnostics, which helped improve access and efficiency in healthcare delivery. India also continued to strengthen its position as a global hub for medical tourism, offering competitive treatment options. The Real Estate sector benefitted from increased demand in affordable housing and infrastructure development, with commercial real estate seeing steady growth and an emphasis on sustainable building practices.

The IT sector continued to thrive despite global challenges, driven by demand for cloud services, cybersecurity solutions, and AI technologies. Tier 2 and 3 cities emerged as new tech hubs, with government support enhancing regional tech expansion. The Pharmaceutical sector saw an uptick in exports and domestic manufacturing, with reduced dependence on imports and new product launches in global markets bolstering its growth. In Manufacturing, India focused on boosting production through initiatives like the Production-Linked Incentive schemes, especially in electronics and EV manufacturing, which also contributed to job creation and supply chain resilience. The "China + 1" strategy adopted by global firms has played a pivotal role in shaping India's manufacturing sector. While it has increased risk exposure, it has also driven companies to invest in more sophisticated, globally relevant risk management practices, strengthening the sector's resilience and positioning India as a key player in global supply chains.

Media & Entertainment saw continued growth, with OTT platforms gaining popularity, especially in regional content. The Gaming industry also flourished, becoming a key revenue generator as mobile gaming gained dominance. In Steel and Mining, investments in decarbonization and digitalization allowed the sectors to reduce environmental impact and enhance operational efficiency. Startups saw substantial funding despite global slowdowns, with SaaS, fintech, and D2C brands leading the charge in innovation and market expansion.

The Telecom sector expanded 5G coverage and rural internet penetration, narrowing the digital divide and improving connectivity across the country. The Tourism & Hospitality sector rebounded strongly, attracting both domestic and international visitors, with eco-conscious travelers opting for sustainable tourism options and luxury experiences. Finally, the Logistics sector benefited from advancements in automation and multimodal connectivity, reducing costs and improving efficiency, while the government's National Logistics Policy streamlined operations, cutting transit times and enhancing cross-sector integration.

In summary, 2024 saw India's sectors display resilience and adaptability, addressing emerging risks through innovation, digital adoption, and sustainability initiatives. The country's ongoing focus on risk management, technological advancement, and strategic reforms has positioned its economy for continued growth and transformation, paving the way for India to solidify its place as a global economic leader.



India Showcasing an Optimized Risk Handling



Figure 2: Corporate India Risk Index 2024

A score of 65 on the Corporate Risk Index indicates optimal handling of risk by the Indian companies. In 2024, India faced significant market, economy, and operational risks across various sectors, highlighting areas for improvement in the coming years. The year was further complicated by global events such as the ongoing Israel-Palestine conflict, which led to geopolitical instability and fluctuations in global oil prices. The rise of recession fears in major economies like the United States and Europe disrupted supply chains and created demand uncertainties, impacting Indian exports and manufacturing. Investor sentiment in India remains flat in 2024, reflecting the cautious behavior of Angel and VC investors globally. This persistent challenge, which has carried over from 2023, highlights ongoing risks in the market and underscores the uncertainty that continues to affect investment decisions in the country.

Additionally, India's national elections increased risk exposure, with political uncertainty and policy shifts potentially affecting business operations, investor confidence, and sectoral reforms. These global and domestic challenges underscored the need for stronger risk management



frameworks and adaptive strategies across India's industries to navigate future uncertainties effectively.

In response to the heightened risks in 2024, companies across India have increasingly focused on strengthening their risk management frameworks. With the backdrop of global uncertainties, such as geopolitical conflicts and economic slowdowns, alongside domestic challenges like the national elections, businesses have prioritized proactive risk identification, mitigation strategies, and resilience-building measures. This shift reflects a broader trend of embedding risk management into corporate strategy, with an emphasis on agility, digital transformation, and sustainability.

As a result, sectoral risk indices have remained within the superior and optimal risk index range, demonstrating that most industries in India have effectively managed the challenges they faced. Through a combination of technological innovations, regulatory compliance, and strategic planning, sectors have been able to maintain stability and navigate both internal and external risks. This disciplined approach to risk management has ensured that, despite various pressures, India's sectors remained well-positioned for sustainable growth and continued progress in 2024.

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

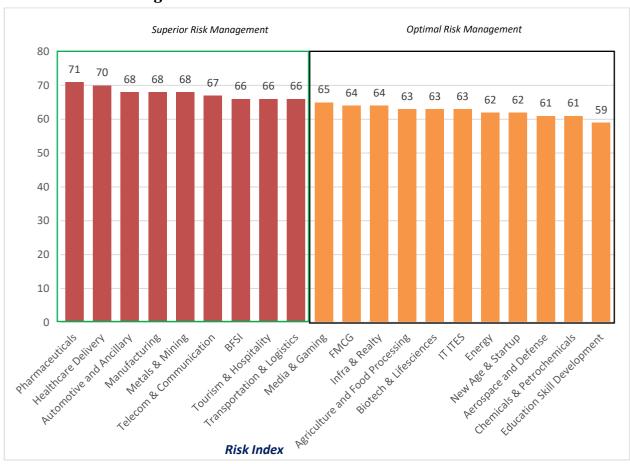


Figure 3: Corporate India Risk Index 2024 Sector Score



Superior Risk Index

Superior risk handling was found in nine industrial sectors:, Pharmaceuticals, Healthcare Delivery, Automotive & Ancillary, Manufacturing, Metals & Mining, Telecom & Communication, BFSI, Tourism & Hospitality, and Transportation & Logistics.

Optimal Risk Index

Optimal risk handling was found in 11 industrial sectors: Media & Gaming, FMCG, Infra & Realty, Agriculture & Food processing, Biotech & Lifesciences, IT ITES, Energy, New Age & Startup, Aerospace & Defence, Chemicals & Petrochemicals and Education & Skill Development



New Age & Startup Sector Insights 2024

India's new-age sector in 2024 is rapidly emerging as a cornerstone of the nation's economic transformation, fueled by its robust digital infrastructure, growing internet penetration, and an increasingly tech-savvy youth population. This dynamic sector spans industries like e-commerce, fintech, digital payments, online gaming, logistics, and more, with companies heavily investing in cutting-edge technologies such as AI, machine learning, blockchain, and data analytics. The adoption of digital-first solutions is reshaping traditional business models, creating new opportunities for innovation and growth across various industries. The rise of the digital economy is also driving a shift in consumer behavior, with more individuals embracing online services, driving demand for new-age businesses.

However, despite its immense growth potential, the sector faces a unique set of challenges. One of the key risks lies in the rapidly evolving regulatory landscape, particularly around data privacy, cybersecurity, and the regulation of emerging technologies. As these companies scale, staying compliant with new and shifting policies becomes increasingly complex, leading to increased operational costs and risks. Additionally, the technological disruptions that are the lifeblood of this sector also pose a vulnerability. The rapid pace of innovation demands constant investment in research and development, as companies must continuously adapt to stay competitive in a fast-changing environment.

Another challenge is the capital-intensive nature of scaling these businesses, which requires significant funding and access to resources to build infrastructure and sustain growth. Furthermore, talent acquisition and retention in specialized fields such as artificial intelligence and data science remain a persistent challenge due to the global competition for skilled professionals. In 2024, the new age and startup sector in India has faced a decline in investor-backed fund flows, reflecting a global slowdown in venture capital and angel investments. This reduction in funding presents a challenge for many startups, hindering their growth and innovation potential.

To address these challenges, companies in the new-age sector are adopting a range of strategies to mitigate risks and drive growth. Many are focusing on building robust cybersecurity frameworks to protect against data breaches and digital threats while also investing in compliance mechanisms to navigate the evolving regulatory landscape.



Additionally, a focus on sustainable practices, both environmentally and in terms of business operations, is gaining momentum, with companies embracing circular economy principles and reducing their carbon footprints. Collaborations with global technology partners, innovation labs, and academic institutions are helping companies enhance their technological capabilities, driving continued innovation and competitive advantage.

Despite the challenges, India's new-age sector is poised for sustained growth, with the potential to lead global digital transformation, provided businesses continue to adapt, innovate, and navigate the complexities of the evolving digital world.



New Age & Startup Sector Risk Index 2024 Vs 2023

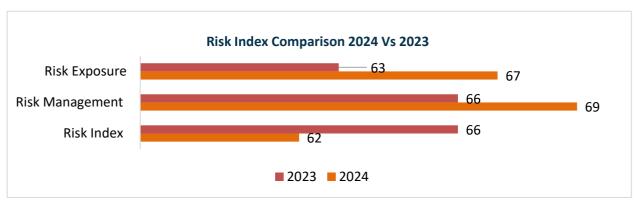


Figure 4: Detailed Comparative Analysis 2024 Vs. 2023

Metals & Mining Sector Risk Index 2024 Vs 2023

The overall Risk Index for the sector decreased from 66 to 62. The increase in risk exposure was met by an increase in risk management as well from the companies.

Metals & Mining Sector Risk Exposure 2024 Vs 2023

The increase in risk exposure suggests that the environment in which these companies operate has grown riskier. This could be due to several factors, such as more intense competition, higher regulatory scrutiny, and more frequent technological disruptions. The rapid pace of innovation and technological dependence also makes these companies vulnerable to new forms of risks, including cybersecurity breaches, regulatory changes, and disruptions in global supply chains. Additionally, external factors such as geopolitical uncertainties, economic fluctuations, and evolving market dynamics can exacerbate risk exposure. As the sector grows and scales, businesses face a wider array of potential risks, leading to an increase in overall exposure.

Metals & Mining Sector Risk Management 2024 Vs 2023

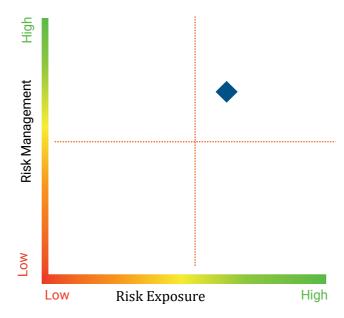
In the case of the new-age sector, the increase in risk management likely reflects the sector's heightened focus on addressing emerging threats. As the industry matures and becomes more complex, companies are dedicating more resources and adopting advanced strategies to identify, assess, and manage risks such as cybersecurity threats, regulatory changes, and market volatility. The implementation of enhanced frameworks, like strengthened cybersecurity measures, compliance programs, and AI-driven risk assessment tools, indicates that companies are increasingly proactive and prepared to address these risks.



Key Highlights

Risk Dimension Analysis: Market and Economy

Risk Exposure Score: 69 Risk Management Score: 67



Inflation

- In 2024, New-age sector continues to navigate significant risks, compounded by global economic pressures and domestic monetary policy adjustments. RBI faces the challenge of balancing price stability with growth objectives.
- However, current surge in global inflation rates has led to central banks worldwide increasing interest rates to combat rising prices. This has direct impact on cost of borrowing for startups and businesses.
- In India, this trend is contributing to higher interest rates on loans, impacting cost of capital

for startups. This increased cost of capital has led to significant restructuring efforts within new-age sector.

- Furthermore, the impact of global supply chain disruptions and geopolitical instability on inflation rates adds complexity to the RBI's policy decisions. These factors can contribute to price volatility and create uncertainty for businesses in the new-age sector.
- To address these inflation risks, new-age companies should focus on efficient resource management and cost optimization, explore alternative funding sources, prioritize sustainable growth and profitability over rapid expansion and implement robust financial planning and risk management strategies.

Taxation Risk

■ The new-age digital industry, encompassing sectors like e-commerce, fintech, online education, and digital entertainment, requires stable and predictable tax regime. Frequent changes in tax policies, complex compliance requirements, and uncertainties regarding the interpretation of tax laws can create a climate of uncertainty, hindering investment and innovation.



- As the digital economy expands, the need for clarity on the taxation of digital services, cross-border transactions, and intellectual property becomes increasingly important. The taxation of digital assets, such as cryptocurrencies and NFTs, also presents a significant challenge. Clear guidelines on the taxation of these assets are essential for promoting transparency and preventing tax evasion.
- Furthermore, the need to streamline tax compliance procedures and reduce the administrative burden on businesses is crucial. This includes simplifying tax filing processes, promoting the use of digital tax platforms, and providing clear guidance on tax regulations.
- To address these taxation risks, the government should develop a stable and predictable tax regime, provide clear guidelines on the taxation of digital services, streamline tax compliance procedures, offer tax incentives to attract foreign investments and promote transparency and accountability in tax administration.

Geopolitical Risks

- The assessment of geopolitical risks begins with a top-down analysis, focusing on megatrends, which are significant, slow-moving forces with broad reach and longevity, and trends. These forces profoundly influence economic, political, and social spheres, shaping the operating environment for new-age businesses.
- Identifying relevant geopolitical risk drivers serves as foundation for developing scenarios that cannot be ruled out due to their significant risk potential and business impact. The objective is not to precisely calculate risk potential, but rather to ensure that business leaders are aware of relevant risk drivers and proactively address potential outcomes.
- For the new-age sector, geopolitical risks can manifest in various ways, including Trade tensions and tariffs, Data localization and sovereignty regulations, Cybersecurity threats and digital warfare, Political instability and social unrest, and Regulatory changes and policy shifts.
- To effectively manage geopolitical risks, companies should conduct regular geopolitical risk assessments, develop scenario planning and contingency plans, build strong relationships with government and regulatory bodies, invest in cybersecurity and data protection and monitor geopolitical developments and trends.

Foreign Exchange Risk

- Foreign Exchange investments inherently carry high risks due to significant fluctuations in exchange rates, affecting the value of foreign assets and creating potential liabilities. This is particularly relevant for new-age companies that often operate in a globalized market, relying on international partnerships, overseas customers, and foreign capital.
- To effectively manage these risks, companies must analyse their exposure by identifying all assets, liabilities, and transactions denominated in foreign currencies. Based on this analysis, companies should develop a comprehensive risk management strategy that incorporates a



- combination of risk mitigation and transfer techniques. Hedging strategies, such as forward contracts, options, and futures contracts, are some essential tools.
- Regular monitoring and review of effectiveness of these risk management strategies are essential. This includes tracking foreign currency exposures, assessing performance of hedging strategies, and reviewing the impact of exchange rate fluctuations on company's financial performance. Adjustments to the strategy should be made as necessary to ensure its continued effectiveness.
- To mitigate foreign exchange risks, new-age companies should conduct thorough analysis of foreign exchange exposure, utilize hedging instruments, implement robust monitoring and review processes, and diversify their currency holdings.

Regulatory Risk

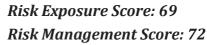
- Regulatory and policy clarity is paramount for fostering growth of technology-driven industries. However, lack of clear regulations can hinder innovation and create a climate of uncertainty. The need for regulatory certainty is acute in areas such as online gaming, fintech, and e-commerce, where rapid technological advancements and evolving business models present unique challenges.
- The need for regulatory clarity extends beyond specific sectors to encompass broader issues such as data privacy, cybersecurity, and consumer protection. The implementation of robust data protection laws and cybersecurity standards is essential for building trust and ensuring sustainable growth.
- To address these regulatory risks, the government should develop clear and consistent regulatory frameworks, engage in regular consultations with industry stakeholders, adopt a risk-based approach to regulation, ensure predictability and transparency in taxation policies and promote international cooperation and harmonization of regulatory standards.

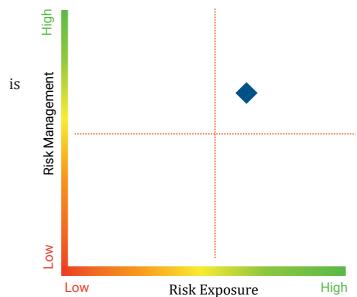
Competitive Risk

- The new-age sector, encompassing diverse areas like e-commerce, fintech, AI, software development, and online services, faces competition on multiple fronts such as price, delivery speed, product performance, customer service, and technological advancement. Competitors possess substantial resources and capabilities, often backed by significant venture capital funding or established market presence.
- Key aspects of competitive risk include rapid technological evolution, intense Talent Acquisition, data and platform dominance, Global Competition, Funding and Investment, Evolving Consumer Expectations, and Regulatory Scrutiny.
- To mitigate competitive risks, the companies should invest in Continuous Innovation, build a Strong Brand, focus on Customer Experience, leverage Data Analytics, monitor Competitor Activities, and adapt to Regulatory Changes.



Risk Dimension Analysis: Technology





Innovation Risk / Obsolete Technology

- The new-age sector, spanning software development, e-commerce and digital services characterized by its dynamic nature and rapid technological evolution. Failure to innovate and keep pace with these advancements can lead to obsolescence, loss of market share, and decreased profitability.
- Rapid technological advancements, including AI, machine learning, and blockchain, require continuous and significant research and development (R&D) investment. Companies

must stay ahead of the curve to maintain their technological leadership and competitive edge.

■ The new-age companies should invest Heavily in R&D, collaborate with Research Institutions, monitor Industry Trends, implement Risk Management in Innovation, and build strong innovation team.

Intellectual Property Risk

- Protecting innovation through robust IPR mechanisms has become paramount, particularly in an environment characterized by ease of replication and distribution of digital content. The foundational concepts of IP, including copyrights, patents, trademarks, and trade secrets, play a crucial role in safeguarding digital creations and innovations.
- The constant evolution of technologies such as AI further complicates the issue of IP protection, requiring constant adaptation of IP laws. This necessitates implementation of robust legal frameworks, leveraging technological solutions, fostering international cooperation, creating impactful education and awareness campaigns, and encouraging industry collaboration.
- However, ongoing adaptation to evolving technologies, international cooperation, education, and awareness efforts are essential to address the complexities of IP protection. Ultimately, a balanced and comprehensive approach is crucial to nurturing innovation, promoting creativity, and sustaining vibrant digital economy driven by robust intellectual property rights.



■ To address these risks, companies should conduct regular IP audits to identify and address potential infringement issues, educate employees and partners, stay informed about evolving IP laws and regulations, and utilize anti-piracy measures to combat illegal distribution of content.

Disruptive Technology

- Technology risks remain central concern, as rapid evolution of technologies like AI, Blockchain, and Drones continues to reshape industries. Businesses are increasingly leveraging these emerging technologies to drive improved performance and disrupt traditional models, but this also exposes them to new and complex risks.
- The potential for disruptive technologies to render existing products and services obsolete is a significant threat. This necessitates a proactive approach to technology adoption, with a focus on continuous innovation and agile development.
- Organizations must carefully consider the ethical implications, governance frameworks, and operational changes required to effectively integrate these technologies into their business processes. Organizations have a tremendous opportunity to leverage AI for good, but they must also consider where AI should be used responsibly.
- To mitigate these risks, companies should develop a comprehensive technology strategy, invest in R&D, implement robust governance frameworks for ethical and responsible use, prioritize data security and privacy, partner with technology experts and industry leaders, and implement a system of continuous monitoring for technological advancements.

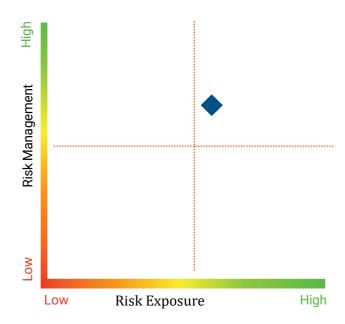
Data Compromises

- Data compromise risks remain a paramount threat to the new-age sector, as the volume and sensitivity of data collected and processed continue to escalate. Cybersecurity threats are a significant and growing concern, with data breaches capable of causing substantial financial and reputational damage.
- Data breaches can result in the loss of sensitive information, including customer data, financial records, IP, and proprietary technologies. Robust cybersecurity measures, including network security, data encryption, intrusion detection systems, and regular security audits, are essential to mitigate these risks.
- To mitigate these risks, companies should prioritize Data Privacy, conduct Regular Security Assessments, implement Data Loss Prevention (DLP) Systems and access controls.



Risk Dimension Analysis: Operational and Physical

Risk Exposure Score: 66 Risk Management Score: 70



Critical Infrastructure Failure / Machine Breakdown

- Infrastructure failures pose significant risks, mirroring the broader challenges facing the nation's infrastructure development. Despite advancements, critical issues like land acquisition, environmental concerns, and project financing persist, hindering the sector's growth.
- The new-age sector, heavily reliant on digital infrastructure, faces vulnerabilities stemming from both urban and rural infrastructure deficiencies. Urban areas grapple with aging infrastructure, while rural regions

struggle with limited connectivity and access to essential services.

■ The New-age companies should implement Redundancy and Backup Systems, diversify the Data Centre Locations, partner with Reliable Internet Service Providers, implement disaster recovery plans and utilize cloud services.

Business Continuity / Sustainability

- Many startups prioritize rapid growth and user acquisition in the initial stages, potentially neglecting long-term sustainability practices like environmental responsibility or ethical sourcing. This can damage brand reputation and lead to consumer backlash.
- Neglecting sustainability and business continuity planning can expose new-age and startup companies in India to significant risks. By prioritizing long-term environmental and social responsibility, while also building resilience against disruptions, startups can create a more sustainable and successful future.

Supply Chain Risk

Disruptions can significantly impact production capability, efficiency, and customer satisfaction. New-age sector relies on intricate global supply chains. These chains are susceptible to disruptions caused by supplier failures, raw material shortages, geopolitical instability, and logistical challenges.



■ To mitigate these risks, companies should diversify its suppliers and build strong relationships with their key partners, implement robust measures and Supply chain management practices, and majorly focus on the sustainability.

Commodity Price Risk - Volatility in prices of raw materials

- The volatility in prices of raw materials, driven by global economic trends, geopolitical factors, and supply chain disruptions, can significantly impact revenue and profitability. The new-age sector has a substantial physical component. Companies involved in manufacturing semiconductors, batteries, and other electronic components are highly exposed to price fluctuations in raw materials like lithium, cobalt, and rare earth elements.
- The impact of commodity price movements on revenue and profitability varies depending on a company's position in the value chain. Companies that rely on raw material inputs for their products are directly affected by price fluctuations. The profitability of these players is also determined based on the variant of the commodity that the entity is dependent on within the value chain.
- To mitigate these risks, companies should diversify their supply chains, implement various hedging strategies, invest in sustainable materials, enhance the supply chain visibility, and build strong relationships with the suppliers.

Portfolio Risk

- MCompanies face challenges related to concentrated customer bases, over-reliance on specific partners, and the need to adapt to shifting market dynamics. A poorly diversified portfolio can expose companies to significant financial vulnerabilities and hinder long-term growth.
- In the new-age sector, a highly concentrated customer base poses a significant portfolio risk. If a substantial portion of a company's revenue is derived from a limited number of clients or market segments, any downturn in those areas can severely impact its financial stability. Companies must invest in robust customer relationship management and retention strategies to mitigate this risk.

Environmental Hazard Risk

- New-age sector faces range of environmental hazard risks. Climate change-induced extreme weather events, such as floods, droughts, and heatwaves, can disrupt centre operations, supply chains, and logistics. Data centres are vulnerable to power outages and cooling system failures caused by extreme weather. The increasing demand for electronic devices and components contributes to e-waste generation, posing environmental and health hazards.
- Failure to comply with environmental regulations can lead to fines, challenges, and reputational damage. Moreover, deforestation, water scarcity, and pollution can impact the businesses and supply chains that new-age companies rely on. Companies with heavy reliance on supply chains need stringent due diligence to assess environmental liabilities. Failure to address concerns can lead to reputational damage and investor withdrawals.



As public awareness of environmental issues grows, consumers and investors are increasingly demanding sustainable practices from new-age companies. This prompts companies to adopt stricter ESG policies and integrate sustainability into their business strategies. To mitigate these risks, companies should conduct environmental risk assessments, develop climate resilience strategies, enhance transparency and reporting, and invest in green technologies.

Workplace Accident

- Companies face risks from workplace safety and environmental regulations. Compliance with laws regarding hazardous substances, and workplace safety can lead to fines, sanctions, and costly changes. Accidents or defects can harm reputation and competitiveness, potentially impacting insurance. Robust safety protocols and training are crucial to minimize workplace incidents.
- This has a direct impact on the new-age sector, particularly in areas like data centre operations, hardware manufacturing, logistics and warehousing and increased use of robotics and automation.
- To mitigate workplace accident risks, companies should implement Robust Safety Protocols, provide Regular Training, conduct Regular Safety Audits, invest in Safety Equipment, and promote a Safety Culture.

Human Resource

- The new-age sector faces a unique set of human resource challenges, directly impacting its financial stability and growth prospects. The evolving expectations of the workforce, particularly agile learners, necessitate a shift in traditional talent management strategies.
- Attracting and retaining top talent requires significant investment in competitive compensation and development programs. Failure to meet employee expectations can lead to high turnover rates, increased recruitment costs, and loss of institutional knowledge. Negative employee experiences can damage company's reputation, making it difficult to attract new talent and customers.
- To mitigate these risks, new-age companies should invest in Employee Experience, prioritize Talent Development, offer Flexible Work Arrangements, build a Strong Employer Brand and Implement data driven HR. By prioritizing employee well-being and development, new-age companies can build a resilient workforce and mitigate the financial risks associated with talent management.

Financial Risk

- The rapid digitalization of financial industry, driven by emerging technologies like AI, blockchain, and internet finance, has transformed traditional financial services. However, this transformation also exposes the sector to new risks, including cybersecurity threats, regulatory uncertainties, and market volatility.
- The adoption of new technologies promotes financial innovation while also making financial



- security subject to disruption. Internet finance has ushered in major changes in development of financial industry. The application of new technologies in financial sector will bring about development of intelligent investment consulting businesses for financial institutions.
- In 2024, new-age companies must prioritize financial resilience and adopt proactive risk management strategies which includes diversifying Funding Sources, focusing on Profitability, implementing Robust Financial Planning, and building Strong Investor Relationships.

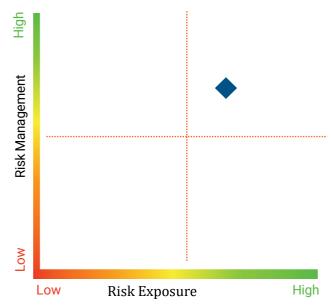
Breaches of law (local/international)

- Non-compliance with various laws and regulations can lead to hefty fines and penalties for startups. These financial burdens can strain limited resources and hinder growth.
- Many early-stage startups might not have the resources to hire dedicated legal counsel. This can lead to inadvertent breaches of law due to a lack of awareness or understanding of complex regulations.



Risk Dimension Analysis: Crime and Security

Risk Exposure Score: 63 Risk Management Score: 65



Cyber-crimes

- The increasing reliance on digital platforms and interconnected systems has broadened attack surface, making organizations more vulnerable to sophisticated cyber threats. The adoption of AI, while offering numerous opportunities, also introduces new cybersecurity risks.
- Building a comprehensive cybersecurity culture is challenging, especially for organizations with diverse operations. The complexities include overcoming change

resistance, securely adopting emerging technologies without hindering innovation, managing interconnected systems, and effectively measuring cybersecurity culture.

■ Fostering a strong cybersecurity culture across enterprises and broader ecosystems clearly has its challenges. To mitigate these risks, companies should implement robust cybersecurity measures, conduct regular security audits, provide trainings, partner with experts and industry leaders, utilize AI to enhance cybersecurity and focus on cyber human risk management.

Counterfeiting

- The proliferation of digital counterfeiting, including identity theft, fraudulent online transactions, and deepfake technology, poses a significant threat. Fraudulent online transactions, facilitated by fake e-commerce websites and payment gateways, result in financial losses for consumers and businesses.
- The rise of deepfake technology, which uses AI to create realistic fake videos and audio recordings, can be used to spread misinformation and damage reputations. The counterfeiting of digital assets such as non-fungible tokens (NFTs) is becoming increasingly common. Scammers create fake NFTs or replicate popular digital assets, deceiving buyers and undermining the integrity of digital marketplace.
- New-age companies must invest in robust authentication and verification technologies to combat threats. Additionally, international cybercrime networks use sophisticated techniques to facilitate fraud, making it essential for companies to collaborate with law enforcement agencies to detect



and prevent such activities.

Threat to Women Security

- The new-age sector, characterized by its dynamic and often decentralized work environments, presents unique challenges in safeguarding women. This includes addressing online harassment, cyberstalking, data privacy breaches, and workplace safety issues in co-working spaces and remote settings.
- The sector must rapidly innovate and implement new strategies to protect women by drawing innovative and replicable measures to enhance measures taken to better protect their female populations.
- Recognizing that equity, diversity, and inclusion are essential to the operations and effectiveness of organisations, new-age companies must institute measures to embrace diversity in organizational structures, decision-making processes, and communication.

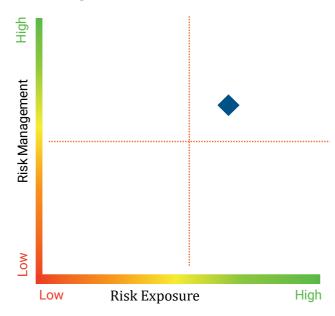
Terrorism

- A major terrorist attack can disrupt the overall economy, impacting investor confidence and potentially hindering access to funding, crucial for startups. If a startup is associated with a terrorist attack, it can severely damage its reputation and hinder its ability to attract customers and investors.
- Startups in certain sectors, like tourism or hospitality, might be more vulnerable to the economic fallout of a terrorist attack. The bigger concern might be the indirect consequences of terrorist activities that could disrupt the overall business environment and pose challenges.



Risk Dimension Analysis: Natural Hazard and Event

Risk Exposure Score: 66 Risk Management Score: 70



Natural Hazards like flood, drought, famine, earthquake, landslide etc

- India experiences frequent monsoon seasons, leading to flooding in many regions. This can damage infrastructure, disrupt transportation networks, and cause power outages, impacting businesses of all sizes, including startups.
- While major earthquakes can cause severe damage to buildings and disrupt essential services, impacting startups across various sectors.
- This can disrupt supply chains and affect startups that rely on agricultural inputs or operate in water-intensive industries.

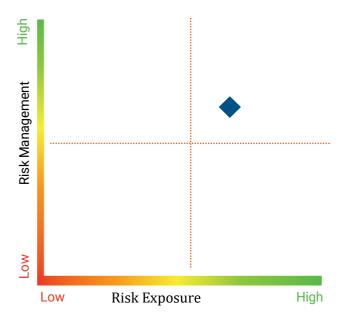
Pandemic and other Global Epidemic Diseases

- The Covid-19 pandemic caused a global economic slowdown, leading to a decline in investor confidence and a decrease in startup funding.
- Many startups struggled to raise capital, hindering growth plans. A survey by NASSCOM in India reported that around 40% of startups had to halt or significantly reduce operations during the pandemic.



Risk Dimension Analysis: Strategic Risk

Risk Exposure Score: 66 Risk Management Score: 67



Resource scarcity / Misutilization / Overall Utilization

- As global demands on natural resources increase, and with escalating population growth, managing resource scarcity becomes a critical imperative for this sector.
- The new-age sector, with its rapid growth and innovation, must adopt sustainable practices to mitigate its environmental footprint. This involves addressing the consumption of energy, water, and raw materials used in the production of electronic devices and the operation of data centres.
- To address these challenges, new-age organizations can employ strategic approaches focused on optimizing resource allocation and enhancing efficiency. This includes implementing data-driven inventory management systems for hardware and other physical resources, and adopting sustainable practices to minimize waste in both physical and digital operations.
- To enhance resource management, the companies should invest in Technology, optimize Data Centre Efficiency, promote Sustainable Software Development, implement Data Centre Location Optimization.

Public Sentiments

- Public perception can significantly impact new-age companies, leading to decreased demand for products and services, increased regulatory scrutiny, and challenges in attracting and retaining talent. Maintaining a positive public image through transparent communication, community engagement, and a demonstrable commitment to ethical and sustainable practices is crucial.
- The development and application of emerging technologies, such as AI, blockchain, and biotechnology, pose various social risks, which raise public concerns. Understanding the factors that influence public risk perception is vital for promoting the sustainable development of these technologies.

Delay in Execution of Projects

■ Delays in launching new products or infrastructure upgrades can result in significant losses in



- competitive advantage, missed opportunities, and increased operational costs. Specifically, in new-age sector, hurdles in areas like data privacy, fintech, and AI, pose significant challenges.
- Obtaining necessary approvals can be time-consuming, leading to project delays and increased compliance costs. For instance, deployment of new hardware or software systems may be delayed due to shortages or network connectivity issues. The rapid pace of technological change often requires companies to adapt their project plans mid-execution, leading to further delays.
- Slow decision-making processes within organizations can hinder timely project execution. Internal complexities related to approvals, resource allocation, and collaboration can lead to prolonged project timelines. Adopting strategies such as proactive regulatory engagement, diversification of suppliers, contingency planning, increased focus on automation, and improved communication would be beneficial.

Increased Number of Recalls and Quality Audits

- Regulatory bodies, such as data protection agencies, consumer protection authorities, and industry-specific regulators, frequently conduct audits to ensure compliance with data privacy, cybersecurity, and product safety standards.
- Any discrepancies or non-compliance issues can lead to product recalls, fines, and reputational damage. Companies are increasingly adopting AI-driven compliance tracking tools and automated testing frameworks to minimize audit-related risks.
- Poorly designed software, hardware, or digital services may require recalls if they do not meet customer expectations, regulatory standards, or security requirements. Non-compliance with data privacy regulations, accessibility standards, or consumer protection laws can lead to mass product withdrawals and damage to customer trust.
- Companies are reinforcing their data governance frameworks, accessibility policies, and transparency initiatives to mitigate such risks. The rise of AI, and machine learning, has increased regulatory concern about how these systems are being used.

Failed / Hostile Mergers & Acquisitions

- Unsuccessful M&As can result in financial losses, cultural conflicts, and operational inefficiencies. The integration of disparate technologies, data systems, and corporate cultures can be challenging, leading to delays, cost overruns, and employee dissatisfaction.
- Hostile takeovers often lead to management disputes, employee dissatisfaction, and strategic misalignment. Companies are focusing on shareholder alignment strategies and robust defence mechanisms to prevent hostile acquisition attempts.
- Companies are employing detailed due diligence processes, including technology assessments, regulatory reviews, and cultural compatibility analyses, before engaging in acquisitions. Overvaluation of synergies between merging firms can result in financial strain and investor dissatisfaction.
- Companies are ensuring thorough financial evaluations, including revenue projections, cost



synergies, and risk assessments, before finalizing any M&A deals. The speed of technological change makes it difficult to predict the true value of tech companies.



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 solutions such as Electrical Audit & Thermography, etc.
- **Fire Hydrant IoT:** Fire Hydrant IoT: Fire hydrant IOT (ILGIC Patented Solution) is an automated device for monitoring key parameters such as Hydrant and Sprinkler line pressure, Main and Jockey pump on-off status, Firewater tank level. These can be interpreted to provide intelligence on unauthorized usage of water and leakage, effectively saving water. 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.
- **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 locations.
- Renewable Solutions: In line with our philosophy of recommending business solutions, we recommend efficiency measurements for wind and solar power generating assets. Drones are used to provide high accuracy and 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 and in surface transportation / INLAND movement 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, to determine root cause analysis with MIS, claim assessment reports collectively in the form of logistics audit.
- MWS (Marine warranty surveys): Our inhouse practices of condition survey prior risk inception & post risk inceptions helps our customers to have an independent risk management of the high value / ODC (over dimensional cargo) movements conducted by the Insured so that reliance over logistics service provider is supervised with Insured's nominated risk assessment team having a worldwide presence with a supervised network. Not only marine cargo, but HULL insurance risk exposures are surveyed for risk assessment and risk management.
- **Technical engagements:** Uncertainty of the risk associated with the transit can be concluded



with marine experts. Assessing vessel's condition for SEA transit as a full chartered load on behalf of the Insured, 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 (software as a service) 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 is recommended to effectively monitor and mitigate theft / pilferage prone dispatches to 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. We have case studies of successful recovery of stolen goods with our telematics services.

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 prevention with reference to some parameters of distinctive research and industries best practices.
- **Drone Solutions for Linear Projects:** 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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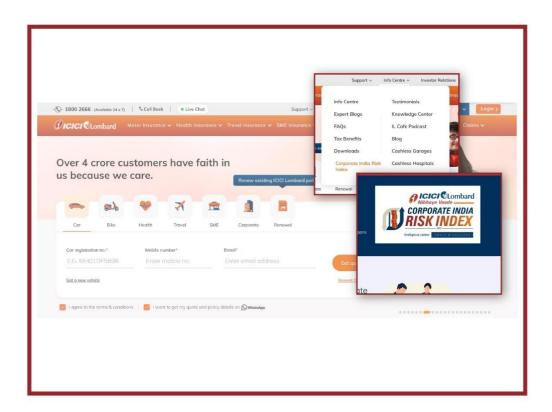
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