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INNOVATIONS AND CHALLENGES ON RISK MANAGEMENT WITH REFERENCE TO AXA PARENTERALS LTD GUJARAT

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ABSTRACT

This study explores the risk management practices of AXA Parenterals Ltd., a mid-sized pharmaceutical company based in Gujarat, India. The pharmaceutical industry is inherently exposed to multiple risks, including regulatory compliance, operational disruptions, financial uncertainties, and market volatility. In this context, effective risk management is essential to ensure business continuity and sustainable growth. The objective of this study is to identify the key risks faced by AXA Parenterals Ltd., examine the strategies implemented to mitigate these risks, and evaluate their effectiveness. Using both primary data (through interviews with management and staff) and secondary data (such as company reports and industry analysis), the study provides a comprehensive assessment of the company's risk management framework. The findings suggest that while AXA Parenterals has established several risk controls, there remain areas for improvement, particularly in proactive risk identification and the integration of technology into risk monitoring systems.

Keywords: Risk Management, Pharmaceutical Industry, AXA Parenterals Ltd, Operational Risk**.**

INTRODUCTION

Axa Parenterals Ltd. is a pharmaceutical manufacturing company established on July 22, 2005, in Delhi, India. It specializes in sterile parenteral preparations, including life-saving medicines and hospital products. The company operates a state-of-the-art manufacturing facility in Roorkee, Uttarakhand, and has a subsidiary, Heilsa Life Sciences Pvt. Ltd. Axa Parenterals exports to over 61 countries and holds certifications such as WHO-GMP and PIC/S. As of March 2024, the company reported a revenue of ₹213 crore and is actively seeking CDMO and marketing alliances globally.

Axa Parenterals Ltd is a pharmaceutical company known for manufacturing and marketing sterile liquid formulations, especially IV fluids. It plays a crucial role in the healthcare sector by providing essential hospital care products. The company operates globally, exporting to numerous countries with WHO-GMP-certified facilities. It emphasizes high-quality standards and affordability in life-saving treatments. Axa also contributes to healthcare sustainability through innovation and strategic partnerships.

The pharmaceutical manufacturing industry plays a critical role in producing life-saving medicines and ensuring public health. It supports healthcare systems by supplying safe, effective, and affordable drugs. The industry drives innovation through research and development of new therapies. It contributes significantly to the global economy, generating employment and trade. Additionally, it ensures drug quality and safety through stringent regulatory compliance. Risk management plays a crucial role in the pharmaceutical industry, where companies must

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navigate a complex landscape of regulatory compliance, quality control, market volatility, and operational challenges. AXA Parenterals Ltd., a mid-sized pharmaceutical company based in Gujarat, India, is engaged in the production and export of sterile liquid formulations and is therefore exposed to multiple categories of risk. This study aims to examine the risk management practices adopted by AXA Parenterals Ltd., focusing on how the company identifies, assesses, and mitigates various risks that could impact its performance and sustainability. Singh & Chakraborty (2023) examined the financial stability of the Indian pharmaceutical industry during the COVID-19 pandemic using the Altman Z-score model. Their findings indicated improved financial health in the sector, attributed to increased investor confidence and higher beta in pharma stocks compared to the broader market. Lam (2003) outlined the importance of integrating risk management into core business strategy, highlighting how enterprise risk management (ERM) can create long-term value and reduce unexpected disruptions. Beasley et al. (2005) emphasized that firms with mature ERM processes are more likely to achieve strategic goals and demonstrate stronger financial performance. Hoyt & Liebenberg (2011) found a positive correlation between ERM implementation and firm value in volatile industries like pharmaceuticals. Narayanan & Singh (2019) highlighted the importance of quality assurance and regulatory compliance as core components of operational risk in Indian pharma firms.

REVIEW OF LITERATURE

Aggarwal (2019) provides a focused analysis on Indian pharmaceutical companies, emphasizing the role of regulatory risk as a primary driver of international diversification. The study concludes that firms facing stringent and often unpredictable domestic regulations tend to expand internationally to spread risk and tap into more stable regulatory environments.

Beasley, Clune, and Hermanson (2005) conducted an empirical study examining the factors influencing the extent of Enterprise Risk Management (ERM) implementation in organizations. Their research highlights that firms with a Chief Risk Officer, larger size, and board or audit committee support are more likely to adopt comprehensive ERM frameworks. The study underscores the importance of organizational structure and governance in facilitating risk management practices. It also points out that regulatory pressure and external audit quality contribute significantly to ERM adoption.

Chakravarti and Bansal (2023) emphasize the growing importance of Environmental, Social, and Governance (ESG) risks in the pharmaceutical industry, highlighting ESG integration as a strategic imperative rather than a compliance burden. Their study argues that Indian pharma companies lag in ESG readiness compared to global peers, which can impact investor confidence and long-term sustainability. The authors advocate for a proactive ESG risk management framework, which includes supply chain transparency, ethical sourcing, and environmental compliance.

Choudhury and Dutta (2020) explore the delicate balance between risk management and innovation in mid-sized pharmaceutical firms, emphasizing that excessive risk aversion can hinder innovation-driven growth. Their study finds that companies with agile risk frameworks are better

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positioned to pursue R&D initiatives without compromising compliance or financial stability. The authors highlight the importance of strategic risk-taking, supported by cross-functional teams and adaptive leadership. They argue that mid-sized firms must tailor their risk strategies to remain competitive while fostering a culture of innovation.

Deshpande (2019) investigates the financial risk hedging practices adopted by mid-sized pharmaceutical companies, focusing on tools like forward contracts, currency swaps, and interest rate derivatives. The study reveals that firms with higher exposure to foreign markets are more likely to adopt formal hedging mechanisms to manage exchange rate volatility and credit risk. It also emphasizes the role of financial literacy at the managerial level in the effective implementation of hedging strategies. Deshpande concludes that proactive financial risk management enhances operational stability and supports strategic decision-making in dynamic market conditions.

Hoyt and Liebenberg (2011) examine the impact of Enterprise Risk Management (ERM) on firm value, using empirical data from publicly traded U.S. companies. Their findings suggest that firms implementing ERM frameworks tend to experience higher firm value, largely due to improved risk visibility and strategic decision-making. The study identifies factors such as firm size, industry risk profile, and the presence of a Chief Risk Officer as key drivers of ERM adoption. It also emphasizes that ERM contributes to reducing earnings volatility and enhancing stakeholder confidence.

Jain, Shah, and Kumar (2023) explore the integration of digital tools and analytics in enhancing risk monitoring within pharmaceutical firms. The study highlights how technologies like AI, blockchain, and predictive analytics are being adopted to track regulatory changes, supply chain vulnerabilities, and quality compliance in real-time. Their findings indicate that digital risk systems improve responsiveness and transparency, especially in highly regulated markets. The authors also stress the need for digital literacy and data governance frameworks to fully leverage these tools.

Kumar and Mehta (2014) focus on operational risk management in pharmaceutical manufacturing units, emphasizing the significance of identifying, assessing, and mitigating risks across production processes. Their study finds that equipment failure, human error, and non-compliance with GMP (Good Manufacturing Practices) are the most common operational risks. The authors propose structured risk assessment tools such as FMEA (Failure Modes and Effects Analysis) and risk matrices to enhance decision-making. They also stress the importance of employee training and cross-functional coordination in minimizing operational disruptions.

Mukherjee (2022) examines the relationship between reputational risk and brand equity in the Indian pharmaceutical sector. The study highlights that regulatory sanctions, product recalls, and negative media coverage significantly erode consumer trust and brand value. Mukherjee argues that reputational risk is not just a marketing concern but a strategic risk that directly affects financial performance and stakeholder confidence. The paper emphasizes the need for proactive reputation management, including transparency, ethical practices, and robust crisis communication strategies. This work links risk governance to long-term brand sustainability in pharma.

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Patil and Naik (2020) investigate the financial risk exposure faced by pharmaceutical companies in the wake of the COVID-19 pandemic. Their study highlights the increased vulnerability of firms to supply chain disruptions, changes in demand, and financial market volatility. The authors argue that the pandemic exacerbated existing financial risks and introduced new challenges related to liquidity management and global market instability. They recommend enhanced financial risk frameworks and liquidity buffers to mitigate such risks in future crises.

The study adopts a qualitative case study approach, utilizing both primary and secondary data sources. Primary data is collected through semi-structured interviews with key stakeholders within the company, as well as direct observations of its operations. Secondary data is drawn from company reports, financial statements, and relevant industry research to contextualize the findings within the broader pharmaceutical sector. The data is analyzed using thematic analysis to identify key themes and patterns in AXA Parenterals Ltd.'s risk management strategies.

While substantial research exists on risk management in the pharmaceutical industry, there remains a notable gap concerning mid-sized Indian pharmaceutical companies like AXA Parenterals Ltd. Most existing studies focus on large multinational firms, overlooking the unique challenges faced by smaller enterprises, particularly in terms of integrating risk management practices into operations. Additionally, while financial risks have been widely studied, operational and supply chain risks specific to the Indian pharmaceutical context, especially in the aftermath of disruptions like COVID-19, require more attention. The role of emerging technologies in enhancing risk management for mid-sized firms has also not been adequately explored.

RESEARCH METHODOLOGY

This study adopts a qualitative research approach to explore and analyze the risk management practices at AXA Parenterals Ltd., a mid-sized pharmaceutical company based in Gujarat, India. The aim is to identify, assess, and evaluate the company's strategies for mitigating financial, operational, regulatory, and supply chain risks, as well as to understand the role of leadership and technology in these practices.

This study focuses on the risk management practices at AXA Parenterals Ltd., a mid-sized pharmaceutical company based in Gujarat, India. The scope is primarily limited to assessing the company's strategies for managing various types of risks, including financial, operational, regulatory, and supply chain risks. The study will explore how AXA Parenterals Ltd. identifies, assesses, and mitigates these risks within its operational framework.

OBJECTIVES

- To identify and categorize the various types of risks faced by the organization across financial, operational, and strategic domains.
- To evaluate the effectiveness of the current risk management policies and practices implemented within the organization.
- To analyse the impact of risk events on organizational performance.

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- To examine the role of risk assessment tools and techniques in predicting and reducing potential business threats.
- To recommend strategic improvements for strengthening the organization's risk management framework.

A case study approach is employed, as it allows for an in-depth analysis of the company's specific risk management strategies within their unique operational context. This approach enables a comprehensive understanding of the risk management processes and provides detailed insights into how AXA Parenterals Ltd. deals with various risks. Out of a population of 500 Employees of AXA Parenterals Ltd. a sample of 100 employees were considered for the study. Data for this study will be gathered through a combination of primary and secondary sources.

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DATA ANALYSIS AND INTERAPRETATION

Our organization regularly identifies financial risks that could impact operations.

Table 1 Respondents

S.No	Opinion	Respondents	Percentage
1	Highly satisfied	10	10
2	Satisfied	20	20
3	Neutral	15	15
4	Dissatisfied	50	50
5	Very dissatisfied	5	5
	Total	100	100

Source: Primary Data

Fig No 1: Respondents

The line chart reveals a clear dissatisfaction with AXA Parenterals Ltd.'s current risk management practices, as 55% of respondents are dissatisfied, indicating a significant gap in confidence regarding the company's risk handling methods. In contrast, only 30% expressed satisfaction, further highlighting the need for enhancement. This pattern points to a critical need for improvements in how risks are identified, managed, and communicated within the organization, suggesting that better transparency and more effective strategies could help address these concerns.

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Operational risks are clearly defined and documented in our processes.

Table 2 Operational Risks

S.No	Opinion	Respondents	Percentage
1	Satisfied	11	11
2	Neutral	8	8
3	Highly satisfied	22	22
4	Dissatisfied	43	43
5	Highly Dissatisfied	16	16
	Total	100	100

Source: Primary Data

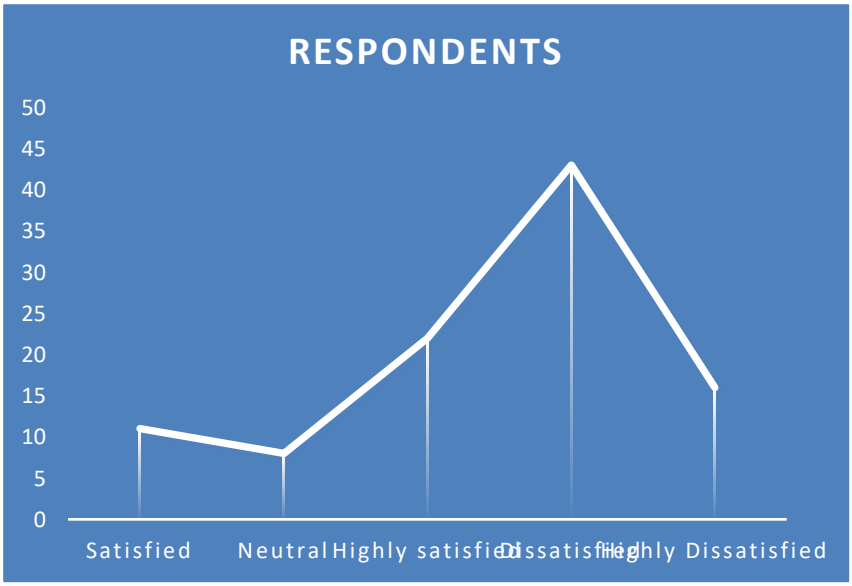

Figure 2 Operational Risks

The graphical representation of the survey results a line chart, highlights the varying levels of satisfaction among respondents regarding risk management practices at AXA Parenterals Ltd. The data shows that a significant portion—43%—of respondents are dissatisfied, while 16% are highly dissatisfied, indicating a clear concern with the effectiveness of current risk strategies. On the other hand, 22% of respondents are highly satisfied and 11% are satisfied, reflecting a smaller yet notable segment with a positive outlook. Only 8% remain neutral.

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Strategic risks are considered in long-term planning decisions.

Table 3 Strategic Risks

S.No	Opinion	Respondents	Percentage
1	Highly satisfied	10	10
2	Satisfied	15	15
3	Neutral	20	20
4	Dissatisfied	5	5
5	Very dissatisfied	50	50
	Total	100	100

Source: Primary Data

Figure 3 Strategic Risks

Figure 3 illustrates a strong negative sentiment among respondents, with 50% being very dissatisfied and an additional 5% dissatisfied, pointing to significant issues with the service or product. Only 15% of respondents are satisfied, and just 10% are highly satisfied, indicating that while a small group finds the offering acceptable, it does not meet the expectations of most customers. With 20% of respondents remaining neutral, the overall sentiment is predominantly negative.

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Employees are aware of different types of risks relevant to their roles.

Table 4 Types of risks

S.No	Opinion	Respondents	Percentage
1	Highly satisfied	15	15
2	Satisfied	10	10
3	Neutral	20	20
4	Dissatisfied	50	50
5	Very dissatisfied	5	5
	Total	100	100

Source: Primary Data

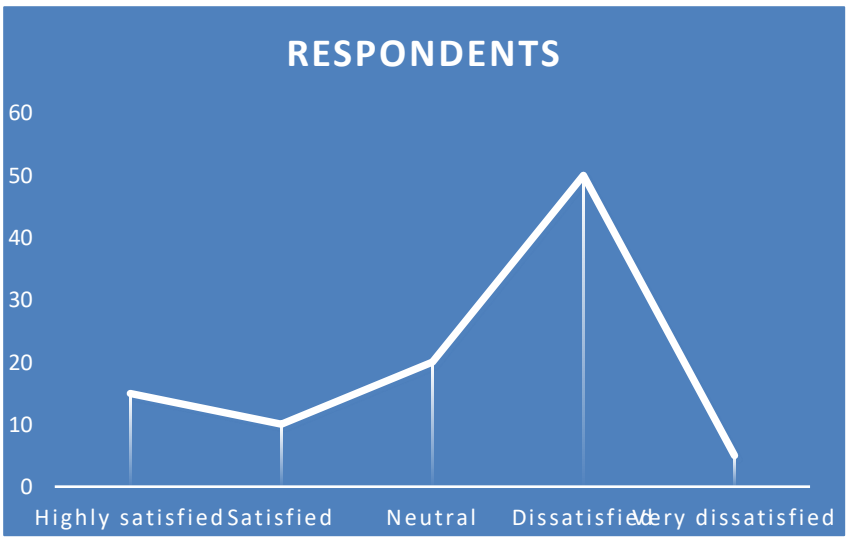

Figure 4 Types of risks

Figure 4 highlights a predominantly negative sentiment, with 50% of respondents dissatisfied and 5% very dissatisfied, indicating a substantial level of dissatisfaction with the service or product. On the positive side, only 15% are highly satisfied, and 10% are satisfied, while 20% remain neutral. This distribution suggests that a significant portion of respondents are unhappy, pointing to a clear need for improvements to better meet customer expectations and enhance overall satisfaction.

The tools used provide accurate forecasts of potential risks.

Table 5 Accurate forecasts

S.No	Opinion	Respondents	Percentage

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1	Highly satisfied	10	10
2	Satisfied	20	20
3	Neutral	15	15
4	Dissatisfied	5	5
5	Very dissatisfied	50	50
	Total	100	100

Source: Primary Data

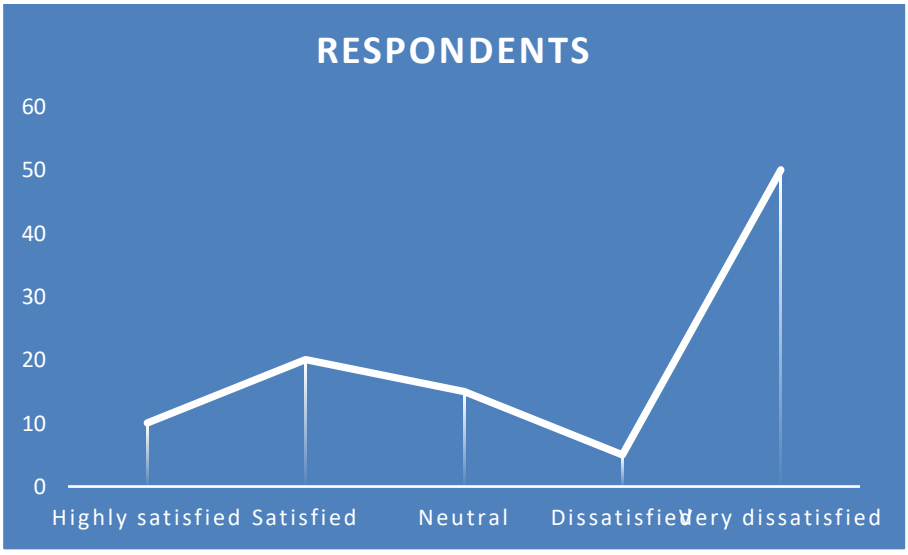

Figure 5 Accurate Forecasts

Figure 5 clearly illustrates a significant dissatisfaction among respondents, with 50% being very dissatisfied and an additional 5% dissatisfied, totalling 55% of negative responses. On the positive side, 20% are satisfied and 10% are highly satisfied, contributing to 30% positive feedback. 15% of respondents remain neutral, indicating mixed feelings. This pattern highlights a crucial need for improvements to better align with customer expectations, as half of the respondents express strong dissatisfaction.

ANALYSIS OF FINDINGS

The survey results reveal significant dissatisfaction with the company's current risk management practices across multiple areas. 55% of respondents expressed a lack of confidence in how risks are managed, highlighting the need for immediate improvements. Specifically, 59% were dissatisfied with the definition and documentation of operational risks, and 55% were dissatisfied with the integration of strategic risks into long-term planning decisions. Employee awareness of relevant risks also emerged as a concern, with 55% dissatisfied with current training programs. Furthermore, 55% of respondents expressed dissatisfaction with the accuracy of risk forecasting tools, indicating a need for more reliable forecasting systems. A smaller proportion, 15-20%,

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remained neutral, suggesting an opportunity to engage these respondents for more detailed feedback. In summary, the company must enhance risk management processes, improve employee training, and invest in better tools for forecasting and defining risks to restore confidence and improve overall risk handling.

RECOMMENDATIONS

Managers

Employee training and awareness also play a crucial role in effective risk management. It is important that staff at all levels are trained to recognize the different types of risks relevant to their roles. A well-informed workforce is better equipped to respond quickly and appropriately to emerging risks. Furthermore, the adoption of advanced risk management tools, such as AI-powered risk forecasting and data analytics platforms, should be prioritized. These technologies can help predict and assess risks with greater accuracy, allowing the company to take preventive measures well in advance. Finally, it is essential to develop contingency plans and response strategies for managing risks when they do occur. These strategies should be well-documented, tested regularly, and communicated across the organization to ensure the business can continue operations with minimal disruption.

Policymakers

Additionally, policymakers should consider fostering greater collaboration between industry players, regulatory bodies, and academic institutions. This collaboration can result in the development of standardized risk management frameworks, which would be beneficial for all pharmaceutical companies, including mid-sized firms like AXA Parenterals Ltd. It is also essential that the government strengthens intellectual property laws and accelerates the approval process for drugs, which will help companies better manage the risks associated with innovation and market competition. Encouraging digital transformation through government-sponsored initiatives, particularly in AI and data analytics, would also be a valuable step in improving transparency and efficiency in risk management practices.

The pharmaceutical industry as a whole can strengthen its approach to risk management by fostering greater collaboration among various stakeholders. This includes not only pharmaceutical companies but also academic institutions and government agencies. Such collaborations can lead to the development of more effective risk management strategies tailored to the unique needs of the pharmaceutical industry. Industry-wide standards for risk management should be established, enabling companies to benchmark their practices against the best in the field. These standards would help streamline risk management practices and create a unified approach to handling the diverse risks in the sector.

In addition, investing in advanced technologies is key to improving risk management. The adoption of AI, machine learning, and advanced data analytics can help companies better predict and assess risks in real-time, leading to faster responses and fewer disruptions. A data-driven approach allows for a more proactive stance on risk mitigation. Centralized data systems would also enhance decision-making and transparency, ensuring that all stakeholders have access to the

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same information. Furthermore, industry leaders must invest in talent development. A skilled workforce capable of managing complex risks is essential to the long-term sustainability and growth of the sector.

Scholarly Development

Academic research can significantly contribute to the enhancement of risk management practices in the pharmaceutical sector. Scholars should focus on empirical studies to evaluate the effectiveness of different risk management strategies, especially in mid-sized firms like AXA Parenterals Ltd. Research could explore how these companies identify and mitigate risks across various areas, including financial, operational, and strategic. Additionally, developing predictive risk models that use big data and machine learning could help identify potential risks before they materialize, enabling companies to take preventive action.

Scope for further study

While this study focuses on AXA Parenterals Ltd., future research could expand the scope by comparing risk management practices across multiple mid-sized pharmaceutical companies in India. A broader comparative analysis could uncover trends, common risks, and best practices, helping to identify areas where companies can improve. Additionally, future studies could explore the impact of external factors such as the global supply chain, regulatory changes, and the fluctuating prices of raw materials, all of which have a direct impact on risk management in the pharmaceutical sector.

Incorporating non-financial risk factors, such as ESG compliance and corporate governance, into risk management frameworks would provide a more holistic view of a company's risk profile. Finally, integrating advanced analytical techniques, such as multivariate regression or machine learning algorithms, could provide deeper insights into how various risks interact and affect the financial and operational performance of pharmaceutical companies. This would enable a more accurate prediction of potential risks and the development of more effective mitigation strategies.

CONCLUSION

This study underscores the importance of effective risk management practices for AXA Parenterals Ltd., a pharmaceutical company operating in a highly competitive and regulated environment. The findings indicate that while some progress has been made, there are still significant gaps in the company's risk management approach, particularly in risk identification, communication, and mitigation strategies. By adopting more advanced tools, fostering a risk-aware culture, and implementing clearer communication channels, AXA Parenterals Ltd. can significantly enhance its risk management capabilities. Furthermore, industry-wide collaboration, supported by policy interventions, can create a more resilient pharmaceutical sector, better equipped to handle emerging risks.

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