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The Impact of Corporate Governance Mechanisms on the Relationship Between Cash Holdings and Audit Fees in Egyptian Listed Companies

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Abstract

This paper explores the impact of corporate governance mechanisms on the nature of the relationship between cash holdings and audit fees, which helps provide an opportunity to identify whether these mechanisms enable to mitigate agency problems, and thus lower audit fees through a sample of 78 Egyptian listed firms in EGX 100 during the period 2014-2016 using panel data analysis. Results indicated that cash holding increases auditing fees. The board characteristics affect negatively on the relationship between cash holdings and audit fees. Also, ownership structure affects negatively on the relationship between cash holdings and audit fees. As well audit committee affects negatively on the relationship between cash holdings and audit fees. There results support the view that corporate governance mitigate on the relationship between cash holdings and audit fees.

Keywords: Cash holding, Auditing fees, Board characteristics, Ownership structure, Audit committee, Panel data analysis, Egyptian Stock Exchange

1. Introduction

Understanding the role of external audit in reducing agency costs of cash holdings is very important (Kim et al., 2015), where the agency costs in the firms that maintain significant cash holdings are more risky (Jensen, 1986; Bates et al., 2009) because the managers have more discretionary power, when cash holdings increase, so they can work on aggravated the Agency's problem (Sun et al., 2012), so it requiring greater efforts exerted by the auditors about firms' cash holdings. As a result, the audit fees can increase.

Agency conflicts arise when the board members who have the power could act on behalf of the shareholders and exploit excess cash holdings for their private benefit at the shareholders' expense, such as: supporting unprofitable sectors or projects, or consumption of benefits in kind granted by the firm to personnel or maximizing remuneration or even theft (Jensen, 1986; Gao and Jia, 2016).

One of the previous studies has confirmed that the cash holdings of the firm are more vulnerable to agency problems between managers and shareholders; due to the discretion exercised by the managers over those cash holdings with the lack of control or auditing. Cash is the most asset vulnerable to manipulation and fraud due to the nature of its liquidity that can be misappropriated and misused easily especially when there is internal control weakness (Dittmar and Mahrt-Smith, 2007).

Some prior studies indicated that some managers are seeking to administrative gain by exploitation of cash holdings for their own interests, which may lead to auditor concern about negative consequences resulting from these actions (Harford et al., 2008; Gleason et al., 2015). Prior studies showed that cash holdings became an interface negative after shareholders expressed their concern over the ineffective and unclear investment strategies to them, and they demanded to pay immediate dividends (Dittmar and Mahrt-Smith, 2007; Harford et al., 2008).

Forms of Non-audit risks with respect to cash holdings and its potential consequences include shareholder class action lawsuits for lost wealth, which typically name the auditor as defendant in this case; this is called litigation risk, as well as non-litigation risk, such as losses from damaged reputation, unpaid fees, and a reduction in future audit engagements (Houston et al., 2005).

Jensen (1986) suggests that maintaining high levels of cash, as opposed to providing dividends to shareholders, allows managers to limit capital market monitoring, arising in the existence of external financing. Moreover, Pinkowitz (2002) argues that cash holdings facilitate acquisitions, and thus managerial entrenchment, by providing managers with the voting power that allows them to keep their positions. However, Bushman and Smith (2001) suggests that corporate governance mechanisms may mitigate agency problems that result from managers' ability to dictate resource allocation. Furthermore, Cohen et al. (2002); Kalcheva and Lins (2007) confirm that in the audit planning stage of overall audit risk assessments - consisting of inherent risks, internal control risks, detection risks, and fraud risks - auditors consider corporate governance quality reviewers, and therefore managers may refrain from making use of cash flows in the strong environments to protect investors.

As illustrated above, the agency problems related to cash holdings may heighten auditors' exposure to business risk and reputational damage, and thus auditors charge higher fees -which the researcher seeks to verify- and hence the current search contributes to some results that benefit audit firms on the effect of cash holdings in Egyptian businesses on audit fees, in addition to studying the impact of corporate governance mechanisms on the nature of this relationship.

This search derives its importance from being kept pace with recent developments in the field of accounting research that focuses on how important the corporate cash holdings, thus the current research contributes to some results that benefit audit firms on the effect of cash holdings in Egyptian businesses on audit fees, in addition to considering corporate governance mechanisms to study the effect of the relationship between cash holdings in Egyptian businesses on audit fees, also the research is especially important due to lack of literature on this relationship in emerging countries in general and in Egypt in particular.

The current research gap is that the unclear relationship between the effect of corporate cash holdings on audit fees in Egyptian business environment, in addition to lack of literature on this relationship in emerging countries. Also, explore the reality in emerging countries in general and in Egypt in particular, also to explore the influence of corporate governance mechanisms on sensitive audit fees for cash holdings. The following research question is: To what extent cash holdings in the Egyptian business affect audit fees and what is the impact of corporate governance mechanisms on that relationship?

2. Theories Identifying Three Motives Behind the Businesses' Desire to Hold Cash

Cash holding is considered one of the most important items of each firm budget, which requires a review of theories that can explain the motives behind businesses' desire to hold cash; Keynes (1936) highlighted that there are three important motives for cash holdings: (1) Transaction motive (the firm needs cash to cover current transactions rather than liquidating assets); (2) Precautionary motive (cash assets provide security for unexpected future events), (3) Speculative motive (the firm needs cash to provide alternative and unexpected cash investment opportunities), these theories are as follows:

- First: Trade-off Theory (TOT)

This theory postulates that firms identify their optimal level of cash holdings by weighting the marginal costs and marginal benefits of holding cash, optimum capital structure is determined according to this weighting. The benefits related to cash holdings are the following reduces the likelihood of financial distress, allows the pursuance of investment policy when financial constraints are met, and minimizes the costs of raising external funds or liquidating existing assets to make payments. The main cost of holding cash is the opportunity cost of the capital invested in liquid assets due to a low return on cash holdings, thus this theory aims at maximizing firm value (Ferreira and Vilela, 2004; Azmat, 2014).

- Second: Pecking Order Theory (POT)

Myers and Majluf (1984)'s Pecking Order Theory (POT), this theory states that to minimize financing costs, firms should prioritize reusing financing instruments and thus finance investments first with retained earnings, then with safe debt and risky debt, and finally with equity. This theory suggests that firms do not have target cash levels, but cash is used as a buffer, where firms hold cash to cover profitable investment opportunities.

- Third: Free Cash Flow (FCF) theory

Jensen (1986)'s Free Cash Flow (FCF) theory, this theory suggests that managers have an incentive to build up cash to increase the amount of assets under their control and to gain discretionary power over the firm investment decisions, which serves their personal interests. According to this theory, Opler et al. (1999) suggests that cash reduces the pressure to perform well and allows managers to invest in projects that best suit their own interests but may not be in the shareholders' best interest.

- Fourth: Agency theory

According to this theory, managers may prefer to retain cash assets to reduce the risk of an enterprise and increase their power to exercise discretion in such assets: optional power. Some of the studies have concluded that the cash held assets provide managers with the ability to achieve their objectives by relying on those assets to undertake into unprofitable or low-value projects for shareholders, but they serve their personal interests (Myers and Rajan, 1998; Harford et al., 2008). From the above, it is clear to the researcher that there is a close relationship between both the theory of free cash flow and the theory of the agency, where managers seek through them to maintain their powers and personal interests.

3. Literature Review and Hypothesis Development

3.1 Cash Holdings and Audit Fees

Myers and Rajan (1998) show through a pilot study on the US firms that cash holdings are more vulnerable to managerial discretion more than non-cash assets, and thus arises the importance of external auditor's monitoring role over management actions as a proxy for the shareholders. In addition, Gul and Tsui (1998) discusses the relationship between cash holdings and audit fees in firms whose stocks are traded in the Stock Exchange of Hong Kong (SEHK) in 1993; with a total of 449 observations, this study also finds greater auditors' efforts in firms with more cash holdings and related to non-value-maximizing activities; where it is believed to increase inherent risks, which requires a greater effort in auditing and therefore higher audit fees. Ettredge et al. (2014) indicated that high audit risks require a greater effort in auditing, and consequently higher audit fees.

Benjamin et al. (2015) aimed at testing the relationship between cash holdings and audit fees in the US firms from 2000-2012 applied to a sample of 125332 firm-year observations, and they had chosen the United States as an environment for application due to 'cash hoarding' prevailed in its firms, which appeared in 1996, results have shown that there is a positive relationship between cash holdings and audit fees; as cash holdings require higher auditors' effort to reduce audit risks.

Kim et al. (2015) explored the effect of audit quality using audit fees on market value of cash holdings through a sample of 14688 firm-year observations in publicly traded U.S. firms in 2003-2011 period, this study found that higher audit quality facilitates the disclosure of information that illustrates inefficient use of investment resources, it also reduces the managers' potential misuse of cash holdings, as it encourages them to improve the quality of financial reports. The study also found that subsequent external audit might affect investment decisions taken by managers before they happen, which in turn leads to lower agency costs and costs of

holding those cash assets that related to resource allocation on investments. Moreover, the study found that the market value of cash holdings significantly increases among audit clients who are industry specialists other than non-specialist audit clients. From the above, the researcher anticipates that cash holdings lead to increasing agency problems businesses, and this would increase both the effort of external auditors and audit fees to cover the estimated audit risks and therefore the first hypothesis is developed as follows:

H_1: Cash holdings in the Egyptian businesses affect audit fees.

3.2 The Impact of Corporate Governance Mechanisms on the Relationship Between Corporate Cash Holdings and Audit Fees

Chen (2008) aimed at testing the impact of corporate governance on cash holding. Using the 1500 US firms during the period 2000-2004, based on various investment opportunities. The study divided these firms into "old economy" firms, such as: Firms that manufacture durable and non-durables products; and "new economy" firms, such as: Telecommunications, computer, software, Internet, and network industries. The study found that the "new economy" firms retain a large amount of cash assets for investment, research and development. That reason was justified that such firms have relied on good governance practices to protect shareholders. It also concluded that the independence of the board significantly increases cash holdings in the "new economy" firms. This was justified on the basis that having an independent board ensures cash holdings to be appropriately invested, and thus lower both audit risks and audit fees.

Gleason et al. (2015) investigated the relationship between cash holdings and audit fees, applied to a sample of publicly U.S. firms provided by Standard and Poor's database, which amounted to 14576 firm-year observations, from 2002-2010, the study found a positive relationship between cash holdings and audit fees, but audit fees decline among clients who hold cash assets and have greater investment opportunities- the allocation of that assets appropriately- than those firms that tend to just hold those assets (holding those assets is just reserves), suggesting that auditors are less worried about the risks when managers have opportunities to distribute funds towards investments of positive Net Present Value (NPV), while audit fees increase in the firms that have cash holdings and implemented corporate governance mechanisms because shareholders in such firms may be more willing to challenge management through proxy fights or civil litigation, thus audit fees decline in the firms with weak governance in return.

It is very important that the external auditor considers the quality of implementation of corporate governance mechanisms; as Gao and Jia (2016) investigates governance role of internal control over financial reporting (ICFR) to alleviate the managerial expropriation of firm resources, by examining the potential effects of the internal control weaknesses (ICWs) on the values of corporate cash holdings, because internal control weakness could expose corporate cash holdings to high risks, such as misusing it and reducing the expected value of cash for investors, through a sample of 7495 firm-year observations of firms registered under the Sarbanes-Oxley Act's (SOX) Section 404 reports, during the period from 2004 to 2008 in the United States. The study found that internal controls over financial reporting facilitates the

scrutiny and discipline of capital markets, reduces managerial rent-seeking activities and thus alleviates the agency problems that are difficult to solve, and maintains the firm's resources. Hence, it is clear to the researcher that internal control is as a governance mechanism to alleviate agency problems between managers and beneficiaries, and therefore lower audit risks and audit fees also.

Khan et al. (2016) aimed at examining the relationship between corporate governance mechanisms through ownership structure and characteristics of board of directors and cash holdings. Using a sample of 80 non-financial firms in Pakistan's stock exchange, from 2010 to 2014, the sample consists of 50 non-financial firms in manufacturing industry (250 observations), in addition to 30 non-financial firms in service industry (150 observations). The study found that the industrial firms maintain cash holdings more than service firms, moreover, there is a negative relationship in industrial firms between implementation of corporate governance mechanisms and cash holdings. For service firms, there is no significant relationship between implementation of corporate governance mechanisms and cash holdings, except for ownership concentration; as the more cash holdings, the more ownership concentration, this may be due to frequent investment opportunities available in the service sector compared to the industrial sector.

Furthermore, Al-Najjar and Clark (2017) found that there is a negative relationship between both types of internal and external governance mechanisms – internal governance mechanisms, such as board size and independence; and external governance mechanisms, such as such as good governance procedures, fiscal policy transparency and securities law and banking supervision, and cash assets held by firms in MENA countries. Using 430 firms from 2000 to 2009, evidence that firms hold less cash to reduce agency conflicts.

Huang et al (2016) explore the efficient of cash holding and investigate the effect of oversight of audit committee during the period between 2007 and 2010. The results refer to that the efficient of cash holdings isn’t promoted after setting up audit committee with all listed companies' sample.

Farooq et al (2018) explore the impact of board and audit committee quality on the audit fees in listed companies in Pakistan using the Partial Least Square through Structural Equation Modeling. Results refer to board quality measures are positive relationship with external audit fees. This paper suggests that high board quality measures depend on higher quality audit to acquire assurance of financial reporting. Audit committee measures are negatively with the external audit fee. this result support the view of point that high audit committee effectiveness will ensure reliable financial reporting and lower audit fees due to decrease external auditor’s efforts

From the above, the researcher expected that corporate governance mechanisms reduce agency problems in businesses with cash holdings, this would diminish the effort of external auditors and then lower the audit fees, thus the researcher will develop the hypotheses:

$H_{2:}$ Board Characteristics affect the relationship between cash holdings and audit fees.

$H_{3:}$ Ownership structure affects the relationship between cash holdings and audit fees.

H_4: Audit Committee affects the relationship between cash holdings and audit fees.

4. Research Methodology

The empirical study only covers examining the corporate governance mechanisms that can affect the relationship between cash holdings and audit fees in non-financial businesses. Financial sector excluded due to the different characteristics of financial institutions from other businesses. The researcher using the most common governance mechanisms: characteristics of board of directors, Ownership structure, and characteristics of audit committee; these important mechanisms could help in the implementation of effective corporate governance.

4.1 Data and Methods

The empirical study only examines the most corporate governance mechanisms that could affect the relationship between cash holdings and audit fees during the period between 2014-2016 of all listed non-financial companies. The data concernings about corporate governance mechanisms and cash holding collected from financial disclosure reports and financial statements of the companies over the period between 2014-2016 but the auditing fees collected via Minutes of the Ordinary General Assembly. The total number of firms is 78 because It excludes financial institutions such as: banks, insurance firms and brokerage firms on the EGX100 in the Egyptian Stock Market (ESM). The total sample is 234 observation for the Egyptian Stock Market (ESM). We do use the panel data approach to explore the corporate governance mechanisms on the relationship between cash holdings and audit fees in the Egyptian market during 2014-2016.

4.2 Variables Measurement

The researcher illustrates the variable measurement as in the following table:

Table 1. Variables measurement

Variable	**Definition**	**Type**	**Measurement**
Fees	Auditing fees	Dependent variable	the natural logarithm of total auditing fees in firm (i) during the period (t)
Ch	Cash holding	Independent variable	cash and cash equivalents to total assets ratio
Corporate Governance Mechanisms			
1- Board Characteristics			
BS	Board size	Moderation variable	Number of directors on the board
BI	Board independence	Moderation variable	Non-executive-independent ratio of the Board

Du	Duality CEO	Moderation variable	Dummy variable equal = (1) if the chairman is the same as CEO, otherwise= (0)
2- Ownership Structure			
IO	Institutional ownership	Moderation variable	The proportion of institutional-owned shares in the ownership structure
AP	Administrative ownership	Moderation variable	The percentage of shares owned by directors and executive management in the ownership structure
3- Audit Committee			
Exp	Experience	Moderation variable	Dummy variable equal = (1) if the member of audit committee directors on the board interested in accounting or financial background, otherwise = (0)
IndAud	Independence auditor	Moderation variable	Dummy variable equal = (1) if the audit Committee in full by the independent Board of Directors, otherwise = (0)
Meet	Meeting	Moderation variable	Dummy variable equal = (1) if the meeting s of the Audit Committee at least four times during the year, otherwise = (0)
Control variables			
FS	Firm Size	Control variable	The natural logarithm of total assets
Lev	Leverage	Control variable	Ration of total debt scaled by total assets
G	Asset Growth	Control variable	Difference between assets (t) to assets (t-1) scaled by assets (t-1)
AQ	Audit Quality	Control variable	Dummy variable equal = (1) one if the firm is big-4, otherwise = (0)
Ind	Industry	Control variable	Dummy variable of each sector (equal =1 telecommunication, 2= core resources ,3= industrial services, 4= Construction, 5=real estate, 6= food and beverage,7= household and

	personal products, 8= gas and petroleum utilities, 9= chemicals, 10=utilities, 11= tourism and leisure , 12= health care and medicines, 13=media,14=distributors and retailers, 15= technology)

5. Empirical Results

5.1 Descriptive Statistics

Descriptive statistics describe the properties of the whole sample and also test the normal distribution. Descriptive statistics include the mean, the median, the maximum value, the minimum value, the standard deviation, the skewness, the kurtosis and shapiro wilk test of each variable. The results are shown in the table.

Table 2. Descriptive statistics

Variable	Obs	Mean	Std.	Min	Max	Range	Pr(Skewness)	Pr(Kurtosis)	Prob>z (Swilk)
Log fees	234	5.001	.425	4.07	6.24	2.16	0.264	0.613	0.177
Cash	234	.131	.016	.001	1.03	1.03	0.000	0.000	0.000
BS	234	8.885	2.59	5	17	12	0.000	0.014	0.000
BI	234	.552	.176	.09	.923	0.83	0.189	0.027	0.017
Duality	234	.244	.143	0	1	1.01	0.000	0.019	0.005
IO	234	.412	.295	0	.998	0.99	0.454	0.000	0.000
AP	234	.293	.277	0	.997	0.99	0.000	0.000	0.000
Exp	235	.677	.469	0	1	1	0.000	0.000	0.629
Ind Audit	234	.474	.377	0	1	1	0.568	0.000	0.448
Meetings	234	.923	.267	0	1	1	0.000	0.000	0.000
Log size	234	1.317	.04	1.23	1.43	0.20	0.900	0.019	0.022
Lev	234	.375	.24	0	.95	0.95	0.147	0.000	0.000
G	234	.179	.301	0	2.96	2.96	0.000	0.000	0.000
Audit Quality	234	.457	.499	0	1	1	0.273	0.000	1.000
Industry	234	6.231	3.20	1	15	14	0.000	0.993	0.000

Table 2 presents the descriptive statistics of the whole variables included in the current research. The descriptive statistics of fees shows mean values of (5.00) and respectively over the entire sample period. These positive values of log fees indicate that the majority of the Egyptian listed firms are higher fees. The maximum value is (6.242) and the minimum value of fees is (4.079), the difference between the minimum and the maximum values (the range) is (2.16) which means that there is a low variation of fees levels across the companies with standard deviations of (0.425).

Skewness and kurtosis values should be close to zero. According to central tendency theory if these values over zero with a sample over 30 units, it means a normal distribution. The value of skewness and kurtosis are (0.264) and (0.613) respectively indicating that the values of fees aren't normally distributed, but the skewness value should be deviated from normal distribution with a limit between -3 and +3, the kurtosis value should be between -10 and +10.Additionally, "swilk test" is used to measure the normality distribution of all the financial variables in this study with a significance value greater than 0.05. Therefore; Log fees is normally distributed at (p-value = 0.177).

Moreover, the mean value cash holding is (0.131). The maximum value is (1.03) and the minimum value is (0.001) with a standard deviation of (0.016) revealing that on average the companies in the sample make more cash holding. The value of skewness and kurtosis are (0.00) and (0.00) respectively which indicate that the values of cash holding are close to be a normal distribution. The shapiro wilk test isn't normally distributed at (P-value =0.0.00) but according to central tendency theory cash holding is a normally distributed.

The descriptive analysis of the corporate governance (moderation): board characteristics (BS, BI, Duality). ownership structure (IO, AP) and audit committee (Exp, Ind Audit, Meetings) show a mean value of BS, BI, Duality, IO, AP, Exp, Ind Audit, Meetings are (8.885, 0.552, 0.244, 0.412,0.293,0.677,0.474,0.923) with a standard deviation are (2.59, 0.176,0.143, 0.295, 0.277, 0.469, 0.377,0.267) respectively which means higher all corporate governance variables. The skewness and kurtosis values of corporate governance variables are a normal distribution according to central tendency theory. Concerning control variables; the mean values of the firm size, leverage, Asset growth, Audit Quality and industry are (1.317, 0.375, 0.179, 0.457, 6.23) with a standard deviation are (0.04, 024, 0.301, 0.499, 3.20) respectively. The skewness and kurtosis values of control variables are normal distribution according to central tendency theory.

5.2 Correlation Matrix

Table 3. Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) fees	1.000								
(2) Cash	0.134*	1.000							

	0.040								
(3) BS	-0.117	-0.263*	1.000						
	0.075	0.000							
(4) BI	-0.011	-0.017	-0.151*	1.000					
	0.861	0.801	0.021						
(5) IO	0.324*	0.152*	-0.104	-0.051	1.000				
	0.000	0.020	0.112	0.434					
(6) AP	0.125	0.118	-0.075	-0.072	0.312*	1.000			
	0.056	0.072	0.255	0.272	0.000				
(7) size	0.635*	-0.138*	0.025	-0.015	0.437*	0.173*	1.000		
	0.000	0.035	0.703	0.819	0.000	0.008			
(8) Lev	0.300*	-0.089	-0.203*	0.081	0.310*	0.106	0.208*	1.000	
	0.000	0.175	0.002	0.216	0.000	0.105	0.001		
(9) G	0.011	-0.018	0.041	-0.050	-0.038	0.146*	0.135*	-0.027	1.000
	0.867	0.788	0.534	0.444	0.561	0.026	0.039	0.678	

* shows significance at the .05 levelAccording to the Pearson's correlation matrix. There is a significant positive correlation between cash holding and auditing fees (r=0.134) and the P-value < 0.05. This means that cash holding increases auditing fees. Concerning the corporate governance variables, the results show there is a positive and significant correlation between Institutional ownership and auditing fees. Also, the control variables; the results show that there is a positive and significant correlation between firm size and auditing fees (r=0.635). There is a positive and significant correlation between leverage and auditing fees (r=0.300).

5.3 Diagnostics Tests

Table 4. Diagnostics tests

Diagnostics Tests		
1- Heteroskedasticity Test	chi2 (1) = 2.22	Prob > chi2 = 0.1366
2- Omitted variable Test	F (3, 206) = 1.41	Prob > F = 0.2409
3- Unit Root Test (Levin, Lin & Chu (LLC))	F-statistic =29.367	Prob F = 0.000
4- Serial Correlation Test	F-statistic = 2.33	Prob F = 0.124
5- Co-integration Test (Kao test)	Unadjusted Dickey-Fuller statistic= -3.211	Prob = 0.000

Diagnostics Tests show that the chi-square is (222). The value of probability is greater than (0.05) therefore there is a homoscedasticity (constant variance) among all variables in the current research. According to Omitted variable Test found that the probability of the probability of F-test (0.2409) which are greater than (0.05) therefore there is no omitted variable between error and intendent variable. Unit Root Test shows the P-value of LLC is (P-value = 0.000) which are less than (0.05). This means that all variables in the current research have stationary time series. Thus, the present research's results can be generalized to future time periods (2014-2016). Serial correlation shows the probability of F-test (0.124) which are greater than (0.05). Thus, there is no serial correlation between independent and dependent variables in both empirical models. This means that the results of the current research will be correct, and conclusions will not be biased.

Co-integration test. According to the P-value of Kao test (P-value = 0.000). Almost all the variables (fees, Cash, BS, BI, Du, IO, AP, Exp, Ind Audit, Meetings, Fs, Lev, G, AQ, ind) are significant as the P-values of these variables are less than (0.05). Thus, there are long-term equilibrium relationships among variables.

5.4 Regression Analysis

5.4.1 Panel data Models

This paper divided panel data into three models: fixed, random and pooled. The researcher compares between three models to choose the appropriate model in this study.

Table 5. Hausman test

Hausman Test	Coef.
Chi-square test value	34.499
P-value	0.000

This Table 5 shows that Chi-square test and level of significance using Hausman test. Results indicated reject the zero hypotheses and accept the alternative hypothesis. In the present study using Fixed Panel Effects.

Table 6. F-Statistic test and significance level of the F-Limer test

F-Limer test	Coef.
Cross-section F	8.051
P-value	0.081

This Table 6 shows that F. Statistic and the significance level the results of the test that is (8.051) and (0.081) sequence p-value >0.05; so, the alternative hypotheses of this test is accepted and reject the null hypothesis and therefore used pooled panel data.

5.4.2 Robustness Check

Table 7. Robustness check

Variable	model1	model2	model3
Cashtotota~s	.234*		
Fs	4.91***	5.112***	5.140***
Lev	.194*	.1701*	.1775*
AQ	.284***	.2681***	.2652***
G	-.133*	-.128*	-.129*
Ind	-.012*	-0.011	-0.011
Cashtoneta~s	.028*		
Cashtosales	0.039		
_cons	-1.533*	1.862**	-1.886**

legend: * p<0.05; ** p<0.01; *** p<0.001

The researcher using robustness check via two alternatives measures of cash holding: cash to net assets and cash to sales and compare these measures with the basic measures of cash holding to explain which measure is appropriate to explore the relationship between appropriate cash holding and auditing fees. According to robustness check found that three models using alternative measure of cash holding are significant at 5% but cash to total assets is significant with all control variables. So, the researcher using cash to total assets.

5.4.3 OLS Regression

Table 8. OLS regression

Fees	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
Ch	0.235	0.117	2.01	0.046	0.466	0.004	**
FS	4.910	0.531	9.25	0.000	3.864	5.957	***
Lev	0.194	0.082	2.36	0.019	0.032	0.356	**
AQ	0.285	0.044	6.41	0.000	0.197	0.372	***
G	-0.133	0.064	-2.09	0.038	-0.259	-0.008	**
Ind	-0.013	0.006	-2.09	0.037	-0.025	-0.001	**
Constant	-1.534	0.692	-2.22	0.028	-2.896	-0.171	**

Mean dependent var	5.001	SD dependent var	0.425
R-squared	0.550	Number of obs	234
F-test	46.165	Prob > F	0.000
Akaike crit. (AIC)	90.486	Bayesian crit. (BIC)	114.673

*** p<0.01, ** p<0.05, * p<0.1

The results show that the coefficient of Ch is positive (0.235) and statistically significant at 4.6 % level. This means that firms with a higher degree of cash holding enjoy more auditing fees. Hence, the first hypothesis H_1 is accepted. Moreover, the results show that there is a significant positive relationship between both firm size, leverage, Audit Quality and auditing fees. Also, there is a significant negative relationship between both Assets growth, Industry and auditing fees.

Furthermore, the value of F-test is (46.165) which shows the overall significance of the model. The model is significant because of the significant value (p=0.000) is less than (0.05). The value of R square is 55% which means that the independent variables (Cash holding, and control variables included) explain 55% of the variation in the auditing fees.

5.4.4 The Moderation Effect

A- The effect of Board characteristics on the relationship between cash holding and auditing

fees

Table 9. Linear regression

Fees	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
Ch	0.265	0.137	1.93	0.050	0.535	0.006	*
BS	-0.028	0.009	-3.24	0.001	-0.045	-0.011	***
BI	-0.179	0.132	-1.35	0.178	-0.439	0.082	
Du	0.143	0.054	2.62	0.009	0.035	0.250	***
BScash	-0.013	0.004	3.18	0.002	0.005	0.021	***
BIcash	-0.099	0.047	-2.12	0.035	-0.191	-0.007	**
DUcash	-0.059	0.035	-1.68	0.049	-0.129	0.010	*
Fs	4.931	0.527	9.36	0.000	3.893	5.969	***
Lev	0.114	0.083	1.38	0.170	-0.049	0.278	
AQ	0.277	0.044	6.34	0.000	0.191	0.363	***
G	-0.142	0.062	-2.29	0.023	-0.264	-0.020	**
Ind	-0.008	0.006	-1.38	0.170	-0.020	0.004	
Constant	-1.288	0.694	-1.86	0.065	-2.656	0.080	*

Mean dependent var	5.001	SD dependent var	0.425
R-squared	0.594	Number of obs	234.000
F-test	26.906	Prob > F	0.000
Akaike crit. (AIC)	78.394	Bayesian crit. (BIC)	123.313

*** p<0.01, ** p<0.05, * p<0.1

The results show that the coefficient of Ch is positive (0.265) and statistically significant at 5% level. Also, the coefficient of board characteristics (BScash, BIcash, DUcash) are negative and statistically significant at 5% level. This means that board characteristics affect negatively on the relationship between cash holding and auditing fees. Hence, the second hypothesis H_2 is accepted.

Moreover, the results show that there is a significant positive relationship between both firm size, Audit Quality and auditing fees. Also, there is a significant negative relationship between Assets growth and auditing fees. There is no relationship between both leverage, industry and auditing fees.

Furthermore, the value of F-test is (26.906) which show the overall significance of the model. The second model is significant because of the significant value (p=0.000) is less than (0.05). The value of R square is 59.4% which means that board characteristics explain 55% on the relationship between cash holding and auditing fees.

B- The effect ownership structure on the relationship between cash holding and auditing fees.

Table 10. Linear regression

Fees	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
Ch	0.129	0.144	0.90	0.051	0.413	0.155	***
IO	-0.058	0.096	-0.61	0.012	-0.248	0.131	**
AP	-0.019	0.106	-0.18	0.028	-0.227	0.189	***
IOcash	-0.019	0.037	0.51	0.051	-0.054	0.091	*
APcash	-0.028	0.057	0.49	0.014	-0.084	0.139	**
Fs	5.044	0.588	8.59	0.000	3.886	6.202	***
Lev	0.192	0.090	2.13	0.035	0.014	0.370	**
AQ	0.280	0.047	5.91	0.000	0.187	0.373	***
G	-0.130	0.066	-1.97	0.050	-0.260	0.000	*
Ind	-0.011	0.007	-1.66	0.098	-0.025	0.002	*
Constant	-1.708	0.759	-2.25	0.025	-3.205	-0.212	**

Mean dependent var	5.001	SD dependent var	0.425
R-squared	0.553	Number of obs	234.000
F-test	22.825	Prob > F	0.000
Akaike crit. (AIC)	100.477	Bayesian crit. (BIC)	145.396

*** p<0.01, ** p<0.05, * p<0.1

The results show that the coefficient of Ch is positive (0.129) and statistically significant at 5% level. Also, the coefficient of ownership structure (IOcash, APcash) are negative and statistically significant at 5% level. This means that ownership structure affects negatively on the relationship between cash holding and auditing fees. Hence, the third hypothesis H_3 is accepted. Moreover, the results show that there is a significant positive relationship between both firm size, leverage, Audit Quality and auditing fees. Also, there is a significant negative relationship between both Assets growth, industry and auditing fees.

Furthermore, the value of F-test is (22.825) which shows the overall significance of the model. The third model is significant because of the significant value (p=0.000) is less than (0.05). The value of R square is 55.3% which means that ownership structure explains 55.3% on the relationship between cash holding and auditing fees.

C- The effect audit committee on the relationship between cash holding and auditing fees.

Table 11. Linear regression

Fees	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
Ch	0.051	0.131	0.39	0.046	0.309	0.207	**
IndAu	-0.148	0.062	-2.37	0.019	-0.271	-0.025	**
Meet	-0.263	0.088	-2.98	0.003	-0.437	-0.089	***
Exp	-0.283	0.050	5.68	0.000	0.185	0.381	***
IndAucash	-0.059	0.036	1.62	0.010	-0.013	0.130	**
Meetcash	-0.088	0.034	2.57	0.011	0.020	0.155	**
Expcash	-0.098	0.036	-2.73	0.007	-0.168	-0.027	***
Fs	5.287	0.501	10.55	0.000	4.300	6.274	***
Lev	0.130	0.080	1.62	0.106	-0.028	0.288	
AQ	0.278	0.045	6.22	0.000	0.190	0.365	***
G	-0.150	0.059	-2.54	0.012	-0.265	-0.034	**
Ind	-0.001	0.008	-0.14	0.889	-0.016	0.014	
Constant	-2.007	0.647	-3.10	0.002	-3.283	-0.732	***

Mean dependent var	5.001	SD dependent var	0.425
R-squared	0.631	Number of obs	234.000
F-test	31.429	Prob > F	0.000
Akaike crit. (AIC)	56.137	Bayesian crit. (BIC)	101.056

*** p<0.01, ** p<0.05, * p<0.1

The results show that the coefficient of Ch is positive (0.051) and statistically significant at 5% level. Also, the coefficient of audit committee (IndAucash, Meetcash, Expcash) are negative and statistically significant at 5% level. This means that audit committee affects negatively on the relationship between cash holding and auditing fees. Hence, the fourth hypothesis H_4 is accepted.

Moreover, the results show that there is a significant positive relationship between both firm size, Audit Quality and auditing fees. Also, there is a significant negative relationship between Assets growth and auditing fees. There is no relationship between both leverage, industry and auditing fees.

Furthermore, the value of F-test is (31.429) which show the overall significance of the model. The third model is significant because of the significant value (p=0.000) is less than (0.05). The value of R square is 63.1% which means that ownership structure explains 63.1% on the relationship between cash holding and auditing fees

6. Conclusion

Regarding the impact of cash holding held in Egyptian listed firms on the audit fees, the results showed that the first hypothesis is accepted which means that cash holding increase audit fees due to the auditor's concern about the cash holding as a result auditor imposes additional audit costs. Gleason et al. (2015) argued that agency's conflicts over the cash holding may increase the risk of litigation and damage to reputation. This result consistent with the agency theory, which some managers seek to maintain their personal power and interests, and therefore the auditors consider these as the highest risk and increase the audit fees.

According to the moderation effects, the results showed that the second hypothesis is accepted which means the board characteristics affect negatively on the relationship between cash holding and audit fees in the Egyptian listed firms. The auditors carry out lower risk assessments and hence lower fees among entities applying governance mechanisms.

Also, the results the results showed that the third hypothesis is accepted which means the ownership structure affect negatively on the relationship between cash holding and audit fees in the Egyptian listed firms due to the quality of the application of corporate governance and thus lower audit fees.

Jensen and Meckling (1976) argued that managerial ownership decreases value incentives and therefore reducing the expectation of auditors towards risks and then lower audit fees. This interpretation is consistent with the agency theory (Bushman and Smith,2001), which concluded that corporate governance mechanisms may mitigate agency problems resulting from managers' ability to control Allocation of resources, and therefore managers may refrain from taking advantage of cash flows and reduced value incentives and thus leads to lower audit fees.

The results showed that the fourth hypothesis is accepted which means the audit committee affect negatively on the relationship between cash holding and audit fees in the Egyptian listed firms due to the quality of the application of corporate governance. It may be due to lower auditors' risk expectations in the event of the availability of audit committee characteristics and consequently lower audit fees; the primary purpose of their establishment is to provide oversight of the financial reporting process and the effectiveness of internal control (huang et al., 2016; farooq et al., 2018).

Table 12. Summary of the hypotheses testing results

Hypotheses		Expected Sign	Findings	Accepted/ Rejected
H_1	Cash holdings in the Egyptian businesses affect audit fees.	+	+	Accepted
H_2	Board Characteristics affect the relationship between cash holdings and audit fees.	-	-	Accepted
H_3	Ownership structure affects the relationship between cash holdings and audit fees.	-	-	Accepted
H_4	Audit Committee affects the relationship between cash holdings and audit fees	-	-	Accepted

7. Future Research

Examining the impact of investment opportunities available to businesses on the relationship between cash holding and audit fees.

Examining the impact of the financial constraints faced by the entity on the relationship between cash holding and audit fees.

Conducting further comparative studies between Egypt and other Arab environments to determine the extent to which the impact of cash holding on audit fees.

Conducting a survey to survey the views of the stakeholders of the users of financial statements and reports, whether investors or financial analysts or others on the importance of cash holding in Egyptian businesses, as well as the impact of disclosure of cash holding in financial reports on investment decisions for businesses.

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