Lisbon School of Economics & Management
Universidade de Lisboa

MASTER OF SCIENCE IN FINANCE

MASTER'S FINAL WORK

DISSERTATION

THE IMPACT OF THE CHARACTERISTICS OF THE AUDIT COMMITTEE ON THE CORPORATE COST OF DEBT

INÊS BORGES SANTOS

OCTOBER – 2021

Lisbon School of Economics & Management
Universidade de Lisboa

MASTER OF SCIENCE IN
FINANCE

MASTER'S FINAL WORK
DISSERTATION

THE IMPACT OF THE CHARACTERISTICS OF THE AUDIT COMMITTEE ON THE CORPORATE COST OF DEBT

INÊS BORGES SANTOS

SUPERVISION:

ANA ISABEL ABRANCHES PEREIRA DE CARVALHO MORAIS
INÊS MARIA GALVÃO TELES FERREIRA DA FONSECA PINTO

OCTOBER - 2021

Abstract

The audit committee has a mission to reduce information asymmetry, improving the quality of reporting and strengthening investment decisions. Therefore, we can expect that audit committee characteristics will influence financial reporting users' decisions. One of the main users of financial information is the debtholder, having to decide whether he or she is available to provide loans or other forms of credit and at what cost. Consequently, it is relevant to investigate if the role of the audit committee has any influence on the decision-making process of the debtholder. In this context, this study aims to analyse the association between the Audit Committee characteristics and the cost of debt for the FTSE100 companies during the years 2018 and 2019. We investigate if audit committee characteristics such as industry expertise, chair's tenure, meeting frequency, presence of women, auditor's tenure, and audit fees have any impact on the cost of debt. We find that our measures of audit committee are not related to the cost of debt, except for the chair's gender of the audit committee, which is negatively and significantly related to the corporate cost of debt. In terms of audit, this study provides evidence that debtholders care more about external auditors than internal auditors.

Keywords: Cost of debt, Audit Committee characteristics, FTSE100

Resumo

O Comité de Auditoria tem como missão reduzir as assimetrias de informação, melhorando a qualidade dos relatórios e fortalecendo as decisões económicas. Deste modo, espera-se que as características do Comité de Auditoria influenciem os utilizadores das demonstrações financeiras. Um dos maiores utilizadores da informação financeira é o credor, que decide se está disponível para conceder empréstimos ou qualquer outro tipo de crédito e a que custo. Consequentemente, torna-se relevante investigar em que medida o Comité da Auditoria afeta o processo de decisão do credor. Neste contexto, este estudo visa analisar a relação entre as características do Comité de Auditoria e o custo da dívida para as empresas cotadas no índice FTSE100, em 2018 e 2019. Investigámos se as características do Comité de Auditoria, tais como a experiência na indústria, o tempo como presidente do comité, o número de reuniões do comité por ano, a presença de mulheres no comité, o tempo do auditor na empresa e as taxas de auditoria têm impacto no custo da dívida. Concluímos que as características do comité de auditoria não têm impacto no custo da dívida, à exceção do género do presidente do comité, que provoca um resultado negativo e significante no custo da dívida das empresas. Em termos de auditoria, este estudo evidencia que os credores dão maior importância ao auditor externo do que ao interno.

Palavras-chave: Custo da dívida das empresas, características do Comité de Auditoria, FTSE100

Glossary

AC- Audit Committee

BIG4 - The largest four accounting firms Deloitte, Ernst & Young, KPMG, and PWC

COD – Cost of debt

EBIT – Earnings before Interest and Taxes

FRC – Financial Reporting Council

FTSE – Financial Times Stock Exchange

IAASB - International Auditing and Assurance Standards Board

IIA- Internal Institute of Auditors

ISA – International Standard on Auditing

OLS – Ordinary Least Squares

SD – Standard Deviation

SIC – Standard Industrial Classification

Acknowledgments

The accomplishment of this cycle is only possible due to all the support and help of my tutors, whose guidance, availability, and expertise in the audit area were essential to this research. I would specially thank Professor Inês Pinto for the structural ideas and suggestions, patience, readiness of response, and enthusiasm. It greatly motivated and contributed to finish this long academic path. It was a pleasure to work and learn with her.

I am grateful to my family for their love and tolerance and all the kindness and words of encouragement. Without them, it would have never been possible to move forward. Thank you for helping me balance my emotional health throughout these harsh times. Any written acknowledgment is not enough to show you how glad I am to have the opportunity to study so far from home and advance with this masters' degree to make me feel fulfilled.

I would also like to thank my friends for their friendship and understanding for all the moments that I missed because of my focus during this master. I recognize your confidence in my academic path constantly repeating that I am capable.

Finally, I would like to thank my second home during the past five years of my life, ISEG. I am glad to my professors and colleagues who enriched this academic experience and made these years a wonderful journey in my life.

List of Tables

Table of Contents

The impact of the characteristics of the AC on the corporate cost of debt

1. Introduction

There is no consensus in the literature about the relationship between the corporate governance mechanisms and the agency conflicts involving debtholders and how it may affect the borrowing costs (Lorca, Sánchez-Ballesta and García-Meca, 2011). From a creditor's perspective, one of the most important factors influencing the financial reporting process involves the board of directors. Board attributes influence the validity of accounting statements by monitoring and disciplining senior management and which may result in a lower cost of debt due to reduced agency problems involving debtholders and reducing information asymmetry (Anderson, Mansi and Reeb, 2004).

The Securities and Exchange Commission, the Financial Accounting Standards Board, and the major stock exchanges frequently emphasize the role of the board of directors in overseeing the financial accounting process (Anderson et al.,2004). Regarding the Financial Reporting Council occurred in 2016, the code provision (C.3.1) requires the mainboard to establish an Audit Committee, which is a sub-committee of the main board that mostly encompasses nonexecutive directors responsible for the oversight of reliable financial reporting and credible audit function (Cadbury Report, 1992). The Audit Committee's mission is to apply the board's internal control principles and to maintain an appropriate relationship with the company's auditors (FRC, 2016).

According to the FRC elaborated by the UK Governance Code, the Audit Committee should: guarantee the integrity of the financial statements, reviewing significant financial reporting judgments contained in them; review the company's internal control and risk management systems and the effectiveness of the company's internal audit function; make recommendations to the board to get the approval of the shareholders in general meeting. Furthermore, its role should assure the external auditor's independence and objectivity effectiveness of the audit process, always based on the policy implemented in the UK. (FRC, 2016).

This study empirically investigates the effect of different attributes of the Audit Committee on the cost of borrowing. Previous studies have specifically addressed the effect of the Board of Directors on the cost of debt financing (Anderson et al., 2004; Lorca et al., 2011) and their results are consistent with the argument that debtholders consider board monitoring effectiveness as a source of greater assurance concerning the integrity of accounting numbers, so improving the financial accounting process. Cotter and Silvester (2003) find evidence that independent directors on AC reduce the monitoring by debtholders when leverage is low. The corollary is that executives on the AC lead to increased monitoring by debtholders.

Khemakhem & Naciri (2013) studied the impact of the characteristics of the AC on the cost of equity. Their results reveal a robust negative relationship between all the characteristics of the audit committee and the cost of capital. It is visible that more companies comply with regulations regarding audit committees over the impact on the cost of capital is noticeable. Nevertheless, relatively little is known about the characteristics of the Audit Committee, a part of the Board, and their relationship with agency conflicts involving debtholders and how they may affect the borrowing costs.

The audit committee (AC) plays a critical role in corporate governance practices by overseeing the quality of auditing (Sulaiman, 2017). The UK has a global reputation for having high standards for corporate reporting, auditing, and governance. The UK Corporate Governance Code aims to ensure high-quality corporate governance that should be fulfilled by the AC as a promoter of audit quality in the UK (FRC, 2016).

This research contributes to the literature by showing the relationship between the attributes of the audit committee and their impact on the corporate cost of debt. Many studies considered the implementation of an effective audit committee as essential for driving professionalism to the improvement of financial reporting quality (Velte, 2017; Weber, 2020; Sulamain, 2017; Qu, 2020). The monitoring and advisory-related function of audit committees are of great importance in reducing information asymmetries between management, the supervisory board, and shareholders and it has the ultimate board-level responsibility for financial reporting oversight (Archambeault, Dezoort, and Hermanson, 2008). Lorca et al. (2011) concluded that as a structure of the corporate governance, a greater AC can result in a lower cost of debt for the firms, due to reduced agency problems and the reduction in information asymmetry.

The remaining part of the paper proceeds as follows: section 2 provides the literature review, where we focus on the audit committee characteristics and their possible impacts, developing the testable hypotheses. Section 3 presents the research design of the model and explains the dependent variable and the explanatory and control variables used. Section 4 describes the sample and the data. Section 5 discusses the results and findings. Finally, the last section contains conclusions, limitations and research avenues.

2. Literature Review and Hypothesis Development

In the UK, the revised Combined Code (2012) endorsed that the audit committee should comprise a minimum of three members; all members should be independent non-executives; at least one member should have recent and relevant financial experience, and audit committees should meet at least four times per year.

2.1 Financial and Industry Expertise

The financial background of board members represents one of the most widely investigated attributes that are of interest to regulators. Leong &Yang (2014), Zalata et al. (2018), Abbot et al. (2003), Abbot et al. (2004) studied the impact a financial expert may have in different areas, such as earnings management, audit fees and the occurrence of financial reporting restatements. Ghafran & O'Sullivan (2017) argue that greater levels of financial expertise in the AC are a synonym for asking for higher audit fees. Nevertheless, according to the author, it is unquestionably that the knowledge in AC will enhance reports' quality. Weber (2020) append the fact that high levels of financial expertise and advanced educational backgrounds tend to increase firms' earnings quality and it may reduce information asymmetries between management, the supervisory board and shareholders, contributing to improving the financial reporting quality.

According to SOX (2002), directors should have the required experience in preparing and auditing financial statements and accounting for accruals, estimates, and reserves. Abbot et al. (2004) argued that audit committee members who possess financial literacy/expertise provide additional support for external auditors when discussing accounting issues and disagreements with management. Therefore, we expect that the outcome of greater audit committee financial knowledge will be a reduced amount of financial misstatement.

Lary and Taylor (2012) developed a financial expertise score to better qualify the chair's financial expertise. The authors include the previous experience in a big4 company as a worker and their argument is based on a better preparation that big4 companies provide. Furthermore, there is a lot of evidence that big4 auditors deliver higher audit quality in the reports due to its associated credibility (DeFond & Zhang, 2014). As a result, we may expect that a chair that had already worked in a big4 will perform better, offering better negotiations skills when facing debtholders and reducing the corporate cost of debt.

Regarding the industry expertise, Cohen (2014) argued that audit committee industry knowledge is valuable because accounting guidance, estimates, and oversight of the external auditor are often linked to a company's operations within a particular industry. Hence, industry expert AC members who understand an industry's complexities and risks might communicate more effectively with the auditor. Moreover, industry experts on the audit committee are likely to

be better situated to understand the nature of industry-specific audit effort required to assure the quality of the financial reports.

In contrast, Brazel and Schmidt (2019) proposed that audit committees with industry-expert chairs are more likely to be associated with large inconsistencies than those without, arguing that audit committee chairs with more industry background can use their specific knowledge as well as their authority over the external auditor to influence audit adjustments that eventually increase fraud risk.

Sulaiman (2017) suggests that AC could be a better developer of audit quality and AC's limited performance is mainly influenced by the chairman of the AC. Regarding the code, chairmen are encouraged to report personally in their annual statements how principles relating to the role and effectiveness of the board have been applied. It will bring clearer context for the investors so they will be willing to accept explanations when a company chooses to justify their provisions. (FRC, 2016).

Concerning these arguments, we anticipate the positive effect of the presence of financial and industry expertise on the chair of the audit committee in the corporate cost of debt:

H1 a) There is a negative association between the level of financial expertise of the AC and the corporate cost of debt.

H1 b) There is a negative association between the chair's experience in a big4 and the corporate cost of debt.

H1 c) There is a negative association between the industry expertise of the chair of the audit committee and the corporate cost of debt.

2.2 Independence and Meeting Frequency

As mentioned before, there is considerable research concerning the AC, its influence on the company and its responsibilities. Qu (2020) studies the specific "styles" of audit committee members and chairpersons. These "styles" are defined as individual characteristics inherent of each member and they may affect the financial reporting choices. The author defends that these "styles" are a good tool to measure the independence from the company and, if they do not harm the company, they should be preserved. The legislation requires that AC's members should maintain some independence from the company in order to provide the best results. Unquestionably, independent audit committees provide more reliable accounting information when compared to insider-stacked committees (Qu, 2020). Anderson et al. (2004) confirm that if Audit Committee composition influences the financial accounting process, it is possible to conclude that corporate debt yields will exhibit an inverse relation to committee independence. Consequently, independent audit committees are associated with a significantly lower cost of

debt financing.

If audit committee members were completely separate from management it could mean that the independent AC members would see fewer industry issues and would be more likely to side with the auditor requiring fewer negotiations and deliberations and thus fewer meetings, impacting the level of monitoring.

Tenure is a factor that may influence independence positively or negatively. The longer the tenure someone has, the less independent the chair becomes and the higher is the probability of behaving like an inside director (Qu, 2020). This raises the question as to whether the chair's tenure should be restricted in the same way as that of the lead auditor. Nevertheless, Sharma et. al. (2011) considers also that as longer the tenure, the better the knowledge of the company and better results. Under these opposite arguments, we cannot anticipate the signal of the relation between the tenure of the AC's chair (and consequently the independence that the AC is associated with) and the cost of debt financing the company will present. Based on the argument that tenure will reduce independence (Qu, 2020), we measure the independence of an AC through the tenure of the AC's chair.

The Treadway Commission (1987) recommends a frequency of at least four audit committee meetings per year (consistent with reviews of quarterly financial statements). Meeting frequency may indirectly provide information on the value of audit committee monitoring of quarterly statements and their diligence in carrying out their responsibilities (Abbot et al., 2003). Abbot et al. (2004) stated that if quarterly meetings are associated with greater audit committee diligence in their monitoring duties, then we expect quarterly meetings to be associated with a lower level of misstatement, hence, better quality reports and lower corporate costs of debt. Aldamen et al. (2012) agree mentioning that the right number of meetings can potentially have a positive impact on the firm performance.

According to Abbot et al. (2004), an audit committee comprised entirely of independent directors and meeting quarterly will be more willing to confront management about financial reporting matters and thus will exhibit fewer incidents of financial reporting misstatements. Therefore, we state that:

H2) There is an association between the tenure of the AC chair and the corporate cost of debt.

H3) There is a negative association between the meeting frequency of the audit committee and the corporate cost of debt.

2.3 Gender in Audit Committee

The presence of women in the Audit Committees has also been a new theme during the last years. Qu (2020) provides evidence that women are more risk-averse than men and men

exhibit higher levels of overconfidence when compared to women. The social-psychological literature emphasizes the gender differences in optimism about future economic outcomes and finds women less confident and more conservative in making financial decisions. Byrnes et al. (1999) add that men are more likely to be involved in 'risky experiments', 'intellectual risk taking' and 'gambling' than women. Zalata et al. (2018) prove that the proportion of female experts on the audit committee significantly reduce earnings management, which enhances and values women in AC.

According to Abbott et al. (2004) and Bédard et al. (2004), Audit Committee female financial experts are expected to have a more pronounced effect on earnings management than their male counterparts. Adams and Ferreira (2009) argue that because women directors do not belong to "old-boy" networks, they are more likely to provide most substantial oversight, monitoring, and an unbiased way of thinking as independent directors.

The current research provides only limited and inconsistent evidence regarding the economic impact that higher female representation in AC might bring to the firm. Based on Qu (2020), we state these hypotheses:

H4) There is a negative association between the fact of the chair be a woman and the corporate cost of debt.

2.4 External factors: Auditor tenure and Audit Fees

The "Big N research" is one of the most exhaustively explored areas in the literature during the last years (DeFond & Zhang, 2014; Pittman & Fortin, 2004)). The auditor size proxied by "Big N firms" is argued to capture stronger auditor incentives, since reputation costs increase with size. Pittman & Fortin (2004) moot that choosing a bigger auditor firm reduces debt monitoring costs by enhancing the credibility of financial statements; hence, it enables firms to lower their interest rates. Based on this argument, we may expect that auditor size may reduce the corporate cost of debt, reducing it by the credibility that the auditor firm has in financial transparency and reliability with creditors. Since this study's sample includes only Big4 auditor firms, we are not considering it as a hypothesis. Nevertheless, "Big N firms" are associated with higher audit fees. Yang et al. (2018) refer that those audit fees are significantly and positively related to firm- specific financial, strategic, and operational risks, indicating the informativeness of corporate textual risk disclosures. This means that higher audit fees are associated with higher informativeness of risk that the firm is associated with. Accordingly, beyond this argument, we may expect that it may cause a higher corporate cost of debt when facing creditors since creditors are more aware of the risks the firm is linked with; thus, they ask for higher fees.

Board tenure captures the ability of managers to influence directors, so longer tenure potentially permits managers greater influence over directors' decisions (Brickley et al., 1994).

The same is expected to occur with auditors. According to Tepalagul & Lin (2015), there are two opposing sides on the effects of auditor tenure on audit quality. The first one states that as the auditor-client relationship prolongs, the auditor may assemble a close relationship with the client and become more likely to act in favor of management, thusly reducing audit quality. This view supports mandatory audit partner rotation. The second states that auditor tenure lengthens, auditors increase their understanding of their clients' business and develop their expertise during the audit, resulting in higher audit quality. Singer et. al. (2018) find that longer audit firm tenure may lead to less timely detection and correction of misstatements, which is consistent with a negative effect of long auditor tenure on audit quality. This fact addresses the benefit of a fresh look by a new auditor. According to the author, the negative association between auditor tenure and timely discovery of misstatements is predominant in the first ten years of an audit engagement (Singer et. al., 2018). Since there is no consensus on the literature, we will study which impact may be stronger when affecting the borrowing cost. These lead to the following hypotheses:

H5) There is a positive association between audit fees and the corporate cost of debt.

H6) There is an association between auditor tenure and the corporate cost of debt.

3. Research Design

According to the previous literature, we use the following pooled OLS model to examine the association between the audit committee's characteristics and the cost of debt presented by companies:

$$COD_{i,t} = \beta_0 + \beta_1 WBIG4_{i,t} + \beta_2 INDEXP_{i,t} + \beta_3 AGECHAIR_{i,t} + \beta_4 MEETFREQ_{i,t} + \beta_5 CHAIR_{i,t} + \beta_6 AUDFEE_{i,t} + \beta_7 AUDTENURE_{i,t} + + \beta_8 LEV_{i,t} + \beta_9 FIRMSIZE_{i,t} + \beta_{10} INTCOV_{i,t} + \beta_{11} LOSS_{i,t} + \beta_{12} I.SECTOR_{i,t} + \text{year controls}_{i,t} + \varepsilon_{i,t}$$

Where, *COD* is the cost of debt calculated through the ratio between total interest cost incurred and the average debt of each company during the last four years of the year considered - 2016, 2017, 2018 and 2019 (Khemakhem et al., 2013). *WBIG4* is a dummy variable equal to one if the chair had already worked in a Big4 company and zero otherwise (Lary and Taylor, 2012). *INDEXP* is a dummy variable in which we consider one if the chair had some industry expertise and zero otherwise (Anderson et al., 2004). *AGECHAIR* is the logarithmic of the number of years of the actual duration of the current chair's tenure (Aldamen et al., 2012). *MEETFREQ* is the number of meetings that the audit committee reported in sample year (Aldamen et al., 2012). *CHAIR* is dichotomously one if the chairperson is a woman and zero otherwise (Aldamen et al., 2012). *AUDFEE* is the natural logarithmic of audit fees (Abbott et al., 2003; Yang et al., 2018).

AUDTENURE is the natural logarithmic of the number of years of the actual duration of the current auditor's tenure. (Pinto & Morais, 2019; Qu, 2020; Zalata et al., 2018).

The regression model requires the introduction of control variables that complement the model. As control variables, we use the firm size – *FIRMSIZE*- , measured by the natural logarithm of total assets, to capture information asymmetry and any residual risk effect (Lorca, et al., 2011; Qu, 2020; Yang et al., 2018); the interest coverage ratio – *INTCOV*- , which is calculated as the ratio of operating profit over interest expense for the period and it is used to proxy for a firm's ability to service its debt. (Lorca, et al., 2011); leverage (*LEV*), which is computed as the ratio of total debt to total assets (Aldamen et al., 2012; Iyer, Sankaran & Hoffman, 2020; Pinto & Morais, 2019); and *LOSS*, coded one if the firm reports a negative net income and zero otherwise (Draeger, Lawson et Schmidt, 2020; Weber, 2020; Zalata et al., 2018). We also control for industry effects with *n* - 1 dummy variables, SECTOR, based on the two-digit SIC code (Aldamen et al., 2012; Lorca, et al., 2011) and for year effects, introducing a dummy variable for each year.

4. Sample and Data

The data comprises UK's FTSE 100 companies during the years 2018 and 2019. Firm-level financial data such as total assets, total equity, total liabilities and equity, total revenue, EBIT and net income are obtained from Bloomberg. Interest expenses and debt values are collected from Orbis for the period between 2016 and 2019. Audit committee characteristics were hand-collected from FTSE 100 firms' financial reports.

After deleting firms with missing independent variables, 174 observations remain in our sample. Our sample includes large firms as it includes only listed firms on the FTSE 100. Firms in the sample are not highly leveraged with debt representing on average 21% of their total assets.

Table 1 provides descriptive statistics for the variables used in our research model. We find that cost of debt has a mean and a median of 4.5% and 3.6% respectively, with a standard deviation of 4.9% and fluctuates from 0 to 48.3% percent. On average, our sample exhibit a debt-to-total-assets ratio (LEV) of 28.6% and 6% of the firms present a negative net income. Considering the chair of the audit committee, on average, 59% present industry expertise, 34% had already worked in a big4 and 26% are women.

Table 1 – Summary Statistics

Panel A: Descriptive Statistics for Continuous Variables

Variable*	Mean	Median	Std. Dev.	Min	Max
COD	0.045	0.036	0.049	0.000	0.483
AGECHAIR	1.078	1.099	0.049	0.000	2.197
AUDFEE	8.104	8.086	0.086	7.935	8.274
AUDTENURE	1.702	1.609	0.074	0.000	3.871
LEV	0.286	0.288	0.013	0.0003	0.830
FIRMSIZE	16.953	16.367	0.140	13.582	25.488
INTCOV	273.138	6.025	183.856	-5.095	34737.5

*See variable definition in Appendix A

Panel B: Descriptive Statistics for Dichotomous Variables

Variable*	Mean	Median	Std. Dev.	Min	Max
WBIG4	0.34	0	0.47	0	1
INDEXP	0.59	1	0.49	0	1
CHAIR	0.26	0	0.44	0	1
LOSS	0.06	0	0.24	0	1
MEETFREQ	5.3	5	1.92	3	13

*See variable definition in Appendix A

According to the two-digit SIC code, our sample is constituted by 24% of financial institutions and 24% of manufacturing companies. Each division encompasses a range of SIC codes. Table 2 shows the percentage of each industry group in the sample, the descriptive statistics of the cost of debt by industry and an F-test (ANOVA) to test the equality of means, which turns out to be significant at a 1% level.

Table 2 – Sector distribution according to SIC code and data on the descriptive statistics of the cost of debt by industry together with the ANOVA test of equality of means

SECTOR	NUMBER OF OBSERVATIONS	PERCENT (%)	MEAN	SD
FINANCE, INSURANCE AND REAL STATE	48	24	0.24	0.03
MANUFACTURING	48	24	0.04	0.03
CONSTRUCTION	8	4	0.24	0.01
MINING	16	8	0.08	0.02
PUBLIC ADMINISTRATION	2	1	0.01	0.01
RETAIL	14	7	0.07	0.02
SERVICES	34	17	0.17	0.03
TRANSPORTATION AND PUBLIC UTILITIES	6	13	0.13	0.02
WHOLESALE	4	2	0.02	0.01
TOTAL	200	100	F-test: 4.10***	

*** P < 0.01

Concerning the table, it is possible to check that the industries with a higher cost of debt (around 24%) are Financial, Insurance and Real State institutions and Construction companies. By contrast, Public Administration seems to be the sector with lower debt costs with a value of approximately 1%.

5. Empirical Results

The panel data analysis should start confirming the basic assumptions of the Classical Linear Regression Model (CLRM): autocorrelations, multicollinearity, heteroscedasticity, unit roots and normality.

The pairwise correlations for the independent variables are reported in Table 3. Overall, there is a statistically significant correlation between some variables. The correlations between *AUDFEE* and *FIRMSIZE* with a coefficient of 0.426; *FIRMSIZE* and *INTCOV* with a coefficient of 0.365 and *FIRMSIZE* and *MEETFREQ* with a coefficient of 0.306 are relatively high.

Table 3 -Pairwise Correlation Matrix for Independent Variables

	WBIG4	INDEXP	AGECHAIR	MEETFREQ	CHAIR	AUDFEE	AUDTENURE	LEV	FIRMSIZE	INTCOV	LOSS
WBIG4	1.0000										
INDEXP	0.0963	1.0000									
AGECHAIR	-0.0039	-0.0412	1.0000								
MEETFREQ	0.2538***	0.0409	-0.0775	1.0000							
CHAIR	0.1144	-0.1157	0.0125	-0.0321	1.0000						
AUDFEE	-0.1591**	-0.1251*	0.0622	0.2393***	-0.0628	1.0000					
AUDTENURE	-0.0001	0.0114	-0.1143	0.0068	0.0374	-0.0698	1.0000				
LEV	-0.1827**	-0.0837	0.0537	-0.0628	0.0119	0.0342	-0.0277	1.0000			
FIRMSIZE	0.0397	-0.0267	0.1767**	0.3059***	-0.1222*	0.4261***	-0.0896	-0.2452***	1.0000		
INTCOV	0.1046	0.0603	0.0279	0.0577	-0.0328	-0.0628	0.0054	-0.1536**	0.3648***	1.0000	
LOSS	0.0258	-0.0931	0.0060	-0.0826	0.0711	-0.1030	-0.0506	-0.0846	-0.0606	-0.0249	1.0000

***, ** and * represent significance level at the 1%, 5% and 10%, respectively.

The Variance Inflation Factors (VIFs) were computed for all variables to test for potential multicollinearity. A VIF of 1 means the absence of multicollinearity whereas a VIF exceeding 10 indicates serious multicollinearity requiring correction. As the VIF statistics for all estimations fluctuate between 1.10 and 3.10, multicollinearity is not a major concern and all variables are kept in the model (Neter, Wasserman & Kutner, 1985).

Table 4 – VIF test

VARIABLE	VIF	1/VIF
FIRMSIZE	3.10	0.322753
IND_MIN	2.59	0.385474
IND_W	2.44	0.410551
IND_MAN	2.25	0.443844
IND_PA	2.09	0.478127
AUDFEE	1.97	0.507248
INTCOV	1.93	0.518365
IND_FI	1.74	0.575278
LEV	1.62	0.617693
IND_S	1.56	0.643046
MEETFREQ	1.41	0.711007
IND_PU	1.32	0.755668
WBIG4	1.31	0.760557
INDEXP	1.29	0.773607
IND_R	1.17	0.851565
AUDTENURE	1.17	0.854024
AGECHAIR	1.15	0.869535
LOSS	1.14	0.879523
CHAIR	1.09	0.919315
D2019	1.06	0.939638
MEAN VIF	1.67	

Regarding heteroskedasticity, we choose the famous Breusch-Pagan test. If the test statistic has a p-value below 0.05 we can reject the null hypothesis of homoskedasticity and heteroskedasticity is assumed. For our dataset, as the p-value is 0.28 thus we can assume homoskedasticity.

Table 5 - Breush-Pagan test for heteroskedasticity

Chi2(1) = 1.17

Prob > chi2 = 0.2803

Another essential assumption of our data set is the absence of unit roots. The data of our study carries time dimensions; hence we should confirm whether these variables are stationary, which means that they always follow the same process throughout time. We perform the Hadri

Lagrange multiplier (LM) test, in which the null hypothesis states that all the panels are stationary. Since the p-value is higher than 0.05 – Table 6, we do not reject the null hypothesis; hence, all panels are stationary.

Table 6 – Unit Roots test – Hadri LM test

Ho: All panels are stationary	**Number of panels**	**= 100**
Ha: Some panels contain unit roots	Number of periods	= 2
Time trend: Not included	Asymptotics: T, N	-> Infinity
Heteroskedasticity: Not robust		sequentially
Statistic	p-value	
z -2.7951	0.9974	

Considering the normality of the residuals of our regression, we estimate a Shapiro-Wilk test for normality. The p-value is higher than 0.05, which indicates that the null hypothesis is accepted, and we assume normally distributed residuals.

Table 7 - Shapiro-Wilk test

VARIABLE	**OBS**	**W**	**V**	**Z**	**PROB>Z**
	200	0.99140	1.282	0.572	0.28350

Considering we have two different years, our approach was to run an Ordinary Least Squares (OLS) model run for panel data. It consists of a pooled regression model with constant coefficients to both intercepts and slopes, which means that it disregards any effect that is specific to a determined individual of the sample. In table 8 we summarize the predicted sign of the coefficients according to the literature review as well as the results of the coefficients that we obtained.

Table 8 – Influence of the audit committee characteristics on the cost of debt

Independent Variables*	Coefficients	Predicted Sign	Coefficient	p-value
Intercept	β_0	?	-0.793	0.425
WBIG4	β_1	-	-0.034	0.844
INDEXP	β_2	-	0.137	0.407
AGECHAIR	β_3	?	0.005	0.969
MEETFREQ	β_4	-	0.006	0.886
CHAIR	β_5	-	-0.435***	0.012
AUDFEE	β_6	+	0.192**	0.020
AUDTENURE	β_7	?	-0.030	0.692
FIRMSIZE	β_8	-	-0.244***	0.000
INTCOV	β_9	-	-0.001***	0.000
LEV	β_{10}	+	-0.897	0.073
LOSS	β_{11}	+	0.614	0.109
Year Fixed Effect	Yes			
Industry Fixed Effect	Yes			
Number of Observations			174	
Adj- R^2			40.26%	

$$COD_{i,t} = \beta_0 + \beta_1 WBIG4_{i,t} + \beta_2 INDEXP_{i,t} + \beta_3 AGECHAIR_{i,t} + \beta_4 MEETFREQ_{i,t} + \beta_5 CHAIR_{i,t} + \beta_6 AUDFEE_{i,t} + \beta_7 AUDTENURE_{i,t} + + \beta_8 LEV_{i,t} + \beta_9 FIRMSIZE_{i,t} + \beta_{10} INTCOV_{i,t} + \beta_{11} LOSS_{i,t} + \beta_{12} I.SECTOR_{i,t} + \text{year controls}_{i,t} + \varepsilon_{i,t}$$

Significance at ***1%, **5%, and *10% level.

*****See variables definition in Appendix A .

Regarding our first hypothesis, we do not test the financial expertise since our sample is not differentiated in terms of financial expertise. In the FTSE 100 listed firms, all chairs are financial experts. Considering the previous chair expertise in a big4, we do not find statistical evidence that a chair who already worked in a big4 could achieve better negotiations with debtholders. In terms of industry expertise, there was differentiation enough to perform a regression analysis. However, and contrary to our hypothesis H1c, the coefficient for the chair's industry expertise (β_2) is not statistically significant thus we may conclude that industry expertise does not affect the cost of debt.

The same happens with our second hypothesis. We find that the chair's tenure does not influence his or her behavior regarding the cost of debt of the firm as the coefficient for the variable *AGECHAIR* (β_3) is not statistically significant. Therefore, there is no evidence that the

tenure of a chair will influence the debtholders and their costs.

Concerning our third hypothesis, we find that the frequency of audit committee meetings does not impact the borrowings costs since the coefficient for the variable *MEETFREQ* (β_4) is not statistically significant. This evidence corroborates Aldamen et al. (2012) and Abbot et al. (2004), who defended the positive impact in the firm's performance that the audit committee meetings may accomplish.

The gender diversity of the board is a crucial theme of governance worldwide (Adams and Ferreira, 2009). In our study, and according to what we expect in our fourth hypothesis (H4), we find that if the chair is a woman, it may positively impact the corporate cost of debt. This means that we find evidence that female chairs could lower the cost of debt. The coefficient of *CHAIR* (β_5) is negative and statistically significant at a 5% significance level. This result is consistent with prior literature; thus, we confirm our fourth hypothesis. We verify that women are more conservative and have more capacity to control the financial decisions; thus, the conclusions provided by Abbott et al. (2004), Bédard et al. (2004) and Qu (2020) are confirmed.

In line with our fifth hypothesis, we find that higher audit fees tend to increase the corporate cost of debt. The coefficient for audit fees ($\beta_6 = 0.192$) is positive and statistically significant at the 5% level. This result approves Yang et al. (2018), who defended that audit fees are positively related to firm risks, improving the informativeness of corporate textual risk disclosures.

Regarding our last hypothesis, we find that audit tenure does not impact the corporate cost of debt since the coefficient of *AUDTENURE* (β_7) is not statistically significant.

As expected, the coefficients of control variables are mostly consistent with prior literature and our prediction. The results provide evidence that most of the control variables impact the corporate cost of debt. *FIRMSIZE* was used to obtain information asymmetry and any residual risk effect. We find that larger firms tend to decrease their debt costs and this conclusion follows Lorca et al. (2011). Likewise, companies with higher interest coverage ratios (*INTCOV*) will lead to low borrowing costs since they seem to better control the inherent risk of failure to their debtholders.

LEVERAGE is included in a model to proxy the default risk. Concerning its coefficient, we assume that companies with superior debt present a higher risk to debt providers, so are expected to lead to a higher cost of debt. Nevertheless, we find that companies with greater debt intensity present lower values of debt costs. We consider this value doubtful since we expect that bondholders and other lenders will require higher interest rates in higher leverage firms.

Finally, profitability is measured by the variable *LOSS* and we find that firms with

negative net incomes (*LOSS*) present higher values of the cost of debt.

Regarding the results, we perform tests including other independent variables according to the literature review and the results are similar. The fact that a chairperson is a woman reveals to be significant, and it emphasizes the role of the chair in the audit committee. We shall highlight that the chair schedules the meetings and is the bridge with the external auditors. As a result, women chairs seem to beneficially impact the cost of debt of a company, diminishing it.

6. Conclusions, limitations, and further research

The main objective of this research is to analyse the impact that some audit committee features may have on the cost of debt financing, for firms belonging to the FTSE100. A sample of 100 firms is used to study this relationship during the 2018 and 2019 years. The findings offer new insights into these associations in an institutional context that greatly differs from those of the countries considered in the previous literature, particularly the US system (Anderson et al., 2004, Khemakhem et al., 2013).

Unlike previous research in other countries, audit committees' characteristics do not seem to impact the corporate cost of debt, with an exception: the chair's gender. The chair of the audit committee is responsible for ensuring that audit committee meetings run efficiently, for managing the committee's agenda and ensuring that each item is thoughtfully discussed by all members of the audit committee (Aldamen et al., 2012). Furthermore, the chair is the first point of liaison with the external auditor and gender seems to matter as far as the chair is concerned. According to the literature, women seem to be more prudent and more conservative (Abbot et al., 2004; Brynes et al., 1999; Zalata et al., 2018) and it positively impacts the banks and the debtholders, reducing the corporate cost of debt.

External auditors also seem to influence the borrowing costs through their audit fees. Our results suggest that debtholders care more about external auditors than internal auditors, known as audit committees. Regarding audit committee characteristics, debtholders seem only to mind the chair due to its proximity relationship to the external auditor.

The results have certain inherent limitations to measurements of variables as the audit committee characteristics. Concerning the presence of an industry expert within the audit committee, our measure is established solely on the requirement of the chair's industry expertise in his/her entire career. This helped to allow subjective information of industry expertise of audit committee members: first, it is based only on the chair's industry expertise and second, we are counting chair's expertise on the industry he/she is working at, but the fact is that if the chair had worked in that industry before, it does not necessarily mean he/she is an industry expert. Therefore, this point may explain that no relationship was found between the presence of industry expertise in an AC and the corporate cost of debt.

The measure of the cost of debt used in this research is one of the most used in the literature (Anderson et al., 2004; Khemakhem et al., 2013; Lorca et al., 2011). However, one major limitation of the measure is the base on accounting numbers, which allows the biases inherent to accounting information. We try to control the problem by adding some control variables, but there is still a probability of a lack in the interpretation of the results.

As already mentioned, UK has the country chosen since its global reputation for having

high standards for corporate reporting, auditing, and governance. Nevertheless, the extension to other countries would be valuable in terms of diversity and comparison.

Finally, our study is conducted over two years only. Expanding the research period, it would be possible to have a better idea of the changing characteristics of the AC and the financial benefits of this development.

This study contributes to the literature on audit committee aspects and their association with the cost of debt financing by adding a topic that is not sufficiently explored and measured. It also contributes to the concerns of credit agencies, since they are worried about how governance could improve the firm's financial position and leave debtholders not so vulnerable to losses. In addition, this field of research will provide firms with a more refined sense of how companies' cost of debt might be affected through the composition, attributes, and working of the audit area, both internal and external.

Our paper also has managerial implications, showing the way that debtholders think about audit committee characteristics and auditors when considering the cost of debt for a company. In sum, firms should pay particular attention to external auditors and their relationship with the firm.

In future venues, it is suggested to extend this analysis to other audit committee characteristics, such as audit committee size or financial and industry experts in the whole audit committee. Moreover, it is recommended to add more years to study and different countries to examine if the conclusions remain the same.

References

Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. Auditing: *A journal of practice & theory*, *23*(1), 69-87.

Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. Auditing: *A journal of practice & theory*, *22*(2), 17-32.

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of financial economics*, *94*(2), 291-309.

Aldamen, H., Duncan, K., Kelly, S., McNamara, R., & Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting & Finance*, *52*(4), 971-1000.

Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of accounting and economics*, *37*(3), 315-342.

Archambeault, D. S., DeZoort, F. T., & Hermanson, D. R. (2008). Audit committee incentive compensation and accounting restatements. *Contemporary Accounting Research*, *25*(4), 965-992.

Bhattacharjee, S., Moreno, K. K., & Pyzoha, J. S. (2020). The Influence of Perspective Taking Encouraged by the Audit Committee on Auditor and Client Judgments during Accounting Disputes. *Auditing: A Journal of Practice & Theory*, *39*(3), 29-53.

Brody, R. G., Golen, S. P., & Reckers, P. M. (1998). An empirical investigation of the interface between internal and external auditors. *Accounting and business research*, *28*(3), 160-171.

Byrnes, J. P., Miller, D. C., & Schafer, W. D. (1999). Gender differences in risk taking: a meta-analysis. *Psychological bulletin*, *125*(3), 347-367.

Cohen, J. R., Hoitash, U., Krishnamoorthy, G., & Wright, A. M. (2014). The effect of audit committee industry expertise on monitoring the financial reporting process. *The Accounting Review*, *89*(1), 243-273.

Cotter, J., & Silvester, M. (2003). Board and monitoring committee independence. *Abacus*, *39*(2), 211-232.

Council, F. R. (2016). Revised ethical standard 2016. Integrity, Objectivity and Independence,

Audit and Assurance (June 2016).

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of accounting and economics*, *58*(2-3), 275-326.

Domingues, J. P. T., Sampaio, P., & Arezes, P. M. (2015). Analysis of integrated management systems from various perspectives. *Total Quality Management & Business Excellence*, *26*(11-12), 1311-1334.

Draeger, M., Lawson, B., & Schmidt, J. J. (2020). Do Audit Committees Effectively Engage in Voluntary Reporting to Manage Legitimacy? *Evidence From a Large-Scale Textual Analysis. Evidence From a Large-Scale Textual Analysis* (March 23, 2020).

Eckel, C. C., & Grossman, P. J. (2008). Men, women and risk aversion: Experimental evidence. *Handbook of experimental economics results*, *1*, 1061-1073.

Ghafran, C., & O'Sullivan, N. (2017). The impact of audit committee expertise on audit quality: Evidence from UK audit fees. *The British Accounting Review*, *49*(6), 578-593.

Gutierrez, E., Minutti-Meza, M., Tatum, K. W., & Vulcheva, M. (2018). Consequences of adopting an expanded auditor's report in the United Kingdom. *Review of Accounting Studies*, *23*(4), 1543-1587.

Joecks, J. (2020). How to Get Women on Board (s)? The Role of a Company's Female Friendly Culture1. *Editorial Policy*, *32*(3), 237-353.

Kausar, A., Shroff, N., & White, H. (2016). Real effects of the audit choice. *Journal of Accounting and Economics*, *62*(1), 157-181.

Khemakhem, H., & Naciri, A. (2013). Do board and audit committee characteristics affect firms' cost of equity capital. *In 36th EAA Annual Congress, Paris*.

Lary, A. M., & Taylor, D. W. (2012). Governance characteristics and role effectiveness of audit committees. *Managerial Auditing Journal*, 27(4), 336-354.

Lisowsky, P., Minnis, M., & Sutherland, A. (2017). Economic growth and financial statement verification. *Journal of Accounting Research*, *55*(4), 745-794.

Lorca, C., Sánchez-Ballesta, J. P., & García-Meca, E. (2011). Board effectiveness and cost of debt. *Journal of business ethics*, *100*(4), 613-631.

May, A. (2016). *Audit Market Concentration, Auditor Switching and Audit Fee Pricing: An*

Investigation of the UK Private Company Audit Market, 2005-2012 (Doctoral dissertation, University of Leeds).

Minnis, M. (2011). The value of financial statement verification in debt financing: Evidence from private US firms. *Journal of accounting research, 49*(2), 457-506.

Neter, J., Wasserman, W., & Kutner, M. H. (1989). Applied Linear Regression Models. Irwin, Homewood. Chap, 11, 386-432.

Pinto, I., & Morais, A. I. (2019). What matters in disclosures of key audit matters: Evidence from Europe. *Journal of International Financial Management & Accounting, 30*(2), 145-162.

Pittman, J. A., & Fortin, S. (2004). Auditor choice and the cost of debt capital for newly public firms. *Journal of accounting and economics, 37*(1), 113-136.

Qu, C. T. (2020). Board members with style: the effect of audit committee members and their personal styles on financial reporting choices. *Journal of Accounting, Auditing & Finance, 35*(3), 530-557.

Shah, N., & Napier, C. J. (2017). The Cadbury Report 1992: Shared Vision and Beyond. *United Kingdom.*

Sharma, V. D., Sharma, D. S., & Ananthanarayanan, U. (2011). Client importance and earnings management: The moderating role of audit committees. Auditing: *A Journal of Practice & Theory, 30*(3), 125-156.

Singer, Z., & Zhang, J. (2018). Auditor tenure and the timeliness of misstatement discovery. *The Accounting Review, 93*(2), 315-338.

Sterin, M. (2020). The influence of audit committee expertise on firms' internal controls: Evidence from mergers and acquisitions. *Accounting Horizons, 34*(3), 193-211.

Sulaiman, N. A. (2017). Oversight of audit quality in the UK: insights into audit committee conduct. *Meditari Accountancy Research*, 25(3), 351-367.

Tepalagul, N., & Lin, L. (2015). Auditor independence and audit quality: A literature review. *Journal of Accounting, Auditing & Finance, 30*(1), 101-121.

The Institute of Internal Auditors (IIA). (2017). Global Perspectives and Insights – Internal Audit and External Audit. Distinctive Roles in Organization Governance.

Velte, P., & Issa, J. (2019). The impact of key audit matter (KAM) disclosure in audit reports

on stakeholders' reactions: a literature review. *Problems and Perspectives in Management, 17*(3), 323.

Weber, L. H. (2020). Is Audit Committee Expertise Related to Earnings Quality? Evidence from Germany. *Editorial Policy, 32*(3), 294-352.

Yang, R., Yu, Y., Liu, M., & Wu, K. (2018). Corporate risk disclosure and audit fee: A text mining approach. *European Accounting Review, 27*(3), 583-594.

Zalata, A. M., Tauringana, V., & Tingbani, I. (2018). Audit committee financial expertise, gender, and earnings management: Does gender of the financial expert matter? *International review of financial analysis, 55*, 170-183.

Appendices

Table 9 - Variables Definition

Variable	Name	Definition
Dependent variable		
COD	Cost of Debt	Ratio of total interest expenses to total debt.
Explanatory variables		
WBIG4	Big4 Experience	Dummy variable that equals one if the chair has already worked in a big4 and zero otherwise.
INDEXP	Industry Expertise	Dummy variable that equals one if the chair has industry expertise and zero otherwise.
AGECHAIR	Age Chair	Natural logarithmic of the number of years of the actual duration of the current chair's tenure.
MEETFREQ	Meeting Frequency	Number of meetings that the audit committee reported in sample year.
CHAIR	Chair gender	Dummy variable that equals one if the chair is a woman and zero otherwise.
AUDFEE	Audit Fees	Natural logarithmic of the Audit Fees.
AUDTENURE	Audit Tenure	Natural logarithmic of the number of years of the actual duration of the current auditor's tenure.
Control variables		
LEV	Leverage	Ratio of total debt to total assets.
FIRMSIZE	Firm Size	Natural logarithmic of the total assets.
INTCOV	Interest Coverage Ratio	Ratio of operating profit over interest expense.
LOSS	Financial Condition Proxy	Dummy variable equal to one if the firm reports negative net income and zero otherwise.
D2019	Year controls	Dummy variable equal to one if the year is 2019 and zero otherwise.
SECTOR	Sector	*n* - 1 Standard Industrial Classification (SIC) dummy variables

Table 10 - Literature Review Summary: Theoretical Papers

Note: This table describes information regarding theoretical papers explored and presented in this thesis. The table is structured as follows: the Author and the corresponding publishing year, the topic approached, the type of analysis performed and the consequent main conclusions.

Author (year)	Topic	Type of Analysis	Main Conclusions
Brody et al. (1998).	Gender differences in risk taking: a meta-analysis.	- Analyse the risk-taking tendencies of women and men.	- Men are more likely to take risks than women. - Gender differences varied according to context and age level. - Males took more risks even when it was clear that it was a bad idea to take a risk. - Women are disinclined to take risks even in fairly innocuous situations or when it was a good idea to take a risk.
DeFond & Zhang (2014).	A review of archival auditing research.	- Audit quality: what is, what drives client demand for it, what drives auditor supply for it, its regulations.	- Audit quality depends on firms' innate characteristics and financial reporting systems. - Big N auditors provide higher audit quality, although it is unclear whether this is due to stronger incentives or greater competencies.
Domingues et al. (2011).	Beyond" audit" definition: a framework proposal for integrated management systems.	- Definition of an audit. - Develop an audit process taking in account implementation strategy, integration level achieved, sub-systems implementation sequence and integration self-awareness by the organization. - Types of audits.	- - Audit process plays a critical role through the IMS implementation, development, and continuous improvement since it provides top management with information regarding the integration level achieved and improvement opportunities.

Sulaiman (2017).	Oversight of audit quality in the UK: insights into audit committee conduct.	- Conduct of the Audit Committee in terms of its oversight role of audit quality in the UK from the perceptions of AC members and audit partners.	- There's a limited supporting role of the AC in enhancing audit quality and it can be improved. - The oversight role of AC is influenced by the quality of the chairman of the AC.
The Institute of Internal Auditors (IIA). (2017).	Global Perspectives and Insights - Internal Audit and External Audit. Distinctive Roles in Organization Governance.	- Difference between Internal and External Auditors.	- Internal and External Auditors are complements. Internal Auditors worry about non-financial information, external auditors concern about financial information.
Velte, & Issa (2019).	The impact of key audit matter (KAM) disclosure in audit reports on stakeholders' reactions: a literature review.	- Literature Review on KAM disclosure based on the reactions of stakeholders. - Differences between KAM and CAM; RMM (Risk of material misstatement) and JOA (Justification of Assessments).	- KAM disclosure may have an impact on earnings management and management reporting behavior (e.g. risk reporting). - Positive impact of KAM on stakeholder reactions. - Firm reputation can be negatively affected due to the KAMs' disclose.

Table 11 - Literature Review Summary: Empirical Papers

Note: This table describes information regarding empirical papers studied and presented in this thesis. The table is structured as follows: Author and the corresponding publishing year, the region or country studied, the time interval of the analysis, the methodology used, both dependent and independent variables examined and the consequent main conclusions.

Author (year)	Country / Region	Period	Methodology	Dependent Variables	Independent Variables	Main Conclusions
Anderson et al. (2004).	US	1993-1998	- Relation between board structure and the cost of debt financing. - Relation between board size and the cost of debt financing.	- Yield spread	- Number of independent directors - Board independence - Number inside directors - Board size - Tenure on board - Age of directors - Audit committee independence - Audit committee size - Audit committee meeting - Financial expert on Audit Committee	- Independent audit committees are associated with a significantly lower cost of debt financing. - There is no relation between debt costs and financial experts serving on the audit committee. - Audit-committee meeting frequency exhibits a negative relation to debt costs.

Bhattacharjee, et al. (2020)	US	2018	- Influence of an audit committee (AC) that encourages auditors (partners and managers) and clients to consider an accounting dispute from the other party's perspective - Examining how an AC perspective taking an intervention approach impacts both auditor and client behavior during a dispute resolution process.	- Likelihood of agreement using two proxies from prior research: (1) solution set overlap, and (2) delta of concessions	- Be auditor - Be client	- When an AC encourages a reanalysis of the key issues from the other party's perspective, or when AC makes a recommendation, there is a greater likelihood of agreement between auditors and clients as compared to when an AC does not encourage perspective taking behavior.
Brody, Golen & Reckers (1998).	USA	1985-1994	- Relationship between internal and external auditors.	- Probability of errors and / or irregularities - Extended Procedures - Additional hours	- Years of audit experience - Number of audit engagements in the past year - Average size of the internal audit department during audit engagements - Percentage of males - Age	- Auditors attend to internal audit department quality differences during the analytical procedures part of the audit planning process. - Individual auditor differences exhibit significant influence over auditor judgments.

Draege, Lawson & Schmidt (2020).	US	2006-2017	- Whether legitimacy management motivates audit committees to voluntarily disclose their financial reporting oversight activities in the audit committee report and if so, whether such legitimacy management disclosure strategy is effective.	- Number of keywords in the company's audit committee report that describe how the audit committee oversees the financial reporting process.	- Average number of years that all committee members have served the same client. - Percentage of financial experts - Total number of audit committee members - Average votes withheld - Be big four - Be listed on the NYSE or AMEX - Sales - Audit Fees - Number of sentences contained in Audit Report - Income - ROA - Total Assets - Switch Auditor	- Audit committees voluntarily increase disclosure of their financial reporting, which means that a regulatory mandate to increase audit committee disclosures may not be necessary. - Increased audit committee disclosure mitigates the negative impact of a restatement on shareholder satisfaction with the audit committee.
Ghafran, & O'Sullivan- (2017).	UK – FTSE350 firms	2007-2010	- Impact of audit committee financial expertise on audit quality. - Differences between experienced and non- experienced audit committee.	- Audit fee in each company's annual report.	- Size - Independence - Meeting frequency	- Audit committees possessing greater levels of financial expertise are associated with higher audit fees. - The knowledge in audit committees enhances financial quality reports. - The value of expertise to

						audit quality depends on the specific financial reporting challenges firms face.
Gutierrez et al. (2018).	UK	2011-2015	- - Impact of the expanded auditor's report for large public companies in UK in the decision usefulness of the auditor's report and whether it has indirect consequences on audit fees and quality.	- Investors' reaction to - the public dissemination of the annual report - Audit fees - Audit quality	- Type of companies (LSE Alternative Investment Market or premium companies) - Year of change of expanded auditor's report (Before and after September 2013) - Report disclosures - Number of words in the auditor's report in the adoption years - Number of risks mentioned in the auditor's report	- No evidence that the rule changes (expanded auditor's report) had a significant effect on investors' reaction, audit fees, and audit quality. - Premium companies with relatively long reports and large numbers of risks pay comparatively higher fees.
Kausar et al.(2016)	UK	2000-2010	- Impact of the audit choice in reducing financing frictions and information asymmetry.	- Investment or Total Debt	- Firm, year, and industry fixed effects - Sales growth - Firm size - Profitability - Liquidity - Audit fees	- Audit mandate conceals the information in firms' audit choices. - When a firm choice to voluntarily have an audit, this firm increases its debt, investment, and

						operating performance, and become more responsive to their investment opportunities. - Audit choice provides information to capital providers, which reduces financing frictions and improves performance.
Lisowsky, Minnis & Sutherland (2017)	US	2002-2011	- Relationship between financial statement verification in debt financing and economic growth.	- Be audited or do not be audited.	- Sales - Return on Assets - Leverage - Year	- Strong negative (positive) relation between audited financial statements during the growth period, and subsequent loan losses (construction firm survival) during the contraction period. - Macroeconomic fluctuations produce temporal shifts in the overall level of financial statement verification a performance. - The use of audited financial statements in debt contracting varies

						with economic conditions.
Lorca et al. (2011).	Spain	2004-2007	- Influence of board of directors on cost of debt financing.	- Cost of debt	- Proportion of independent directors on the board - Proportion of independent directors on the audit committee - board size - Board activity - Board expertise - If CEO is the Chairman - Percentage of shares held by directors.	- Director ownership and board activity influence the risk assessment of debtholders because of their ability to reduce agency cost and information asymmetry. - Large boards may be outweighed by the cost of poorer communication and increased decision-making time.
May (2016).	UK	2005-2012	- Analysis of the UK audit market for private companies - Auditing choices of private companies and the economic consequences of these choices.	- Total Assets - Sales / Total Assets - Be Big Four - End of fiscal year - Leverage (D/A) - Total Sales - Location - Quality of audit reports - (AR+Inventory)/Total Assets	- Audit Fees	- Audit market in UK is segmented with Big Four Dominance. - Low levels of auditor switching. - Firms that switch auditor reduce their credit ratings.

				- Net Income / Total Assets - Number of subsidiaries		- Private firms in the UK are a currently exempt from the more stringent audit regulations.
Minnis (2011)	US	2001-2007	- How verification of financial statements influences debt pricing. - How and why financial statement verification influences capital providers' decisions.	- - Be audited or do not be audited.	- Interest Rate - Interest Coverage - Current Ratio - PPE - Leverage - Total Assets - Sales Growth - Equity - State Audit - Net income - Accruals - Operating Cash Flows	- Audited firms have a significantly lower cost of debt. - Lenders place more weight on audited financial information in setting the interest rate. - Audited financial statements are better able to predict future cash flows.
Pinto & Morais (2019).	Europe: sample based on FTSE 100 (UK), CAC 40 (France) and AEX 25 (Amsterdam, Netherlands)	2016	- Definition of KAMs. - How to identify a KAM. - Process to disclose a KAM.	- Number of disclosed KAMs at fiscal year-end 2016 divided by the average number of sample KAMs.	- Leverage = (D/A). - Number of business segments of the firm - Number of years of the actual duration of the current auditor's tenure. - Audit fee - IRBC	- There is a positive association between audit fees and the number of KAMs disclosed. - Disclosing KAMs can mean audit's loss of reputation and less importance of audit report.

					(RBC2/KAMs disclosed) - Be a financial institution. - Total Assets - Assets /AR - EBIT/Total Assets - Fiscal year of each firm	
Pittman & Fortin (2004).	Canada	1977-1988	- Link between auditor choice and debt pricing for newly public firms.	- Interest rate on the firm's debt = Interest Expenses for the year divided by its average short- and long-term debt during the year.	- Firm age - Auditor choice - Underlying cost of capital - firm's one-digit SIC code - Year	- Retaining a Big Six auditor, which can reduce debt- monitoring costs by enhancing the credibility of financial statements, enables young firms to lower their borrowing costs. - Information asymmetries are even worse for firms that have short private histories when they go public.
Qu (2020)	US	1993-2008	- Whether audit committee members and chairpersons exhibit individual specific ''styles'' that affect corporate financial reporting practices.	- Absolute value of the residuals from a pooled regression based on two-digit SIC Code. - Probability from plugging time-variant firm characteristics in a logit model. - Variance of the residuals for	- ROA - Size - Book to market ratio - Leverage - Growth - Cash flow from financing activities - Be big four - Number of years that	- Audit committee members (chairs) exhibit individual specific styles in influencing the financial reporting choices. - The overall effect of members (chairs) is not explained by observable

				each member (chairperson)-firm from regressing the change in net income - The percentage of quarters the firm meets or beats analyst forecasts.	an auditor in retained by the firm - Audit Expertise	characteristics (gender, age, educational and professional backgrounds).
Sterin (2020)	US	2005-2016	- How audit committee expertise influences firms' internal control decisions. - Whether audit committee expertise is associated with the deferral of internal control testing for acquired firms.	- Dummy variable that is equal to 1 if acquiring firm opts-out of including an acquired business from its annual internal control report required under Section 404 of SOX in period t, and 0 otherwise.	- Audit committee member expertise - Material misstatements - Auditor size - Profitability - Financial health - Growth prospects - Capital market pressures - Earnings-to-price ratio - Demand for external financing - Firm age - Controls for the audit outcome - Audit fees	- Audit committees with greater specialized expertise are less likely to defer target integration. - ICFR (internal control over financial reporting) integration provides an indirect channel through which industry and legal expertise reduce the likelihood of misstatement.

Weber (2020)	Germany	2007-2013	- Influence of some expertise features of audit committee members on earnings quality in the German two-tier system.	- Absolute value of discretionary accruals as a measure for earnings quality and management	- Audit committee's financial expertise - Audit committee's educational level - Audit committee's industry background - Audit committee size - Audit committee meeting frequency - Audit committee independence - Audit committee compensation - Be big four - Auditor rotation - Firm size - Audit fee ratio - Growth - Leverage - Net income - Operating cash flow/ total assets	- Audit committees that include members characterized by high levels of financial expertise and advanced educational backgrounds tend to increase firms' earnings quality. - Monitoring and advisory- related function of audit committees are of great importance in reducing information asymmetries between management, the supervisory board, and shareholders, thus improving financial reporting quality.

Yang, et al. (2018)	US	2003-2012	- Assess firms' risks using unstructured textual disclosure from annual reports. - Association between four risk measures (financial, strategic, operational and hazard) derived from the risk factor section in 10-K filings and audit fees.	- Audit fees	- Financial Risk - Strategic Risk - Operational Risk - Hazard risks - Be big Four - Auditor industry - Auditor Tenure - Non-Audit Fees - Number of sentences in 10- k	- - Audit fees are significantly and positively related to firm-specific financial, strategic, and operational risks, indicating the informativeness of corporate textual risk disclosures.