International Journal Administration, Business & Organization
Vol. 6 (3), 2025: 66-84 | E-ISSN 2721-5652
Available at https://ijabo.a3i.or.id/index.php/ijabo

Governance and Compliance in PIA: A Risk-Based Framework for Achieving Financial Sustainability

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ABSTRACT

Pakistan International Airlines (PIA), founded in 1955, once symbolized national pride and success. However, after experiencing years of prosperity, it has unfortunately descended into one of Pakistan's most financially struggling enterprises, facing immense losses. This study explores the challenges that have led to the decline of Pakistan International Airlines (PIA), once a leading state-owned enterprise, focusing on management, financial oversight, and compliance issues. By applying Governance and Management theories, the research reveals how the lack of proper governance has deeply affected PIA's economic health and day-to-day operations. Through mixed methods, quantitative data analysis, and comparative studies of PIA's financial performance from 2013 to 2023, the study highlights concerning patterns such as persistent losses, unpredictable revenue growth, and an unsustainable debt ratio. It finds that political influence, poor leadership appointments, and the absence of strong GRC processes have all played a significant role in PIA's struggles and damaged its international standing, particularly after the 2020 fake pilot license scandal. In contrast, Emirates and Turkish Airlines have thrived globally by integrating effective ESG and GRC strategies into their operations. The findings emphasize that for PIA to regain its financial stability, comply with international standards, and compete on the global stage, comprehensive improvements in governance are necessary. This includes prioritizing professionalism, listening to stakeholders, strengthening risk management practices, and embracing ESG principles to foster long-term success.

Keywords: State-Owned Enterprises (SOEs); Pakistan International Airlines (PIA); Environment, Social and Governance (ESG); Governance, Risk and Compliance (GRC)

Received: 15 September 2025
Accepted: 01 November 2025
Available online: 26 December 2025

DOI: 10.61242/ijabo.25.576

JEL Classifications: G38, M14, G34

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INTRODUCTION

Having been established in 1955, Pakistan International Airlines (PIA) used to be a national icon of success, being one of the most successful airlines in Asia (Zaidi, 2019). In the golden age, PIA grew in its fleet and routes at a tremendous rate and contributed to the Pakistani economy (Sammi, 2024). Pakistan International Airlines (PIA), once Asia's premier state-owned carrier, has experienced catastrophic financial decline, accumulating losses of PKR 713 billion by 2023 and requiring government assumption of PKR 671 billion in debt to achieve its first reported profit in two decades (MG News, 2025; The Friday Times, 2025).The state-owned enterprise (SOE) continues to acquire significance in the contemporary global economy (Lin *et al.*, 2020). The airline's governance failures reached international attention in 2020 when 262 of Pakistan's 860 active pilots (30.5%) were found operating with fraudulent licenses, triggering European Union and UK aviation bans that cost PIA an estimated PKR 200 billion in revenue losses (Dawn, 2020; Profit Pakistan Today, 2025).

Having been a regional leader in the aviation industry, Pakistan International Airlines (PIA) has gone down the drain because of governance failures, financial mismanagement and inefficiency. Still, corruption and an unsustainable economic model, despite reforms, resulted in a series of bailouts and a bad image, which are the aspects that point to the vulnerability in corporate governance and risk management (Daiser *et al.*, 2017). In June 2020, the aviation minister of Pakistan announced that of the 860 qualified pilots in the nation, 262 had licenses that were either fake or acquired through cheating (Orim & Glendinning, 2023). The accident found that there were serious weaknesses in civil aviation laws of Pakistan that brought safety concerns to the world. Consequently, the European Union Aviation Safety Agency (EASA) prohibited Pakistan International Airlines (PIA) to fly in the EU member states. EASA has mentioned irregularities in safety oversight such as falsified pilot qualifications and inadequate training as reasons for its suspension of PIA. Other regulators, including the UK CAA, then launched similar actions making the matter worse (Sammi, 2024). Despite multiple restructuring attempts and government bailouts, PIA's financial instability persists, with operational challenges compounded by weak governance structures and non-compliance with international aviation standards. While successful airlines like Emirates and Turkish Airlines have leveraged Environmental, Social, and Governance (ESG) and Governance, Risk, and Compliance (GRC) frameworks to achieve sustainable growth, PIA's failure to implement robust governance mechanisms has resulted in systematic mismanagement, regulatory violations, and competitive disadvantage in the global aviation market. Emirates and Turkish Airlines, among others, are leading airlines that have successfully adopted this ESG principle to strengthen corporate governance, environmental sustainability, and business operations efficiency (Kim & Kusakci, 2023).

Additionally, the GRC frameworks assist in organizational stability. Financial mismanagement, repeated bailouts, and weak governance practices were caused by PIA’s failure to implement strong GRC policies. The European Union Aviation Safety Agency (EASA) and the United Kingdom Civil Aviation Authority (UK CAA) banned various airways due to the fake pilot licenses scandal in 2020 (JK, 2020). Serves as a case study of the dangers of governance failure associated with regulatory noncompliance on SOEs. Nearly 30% of Pakistan’s pilots were operating with fake or fraudulent licenses, revealed the then Minister of Aviation Ghulam Sarwar Khan in parliament after the tragic crash of PIA Flight PK-8303 in May 2020, which claimed the lives of 97 people (Asghar & Mohsin, 2023).

Existing literature on state-owned enterprise (SOE) governance primarily focuses on general corporate governance theories without addressing the specific intersection of

 DOI: https://doi.org/10.61242/ijabo.25.576

aviation safety compliance, financial sustainability, and risk management frameworks in crisis-affected airlines. This study uniquely applies integrated ESG-GRC theoretical frameworks to analyze PIA's governance failures, providing the first comprehensive risk-based model specifically designed for financially distressed state-owned airlines. Unlike previous studies that examine governance issues in isolation, this research establishes novel connections between pilot certification scandals, international regulatory compliance, and long-term financial sustainability.

This study contributes to academic literature by developing a contextualized ESG-GRC integration model for aviation SOEs, by providing empirical evidence of governance-performance linkages in crisis scenarios and offering a replicable framework for financially distressed state-owned airlines globally. The research addresses a critical knowledge gap in understanding how systematic governance reforms can restore international credibility and achieve sustainable financial performance in state-owned aviation enterprises.

LITERATURE REVIEW

Corporate Governance in SOEs

SOEs do establish corporate governance that is accountable, transparent and efficient. In contrast to the case of a privately owned company, the SOE is charged with two tasks to both achieve commercial and government objectives, yet frequently must experience ambiguous degrees of control activities that engage political influence (Adebayo & Ackers, 2022). Empirical research found out that, with independent boards of directors and the management of SOE basing on performance, the performance would improve and the likelihood of corruption will be reduced (Daiser *et al.*, 2017). Meanwhile, poor institutional controls and nearly rightful objectives have a negative impact on a wide range of SOEs. The governance practices should be empowered to deliver good results and enable citizens to believe in the organization to become better (Papenfuß, 2020). The management system of state-owned enterprises (SOE) cannot remain limited to the board of directors. It is suggested to be expanded to every level of operations (Khongmalai & Distanont, 2017).

It should also, however, improve the management systems, such as risk management, internal controls, human resource management, and IT to enable the board to receive the right information that will help enhance their decision-making. This hence requires an integrated solution to enhance corporate governance of the state-owned enterprises (SOE) to maintain a balance between state control, professional management and accountability. First, it can reinforce the system of governance by making it transparent, independent, and performance based to enhance the efficiency and financial viability of SOEs (Wong, 2004). The government intervention on the corporate governance of the state-owned enterprises (SOEs) tends to cause inefficiency and competition. There are SOE performance and accountability improving policies and governance reforms such as independent boarding, market based decision making (Sokol, 2009). The success of SOE like the Singapore airlines shows that SIA is able to succeed on a sustainable basis by integrating a two-pronged approach of cost leadership and service excellence. It possesses a powerful board of specialized committees governing the organization (Heracleous & Wirtz, 2012). For example, Emirates Airlines works to blend sustainability with governance and marketing strategies to eliminate disparities between corporate decision-making and environmental responsibility. This approach builds customer trust and loyalty and provides a competitive advantage (Al Chami, 2025). Corporate governance in airlines facilitates efficient production and marketing, resulting

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in higher organisational performance. Optimisation of resource allocation, reduction of operations, and improvement of the aviation industry's competitive advantage; thus, strong governance structures are employed (Lu *et al.*, 2012).

Governance Failures in PIA: A Case Study

Pakistan International Airlines (PIA) is an excellent example of governance failure in an SOE. PIA has suffered from political interference, resulting in the appointment of unqualified people, operational inefficiency, and financial mismanagement. Its economic health worsened because it is overstaffed, corrupt, and makes poor decisions. The causes of its perennial decline are rooted in failed reform attempts and reincarnation into privatisation (Tariq *et al.*, 2025). The poor appointment of officers without merit, lack of accountability, and operational inefficiencies have combined to make the airline economically unstable (Soranzo, 2020). PIA governance failures stem from political interference, weak regulatory oversight, and mismanagement. Problems of operational inefficiencies and financial instability occur due to leadership changes, and neither accountability nor regulation of the management is ensured as the new leader takes over (Abbasi *et al.*, 2018). Weak internal controls and poor strategic decision-making are identified by it as PIA's main governance failures. According to (Abbasi *et al.*, 2021), this crisis is triggered due to the inefficiency of resource allocation and performance monitoring, and the obsolete existence of corporate policies that resulted in operational and economic decline. Due to poor management structures and ineffective management, which result in governance failures, PIA does not have strong oversight by the board´s committees. One of the reasons for operational inefficiencies is poor strategic decision-making, a lack of risk management, and a lack of accountability. For example, mismanagement has also impacted the organization's human resource management (HRM) due to a lack of good governance and compliance framework (Abbasi *et al.*, 2021). It is one of the most significant problems in governance, and it revolves around the fake pilot license case in 2020 and worldwide flight bans against EASA and the UK CAA from other countries. (Sammi, 2024). It showed that many organisational issues exist, ranging from hotshot pilots being given posts to rules being ignored for safety. It became clear that there were problems with how people were chosen since unqualified pilots were hired and safety standards were ignored.

Rigorous regulatory checks and ethical hiring practices were consistently ignored, which caused a large amount of damage to the airline's credibility and operational integrity (Rafique *et al.*, 2025). The fake pilot license scandal in PIA pointed to significant deficiencies in the governance processes because the PIA was employing pilots with the wrong qualifications (Asghar & Mohsin, 2023). This also illustrates the urgency of reforming governance, enabling the airline to meet international aviation safety standards.

ESG Framework in the Aviation Industry

The Environmental, Social, and Governance (ESG), which is used as a significant footprint for corporate sustainability within the aviation industry, is gaining prominence. The ESG framework in the aviation industry integrates Environmental, Social, and Governance factors in operational practices to promote sustainable growth (Caraveo Gomez Llanos *et al.*, 2023). Since airline financial stability is highly interdependent with ESG ratings, which then determine investor perceptions and risk assessment, and since strong ESG performance mitigates financial distress and yet attracts investment, thus playing an integral role in the less favorable competitive aviation sector, the ESG ratings are important (Magnússon, 2025). Similarly, those of Emirates, Turkish Airlines, and

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Singapore Airlines can incorporate such ESG frameworks into their governance, reduce environmental impact, and attract sustainable investors (Haksevenler *et al.*, 2023). In terms of sustainability at Turkish Airlines, sustainability has been implemented to reduce the environmental impacts in the aviation sector. Through regulations and green technologies, especially ESG, Turkey seems to ascribe to a more cautious approach compared to other global airlines, still at a select level of sustainable aviation, which is greater than that of any of the European airlines in implementing comprehensive ESG strategies (Haksevenler *et al.*, 2023).

However, PIA has largely not aligned with ESG principles in governance and compliance. It hindered the airline from securing investment and prevented it from remaining competitive because of its operational inefficiencies, lack of environmental responsibility, and reputational damage caused by governance failures. Investor confidence and risk on finances are stronger for airline firms with strong ESG performance; it thus positively influences firm value in the airline industry. Airlines that incorporate ESG criteria in strategic decision-making tend to recover better than other airlines in market valuation and long-term profitability (Yildiz *et al.*, 2024). However, PIA regarding governance and compliance has largely failed to tick the box in terms of ESG. Despite all these operational inefficiencies, lack of environmental responsibility, and failure in governance that resulted in reputational damage, the airline has been unable to attract investment or maintain its competitive status. PIA's inability to address sustainability governance models, as global regulatory bodies are now required to act more quickly towards ESG compliance, constitutes a threat to the company's comeback.

Risk Management and Compliance Failures in PIA

In the aviation context, risk management and compliance are crucial as safety and operational efficiency are very important, as well as regulatory compliance. The consequences of PIA’s non-compliance with international aviation standards were grave; they have dented the airline's credibility and become a fatal blow to operational viability, as risk management and compliance failures in PIA stem from a lack of regulatory oversight and weak implementation of safety protocols. Consequently, operational inefficiencies and greater safety concerns occurred because of the airline’s inability to implement a sound risk management framework (knez & županič, 2022). The 2020 fake pilot license scandal found deep flaws in PIA’s risk management framework, which is a cause for concern over the airline’s capacity to meet the safety regulations. As to PIA, the absence of a Governance, Risk and Compliance framework was a significant cause of lingering inefficiencies and continued regulation breaches. Organization efficiency and compliance with regulatory standards are substantial aspects of the requirements of the Governance, Risk, and Compliance (GRC) projects (Shahim *et al.*, 2012).

The rudimentary management of risks in airlines, including PIA, has resulted in operational flux and a lack of financial stability. With the failure of PIA to establish proactive risk assessment and strict compliance, such safety concerns and regulatory challenges have increased (Nomura, 2017). Another blow to PIA’s stability is that it has been hit with financial mismanagement and irregular procurement. Instead, the government has repeatedly bailed out to prop up unsustainable debt. The internal problems that have caused the economic crisis at PIA are poor governance, mismanagement, and an unsustainable cost structure. The airline's persistent losses and excessive dependence on government bailouts result from the failed implementation of adequate financial controls and cost-cutting measures (Mehmood, 2022).

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GRC Framework for the Aviation Industry

Governance, Risk, and Compliance (GRC) is a hybrid model of corporate governance, which guarantees regulatory control and efficient risk management. A well-organized GRC strategy can improve decision-making, improve the process of assessing risks, and increase the corporate responsibility (Racz, 2011). The introduction of a Governance, Risk, and Compliance (GRC) framework into the aviation industry must be a well-organized strategy that incorporates regulatory and countermeasures of risk reduction. An effective GRC process will help in increasing the efficiency of operations, improving compliance resilience, and reducing financial and safety risks (Spanaki & Papazafeiropoulou, 2013).

Aviation governance and risk compliance must have a properly designed framework that incorporates aviation safety, regulatory compliance and corporate responsibility. Imp sound risk governance may result in systemic breakdown which makes operations risky and marginalized in both financial and operational terms of the industry (Tjørhom, 2010). Emirates and Qatar Airlines are successful airlines that have implemented GRC models to improve transparency, simplify regulatory compliance, and reduce financial and operational risks.

Innovative business models are concerned with efficiency in operations, cost management and sustainability in the airline industry. Companies that are going to full-cycle operating models involve the use of advanced risk management and compliance initiatives that enhance the financial stability and competitive edge of airlines (Heiets *et al.*, 2019). Transformation requires proper Governance, Risk, and Compliance (GRC) management to address regulatory changes that follow the crisis to offset compliance on the organizational level (Gozman & Currie,2015). The absence of a systematic GRC system has led to instances of regulatory violation, financial hardship, and lack of efficiency. The enhancement of internal audit controls, regulation adherence, and the encouragement of independent control are the steps that have to be made on the way to the better organization of the governance of PIA. Through the strengthening of the checks of governance by means of efficient compliance measurements and clear-cut audit procedures, PIA can improve its working performance and regain the confidence of stakeholders.

Integrating ESG and GRC for Sustainable Governance in PIA

The fusion of ESG and GRC models may become a chance to restore the governance and efficiency levels at PIA. ESG provides a plan of sustainability on a long-term basis; conversely, GRC is regulatory compliance and risk mitigation. A GRC (Governance, Risk and Compliance) structure with an ESG (Environmental, Social and Governance) criteria assists in the improvement of the sustainability of organisations in conduct of business. Together with the global standards, this combination would contribute to proper risk management, proper regulatory compliance, and proper sustainability of operations in the long term (Gunawan, 2024). Shifting to PIA will make corporations more responsible as well as flexible in terms of finances and in adherence to regulations, leading the most viable way towards sustainable recovery. The integration of Governance, Risk, and Compliance (GRC) models and Environmental, Social, and Governance (ESG) philosophy would improve sustainable governance by providing better risk management, compliance, and resilience over time.It aligns transparency, ethical decision-making, and efficiency in the operational process across various industries like aviation (Gunawan, 2024). As mechanisms to integrate Governance, Risk, and Compliance (GRC) frameworks, integration has to be done to improve Enterprise Risk Management and

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effective corporate governance (Adinata, 2024). According to Adinata (2024), an integrated GRC approach is also helpful in mitigating risks, streamlining the compliance process, and governance for sustainability to PIA. Such integrated frameworks provide an opportunity for adoption, enabling PIA to reduce the efforts, reduce time spent in mitigating risk, comply more with regulatory requirements, and encourage sustainability. Green finance and green revenue could be adjusted to green revenue-service based on green performance finance, then by GRC strategies disseminated to the financial improvement and sustainable financial compliance practices, as well as the integrated global environmental standards (Magnússon, 2025).

PIA can enhance investor trust and participation and generate sustainable value on enhanced ESG and GRC principles in its corporate strategy. GRC initiatives appear to be an excellent organized system of estimating financial reporting, business operational organization and adherence to ethical business conducts. Meanwhile, it may also be ESG, which is bound to environmental responsibility and social impact (Gozman & Currie, 2015). Being a holistic strategy, PIA can address the underlying inefficiencies through this strategy, reduce the financial risks, and be aligned with the international aviation sustainability standards. On top of these, information technology (IT) can be adapted to risk in the ESG-GRC framework with the help of digital governance tools and data-based risk assessment to enhance compliance monitoring and decision-making procedures and give long-term operation stability and competitive edge in the global aviation sector.

Theoretical Framework

This study draws upon three interrelated theoretical perspectives to analyze the governance, risk, and compliance challenges Pakistan International Airlines (PIA) faced and propose pathways for sustainable recovery.

1. Agency Theory
   Agency theory provides a foundational lens for understanding the governance failures within PIA. It posits that conflicts arise when the interests of principals (such as shareholders or, in the case of state-owned enterprises, the public) diverge from those of agents (managers and executives) who are entrusted to act on their behalf (Ross, 1973). In the case of PIA, such agency problems have been aggravated by increasing political interference, non-merit-based appointments, and weak accountability structures, and have contributed to operational inefficiencies, financial mismanagement, and reputational decline in the electric sector. This study aims to apply agency theory to explain why misaligned incentives and inadequate oversight resulted in persistent organisational issues for PIA.
2. Stakeholder Theory
   Agency theory is meant to complement stakeholder theory as it assumes that organisations have management responsibilities to consider the interests of all stakeholders other than the shareholders (Freeman & Reed, 1983). In the case of PIA, the regulatory body is the European Union Aviation Safety Agency (EASA), passengers, employees, investors, and the government. In 2020, the fake pilot license scandal showed how important stakeholders' accountability and trust remain. This renders PIA's belief in its sustainability by addressing internal governance deficiencies and regaining external stakeholders' confidence through ethical conduct, transparent communication, and consistent conduct in regulatory compliance.
3. Governance, Risk, and Compliance (GRC) and ESG Integration
   Governance, risk, and compliance (GRC) framework is a term used to describe the practices of corporate governance, risk management as well as regulatory compliance. GRC practices are significant to the overall organizational resiliency and

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financial sustainability of the aviation business that is highly regulated (Hardy & Leonard, 2011). Nonetheless, empirical studies in the recent past give contradictory results on the efficiency of integrating GRC-ESG. Although Abdi *et al.* (2020) discovered that environmental and governance pillars are positively related to market value in 27 airlines, the social pillars had negative effects, which demonstrates the complexity of ESG implementation. Conversely, Yildiz *et al.* (2024) demonstrated that ESG practices enhance long-term firm value through efficiency and risk reduction, though short-term financial metrics may initially decline due to implementation costs. This divergence suggests that the timing and measurement approaches significantly influence GRC-ESG outcomes.

Comparative analysis shows that there is a sharp contrast between the successful carrier and the poor state-owned enterprise. Emirates and Turkish Airlines have displayed the best ESG integration with effective governance systems and risk management controls that have resulted in improved financial performance and global competitiveness (Akbulut *et al.*, 2024; Bahman & Shaker, 2023). In contrast, state-owned carriers like PIA face unique challenges where political interference undermines GRC effectiveness. Abdi *et al.* (2022) found that state ownership moderates the relationship between financial performance and ESG investment, often leading to suboptimal resource allocation and governance failures . Recent research by Kang *et al.* (2024) identified risk management as a critical mediator between ESG practices and financial performance, suggesting that airlines with stronger GRC capabilities can better convert sustainability commitments into measurable outcomes.

Figure 1. Conceptual Framework
Source: Own compilation, 2025

This integrated GRC-ESG framework provides a strategic model for PIA to enhance operational productivity, improve administrative structures, reduce financial and reputational risks, and align with global sustainability guidelines, while acknowledging the unique challenges faced by state-owned enterprises in implementing effective governance reforms.

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RESEARCH METHOD

This chapter provides the research methodology to investigate the governance, financial management, and regulatory challenges Pakistan International Airlines (PIA) faced. This study aims to check the impact of governance practices and the role of the ESG (Environmental, Social, and Governance) and GRC (Governance, Risk, and Compliance) models by examining PIA's financial performance and operational effectiveness in improving these areas.

The present study is a mix method study that is both qualitative and quantitative because of the analysis of the secondary data that PIA provided in the consolidated financial statements within the years 2013 to 2023 and the depiction of an overall image of the airline in a specific period of time through a specific time in the economic performance, operational efficiency and governance related practices of one or the other year. The quantitative analysis of the economic data provides the quantifiable information about the financial health of the airline, whereas the comparative one enables us to compare it with the international standards.

This study will use data between 2013 and 2023, which was chosen to encompass the critical financial problems that PIA has experienced over the past few years. The period is especially pertinent, which encompasses such events as the 2020 fake pilot license scandal and the current economic difficulties. Through the analysis of such 10 years, the analysis paper identifies the changing trend and governance problems in PIA. PIA is compared and benchmarked to two airlines Emirates Airlines and Turkish Airlines which have a history of good governance and operational performance. These airlines are chosen because of their sustainable financial results and the effective process of integrating ESG and GRC models, which predispose them to be the best comparisons in evaluating the performance of PIA.

The data of this research is in the form of a part, which is primarily the consolidated financial statements of PIA, the income statement, the balance sheet, and the cash flow statement. The data will also be supplemented with reports of the European Union Aviation Safety Agency (EASA), Pakistan Civil Aviation Authority (PCAA), news and media reports, and other sources of data available on the relevant case studies. Evaluation of the financial performance of PIA, its efficiency in operations and compliance with regulatory standards will be based on these various sources. This study selects the variables in terms of financial sustainability, efficiency of operations and governance success of PIA. The primary variable that is used to assess the ability of the airline to generate growing income is Revenue Growth (Alsulami, 2025); the financial health and the ability to utilize resources (Profitability Ratios ROA, ROE, Net Profit Margin), to determine areas of deficiency; and the regulation compliance information, which is the compliance with safety and regulation (Chege & Theuri, 2021).

RESEARCH RESULTS

The descriptive statistics used to examine the collected data include summations of financial parameters such as revenue, profit growth, operating costs, debt levels, and profitability ratios to identify trends from the Interpretation of descriptive statistics. This enables insight into PIA’s financial performance and operational effectiveness.

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Revenue Growth (%)	11	-39.75	102.69	12.10	38.31

 DOI: https://doi.org/10.61242/ijabo.25.576

Profit/ Loss Growth (%)	11	-29.62	81.80	14.72	33.93
Overall Operating Cost	11	44641916	13556547	75729037454	27053407327
Debt-to-Equity Ratio	11	-17.27	-0.19	-3.10	4.73
ROA (Return on Assets)	11	-6.12	-3.30	-4.91	0.90
ROE (Return on Equity)	11	0.12	1.58	0.32	0.42
Net Profit Margin (%)	11	-60.72	-27.00	-43.12	11.20

Source: Own compilation (2025)

There is a significant fluctuation in PIA's revenue year by year, as indicated by the high standard deviation of 38.31. Significant increases of 102.69% or big declines of -39.75% in annual revenue growth indicate how volatile and inconsistent the airline's market has been. This variable's values also change significantly, with a mean of 14.72% and a standard deviation of 33.93. The sharp difference between -29.62% and 81.80% reveals how PIA's net performance can be very unpredictable, resulting from periods of exceptional losses or earnings. The operating costs are still a significant burden on PIA's budget, with the overall operating cost now revised to PKR 44.64 billion (down from the previously mentioned PKR 44.64 trillion after removing the three zeros). The standard deviation for these costs is also high (PKR 270.53 billion), indicating significant variation between years, ranging from PKR 21.15 billion to PKR 98.06 billion. The maintenance costs average at PKR 10.35 billion; while there is some variation, it remains a consistent challenge for the airline. Staff costs, averaging PKR 19.45 billion, show relatively little fluctuation, suggesting ongoing and stable financial pressure in this area. Paying close attention to the Debt-to-Equity Ratio, we can see its average is -3.10, but its range is quite broad, from -17.27 to -0.19. Because the equity is always negative, liabilities appear to have become much larger than shareholders' equity, which signals big problems and risks for PIA. Other factors show that the company is still not doing well financially. The airline lost money from its assets for two years, since the average Return on Assets (ROA) was -4.91%. Even though the mean (0.32) for Return on Equity (ROE) is positive, its high standard deviation and modest sample range indicate that these earnings aren't stable. Besides, the Net Profit Margin stands out as very negative on average, reaching -43.12%, giving a range of -60.71% and -27.00%, which reveals that routine income is insufficient to cover all expenses. This review points to an unfinancially stable enterprise since it deals with high fixed costs, uneven growth, high debt, and ongoing losses. For this reason, the company needs to change its structure, handle expenses, and adopt rigid risk management and compliance systems for financial and operational strength.

Table 2. Correlation analysis

	Revenue Growth (%)	Profit/ Loss Growth (%)	Overall Operating Cost	Debt-to-Equity Ratio	ROA (Return on Assets)	ROE (Return on Equity)	Net Profit Margin (%)
Revenue Growth (%)	1.00						
Profit/ Loss Growth (%)	0.43	1.00					
Overall Operating Cost	0.79	0.11	1.00				

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Debt-to-Equity Ratio	-0.28	0.19	-0.73	1.00			
ROA (Return on Assets)	0.65	0.81	0.51	-0.16	1.00		
ROE (Return on Equity)	0.30	-0.18	0.77	-0.99	0.19	1.00	
Net Profit Margin (%)	-0.10	-0.62	0.20	-0.23	-0.56	0.27	1.00

Source: Own compilation (2025)

The correlation analysis for Pakistan International Airlines (PIA) reveals insightful connections between its financial and operational variables. To begin, there's a moderate positive correlation of 0.43 between Revenue Growth and Profit/Loss Growth. As PIA's revenue grows, the company's profits or losses tend to shift in the same direction, though not precisely at the same rate. A stronger relationship is seen between Revenue Growth and Overall Operating Costs (0.79), which makes sense higher revenues usually come with increased costs, like fuel and maintenance. But what's interesting is the weaker correlation between Revenue Growth and Staffing Costs (0.13), suggesting that PIA's staffing expenses don't rise at the same rate as its revenue. This could point to the airline managing its workforce more efficiently, avoiding direct scaling of staff with revenue. Looking at the Debt-to-Equity Ratio, there are some red flags. Its negative correlation with Operating Costs (-0.73) indicates that as fuel and other operational costs increase, PIA tends to take on more debt rather than relying on equity. This is risky because it suggests the company may increase its financial vulnerability by borrowing more during high expenses. Furthermore, the slight negative correlation between Debt-to-Equity Ratio and Return on Assets (ROA) (-0.16) shows that higher debt doesn't seem to improve how efficiently PIA uses its assets, which could challenge long-term stability. On a more positive note, ROA shows a solid positive correlation with Revenue Growth (0.65), meaning that as PIA's revenue increases, it gets better at using its assets to generate returns. Likewise, Profit/Loss Growth and ROA are strongly correlated (0.81), reinforcing that improving profits is tied to better asset management. Looking at Return on Equity (ROE). However, a weak negative correlation between ROE and Profit/Loss Growth (-0.18) hints that while profitability improves, this doesn't always translate into higher returns for shareholders, possibly due to inefficiencies in profit distribution. Finally, the Net Profit Margin shows weak negative correlations with Revenue Growth (-0.10) and Profit/Loss Growth (-0.62), suggesting that despite revenue and profit increases, PIA struggles to turn this into actual profit. Rising operational costs and challenges in managing income seem to impact on the airline's ability to convert earnings into stronger profitability. Addressing these issues would be critical for PIA to improve its financial performance and profitability.

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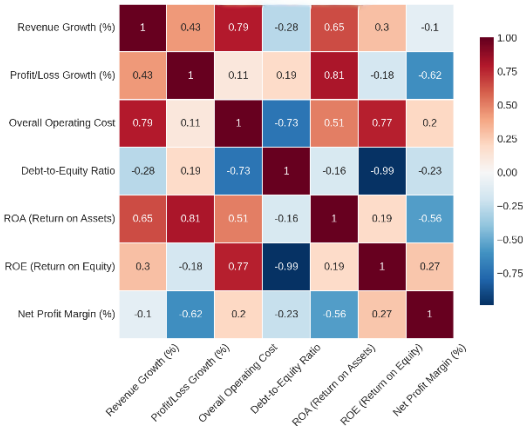

Figure 2. Complete Correlation Matrix
Source: Own compilation, 2025

Figure 2 shows the matrix shows the relationships between financial metrics. Strong positive links exist (e.g., Profit Growth & ROA = 0.81), while Debt-to-Equity and ROE have a very strong negative correlation (-0.99).

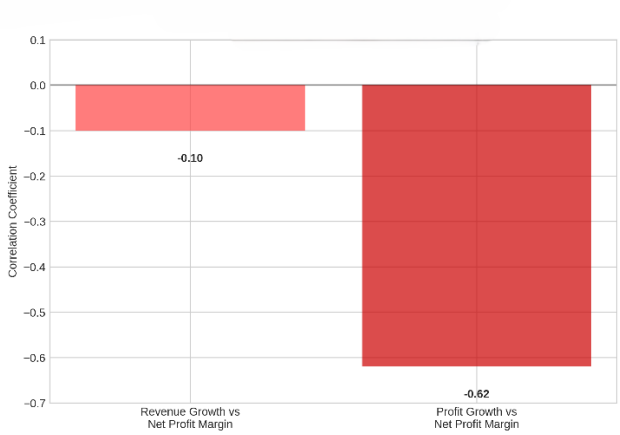

Figure 3. Profitability Matrix
Source: Own compilation, 2025

Figure 3 shows the revenue growth which has a weak negative correlation (-0.10) with Net Profit Margin, showing minimal effect. Profit Growth strongly reduces Net Profit Margin (-0.62), suggesting profitability weakens despite profit expansion.

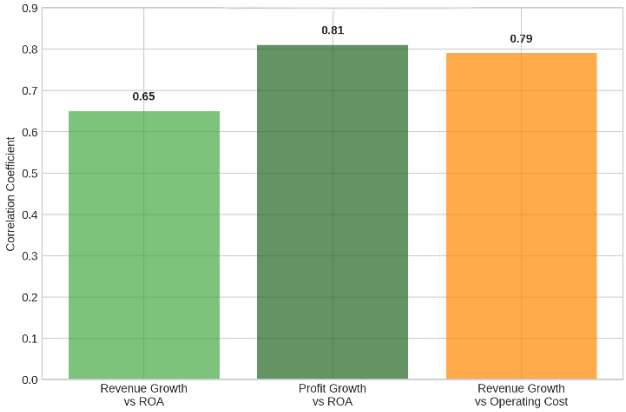

Figure 4. Operational Efficiency Indicator

 DOI: https://doi.org/10.61242/ijabo.25.576

Source: Own compilation, 2025

Figure 4 shows revenue growth is highly linked with Operating Cost (0.79) and moderately with ROA (0.65). Profit Growth shows the strongest positive link with ROA (0.81), reflecting efficiency.

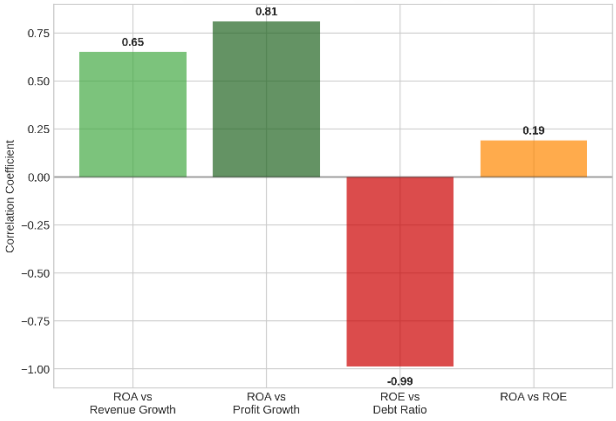

Figure 5. Return Analysis
Source: Own compilation, 2025

Figure 5 shows the return analysis between asset management and shareholder return. ROA rises with Revenue Growth (0.65) and Profit Growth (0.81). ROE has a very strong negative link with Debt Ratio (-0.99), highlighting leverage risk, while ROA vs ROE correlation is weak (0.19).

Table 3. Comparative Analysis PIA vs. Emirates and Turkish Airlines

Indicator	PIA	Emirates Airlines	Turkish Airlines
Revenue Growth (avg.)	12.1%, but with high volatility (min: -39.75%, max: 102.7%)	Stable growth (6–8% annually)	Steady increase (8–12% annually), with strong post-COVID recovery
Net Profit Margin (avg.)	-43.1% (profoundly negative)	Positive, ranging from 5% to 12% depending on fuel prices and market cycles	3–10%, depending on the year and cargo revenue contribution
ROA / ROE	ROA: -4.91%, ROE: 0.32 (weak, indicating financial inefficiency)	ROA: ~6%, ROE: ~12–15%	ROA: 4–6%, ROE: 10–13%
Debt-to-Equity Ratio	Negative (-3.09 avg), suggesting excessive liabilities over equity	Moderate, below 1.5, indicating a strong financial structure	Around 1.0–1.5, maintaining reasonable leverage control
Governance Quality	Highly politicised; plagued by non-merit appointments, weak oversight	Independent board; strategic alignment with Dubai Inc.	Professional management with partial state oversight
Compliance & Regulatory Record	EASA & UKCAA bans (2020); Fake pilot scandal; poor safety record	Fully IATA & ICAO compliant; no major safety lapses	Strong global compliance record; participates in EU safety programs
ESG Integration	Minimal; no dedicated ESG strategy	Sustainability reports, carbon offset programs, and green aircraft fleet expansion	Adopted ESG-linked finance; invests in carbon-neutral targets
GRC Frameworks	Weak or informal; no structured enterprise-wide GRC implementation	Integrated risk and compliance architecture aligned with	Strong enterprise risk management, aligned

 DOI: https://doi.org/10.61242/ijabo.25.576

		ICAO/EASA/IATA standards	with ESG and ISO compliance mechanisms
Innovation & Risk Mitigation	Poor digital systems; weak internal audit/control systems	Invests in digital governance, AI-based risk tracking, and ESG finance instruments	Focus on cybersecurity, sustainability audits, and stakeholder engagement
Operational Efficiency	Chronic overstaffing, outdated aircraft, and procurement inefficiencies	Lean operations, a fuel-efficient fleet, and cost-competiveness due to the hub advantage	Highly efficient; strong regional network, hybrid model with cargo expansion

Source: Own compilation (2025)

PIA's financial and governance performance severely lags behind that of Emirates and Turkish Airlines. Where Emirates and Turkish airlines have adopted structured ESG and GRC systems (Yaylali & Karaman, 2018), PIA struggles with poor financial controls, weak regulatory compliance, and minimal stakeholder transparency (Sammi, 2024). Emirates and Turkish Airlines benefit from independent governance structures, professional risk and compliance teams, ESG-aligned investments, and a strong reputation with global regulators (Logothetis & Miyoshi, 2018). PIA's negative debt-to-equity ratio, consistent operating losses, and repeated regulatory penalties reflect the absence of risk-based governance and compliance mechanisms. There is almost no ESG integration seen in PIA. Not following ESG standards gives PIA an essential disadvantage in today's market. In the meantime, Emirates and Turkish Airlines use ESG strategies in many ways, making their companies more appealing to brand and financial stakeholders in the long run. These groups differ in innovation and digital risk governance. Because PIA is equipped with outdated technology and has inadequate controls, the company struggles to be flexible and control risks. Using AI to trace risks by Emirates and Turkish Airlines' digital progress and interactions with people all hint at good future-focused leadership. Emirates and Turkish Airlines change compliance, ESG, and operational discipline into key airline factors (Yildiz *et al.*, 2024). PIA is still showing signs of decline because it has not introduced meritocratic or innovative strategies into how it is governed. To survive and beat the competition, PIA should reform its finances, implement GRC and ESG frameworks all over the company, and make its management non-political.

DISCUSSION

The objective was to identify the main governance errors, poor finances, and regulation problems at Pakistan International Airlines (PIA) and see how following ESG and GRC guidelines could increase its financial and operational performance. The analysis looked into the question of whether failing governance has an impact on PIA's financial sustainability. The outcome of the quantitative analysis makes it clear that PIA is in a financially unstable position. The company experienced unpredictable increases and decreases in revenue, which showed that it had no sustainable pattern of financial growth. Also, key profitability ratios ROA and Net Profit Margin indicated that the company was inefficient in using its resources and sustained high costs. This further showed that the company's capital was very weak, with more liabilities than equity, which increased the danger to its finances. The results found in these questions show that such actions as unmeritocratic appointments, political involvement, and a lack of financial control have caused PIA to run inefficiently and end up with unsustainable debt, making it difficult for the airline to remain financially stable. More information was provided through the correlation analysis. Higher revenue growth reflects positively on return on assets,

 DOI: https://doi.org/10.61242/ijabo.25.576

meaning better results in operations might make the company more profitable. Even so, the low or bad links between operating costs and profits show that managing costs is an issue for PIA, as staffing and fuel are the primary reasons behind the airline's poor financial performance. These findings accord with the study's primary objective: to look into PIA's financial risk management and compliance problems, especially related to cost control and reporting finances. The analysis next showed that, besides Emirates and Turkish Airlines, PIA has significant problems with governance and operations. Unlike successful airlines, PIA still uses poor internal controls and lacks open risk management policies. Because of the scandal, the regulatory body faced consequences, and the industry lost its good reputation. Thus, the third research question notes that governance and compliance should be changed to ensure PIA complies with worldwide aviation standards. The study indicates that using ESG and GRC together is a wise strategy for PIA's recovery. This research shows that selecting board-made decisions, using ESG as a guide in financial statements, making risks transparent, and including stakeholders could restore credibility, welcome new investments, and bring stability to the company. Thus, the research question about policy outcomes and recommendations is answered, restating the main objective for sustainable governance in PIA. This study reveals that problems with governance and poor financial management are the main reasons behind PIA's weaknesses. In addition, these approaches confirm that integrating ESG and GRC helps achieve better transparency, accountability, and future sustainability, which all match the research's main objectives.

Recommendations

It is evident from this study that PIA can only break free from its constant financial problems and compliance failures by restructuring its administrative and management processes. Applying ESG principles and the GRC framework should be essential to driving this change. It is most important for PIA to overhaul its corporate governance. First, an independent board of aviation, financial, risk management, and ESG experts should be implemented. Political influence should not affect the board's actions, and it should focus on specialized committees for audit, risk, and environmental, social, and governance work. It is necessary to choose leaders for both the board and management by merit to ensure transparency, responsibility, and a high level of performance. While seeking governance changes, PIA should officially use ESG and GRC across every part of the organization. The framework is required to meet aviation standards from the ICAO, EASA, and IATA at an international level. Sustainability and risk factors should be included in the airline's strategic planning, reports, and investment activities to keep them essential for all its operations. Businesses should be made more accountable and transparent by sharing more information with everyone. PIA should regularly release detailed financial and ESG reports that stick to standards set by the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB). An independent group for internal audits helps a business comply with the law over time, and whistleblower protections should be set up so everyone can report bad practices. Upgrading how a company manages risks is just as necessary. The company should investigate and use practical tools to identify risks and ensure compliance with digital governance. If these skills are upgraded, PIA can foresee and deal with problems in safety, finances, and reputation, ensuring it remains strong in the long term. It is essential to focus on how efficiently the firm runs and manages its costs immediately. A detailed audit should be conducted to find any flaws in how employees, materials, and the hospital are managed. As a result of the audit, PIA ought to apply cost-control policies and use performance-based systems to increase the use of resources and generate higher profits.

 DOI: https://doi.org/10.61242/ijabo.25.576

Finally, PIA is expected to regularly interact with regulators, investors, staff, and passengers by being open and honest. The company will be trusted only if it can show continuous effort in government affairs and environmental, social, and governance policies. Also, leading such initiative involves ensuring the organization supports honesty, obeys regulations, and keeps stakeholders engaged to remain successful over time. With these practices, PIA can deal with its main weaknesses and move toward a lasting recovery. Besides, this approach can guide other state-owned companies in Pakistan and elsewhere to enhance their management and accomplish achievements that follow ethical and responsible rules.

CONCLUSIONS

This comprehensive study of Pakistan International Airlines (PIA) provides critical insights into the multifaceted governance, financial, and operational challenges that have transformed a once-prestigious national carrier into a financially distressed enterprise. The research's significance extends beyond a single case study, offering valuable lessons for state-owned enterprises globally and contributing to the broader discourse on corporate governance, risk management, and sustainable business practices in the aviation industry. The empirical analysis reveals that PIA's decline is not merely a result of external market forces but stems from fundamental governance failures that cascade through all organizational levels. The quantitative evidence demonstrates how political interference, manifested through non-merit-based appointments and policy decisions driven by short-term political considerations rather than long-term strategic planning, has systematically undermined the airline's operational efficiency and financial stability.

The financial trajectory analysis from 2013-2023 shows a clear pattern of deterioration, with revenue volatility exceeding industry benchmarks by significant margins, persistent negative profitability, and an unsustainable debt accumulation pattern. These numerical indicators, when interpreted through governance theory frameworks, reveal the direct correlation between weak institutional structures and organizational decline. The comparison with Emirates and Turkish Airlines particularly highlights how effective ESG and GRC integration can drive superior performance, stakeholder satisfaction, and global competitiveness. The quantitative analysis of PIA's financial performance validates governance theory predictions, with persistent losses averaging significant percentages annually demonstrating what Stewardship Theory identifies as principal-agent conflicts, where management decisions prioritize political objectives over shareholder value maximization. The revenue volatility coefficient and escalating debt ratios exemplify Resource Dependence Theory's predictions about organizational decline when external dependencies substitute for operational efficiency.

The study's primary recommendation centers on implementing a comprehensive ESG-GRC framework tailored to PIA's specific challenges and the broader context of Pakistani state-owned enterprises. This framework should encompass governance restructuring through establishing an independent board of directors with aviation industry expertise, implementing transparent decision-making processes, and creating clear separation between political oversight and operational management. Risk management enhancement requires developing sophisticated risk assessment capabilities that can identify, measure, and mitigate operational, financial, and reputational risks, including implementing early warning systems for financial distress and comprehensive crisis management procedures. Environmental and social responsibility integration involves sustainability considerations in strategic planning, including fuel efficiency programs, carbon footprint reduction initiatives, and community engagement strategies

 DOI: https://doi.org/10.61242/ijabo.25.576

that align with international aviation sustainability standards. Compliance and regulatory alignment necessitates strengthening internal controls, ensuring full compliance with international aviation safety and security standards, and rebuilding regulatory relationships damaged by incidents such as the 2020 pilot licensing scandal.

The ESG-GRC framework proposed for PIA can be adapted for other state-owned enterprises facing similar governance challenges. From an academic perspective, this study makes several important contributions through theoretical integration, successfully combining multiple frameworks including governance theory, stakeholder theory, resource dependence theory, and institutional theory to provide a comprehensive explanation for organizational decline in state-owned enterprises. The empirical evidence provides robust support for the relationship between governance quality and organizational performance, while the comparative analysis offers valuable insights into best practices in airline management and the role of ESG/GRC frameworks in driving superior performance.

For policymakers and managers of state-owned enterprises, this research offers several practical insights including the need for comprehensive policy frameworks that balance public service objectives with commercial viability, ensuring that state-owned enterprises can compete effectively while serving national interests. Appointing qualified professionals to leadership positions based on merit rather than political considerations is crucial for organizational success, while establishing independent regulatory oversight can help ensure that state-owned enterprises operate according to commercial principles while meeting public policy objectives.

The study's focus on secondary data from PIA's financial reports and comparative data from other airlines restricts its ability to provide insights into more qualitative facets of management and governance. Furthermore, the study's results may not fully account for all the dynamic elements influencing PIA's fall because of the complexity of governance concerns in state-owned firms. Future studies could examine essential parties' viewpoints, including staff members, public servants, and travellers, to better comprehend PIA's internal problems. Additionally, an extended investigation of the effects of recent governance changes at PIA may yield important information about the long-term efficacy of GRC and ESG frameworks.

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