

# Revisiting Auditor Independence: How Non-Audit Services and Family Ownership Influence the Cost of Capital in Emerging Economies

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## Abstract

Audit quality enhances the reliability of financial statements to the financial statement users and minimizes information asymmetry. The previous literature supports information risk mitigation by audit quality, which is linked to the cost of capital. The current study aims to evaluate the impact of auditor independence on the cost of capital, while also assessing the role of family ownership as a moderating variable. Auditor independence is proxied by non-audit fees, the cost of capital is proxied as WACC, and family ownership is measured as a family holding at least 5% of total ownership. A total of 294 non-financial companies listed on the PSX were considered for the period from 2014 to 2023, resulting in 2,940 observations. The GMM technique was used to evaluate the association between auditor independence and cost of capital, with the moderating role of family ownership. The empirical findings of the current study indicate that non-audit fees and family ownership are significantly linked with COD, COE, and WACC. The final result of the present study plays a significant role in understanding the importance of auditor independence to the cost of capital. The present study aims to highlight the significance of auditor independence in relation to the WACC, to facilitate the adoption of positive policies by investors, top management of financial and non-financial institutions, policymakers, and regulatory bodies, and ultimately benefit all stakeholders.

**Keywords:** Auditor independence, non-audit services, cost of capital, cost of equity, cost of debt.

## INTRODUCTION

Auditor independence is a cornerstone of credible financial reporting and a critical determinant of investors' confidence in capital markets. Prior literature claims that the technical competence of an auditor is not the only factor; instead, the effectiveness of an external audit relies on the auditor's ability to maintain objectivity and professional skepticism free from management influence. Auditor independence improves the reliability of financial statements and reduces information asymmetry, which improves investor confidence and trust. Conversely, any compromise in auditor independence may lead to biased financial reporting, diminished audit quality, and an increased cost of capital for firms.

Several global audit failures, such as Enron (2001), Parma (2003), Intercontinental Bank (2009), and Skye Bank (2018), have frustrated users of financial statements. The global surge in audit failures has raised serious questions about auditors' competency as well as independence. A growing lack of investors' trust in financial reporting may be because auditors fail to report inconsistencies in financial statements due to a lack of independence. Quality audits reduce investors' information asymmetry and risk by enhancing the reliability of the financial statements (Ali, 2015; Fairchild, 2019). Therefore, quality audits enhanced the stability of financial knowledge, minimized the information risk, and also lowered the required rate of return imposed by investors (Azizkhani, 2010; Zhang et al., 2019). The association between audit quality and cost of capital (COC hereafter) has attracted the attention of recent researchers (Persakis & Iatridis, 2015; Zhang et al., 2019). However, auditor independence and COC are hardly documented in the literature in

the context of developing countries like Pakistan (Prabhakar et al., 2012). Organizations face many problems, such as destructive behavior, fraud, inaccurate financial statements, weak control measures, and a lack of accountability in criminal measures and law enforcement, among other issues. Therefore, the effect of auditor independence on the COC in family-oriented firms tends to differ from country to country or even company to company.

Developing countries like Pakistan face issues related to poor management, misleading reporting, and corruption. For instance, TAJ company, HBL, and Hescol events have raised serious questions about the quality of the audits. There are also concerns about the reliability of the reported income and its relationship with the auditing process due to the high incidence of business failure.

Developed and developing countries across the world have dominance of family-owned firms, and resultantly, minority shareholders face several challenges, including corporate scandals of high-profile companies due to poor financial statements or audit quality (Amahalu et al., 2018). There has yet to be any significant research conducted in Pakistan on family ownership as a moderating variable between auditor independence and the COC. Many previous studies discovered a substantial relationship between audit committee size and COC or business performance (Zraiq & Fadzil, 2018). Nevertheless, in past research study results, there needs to be added, so this study will strive hard to investigate the effects of auditor independence on the COC with the moderation of family ownership to enhance understanding (Singh et al., 2018). It was discovered that the audit department of a company has a substantial relationship with company capital; moreover, these findings need to be more accurate concerning the

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effect of audit independence on the COC. This study will help analyze auditor independence on the COC in family-oriented businesses or organizations.

In addition to that, prior literature in the domain of corporate finance reports serious issues related to the inaccuracy of reported results and false audits to prevent corruption in financial management in family-owned firms. Prior financial scandals show that expertise and independence of audit quality play a vital role in the mitigation of corporate scandals. Investors feel comfortable basing essential investment decisions on audited financial statements. Given the above, the current study aims to evaluate the role of audit quality in relation to the COC, particularly in the context of family-oriented businesses or companies. This study provides various theoretical ideas for policymakers to improve organizations' capital structure and auditing departments. This is useful for stock exchanges, governments, professionals, academics, and non-financial businesses involved in the financial sector.

## LITERATURE REVIEW

### Auditor independence and COC

The independence of the auditor is described as the conditional likelihood of the auditor to report the violations in case they are present (DeAngelo, 1981). Due to a lack of auditor independence in short-run audit firms may face various penalties from professional bodies, loss of revenue, reputational damage, and potential legal liability. In the long run, the lack of independent audits affects financial markets because capital providers demand higher rates in exchange for unreliable financial information. Independence in audit means having a fair view in conducting tests, evaluating examination results, and preparing audit reports. Independence refers to the integrity of the auditor in the consideration of reality and the impartiality of the examiner in the development and the provision of his opinion (Deli et al., 2021). The independent attitude of the auditor implies the attitude of fairness in analyzing and managing the financial statements. Financial relationships with the clients, work with the company, disposition activities with businesses not aligned to the clients, family and personal other relationship compensation of professional services, receipt of goods/services by clients, and providing goods/services to clients are some of the factors that predispose independence of auditors (Deli et al., 2015).

Auditor independence is directly and indirectly linked with COC, which reflects the level of risks based on the investment project. As companies get capital from a variety of sources hence the COC varies in terms of COD and COE. The COC deviates due to differences in risk and contractual agreements between investors, creditors, and companies. The COC of any source is referred to as the essential elements or the direct COC. COC is the total cost of all the financial sources divided by the average or overall (Amahalu et al., 2018). Omwnza (2018) also states that the financial performance of commercial banks in the market is also affected by the COC, as it concerns the funding of capital and the financial performance of these banks. Previous literature discourages debt financing because it exposes them to financial risks and instead uses equity funds. Managers must manage the capital structure to ensure that the combination of sources of

finance is used to maximize the shareholders' wealth and reduce the company's COC (Uremadu & Onyekachi, 2019).

**H1:** There is a significant relationship between non-audit fee services and cost of capital (cost of debt, equity, and WACC)

### Family ownership and cost of capital

Interest convergence, proposed by Burley and Means in 1932, refers to holding more capital, which helps ensure that the department's primary goal remains profitable. As stated in stewardship theory, the integration of interests can also be attributed to the behavior of managers. This perspective argues that managers are motivated to fulfill their responsibilities to meet the needs of all stakeholders in the company rather than pursuing their interests as needs arise (Pies et al., 2021). The presence of shareholder-managers in the company reduces the problem of information asymmetry, reducing the risk value required by shareholders and ultimately reducing the investment cost (Tran et al., 2023).

Moreover, family ownership concentration facilitates the convergence of interests between large and minority shareholders (Panda et al., 2017). Likewise, family members, especially significant individuals, can reduce the exposure and risks of creating financial capital. Effective management of businesses can help business owners decrease the debt and equity expenses that are a fundamental aspect of finance (Yates et al., 2023). Also, the involvement of relatives hinders entrepreneurship and capital generation. This is achieved through effective corporate governance that reduces costs associated with debt and other capital expenditures (Jansen et al., 2023). However, Feng et al. (2020) also discovered a positive correlation between family members and investment expenditures. This relationship is particularly relevant where members are predominantly from other companies, executives, or family members. Aderajew et al. (2019) also found a positive relationship between family members and investment costs. The study conducted by Hamid et al. (2015) in Malaysian companies from 2003 to 2007 examined the impact of quality management on the COC and found a positive relationship between skillful management and the difference between the two. Additionally, Fang et al. (2020) show that considerable owner control and the power of family-based shareholders and small holdings can explain changes in capital prices. This suggests that well-managed systems help to reduce risk, causing investors to expect lower COC returns.

**H2:** Family ownership is significantly and positively associated with the cost of capital.

### Family ownership and the relationship between auditor independence and cost of capital

Family ownership has been discussed in previous studies, which emphasized that the presence of family ownership may prevent the independent judgments of directors, leading to the performance of the small companies (Ararat et al., 2015). In family business, retaining social wealth is more important than there are financial accruals of non-family business cases (Nadeem, 2020; Barrios et al., 2021). Likewise, Morck and Yeung (2019) indicated that managers of family firms oppose the audit committee, leading to poor performance of the firm. They are examining the unrepentant angle of leadership types, and the way women in business make

various decisions in family and non-family enterprises. It is a system of reference where the women who make strategic and political choices in the family, but not in the family business, gain or lose protection of the emotional family wealth (Moreno-Gomez & Calleja-Blanco, 2018). Thus, scientists say that in spite of the idea that gender diversity is a way to enhance corporate governance performance, in family firms, female directors have less influence and replacement by family members. Corporate governance in the region of Pakistan is very different from that of the developed countries because of its specialized corporate characteristics, such as concentration of family ownership and financial reporting behavior (Abubakar et al., 2018). The power that a family business can provide thoughts.

Therefore, family ownership negatively mediates the connection between the independence of the auditor and the corresponding capital structure associated with the COC. The past studies have produced mixed statements on the effectiveness of the independent auditor in enhancing the COC of family firms. The family conflicts can result in reduced disclosures, capital costs, since family members may not have the same business objectives, and they may not be treated fairly by other members of the same family, and to some degree, they may not be healthy competition (Wan et al., 2020). In order to reduce conflict, certain studies propose that independent directors should be appointed to mediate and advise family firms in good faith to enhance their governance (Puchniak et al., 2017).

**H2-a-c:** Family-ownership moderates the relationship between non-audit fee services and cost of capital (cost of debt, equity, and WACC)

## METHODOLOGY

The study's population consists of non-financial companies listed on the Pakistan Stock Exchange (PSX) from 2014 to 2023. In total, 527 (369 non-financial and 180 financial) companies were listed on the PSX, of which 294 were considered in the current study. Companies with missing values (1% or more in independent variables and any missing value in independent variables) were excluded from the sample for final data analysis. This paper presents the analysis to decide whether GMM is worth fitting as a causal channel analysis technique. This study tests the multicollinearity effect using VIF technique. It concludes that there is no Multicollinearity. We also verified the variance consistency through the Wald test, which proves no heteroscedasticity problem in our data. The Sargan test of that validity not only assesses the extent of over-identifying limitations but also confirms that the instrument is valid and is not disproved by over-identifying limits. Also, the serial autocorrelation levels assessed by AR (1) and AR (2) are not an issue at all, and the result is that no autocorrelation exists. The endogeneity problem and issue found in the dataset, and to resolve the issue between the variable and error terms, the current study used the GMM model (Singh et al., 2018). The results of all the tests indicate that the proposed framework of the current study did not suffer from any weakness.

### 3.1 Data and Sample

The present study considered the non-financial sector listed companies on the Pakistan Stock Exchange (PSX). To discover the

relationship between auditor independence and cost of capital, Pakistan is currently the most suitable and promising option for the necessary business environment. Among the companies contributing to Pakistan's growth in the expanding market, Morgan Stanley Capital International (MSCI) stands out. A New York-based research firm statement titled "Denmark and Pakistan: The surprising stock markets that performed well in 2020" highlighted that the PSX exhibited the best performance in 2020 and ranked fourth globally (Marketcurrentwealth.net, 2020). It was recognized as one of the leading emerging markets in Asia and achieved significant success in securing numerous new contracts and investments. The developed markets differed from the PSX due to their robust legal and institutional framework (Dittus & Prowse, 1995).

Rules and regulations in Pakistan's corporate sector were observed in line with its status as an emerging economy, distinct from developed ones, as extensively studied. Considering all the factors discussed regarding the PSX, it is the most suitable market for conducting this case study. This study will compile a database of non-financial companies listed on the PSX for a decade (2014 to 2023). The list encompasses two sectors: financial and non-financial. There are 549 companies on this list, with 369 falling under the non-financial sector and 180 under the financial sector.

**Table 1:** Sample companies

Total Listed Companies on PSX	549
Less: Companies Categorized under the Financial Sector	180
Companies Categorized under Non-financial Sector	369
Less: Companies with Missing Information	75
Final Sample of the Study (Companies)	294

### Measurement of Variable

The current paper explores the factor of the provision of non-audit services (the non-audit services fee / total Fee paid to the auditor in a year) as a proxy to define the independence of the auditor. COC is calculated as WACC, weighted average cost of equity, and weighed average cost of debt. Family ownership is the dummy variable 1 if an individual or family retains 10% or more ownership, 0 otherwise.

**Table 2:** Operationalization and measurement of variables

Variables	Measures	Source
Dependent variable WACC (weighted average cost of capital)	The weighted average cost of capital is measured as the weighted cost of equity and the weighted cost of debt.	(Aderajew et al., 2019)
Cost of Debt	The interest a company pays on its borrowings is divided by total debt.	(Shad et al., 2020)
Cost of Equity	The valuation of the rate of return expected by shareholders (including dividends) for taking the risk of investing in that firm	(Shad et al., 2020)
Non-Audit fee	Amount of providing non-audit services as a percentage of the total amount paid to the audit firm during a year.	(Hartono et al., 2012)
Family ownership	Family firms (FAMILY) represent those having family ownership of at least 5% of a firm's equity.	Audit report
Firm Size	Natural log of total Assets	(Sugiarti et al., 2023)

Growth	Percentage of change in sales concerning the previous year	(Sugiarti et al.,2023)
Firm age	The number of years of incorporation of the company	(Sugiarti et al.,2023)
Leverage	Total debt to equity ratio	(Sugiarti et al.,2023)

## RESULTS AND ANALYSIS

### Descriptive Statistics

The descriptive statistics in Table 1 reveal considerable variation among the sampled firms. The mean value and standard deviation of WACC are 0.169 and 0.097, respectively. The average cost of debt is relatively low at 0.158, while the cost of equity averages 0.18, suggesting consistent investor return expectations. The mean value and standard deviation of non-audit fees as 0.39 and 0.25, respectively. Family ownership shows a high mean value of 0.834, signifying that most firms in the sample are family-controlled, emphasizing its relevance as a moderating variable. The leverage range with a mean of 0.525, with a range from 0.337 to 0.881, and the deviation from the mean is 0.208. The firm size indicates the mean value of 6.749 with a standard deviation of 0.949, with the range of 4.233 to 9.050. Firm growth displays the highest variability (SD = 0.788), suggesting a wide disparity in expansion rates, and firm age ranges broadly from 8 to 77 years, with an average of 41 years, indicating the inclusion of both young and mature firms.

**Table 1:** Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
WACC	0.169	0.097	.087	0.216
Cost of Debt	0.158	0.145	0.000	0.192
Cost of Equity	0.180	0.158	0.137	0.230
Non-Audit Fee	0.39	0.25	0.013	0.877
Family-Ownership	0.834	0.372	0	1
Leverage	0.525	0.208	0.337	0.881
Firm Size	6.748	0.949	4.233	9.05
Growth	0.149	0.788	-1.46	19.61
Firm Age	40.945	21.147	8	77

### Correlation Analysis

Table 2 indicates the relationship between study variables and whether they are significantly correlated with each other or not. According to this table, the non-audit Fee positively correlates with 18.7% cost of debt and 9.4%. Leverage also shows a negative relationship with debt and equity of 9%, and 5% non-audit fees are positively correlated with the WACC by 10.2%. Leverage is positively correlated with the weighted WACC of 8.6. Firm size is negatively correlated with a WACC of 5.1%. Growth is negatively correlated with a WACC of 43%. Firm age is negatively correlated with a WACC of 4.4%. Family ownership is negatively correlated with a WACC of 6.1%. Firm size is negatively correlated at 7% and 8%. The cost of debt and equity of the firm are negatively related to the firm's growth of 9% and 7.4% respectively. The negative correlation of firm age is with the cost of debt and equity of 14% and 7.3% respectively. The cost of debt and the cost of equity also show a negative correlation with family ownership between 6.2 and 6.4% respectively.

**Table 2:** Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) WACC	1.00									
(2) COD	0.32	1.00								
(3) COE	0.11	0.31	1.00							
(4) NAF	0.10	0.18	0.09	1.00						
(6) LEVE	0.08	-	-	0.06	0.15	1.00				
		0.09	0.05							

(7) FS	-0.05	-	-	-	0.13	0.21	1.00			
(8) Growth	-0.04	-	-	-	0.14	0.22	0.16	1.00		
(9) FA	-0.04	-	-	-	0.30	0.03	0.03	0.21	1.00	
(10) FO	0.06	0.06	0.06	0.15	0.14	-0.05	-0.11	0.08	0.11	1.00

**Note:** NAF= non-audit fee, leverage= Leve, FS=firm size, FA= Firm age, FO= family-ownership.

### Generalized Method of Moments Estimation Results

Endogeneity bias is a significant issue in the domain of social science. It prevents the data from making accurate inferences or reliable estimates (Rahman et al., 2023). In this scenario, researchers could arrive at theoretical conclusions that are not suitable. To disregard these problems, we used the GMM method to obtain accurate results (Ullah, 2018; Rahman et al., 2023). It is a dynamic panel data estimator that was first developed, updated, modified, and improved (Arellano, 1991; Arellano, 1995; Blundell, 1998). It addresses endogeneity issues and unobserved heterogeneity problems (Ullah, 2018). In addition to that, it is used in the case of a sample with a higher amount of entities (i) than periods (t) (Asongu, 2017). The present study reports data analysis based on the various scenarios; for instance, scenario 1 reports the overall analysis of Big-4 and non-Big-4. Scenario(s) 2 and 3 report the comparative analysis between Big-4 and non-Big-4. Scenarios 4 and 5 report on the results of non-audit fee services to predict the cost of capital with samples from Big-4 and non-Big-4 firms.

$$COD = \alpha_0 + \beta_1 nonauditfee + \beta_2 familyownership + \beta_3 familyownership * nonauditfee + Controls + e_t \dots \dots \dots Eq. 1$$

$$COE = \alpha_0 + \beta_1 nonauditfee + \beta_2 familyownership + \beta_3 familyownership * nonauditfee + Controls + e_t \dots \dots \dots Eq. 2$$

$$WACC = \alpha_0 + \beta_1 nonauditfee + \beta_2 familyownership + \beta_3 familyownership * nonauditfee + Controls + e_t \dots \dots \dots Eq. 3$$

**Table 3:** GMM Analysis

	COD	COE	WACC
Non-Audit Fee	0.714**	0.891**	1.178***
Leverage	0.123***	1.012***	5.491***
Firm Size	-1.525**	-1.489**	-1.657***
Growth	-1.241***	-1.431***	-0.836***
Firm Age	-1.331***	-1.231***	-0.045***
Family-Ownership	1.723**	1.252	3.128***
Family-Ownership x Non-Audit Fee	0.995***	1.011***	4.097***
Constant	6.946	5.967	18.948

The results in Table 3 indicate that the non-audit fee and leverage are positively related to the cost of debt and equity at a significance level of 1%. The cost of debt and equity is negatively correlated with leverage, firm size, firm growth, and firm age at a 1 percent significance level. Family ownership is positively related to the cost of debt, at a significance level of 5%, whereas family ownership is not significantly related to the cost of equity.

Family ownership positively moderates the relationship between non-audit fees and the cost of debt and equity at a 1% significance level. The non-audit fee is negatively associated with a WACC by showing the coefficient value of -1.178 and a t value of -2.490, which means that a one-unit decrease in non-audit fee leads to an increase in WACC by one unit at a 1% significance level. This finding is supported by the study of Le et al. (2023), which states that the lowest audit fee leads to enhancing the WACC. Leverage is positively associated with the WACC at a 1% significance level with a coefficient of 5.491 and a t value of 8.123, which means that if the leverage increases, the WACC also increases. This finding is also supported by the study of Kling et al. (2021), which

states that an increase in leverage leads to an increase in the WACC.

The firm size is positively related to the WACC at a confidence level of 1% with the coefficient of 1.65 and t-value of -4.271 indicating that as the size of the firm increases, the WACC also increases. This observation is also justified by the research of Vartiainen et al. (2020), who say that the higher the size of the firm, the higher the WACC. The WACC has a negative correlation to growth, with both the coefficient value and t value of -0.836 and -2.557, respectively, indicating that as the growth goes down, the WACC increases. Steffen et al. (2020) also support this finding and say that the smaller the firm, the higher the WACC (Uremadu & Onyekachi, 2019).

The age of firms is found to negatively relate to the WACC at 1% level of significance; the coefficient of -0.045 and t-value of -3.214, implying that the firm age needs to decrease, and the WACC will also increase as a result (Brusov et al., 2023). The WACC is associated with family ownership at 1 percent level of significance with the coefficient of 3.128 and t-value of -3.214 to indicate that an increase in the family ownership would result in an increase in the WACC (Mohammad et al., 2023), which states that an increase in family ownership would lead to an increase in the WACC. At a significance level equal to 5 percent, family owners mediate the relationship between non-audit fee and weighted COC with a coefficient of 4.097 and a t-value of -2.80 (Gomez-Mejia et al., 2021).

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The aim of the study was to quantify the effect of auditor independence on the COC through the moderating influence of family ownership. The empirical analysis on the effect of auditor independence is done through the GMM method. The results of this research give an in-depth determination of one of the various characteristics of Auditor independence and its effects on the COC. Results demonstrate that the cost of capital has a positive relationship with the provision of non-audit services (proxy for auditor independence). Moreover, family ownership has proven a crucial factor as family ownership strengthens the positive association between the provision of non-audit services and COC. These results emphasize the fact that auditor independence towards COC is a complicated concept. On the whole, the results can be very informative concerning the dynamics of auditor independence and financial indicators, resulting in an improved understanding of family-owned business.

The current research paper attempts to present the relevance of auditor independence to policymakers, financial and non-financial institutions, and regulatory authorities in order to introduce golden policies to all stakeholders. Proper governance will enable the organizations to implement a reasonable system of audit departments in order to win the trust of investors. The policymakers will govern policies on earnings management or enhance the audit departments in family-owned companies to assist the companies in operating profitable businesses. The regulatory agencies must come up with laws that will be conducive to the proper management and growth of profitable enterprises. Such efforts will build trust in the investor, business growth,

economic growth, and the development of numerous potential businesses.

### Implications & Limitations

The implications of the study are founded on the knowledge derived by the investors in the Pakistani-based potential financial and non-financial sectors. The audit department will help the local and foreign investors to make informed decisions, as the study will provide information. The findings of the study can be used by regulatory bodies and policymakers within the Pakistani listed companies to formulate or make amendments to their guidelines. Comprehensively, an efficient stock market, which is informed by sound studies of the nature of independence of auditors, can help Pakistan in developing its economy as well as supporting the development of financial markets through investment.

There are also some limitations in this research, as the current research is focused on the non-financial companies listed on PSX between 2014-2024, which means that the results may require further generalization to financial bodies or the companies that experienced manipulative audit firms during the period out of scope. Such period-specific analysis may not fully identify long-term trends or the influence of other audit and family ownership characteristics. Also, the use of publicly available financial information constrains the study to the quantitative analysis, which may not capture the qualitative aspects such as managerial quality, reputation of the firm's auditor, and perception of the shareholders, which can also affect the financial performance of a firm.

Another limitation of the empirical financial research is that the study assumes the correctness and completeness of the financial data reported by the companies. Moreover, although an attempt will be made to rein in external factors, including market conditions and industry trends concerning the audit departments of the companies, the unpredictability of financial markets implies that external factors cannot be considered in their entirety. These constraints reflect the necessity of taking the results with some care and indicate future research directions.

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