



Corporate Governance and Profitability of Insurance Companies: Empirical Insights from Pakistan

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ABSTRACT

This research seeks to explore how corporate governance affects the profitability of insurance companies in Pakistan. The empirical analysis utilizes data from a panel of 35 insurance firms covering the period from 2004 to 2022, employing the random effect technique for model estimation. Profitability, measured by Return on Assets (ROA), is the primary metric. The findings reveal that leverage, liquidity, premium growth, risk, and corporate governance significantly influence the profitability of insurance companies in Pakistan. However, age, tangibility, and inflation exhibit an insignificant relationship with performance in the insurance sector. Notably, corporate governance emerges as a pivotal variable with a broad impact on these companies. The study suggests that improving corporate governance practices is crucial for insurance companies to enhance profitability and overall performance.

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1. Introduction

The primary objective of every company is to optimize its profits and enhance the prosperity of its owners (Gitman, Joehnk, Smart, & Juchau, 2015). However, due to internal and external difficulties, most companies are unable to achieve their objectives. Internal impediments hindering firms from attaining the sustainability goals of the company encompass agency issues, labor unions, management, and a deficiency in state-of-the-art technologies. External influences which are not in the domain of management that have a detrimental impact on profitability include natural disasters, political turmoil, oil shortage and terrorism. This study is designed to assess the viability of Pakistan's insurance companies and to investigate the key determinants that affect performance and profitability of insurance companies. Financial institutions play a crucial role in a country's economy, especially in insurance businesses, involving effective financial mechanisms such as deposit mobilization, risk transfer, and intermediation (Uzunkaya, 2012; Wu, Hou, & Cheng, 2010). To encourage the commerce and capital planning, financial organizations channel resources and move risks from one economic entity to another. Financial intermediation efficiency and risk mitigation infrastructure of an economy amplify economic growth but simultaneously financial institutional insolvencies and failure leads to systemic crises and adverse consequences for the economy (Naveed, Ali, Iqbal, & Sohail, 2020). The crucial role that financial system and risk mitigating infrastructure, such as insurance companies, continually play in supporting and safeguarding economic activity play a pivotal role in the stability of the financial system and overall macroeconomic stability (Olaewaju & Msomi, 2021; Oscar Akotey, Sackey, Amoah, & Frimpong Manso, 2013). Certainly, a mature and advanced insurance industry serves as a catalyst for economic development by furnishing long-term funds crucial for the infrastructure development of any economy (Charumathi & Nithya, 2014; Oscar Akotey et al., 2013). Therefore, risk mitigating infrastructure, such as insurance companies work as part of the

immune and repair system of the economy. Empirical research is thus required to discover the essential aspects determining insurance company profitability, which will aid the concerned organizations in focusing on the relevant factors.

Insurance business improve the risk mitigating infrastructure and increases the overall health of financial system in Pakistan. The insurance landscape in Pakistan has witnessed substantial transformations, including the shift from a state-led to a market-driven industry following economic privatization and deregulation since 1991. Other notable changes involve the legal separation of insurance companies into distinct life and non-life entities and a substantial influx of foreign insurers into the market. These developments have intensified competition within the industry. Consequently, it becomes imperative for every insurer to discern the key factors influencing business success. This paper aims to assess the direction and intensity of various factors that may impact the financial performance of insurers companies. Insurance agencies (both private and public) comprising of life-giving, fire, injury, causality and many other types of insurance. Pakistan's financial sector has held up well in the face of a competitive environment and global events and facilitates the firms operating in the industrial sector. The size of the country's financial sector, which comprises insurance providers, non-bank financial institutions (NBFIs), microfinance banks, the national savings bank (CDNS). Hence, this study is designed to investigate the effect of corporate governance on the profitability and performance of insurance companies of Pakistan.

2. Review of Literature

The most pertinent corporate finance literature on profitability factors during the previous 20 years was reviewed by the author in this previous article. Previous research on the factors influencing profitability mostly examined the banking industry within the financial sector (Bourke, 1989; Short, 1979). In a 1979 study, Short examined the relationship between each bank's profit rates and level of concentration in the domestic banking industry. The study involved 60 banks. He asserted that more concentration would result in higher rates of profit. Bourke (1989) examined the internal and external factors that affect a bank's profitability while researching the factors in twelve different nations. His results supported the Edwards-Heggstad Mingo risk prevention concept and lined up with US bank concentration and profitability research. In the aftermath of these groundbreaking investigations, numerous studies have explored the key factors influencing profitability. The research delved into both internal and external determinants of profitability, with a particular focus on the banking and insurance industries.

The role of corporate social responsibility in profitability of the firms is well documented in literature. For instance (Angbazo, 1997; Athanasoglou, Brissimis, & Delis, 2008; Barajas, Steiner, & Salazar, 1999; Berger, 1995; Claessens & Yurtoglu, 2013; Guru, Staunton, & Balashanmugam, 2002; Joh, 2003; Kao, Hodgkinson, & Jaafar, 2019; Khan, Muttakin, & Siddiqui, 2013; Kosmidou, Tanna, & Pasiouras, 2005; Mamatzakis & Remoundos, 2003; Naceur & Goaid, 2001; Olutunla & Obamuyi, 2008; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Additionally, studies conducted across multiple countries have explored both internal and external determinants of bank profitability, including, (Abreu & Mendes, 2002; Alarussi & Alhaderi, 2018; Ayaz, Mohamed Zabri, & Ahmad, 2021; Demirgüç-Kunt & Huizinga, 1999; Jamil, Mohd Ghazali, & Puat Nelson, 2021; Molyneux & Thornton, 1992; Pasiouras & Kosmidou, 2007; Tarighi, Appolloni, Shirzad, & Azad, 2022; Wetzel & Hofmann, 2019; Youssef, Salloum, & Al Sayah, 2022). The relevant and significant findings in the banking and insurance sectors were highlighted by (Naceur & Goaid, 2001; Olutunla & Obamuyi, 2008). More recently some studies also identifies different factors influencing the operational performance of insurance companies across various nations (Agyei, Sun, Abrokwah, Penney, & Ofori-Boafo, 2020; Olarewaju & Msomi, 2021; Oscar Akotey et al., 2013).

2.1. Determinants of Profitability

Table 1 provides a comprehensive list of variables employed in the study, encompassing both independent and dependent variables, along with the expected relationships among them. Prevailing literature predominantly adopts profitability ratios as their dependent variables, with return on equity (ROE), net profit margin (NPM), and return on assets (ROA) being the most commonly utilized ratios. Historically, return on equity (ROE) has frequently served as a proxy for profitability in earlier research on the insurance industry (Ahmed, Ahmed, & Usman, 2011; Camino-Mogro & Bermúdez-Barrezueta, 2019).

Return on assets (ROA) serves as a stand-in for profitability in this context. Other important factors that influence profitability are age, risk, leverage, tangibility, liquidity, corporate governance, inflation, and GDP growth. The following is a brief explanation of each of these factors and how profitability is related to them:

Table 1: Variables and their Expected Relationship

Variable	Proxies/ Definitions	Expected (sign)
Profitability	Return on Asset (ROA) = Net Profit before Tax/Total Assets	Neg/ Positive
Leverage (LEV)	Total Liabilities/ Total Assets	Negative
Liquidity (LIQ)	Current Assets/ Current liabilities	Neg/ Positive
Tangibility (TAN)	Fixed Assets / Total Assets	Neg/ Positive
Premium Growth (PGR)	Percentage change in premiums	Neg/ Positive
Age	Nos. of years since established	Positive
Risk	Net assets to Total worth	Neg/ Positive
Growth in GDP (GDPG)	$(GDPG) = (GDP_t - GDP_{t-1}) / GDP_{t-1}$	Positive
Inflation (INF)	$(IR) = (I_t - I_{t-1}) / I_{t-1}$	Negative
Corporate Governance	Dummy Variable	Positive

2.1.1. Leverage

In earlier research, leverage was one of the most significant and important factors influencing profitability. Al-Shami (2008) used the debt-to-equity ratio to compute it. Ahmed et al. (2011) computed it as the ratio of total debts to total liabilities. Debt ratio is the stand-in for leverage in this study. The results of prior studies indicate a negative correlation between a company's leverage and profitability.

2.1.2. Liquidity

One significant element that affects the firm's profitability is its liquidity. Usually, the quick ratio or current ratio are used to measure it. In keeping with the earlier research, the current ratio, which is calculated by dividing current assets by current liabilities is utilized as a stand-in for liquidity in this context (Ahmed et al., 2011). Liquidity and the firm's profitability have an inverse relationship (Eljelly, 2004).

2.1.3. Tangibility

All forms of tangible assets (such as real estate, buildings, machinery, and equipment) that have some degree of debt capacity are referred to as asset tangibilities. The ratio of net fixed assets to total assets will be the formula used to calculate the value of tangibility. (Ahmed et al., 2011; Camino-Mogro & Bermúdez-Barrezueta, 2019).

2.1.4. Premium Growth

Growth means more capacity expansion and massive cliental for insurance. The percentage change in premiums can also be used to quantify the growth factor.

2.1.5. Age

In the majority of research, the firm's age is another important factor that determines profitability. The study's age proxy is the same as the one used in other recent insurance industry studies (Ahmed et al., 2011; Al-Shami, 2008; Camino-Mogro & Bermúdez-Barrezueta, 2019). The profitability of a firm is directly correlated with its age.

2.1.6. Risk

In the majority of studies, firm risk is another important factor that determines profitability. Similar to other recent studies on the insurance industry, this study used net assets to total worth as a proxy for risk (Ahmed et al., 2011; Al-Shami, 2008; Camino-Mogro & Bermúdez-Barrezueta, 2019). The profitability of a firm is directly correlated with its age.

2.1.7. Corporate Governance variables

Insurance companies allocate a small portion of expenses to be met through the instrument of corporate governance. Corporate governance is considered a mechanism for assessing the ethics and efficiency of insurance companies. To evaluate corporate governance,

I have employed dummy variables and proxy measures, as outlined by (Mande, Park, & Son, 2012).

Table 2: Indicators for Corporate Governance

No	Indicators	Measurement	Dummy Variable
1	Board Directors	No. of directors of the board	"1 when less than median of the sample 0 when greater than median of the sample"
2	Board independence	Independent director divided by total number of directors	"1 when 60% or more directors are independent 0 when less than 60% of directors are independent"
3	Audit Committee independence	Audit committee members divided by Number of Director in audit committee	"1 while greater than median of the sample 0 while less than median of the sample"
4	Managerial Proprietorship	%age of shares held by executive director, divided by total no of shares	"1 when percentage is less than sample median 0 when percentage is greater than sample median"
5	CEO Duality	If CEO is chairperson	"1 when CEO is not chairperson of the board 0 when CEO is a chairperson of the board"

2.1.8. GDP Growth Rate

This macroeconomic variable, which raises income levels and living standards while boosting the purchasing power of the populace, is probably going to have a positive effect on the financial performance of insurers.

$$Economic\ Growth\ Rates\ (EGR) = (GDP\ t - GDP\ t - 1) / GDP\ t - 1$$

3. Model Specification, Data and Methodology

In this cross-sectional study, nine explanatory variables varying across groups are considered. The analysis utilizes a panel data methodology, combining both time series and cross-sectional observations, thereby providing more valuable information. Panel data not only grants increased degrees of freedom but also mitigates multicollinearity among variables, introducing additional variability. The utilization of panel data, as opposed to relying solely on time series or cross-sectional data, enhances the comprehensiveness of empirical results and analysis.

$$\pi_{it} = \alpha_1 + \alpha_2 LEV_{it} + \alpha_3 LIQ_{it} + \alpha_4 TAN_{it} + \alpha_5 PGR_{it} + \alpha_6 AGE_{it} + \alpha_7 RISK_{it} + \alpha_8 CG_{it} + \alpha_9 INF_{it} + \alpha_{10} GDPG_{it} + \epsilon_{it}$$

π_{it} = ROA, ROE and ROIC indicating performance of Insurance Companies i-e 35 Companies at time t which is from 2004 -2014.

Where, α_1 = intercept, $\alpha_2 - \alpha_{11}$ = coefficients parameters, LEV_{it} = Leverage LIQ_{it} = Liquidity, TAN_{it} = Tangibility, PGR_{it} = Premium growth, AGE_{it} = AGE, $RISK_{it}$ = Risk, CG_{it} = Corporate Governance INF_{it} = Nominal Inflation Rate, $GDPG_{it}$ = GDP Growth.

3.1. Sample Selection and Data

The research employs data spanning nineteen years, covering 35 insurance companies from 2004 to 2022.

3.2. Model Estimation and Results

Table 3: Summary Statistics (Profitability)

Variable	Observation	Mean	Std. dev	Min	Max	Skewness	Kurtosis
ROA	665	0.081	0.052	-0.0008	0.02029	0.6642	3.5094
ROE	665	0.188	0.156	-0.0125	0.6086	1.4930	5.0549
ROIC	665	0.060	0.049	-0.0088	0.1705	0.8830	3.0095
LEV	665	0.636	0.156	0.2920	0.8094	-0.9986	2.7863
LIQ	665	3.532	1.069	2.1800	5.7700	0.9283	2.6742
TAN	665	0.022	0.015	0.0080	0.0586	1.2691	3.2620
PRG	665	25.55	45.18	-48.995	133.53	0.8367	3.7782
AGE	665	8.000	3.166	3.0000	13.000	0.0000	1.7800

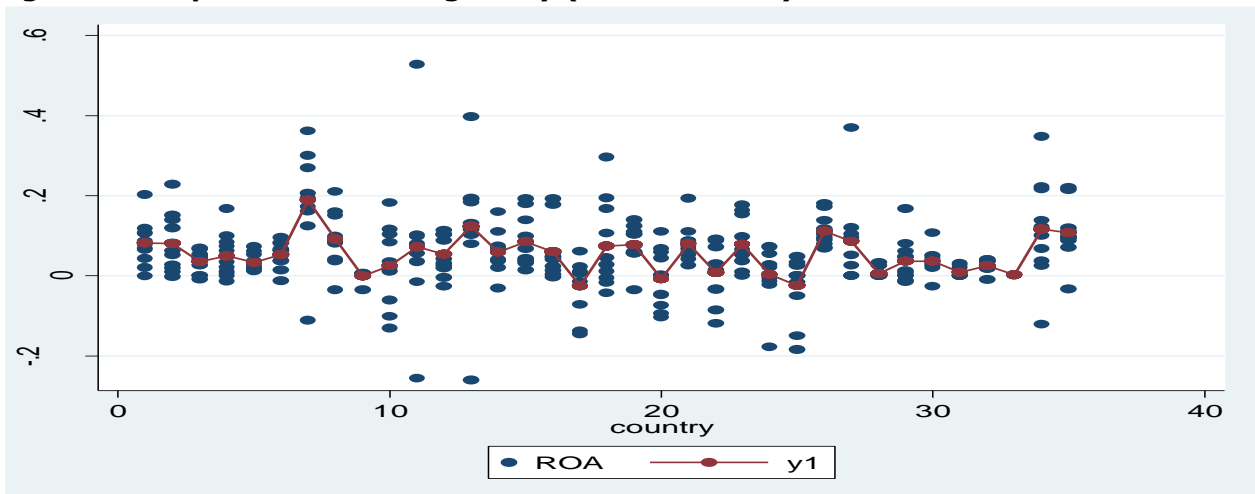
RISK	665	3.145	0.936	1.9600	5.2500	0.7516	2.9683
CG	665	4.363	2.229	3.0000	8.0000	1.0206	2.0416
INF	665	0.122	0.540	-0.3300	1.6710	2.0786	6.2846
GDPG	665	4.322	2.001	1.6066	7.6673	0.3014	1.9149

The chosen time frame and the availability of data for the selected 35 insurance companies are deemed sufficient to address the research question and establish reliability for the study. To analyze the research objectives, this study relies on secondary data collected on a yearly basis. The data is sourced from multiple channels, including the Insurance Association of Pakistan (IAP), annual reports of insurance companies, company websites, World Development Indicators (WDI), and some unstructured questions posed to company management concerning corporate governance

3.3. Test of Heterogeneity (Cross Section)

The cross-sectional heterogeneity analysis over the group (cross sections) is shown in the graph below. The average profitability is displayed by the red line, and the profitability of each insurance company is displayed by the blue dots. The red line's up and down movement indicates a small amount of cross-sectional heterogeneity. Because we do not wish to calculate cross-sectional heterogeneity, the methodology of this study is based on the Fixed Effect Methodology, which is predicated on the assumption that cross-sectional heterogeneity exists. In the event that the red line is straight, cross-sectional heterogeneity does not exist. Therefore, every insurance company differs from the others on average, albeit slightly.

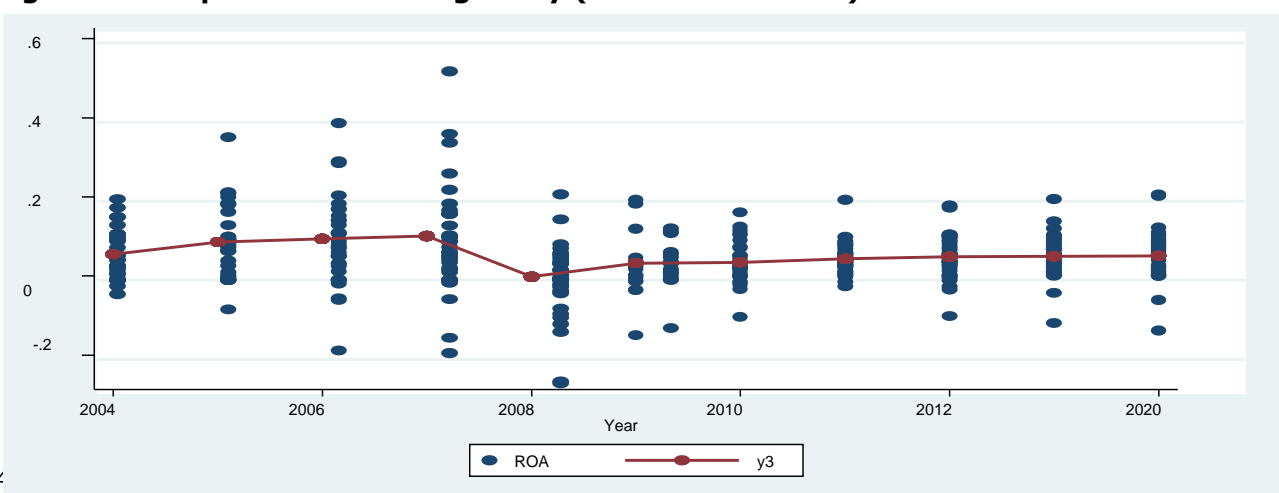
Figure 1: Graph shows Heterogeneity (Cross Section)



3.4. Test of Heterogeneity (Overtime Period)

The Cross-Sectional Heterogeneity is now examined throughout the duration. It is possible that all insurance companies will change over time. The graph above illustrates the average mean profitability from the track in the years 2007, 2008, and 2009, indicating heterogeneity in those years. The 2008 financial crisis is to blame for this heterogeneity.

Figure 2: Graph shows Heterogeneity (Over Time Period)



4. Findings of the Study

We conducted regression analyses, examining firm-specific, corporate governance, and macroeconomic variables in relation to the profitability of all insurance companies. The results of random effect panel regression model is reported in the table 5

Table 4: Results of Life and Non-Life insurance companies of Pakistan

Variable	Coefficient	P value
Constant	-.0293826	0.2461
Leverage	-.0005673**	0.0240
Liquidity	.004662***	0.0933
Tangibility	-.0209774	0.2092
Premium Growth	-1.70e-06**	0.0269
Age	.0006277	0.5403
Risk	-.00121*	0.0130
CG	-3.16e-06*	0.0099
INF	-.0178621	0.9633
GDPG	.0149217*	0.0000

The findings presented in Table 5 indicate that Liquidity, Tangibility, Premium growth, and Age are identified as significant and pivotal factors influencing profitability. Moreover, corporate governance and macroeconomic variables exhibit a noteworthy impact on the profitability of insurance companies. Conversely, leverage and risk are observed to be non-significant and do not play a substantial role in determining the profitability of insurance companies. The overall results align with existing literature (Charumathi & Nithya, 2014; Oscar Akotey et al., 2013). Table 6 includes the results of the Hausman test for fixed effect and random effect. Hausman Test for impact of Insurance business specific variables, corporate governance and macroeconomic variables on Life Insurance Companies is given below.

Table 5: Result of Hausman Test

	Fixed Effect	Random Effect	Difference
Leverage	-.0001457	-.0005673	.0004217
Liquidity	.0066571	.004662	.0019952
Tangibility	-.0066226	-.0209774	.0143548
Premium Growth	-1.45e-06	-1.70e-06	2.47e-07
Age	-.0026795	.0006277	-.0033072
Risk	-.0011951	-.00121	.0000149
CG	-1.12e-06	-3.16e-06	2.03e-06
INF	-.0259601	-.0178621	-.0080981
GDPG	.0116584	.0149217	.0005783
		Hausman P Value	0.4615

Corporate governance serves as an internal regulatory mechanism within insurance companies, primarily adopted due to international practices outlined in the BASEL accord. It is also mandatory to meet regulatory requirements and acts as an internal control system, providing protection to insurance company owners. Six attributes of corporate governance, quantified with dummy variables, were examined, indicating a positive and significant correlation with profitability. The effectiveness of the corporate governance mechanism is deemed weak, and its acceptance is found to boost profitability. Public unawareness of corporate governance may contribute to this, as financial statements prepared by external accountancy firms, transparent disclosure practices, and board independence and size were shown to impact profitability. Managerial ownership concentration is emphasized, suggesting that executives' performance improves when they have a significant stake in the company. The negative impact of CEO duality on performance is noted, aligning with the Basel Committee's recommendation to avoid such dual roles. These results are consistent with existing literature. Many studies document positive influences of corporate governance on profitability of the firms (Albitar, Hussainey, Kolade, & Gerged, 2020; Ullah, Muttakin, & Khan, 2019). Additionally, macroeconomic variables' impact on profitability indicators (ROA) is explored, revealing a positive and significant relationship between real GDP growth and ROA. This signifies that GDP growth positively influences the profitability of insurance companies.

5. Conclusions and policy implications

The relation between corporate governance and firm performance has emerged as a prominent area of research, capturing the attention of academics and researchers. Despite an

abundance of empirical literature on the subject, the outcomes of these investigations have proven inconclusive. This research aims to explore the influence of corporate governance on the financial performance of Pakistani insurance companies. The empirical analysis utilizes data from a panel of 35 insurance firms spanning the period from 2004 to 2022, employing the random effect technique for model estimation. Profitability, measured by Return on Assets (ROA), serves as the key variable of the study. The findings suggest that profitability in Pakistan's insurance sector is notably influenced by factors such as leverage, liquidity, premium growth, risk, and corporate governance. On the other hand, age, tangibility, and inflation appear to have no significant correlation with performance in the insurance industry. Corporate governance stands out as a crucial variable, exerting a substantial and varied impact on these companies. The study emphasizes the importance of improving corporate governance practices as a key strategy for insurance companies to enhance both profitability and overall performance.

5.1. Avenues for Future Research

This study delved into factors specific to insurance, encompassing regulatory aspects, corporate governance, and macroeconomic factors for both Life and Non-Life Insurance companies in Pakistan. Further exploration could delve into Takaful with more in-depth research.

- The analysis considered only two macroeconomic variables to assess their impact, but the profitability of insurance companies may be influenced by a broader array of macroeconomic factors.
- Researchers may opt for methodologies like Data Envelopment Analysis or Stochastic Frontier Analysis to evaluate the effectiveness of Pakistani insurance companies.
- Future investigations could benefit from focusing on qualitative variables to comprehensively understand the impact of financial development on profitability.
- It is recommended for future researchers to scrutinize the performance of the insurance industry both preceding and succeeding the 2008 financial crisis.
- Starting in December 2023, the annual reports from the Insurance Association of Pakistan (IAP) will furnish researchers with substantial data to compare the profitability of Takaful and Insurance companies.

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