DYNAMICS OF AUDIT LAG – BOARD OF DIRECTORS AND AUDIT COMMITTEES’ EFFECT

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Abstract

Audit procedures are considered to be an external governance mechanism tool used by shareholders from an agency theory perspective. The empirical model is constructed to assess the theoretical and statistical relationship between audit lag and corporate governance characteristics over a period of four years (for FTSE 350 companies excluding financial institutions between 2007 and 2010). This paper studies the effect of corporate governance mechanisms, board of directors and audit committee, on audit report lag. The importance of this research comes from the few studies conducted regarding the relationship between corporate governance and audit report lag. It is crucial to understand the determinants of audit lag in order to minimize it as much as possible and accordingly generate timely information.

Keywords: Audit, Board of Directors, Corporate Governance, Reporting

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1 Introduction

Audit report lag has been studied for different types of institutions (Henderson and Kaplan, 2000; Behn et al., 2006; Cohen and Leventis, 2013). Extensive research is available on the determinants of audit report lag, whether these determinants are audit-related or company-related. However, when it comes to bridging audit delay with corporate governance, prior research becomes narrow.

Audit report lag, also known as audit delay, is the time (measured as number of days) between a company's fiscal year-end and the audit report date. It is an important factor because it is directly related to the timeliness of financial statements. The main purpose of financial reporting is to present information that is useful to decision makers, whether they are investors or creditors (Kieso et al., 2010). In order for this information to be useful, it has to be supplied in a timely manner. Timeliness of financial reporting increases the confidence of investors (Leventis et al., 2005) which in turn, affects their certainty in decision-making. Moreover, the financial information's value will decrease as the audit report lag increases. Investors who need this data urgently, or who are wealthy enough to buy costly pre-disclosure information will resort to substitute sources for such information (Knechel and Payne, 2001; Bamber et al., 1993). Whittred (1980) concludes that a qualified audit report delayed corporate annual reports and this delay is prolonged if the qualification is more serious. Therefore, it is essential that audited information be presented in a timely manner.

This paper studies the effect of corporate governance mechanisms, board of directors and audit committee, on audit report lag. The variables studied concerning the board of directors are Board of directors' size, CEO role duality, Board of directors’ independence, and frequency of board meetings. The variables studied concerning the audit committee include frequency of meetings, audit committee independence, audit committee independence size, and audit committee independence financial expertise. The sample analyzed is companies listed in the London Stock Exchange for the time period from 2007 to 2010. This time period is characterized by the financial and economic turmoil that hit the U.K. Between the months of July and August 2007, the U.K. stock market experiences turmoil as a response to the mortgage-caused market crash in the United States. In 2008, the U.K.’s economy enters a recession. In 2009, the economic recession is over (British Broadcasting Corporation, 2009).

The importance of this research comes from the few studies conducted regarding the relationship between corporate governance mechanisms and audit report lag. It is crucial to understand the determinants of audit lag in order to minimize it as much as possible and accordingly generate timely information. This is why it is important to check if corporate governance mechanisms influence audit report lag. Furthermore, an analysis of the literature review shows that the study of the determinants of audit report lag in relation to corporate governance mechanisms in the United Kingdom is almost non-existent.
2 Literature review and hypotheses development

2.1 Audit report lag

Audit report lag is defined as the time (measured in number of days) between a company's fiscal year-end and the audit report date. It is also referred to as audit delay or audit lag. There is a plethora of audit report lag studies conducted on developed countries including Canada (Ashton, Graul, and Newton, 1989), New Zealand (Carslaw and Kaplan, 1991), Greece (Cohen and Leventis, 2013; Leventis et al., 2005), Spain (Bonson-Ponte et al., 2008), Australia (Whittred, 1980), Hong Kong (Jaggi and Tsui, 1999), and the United States (Schwartz and Soo, 1996; Johnson, 1998; Henderson and Kaplan, 2000; Behn et al., 2006; Ashton et al., 1987). In addition, there are studies done in the developing countries including Malaysia (Mohamad-Nor et al., 2010), India, Pakistan, and Bangladesh (Ahmed, 2003; Imam et al., 2001), and Egypt (Afify, 2009).

The research of audit lag is not a recent one. Ashton et al. (1987) find that certain audit report lag variables are affected if a company is financial/nonfinancial and if it is public/nonpublic. A company in the financial sector with a qualified opinion reports a longer audit delay. Company size has a negative relationship with audit delay for public companies and a positive one for nonpublic companies. Ashton et al. (1989) investigate the determinants of audit lag for Canadian public-listed companies for the time period 1977-1982. Many variables are "statistically significant" throughout this time period, but the adjusted $R^2$ numbers calculated for these years do not provide the model with good prediction power (0.088-0.126). Carslaw and Kaplan (1991) also examine determinants of audit delay but for New Zealand public companies for the years 1987 and 1988. Company size and the sign of income have an effect on audit delay. However, the adjusted $R^2$ values for the two years do not explain the variance in audit delay by the combination of the independent variables. Schwartz and Soo (1996) study the effect of an auditor change and its timing on audit report lag. The results show changing auditors does affect audit lag and that this lag shortens if the change is done early in the fiscal year. These results emphasize that if an auditor change is imminent, then it should be done early in the fiscal year to make audit planning smoother and to enhance audit report timeliness.

It has been found that audit report lag varies considerably due to the political process (if the mayor has strong political opposition, if the mayor is re-elected, if accrual accounting has an internal accounting team) (Cohen and Leventis, 2013). Another notable observation regarding government mechanisms is that cities have shorter audit delays than municipalities (Johnson, 1998). Henderson and Kaplan (2000) examine audit report lag for banks. Financial institutions are considered unique when studying audit report lag because they have specific regulations and procedures that differ from other industry sectors (Mohamad-Nor et al., 2010; Leventis et al., 2005; Abbott et al., 2003).

Determinants of audit report lag can be attributed to audit-related characteristics including the work done on an audit or traits that an auditor must possess. In order for the auditor report lag to be reduced, the auditor's "mindset" must be altered to accept a new audit approach. This different "mindset" should be accompanied by more skillfulness and flexibility on the auditor's side (Behn et al., 2006). The amount of audit work needed and how much an auditor relies on a structured audit approach influence greatly audit delay for U.S. companies (Bamber et al., 1993).

Reliance on a structured audit approach prolongs audit report lags due to the rigidity of the structure and the continuous amount of paperwork needed. However, relying on a structured audit approach allows firms to react more quickly to unanticipated events. These results have also been found in a study conducted on a sample of Hong Kong companies (Jaggi and Tsui, 1999). It is very common for auditing firms, especially large international or regional ones, to provide their clients with more than an auditing assignment. Audit report lag increases if an audit firm provides a certain company with tax services in addition to audit services. However, audit report lag decreases if the audit firm provides management advisory services in addition to audit services (Knechel and Payne, 2001).

Many studies have been conducted on company-related attributes in order to determine whether they have any effect on audit report lag. The most studied variables include company size, industry classification, and the presence of an extraordinary item. A general conclusion on company size is that it is inversely related to audit report lag (Ashton et al., 1989; Ashton et al., 1987; Carslaw and Kaplan, 1991). Ashton et al. (1987) and Ashton et al. (1989) state that companies in the financial sector experience shorter audit report lags. It was mentioned that "financial assets are easier to audit than non-financial assets". The financial sector is governed by different guidelines and regulations (Mohamad-Nor et al., 2010), which can allow auditors to undergo a smoother audit. On the other hand extraordinary items need more time to be audited and as such, incur an increase in audit report lag (Leventis et al., 2005; Ashton et al., 1989; Bamber et al., 1993).

The amount of literature on audit report lag determinants associated with corporate governance mechanisms is low. Afify (2009) studies the impact of corporate governance on audit report lag for public-listed Egyptian companies. The board of director's independence, role duality of the CEO, and the existence of an audit committee are found to be significantly related to audit report lag. Our paper examines both board of director's independence and CEO role duality. Unlike Afify, who only tests for the
The importance of audit delay is rich with different characteristics of the board of directors and characteristics of the audit committee. The results show significant impact for audit committee size and audit committee frequency of meetings. Furthermore, this study deduces that characteristics of the board of directors are not strong determinants of audit report lag. Our paper includes an extra variable not explored in this study, which is the frequency of the board of directors' meetings.

2.2 Corporate governance framework

The Cadbury Report states that the audit committee reviews the financial statements before they are submitted to the board (The Committee on the Financial Aspects of Corporate Governance and Gee and Co. Ltd., 1992). Therefore, timeliness of financial information rests on both the audit committee and the board. Both corporate governance mechanisms should make sure that there are no material misstatements that would cause a greater audit delay than usual.

Nehme (2013) states that the U.K. is "one of the pioneers" in crafting and executing corporate governance codes in the developed world. The Code basically operates under a "comply or explain" principle. This means that UK listed companies should comply with all the standards and procedures stated in the Code or explain to investors via their annual reports why they did not comply. Accordingly, companies are accountable to the shareholders and not only to regulators, creating a big incentive to comply with the Code. Another study links corporate governance measures with corporate internet reporting comprehensiveness (Abdelsalam et al., 2007). The results support that independence of directors is significant with a positive relationship to corporate Internet reporting comprehensiveness. This means that independent directors have a higher level of voluntary disclosure. CEO role duality is significant with a negative relationship to corporate Internet reporting credibility. This means that a CEO also acting as chair of the board of directors has a lower level of voluntary disclosure.

The dependent variable of this model is audit report lag. In other studies, it is also termed as audit delay (Cohen and Leventis, 2013) or audit lag (Ahmed, 2003). Audit report lag is measured as the number of days situated between a company's fiscal year-end and the date the audit report is issued. This measurement of audit report lag is the commonly used measurement based on the literature review (Krishnan and Yang, 2009; Knechel and Payne, 2001; Leventis et al., 2005; Ashton et al., 1987). The importance of this variable lies in that it determines the timing of the release of a company's financial statements. Only when the audit has been completed and the audit report has been signed the financial statements are made available for the public.

2.2.1 Board of directors size

A large board size may hinder the work of the auditor or it may facilitate the audit. Prior literature has been inconsistent regarding results concerning board size. It has been found that there is a positive relationship between earnings management and the size of the board (Abdul Rahman and Ali, 2006). Larger boards are characterized with ineffectiveness in comparison with smaller boards regarding their oversight and monitoring duties in the Malaysian context. It can be said that larger boards have difficulties with coordination. This difficulty can be translated into a longer audit report delay.

A study conducted on Greek firms shows that the board size variable is insignificant to explain the variation in the quality and informativeness on annual accounting earnings (Dimitropoulos and Asteriou, 2010). Mohamad-Nor et al. (2010) finds that a larger board size increases audit report lag. However, this result is also statistically insignificant indicating that the size of the board of directors does not affect audit report lag.

The more members the board is composed of, the more the functions of the board are spread out smoothly among the members, and not concentrated on just a few. This wide distribution of duties can cause the board to be more focused on the financials of the company, causing more accurate data to be disclosed, and in turn, shortening the audit report lag. In addition, larger sized boards are characterized with more diversified backgrounds (Nehme, 2013). As such, these backgrounds will lead to better communication with auditors increasing audit quality and decreasing audit lag.

In conclusion, the literature is rich with different results and conclusions. Some of those who have studied board size find that this variable is insignificant. On the other hand, some find that a larger board is more diversified the fact which facilitates communication with the auditor. The hypothesis to be empirically tested would be as follows:

\[ H_1: \text{There is a negative significant relationship between the board of directors' size and audit report lag.} \]

2.2.2 CEO role duality

The UK Corporate Governance Code states: "There should be a clear division of responsibilities at the head of the company between the running of the board and the executive responsibility for the running of the company's business. No one individual should have unfettered powers of decision." CEO role duality may compromise the effectiveness of the board of
directors. This is because when the CEO is also the chair of the board, board members, board meetings and their agenda items are basically in control of the CEO (Abdelsalam et al., 2007).

However, it is determined that CEO duality does not affect voluntary disclosures (Cheng and Courtenay, 2006). In addition, CEO role duality, or its absence, does not affect the informativeness of earnings (Petra, 2007). Also in line with these studies, it is shown that CEO duality does not have a relationship with financial restatements (Abdullah et al., 2010).

A CEO also holding the chair of the board position has more focus and control of the issues facing the organization (Rechner and Dalton, 1991). In this case, the CEO is the most knowledgeable of the inner workings of the company. This fact might facilitate the auditor's work leading to a decrease in audit report lag. The hypothesis to be empirically tested would be as follows:

$H_0$: There is no significant relationship between CEO role duality and audit report lag.

$H_1$: There is a negative significant relationship between CEO role duality and audit report lag.

2.2.3 Board of directors' independence

Non-Executive Directors (NED) is witnessed when the majority of the board of directors is composed of non-executive directors. Non-executive directors are individuals "with the right skill sets who have no business and other relationships which could interfere with the exercise of independent judgment or the ability to act in the best interests of the shareholders (Mohamad-Nor et al., 2010).

When studying board independence in relation to earnings management and earnings informativeness, there are conflicting results. Ahmed et al. (2006) find that the independence of the board is not significantly related to the informativeness of annual accounting earnings. Abdul Rahman and Ali (2006) find a similar result when studying board independence and earnings management. Board independence is found to not be significant when studying its effect on audit report lag (Mohamad-Nor et al., 2010).

On the contrary, the proportion of outside directors occupying a seat on the board is shown to have a statistically significant positive relationship with informativeness of annual earnings (Dimitropoulos and Asteriou, 2010). In addition, director independence is found to have a positive relationship for corporate Internet reporting comprehensiveness in the U.K. (Abdelsalam et al., 2007). Afify (2009) finds that board independence is negatively related to audit report lag.

The previous literature indicates that independence of the board is an important feature for the smooth and efficient functioning of the board. As such, a board comprised mostly of independent directors facilitates the auditor's work and shortens the audit report lag. Board of directors independence is measured by the proportion of independent directors in the board needs to be calculated. The hypothesis to be empirically tested would be as follows:

$H_0$: There is a negative significant relationship between board independence and audit report lag.

$H_1$: There is a positive significant relationship between board independence and audit report lag.

2.2.4 Frequency of board of directors meetings

How many times the board of directors' meets could be an important variable in explaining audit report lag. However, this variable has not been studied in a corporate governance context.

The U.K. Corporate Governance Code mentions that the responsibilities of the board of directors lie in setting the company's strategic goals, ensuring sufficient financial and human resources to allow the company to reach these goals, monitor management performance, place the company's values, and make sure that obligations towards shareholders and others are fulfilled. As such, the code declares that "the board should meet sufficiently regularly to discharge its duties effectively".

A board with a high frequency of meetings is more knowledgeable of the company's operations and finances. Accordingly, the board could be more helpful in facilitating the audit of the financial statements. In turn, this causes the audit report lag to shorten. The hypothesis to be empirically tested would be as follows:

$H_0$: There is no significant relationship between frequency of board meetings and audit report lag.

$H_1$: There is a negative significant relationship between frequency of board meetings and audit report lag.

2.2.5 Frequency of audit committee meetings

The board of directors must establish an audit committee responsible mainly for insuring that the financial statements fairly present reality, overseeing the company's internal financial controls, and providing recommendations (Financial Reporting Council, 2012). This is how the U.K. Corporate Governance Code defines the duties of the audit committee. As such, the number of times the audit committee meets annually could be detrimental for determining audit report lag.

There are implications that frequent audit committee meetings allow the committee to be well informed regarding the auditing procedure as well as perform its duties more attentively (Abbott et al., 2003). This could mean that meeting regularly facilitates the auditing of the financial statements, and in turn, reduces the audit report lag.

Similarly, it is said that audit committees, during their meetings, discuss all the obstacles faced in the company's financial reporting (Mohamad-Nor et al., 2010). Therefore, if committees meet scarcely, these problems would take time to be identified and resolved as promptly as possible. This is the reasoning used to hypothesize that an active audit committee shortens the audit report lag in Malaysian public companies. An audit committee is pegged as being
active if it meets a minimum of four times per year. The results of this study do indeed support the hypothesis.

The U.K. Guidance on Audit Committees places the responsibility of deciding the frequency of meetings to the audit committee chairman. This decision should be made based on how many meetings are required in order for the committee to fulfill its duties. However, the guidance recommends that audit committees meet at least three times a year.

Based on the previous literature, as well as the U.K. Corporate Governance Code and Guidance on Audit Committees, an audit committee is more thorough in its job when it meets frequently. These meetings might facilitate the audit and might shorten the audit report lag. The hypothesis to be empirically tested would be as follows:

\[ H_2: \text{There is a negative significant relationship between frequency of audit committee meetings and audit report lag}. \]

### 2.2.6 Audit committee independence

"The board should establish an audit committee of at least three, or in the case of smaller companies, two, independent non-executive directors" (Financial Reporting Council, 2012). The U.K. Guidance on Audit Committees says it all. Audit committees must be formed of independent members. The real question is whether the independence of members affects audit report lag.

Many studies research the importance of audit committee independence. Bradbury et al. (2006) finds that a high level of independence is associated with "lower abnormal working capital accruals". The authors conclude that audit committees are productive only when they are fully formed of independent directors in the Malaysian and Singapore context.

Audit committee independence is found to be positively related to audit fees (Abbott et al., 2003). The study states that this result may be explained by the willingness of independent members to avoid acquiring bad reputations connected to financial misstatements. Independent directors may call for an "expanded audit scope", "additional audit procedures", and "greater levels of audit assurance". Because of these excess demands, independent audit committee members might be more cooperative with auditors and this will cause their audit fees to be higher.

Another study in the U.S. shows that audit committee independence is associated with the type of report an auditor will issue (Carcello and Neal, 2000). Management may put pressure on the auditor in order for the latter not to issue a going-concern audit report. This pressure can include the threat of the company changing auditors as well as monetary incentives (which is basically bribery). In contrast, an independent audit committee can counteract management's intentions. The results of this study show that the higher the number of non-independent directors on the audit committee, the lower the chances that a going-concern report will be issued.

Audit committee independence is studied in relation to its effect on audit report lag. Mohamad-Nor et al. (2010) show that audit committee independence is a statistically insignificant variable to explain audit report lag. Based on the previous literature, it can be deduced that audit committee independence is detrimental for its smooth and transparent functioning. Independence could be a determinant of audit report lag. Independence is measured by the proportion of independent audit committee members. The hypothesis to be empirically tested would be as follows:

\[ H_2: \text{There is a negative significant relationship between audit committee independence and audit report lag}. \]

### 2.2.7 Audit committee size

The U.K. Corporate Governance Code states that the audit committee should be formed of a minimum of three people. If the company is a small one, then the committee could be made up of two people.

One study views that a larger audit committee is beneficial in identifying and fixing problems encountered in the financial reporting process (Mohamad-Nor et al., 2010). According to the authors, this is true if a larger committee raises the amount of resources accessible to the committee as well as enhances the committee's supervisory quality.

Mohamad-Nor et al. (2010) show that the audit committee size influences audit report lag in Malaysia. Their hypothesis that audit committee size is negatively associated with audit report lag is proven to be true. They conclude that firms with larger audit committees are more probable to issue their audit reports in a timely manner.

Based on the prior literature, as well as the guidelines stated in the U.K. Corporate Governance Code, it can be hypothesized that having a large audit committee can facilitate the auditor's job, shortening the audit report lag. The hypothesis to be empirically tested would be as follows:

\[ H_2: \text{There is a negative significant relationship between audit committee size and audit report lag}. \]

### 2.2.8 Financial expertise of audit committee members

Audit committees are responsible for functions related to financial statements, internal controls, and auditing (Financial Reporting Council, 2012). They have to make sure that financial statements do depict the financial state of the firm. They have to fortify the firm with sufficient internal controls to avoid corruption or large financial mistakes from taking place. They have to ensure that the internal auditing procedure is going smoothly as well as cooperate with the external auditor.
Mohamad-Nor et al. (2010) hypothesize that audit committee financial expertise does affect audit report lag in Malaysia. They believe that these two variables exhibit an inverse relationship. However, after conducting multiple regression tests, they find that the financial expertise of audit committee members isn't a significant variable to explain audit report lag.

Previous studies find a relationship that ties greater financial expertise with worse "management earnings forecasts precision and accuracy", financial statement misstatements", and "voluntary disclosure" (Bedard and Gendron, 2010). DeZoort et al. (2003) find that audit committee members who are financial experts (proxied for by being a CPA) are more likely to resist making adjustments to financial statements suggested by the auditors. This indicates that financial experts on the audit committee are not always avid supporters of external auditors' decisions. This is a hindrance to the auditing process and causes the increase in audit report lag. Whereas, non-financial experts serving on the audit committee may be more complacent with auditor guidance and act as the auditor suggests in order to facilitating the audit, causing the audit report lag to shorten. The U.K. Guidance on Audit Committees mentions that an audit committee should comprise at least one person possessing financial expertise. Based on the above, we can deduce that a financial expert is a person who has a working and/or an educational background (University degree, certification…) in either finance or accounting.

The above helps to hypothesize that financial expertise is an important factor that might cause the audit report lag to increase since financial expert members are more resistant regarding auditor guidance.  

Hc: There is a positive significant relationship between audit committee financial expertise and audit report lag.

2.3 Control variables

2.3.1 Company size

Company size could play a factor in the reduction of audit report lag. This is because larger companies have the ability to pay auditors relatively higher fees to complete the audit faster, the more intense scrutiny by investors and regulatory bodies to issue their financial reports as quickly as possible, and "advanced accounting systems and better internal controls" that could speed up the auditing process (Afify, 2009). On the other hand, audit report lag might actually be longer for larger companies since it would require more time to complete the auditing tasks (Ashton et al., 1989). The previous literature shows that larger companies, especially in the public sector, are related to a reduced audit report lag (Bonson-Ponte et al., 2008; Jaggi and Tsui, 1999; Carlaw and Kaplan, 1991; Ashton et al., 1989; Ashton et al., 1987). Company size is measured by total revenue.

2.3.2 Profitability

Profitability is used in prior literature as control variable when studying audit report lag. It is suggested that the yearly changes in audit delay is caused by yearly changes in certain variables. One of these variables is return on assets, which is a proxy for profitability (Ashton et al., 1987). Afify (2009) talks about several ways audit report lag could be affected by profitability. A company whose financial performance is declining may want to delay relaying the bad news, and as such cause audit lag to increase. Conversely, a company with good financial indicators would want to release the good news as fast as possible and cause audit delay to shorten. Afify (2009) finds a significant relationship between audit report lag and profitability. Based on prior research (Abdelsalam et al., 2007; Leventis et al., 2005; Afify, 2009; Ashton et al., 1987), this project will resort to using return on assets as a determinant of profitability.

2.3.3 Line of industry

Line of industry is commonly studied in prior literature as a dummy variable (Ashton et al., 1989; Carlaw and Kaplan, 1991; Leventis et al., 2005; Afify, 2009). This variable could be beneficial in showing that audit delay might be related to the line of industry (Nehme, 2013). Industry classifications used in this project are based on FTSE 350 databases. This variable has a dummy measurement with 8 classifications. These classifications are oil and gas, basic material, consumer goods, industrials, consumer services, telecommunication, health care, and technology.

2.3.4 Liquidity

There are some cases where liquidity is used as a control variable is studies related to corporate governance. It is hypothesized that companies who have a higher liquidity ratio are prone to disclose more interim financial information (Mangena and Pike, 2005). This hypothesis is backed up by the premise that companies seize the opportunity to show that they are capable of upholding their financial forecasts. As such, it could be deduced that higher liquidity means shorter audit report lag due to the increased interim disclosures. Lin and Liu (2009) study the impact of a firm's liquidity on the type of auditor selected by the firm. Liquidity is measured by current assets over total assets.

2.4 Theoretical framework

Corporate governance can always be related to agency theory. An agency relation is formed when
once in interests they have not in their annual management paper sample. These two sectors are statistics and governing regulatory. Agency theory can be applied to the Prudential Regulation Authority (PRA). The role of managing external parties to overlap. When they have similar interests, reducing agency cost is to cause the interests of both parties to overlap. Residual loss is the cost that occurs due to these conflicts of interest (McColgan, 2001).

McColgan (2001) also identifies certain types of agency conflicts. The moral hazard agency conflict arises when management targets goals and objectives that differ from those of the shareholders (Jones, 2010). This could lead to a decline in management productivity (becoming less efficient and less effective). Management sees no incentive in pursuing goals for a company that it doesn’t have a stake in. Agency cost can be applied to an auditing context since management might not be cooperative with the external auditor. The prolongation in audit report lag could be due to the moral hazard problem.

Audit report lag could be included in agency cost caused by a moral hazard conflict. The solution in reducing agency cost is to cause the interests of both parties to overlap. When they have similar interests, management might be cooperative with the external auditor, and in turn, minimize the audit report lag.

3 Research design

3.1 Sample selection

The companies selected for this research are companies listed at the FTSE 350 database. This database includes companies in the United Kingdom publicly listed on the London Stock Exchange. Financial sector and utilities sectors have been excluded from this paper sample. These two sectors have unique regulations and standards that specifically pertain to them and as such would cause inconsistent data collection. The financial sector is currently being regulated by The Financial Conduct Authority (FCA) and The Prudential Regulation Authority (PRA). The utilities sector is guided the Office of Gas and Electricity Markets (OFGEM), the Water Sources Regulation Authority (OFWAT), Northern Ireland Authority for Utility Regulation (NIAUR), Office of Communications (OFCOM), and the Water Industry Commission for Scotland (WICS). The exclusion of these two sectors is consistent with prior literature. These sectors are considered unique in their nature, need special types of audits, and have special reporting characteristics and governing regulatory bodies (Abbott et al., 2003; Mohamad-Nor et al., 2010; Leventis et al., 2005).

The time period in which the data has been collected spans four years (2007-2010). The data has been manually collected from the companies’ annual reports. This time period is significant in understanding to what extent audit report lag might have been affected by the external environment. This time period is characterized by a severe market crash that hit the U.K. which led to an economic recession (British Broadcasting Corporation, 2009). In addition, this time period witnessed two major changes to the U.K. Corporate Governance Code. Companies are now obliged to comply with the Code or else explain to shareholders why they have not in their annual reports. As such, this project could show how audit report lag responds to an economic recession as well to compliance with corporate governance guidelines.

3.2 Model specification

The econometric model of this empirical is as follows:

\[
ARL = \beta_0 + \beta_1 \text{BODSIZE}_t + \beta_2 \text{RD}_t + \beta_3 \text{NED}_t + \beta_4 \text{BODFREQ}_t + \beta_5 \text{ACFREQ}_t + \beta_6 \text{ACINDP}_t + \beta_7 \text{ACSIZE}_t + \\
\beta_8 \text{ACEXP}_t + \beta_9 \text{LnSZ}_t + \beta_{10} \text{ROA}_t + \beta_{11} \text{IND}_t + \beta_{12} \text{LIQ}_t + \epsilon
\]  

Where:
- \( \beta_0 \) - constant = the intercept
- \( \beta_1 - \beta_{12} \) = the coefficients
- \( E \) = error term
Dependent variable
- ARL = Audit report lag

Board of Directors' variables
- BODSIZE = size of the board of directors
- RD = a dummy variable given the value of 1 if the CEO is also chairman of the board and 0 otherwise
- NED = the percentage of outside directors on the board
- BODFREQ = frequency of board of directors meetings

Audit committee variables
- ACFREQ = frequency of the audit committee meetings
- ACINDP = the percentage of outside directors on an audit committee
- ACSIZE = number of members serving on an audit committee
- ACEXP = the percentage of financial experts on an audit committee

Firms-specific control variables
- SZ = Companies' size; total revenues
- ROA = Profitability; return on assets
- IND = Type of industry from FTSE 350 schedules
- LIQ = Liquidity; current assets divided by total assets

4 Results and discussion

4.1 Descriptive statistics

The sample used in this project covers companies listed on the Financial Times Stock Exchange (FTSE 350). This sample excludes companies from the financial and utilities sector because they are governed by unique regulatory bodies and procedures. The total number of companies whose annual reports contain no missing/omitted information for the years 2007-2010 is 908.

The descriptive statistics regarding the sample companies are reported in Table 1.

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The average audit report lag is 64 days. It is interesting to note that the maximum audit report lag is 158 days and the lowest is 23 days. This vast difference of 135 days is the main reason for research done on audit report lag and its determinants. The average of CEO role duality shows that role duality exists at a minimum in London-listed companies. The average amount of board members is 9. The range of the size of the board of directors is 17 members. The average percentage of board independence is 58%. This shows that more than half of the companies studied have non-executive directors active on the board. The average board of directors' meetings is 9 meetings.
### Table 2. Spearman correlation test

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Note: *Significance at confidence level of 95
However, the maximum amount of board meetings is 52, which shows that companies’ boards meet once every week. This is comparable with the minimum amount the board of directors meet in a company which is twice a year.

Meeting four times a year is the average for audit committees in the U.K. The upper range for audit committee meetings is 14, which is less than the range for board meetings by more than half. The average number of members serving on audit committees is 4, almost half of the average number of board members. Audit committees are mostly composed of independent directors with an average independence rate of 85%. However, the mean percentage of audit committee members who possess financial expertise is 35%, which is surprising considering the financial duties delegated to the audit committee. This can be due to the late compliance with the corporate governance code. The code requires audit committees to assign members with financial expertise.

Company size average (log of total revenues) is 14. The average return on investments is 7%. Industrials constitute the greatest percentage of companies while the telecommunications sector has the lowest percentage of companies studied. On average, liquidity is 0.395.

Based on the kurtosis and skewness values, the data is not normally distributed. For normal distribution, kurtosis and skewness should be situated between ±3 and ±1.96 (Hannifa and Hudaib, 2006; Gujarati, 1995). With this sample, kurtosis ranges between 1.64 and 41 and skewness is between -1.9 and 6.35. Because of the lack of normal distribution of the data, a spearman collinearity test is used to test for multi-collinearity among the variables.

Table 2 states that the collinearity values are relatively low. This means that there is no significant multi-collinearity problem among the dependent and independent variables.

Table 2 also portrays three significantly moderate correlations. The size of the audit committee is significantly related with a positive correlation to the size of the board of directors (0.4530). This is expected since members of the audit committee are chosen from the board of directors. There is a negative correlation (-0.5085) between the financial expertise of audit committee members and the size of the audit committee. The bigger the audit committee, the less the financial experts proportion in that committee. The last significant relationship can be found between the company size and size of the board of directors, with a correlation value of 0.4494.

The results in Table 3 show that the null hypothesis is accepted because the coefficients’ differences are not systematic. Because of this, the random-effects regression test (GLS) with robust standard error is to be used.

### Table 3. Hausman test

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Note: b = consistent under $H_0$ and $H_a$
B = inconsistent under $H_0$, efficient under $H_a$
Test: $H_0$: difference in coefficients not systematic
Chi(2) = 13.70
Prob>chi2 = 0.6882

### 4.2 Multivariate statistics

Table 4 displays the results of the regression model. The model used is multiple regressions using the random-effects regression test (GLS) with robust standard error. This regression model has an R-squared value of 0.176, which is close to R-squared values in other studies conducted on audit report lag...
(Ahmed, 2003; Jaggi and Tsui, R-squared value 1999, 17.06%; Bonson-Ponte et al., 2008; R-squared value 20%; Carslaw and Kaplan's, 1991, adjusted R-squared value 17%).

There is a significant negative relationship between CEO role duality and audit report lag (β = -2.977, p. 0.01). This is in line with the hypothesis H2 and some of the prior literature. Studies show that CEO role duality does not have a significant association with voluntary disclosures, informativeness of earnings, and financial restatements (Cheng and Courtenay, 2006; Petra, 2007; Abdullah, Yusof, and Nor, 2010). An explanation that might justify the negative relationship is that a CEO also holding the chair of the board position has more focus and control of the issues facing the organization (Rechner and Dalton, 1991).

This means that CEO role duality allows the CEO to have greater and more in-depth knowledge of what is going on in the business. This greater knowledge makes it easier for the CEO to cooperate with the auditor and helps in decreasing the audit report lag.

On the other hand, Affify (2009) finds a significant positive relationship between role duality and audit report lag. Mohamad-Nor et al. (2010) also find a positive insignificant relationship between role duality and audit report lag.

The GLS random regressions test shows a negative significant relationship between board size and audit report lag (β = -0.215, p. 0.1) in line with H1. Prior literature has been inconsistent regarding results concerning board size. Abdul Rahman and Ali (2006) and Ahmed et al. (2006) find that a larger board size is ineffective in performing its duties as well as less transparent when disclosing earnings information. Conversely, it is shown that board size does not affect the informativeness and quality of earnings (Dimitropoulos and Asteriou, 2010). The negative relationship can be explained by the fact that the more members the board is composed of, the more diversified the backgrounds it contains (Nehme, 2013). The diversity of backgrounds gives the auditor a better chance of smooth communication with the board. Better communication leads to effective auditing and a shorter audit report lag. In addition, larger boards can divide their responsibilities more evenly among the different members leading to more accurate in performing their duties which facilitates the auditing procedure. Board of directors' independence and board of directors' frequency of meetings are found to be statistically insignificant.

Concerning audit committee characteristics, all variables are found to be statistically significant in relation with audit report lag. Contrary H7, there is a positive significant relationship between audit committee size and audit report lag (β = 1.033, p. 0.01). It is said that more members at the audit committee, more resources become available, making financial reporting problems detected and resolved in a more timely manner (Mohamad-Nor et al., 2010). On the other hand, a larger audit committee could hinder the auditing process. With a greater audit committee size comes "poorer communication, coordination, involvement, and decision-making" (Bedard and Gendron, 2010). This leads to a greater audit lag and explains the positive relationship audit lag has with audit committee size.

As hypothesized, there is a negative significant relationship between audit committee independence and audit report lag (β = -3.258, p. 0.1). The greater the proportion of independent, non-executive directors serving on the audit committee, the shorter the audit report lag would be. This is in cohesion with prior literature. Bradbury et al. (2006) emphasize that audit committees are productive only in the cases where all the members are independent directors. Audit committee independence is also related with higher fees (Abbott et al., 2003). Since independent audit committee members do not have a conflict of interest stemming from their duties, they work harder to uncover and resolve financial misstatements. As such, their compensation is greater and their cooperation with the external auditor is better, making the audit report lag shorter. Mohamad-Nor et al. (2010) also find a negative relationship between independence and audit delay, but unlike the results of this regression model, the relationship is not a significant one.

There is a positive significant relationship between the frequency of audit committee meetings and audit report lag (β = 0.508, p. 0.1). The more audit committees meet, the greater the audit report lag. This is in contradiction with H8. Mohamad-Nor et al. (2010) state that active audit committees cause audit report lag to decrease. The issue of audit committee meetings is concerned with how effective those meetings are. Previous literature shows that 30% of studies reveal a positive relationship between frequency of audit committee meetings and effectiveness while only 2% reveal a negative relationship (Bedard and Gendron, 2010). An active audit committee, contrary to common perception, is a sign of ineffectiveness. Bedard and Gendron (2010) give examples on how meeting frequently is a sign of ineffectiveness. They say that audit committees need to meet frequently in some instances to discuss topics where they debate the disclosure of "internal control weaknesses". Frequent meetings discussing such topics do not facilitate, but rather hinder, the auditing process. Accordingly, the more the audit committee meets, the greater the audit report lag will be.

Consistent with the expectation, there is a positive significant relationship between the financial expertise of audit committee members and the audit report lag (β = 9.832, p. 0.01). The greater the proportion of financial experts composing the audit committee, the longer the audit lag will be. This is in line with previous studies. Financial expertise is related to worse "management earnings forecasts precision and accuracy ", financial statement
misstatements” and “voluntary disclosure” (Bedard and Gendron, 2010). Moreover, financial experts serving on the audit committee are more resistant to abiding by the auditor's suggestions (DeZoort et al., 2003). This definitely causes an increase in audit report lag. However, Abbott et al. (2003) mention that greater cooperation between audit committee members with financial expertise and external auditors can be found, since the audit committee members are knowledgeable of technical financial issues.

As for control variables, company size has a negative significant relationship with audit report lag ($\beta = -1.881, p = 0.01$). Larger companies have more resources at their disposal for the completion of a timely audit (Afify, 2009). Larger companies also seek better reputations which can be achieved through timely audit reports (Nehme, 2013). Profitability, measured by the return on assets, also has a negative significant association with audit report lag ($\beta = -7.839, p = 0.05$). Since companies hasten to release good news, then having higher profitability, will cause audit report lag to shorten (Afify, 2009). Liquidity has a positive significant relationship with audit report lag ($\beta = 5.497, p = 0.05$). Only three industry sectors have a significant relationship with audit report lag: oil and gas, basic materials, and telecommunication companies. Oil and gas and basic material companies have a positive significant relationship with audit report lag ($\beta = 15.481, p = 0.01; \beta = 8.941, p = 0.01$). This can be due to the complex nature of the business operations related to these two fields. The complexity causes audit report lag to increase. Conversely, telecommunication companies have a negative significant relationship with audit report lag ($\beta = -3.982, p = 0.1$). This can be explained because such companies are well regulated causing their audit to be smooth and timely.

### Table 4. Random-effects regression test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>z-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>BODSIZE</td>
<td>-0.216</td>
<td>-1.72*</td>
</tr>
<tr>
<td>RD</td>
<td>-2.977</td>
<td>-3.60***</td>
</tr>
<tr>
<td>BODINDP</td>
<td>-5.121</td>
<td>-1.07</td>
</tr>
<tr>
<td>BODFREQ</td>
<td>-0.036</td>
<td>-0.25</td>
</tr>
<tr>
<td>ACFREQ</td>
<td>0.508</td>
<td>1.70*</td>
</tr>
<tr>
<td>ACINDP</td>
<td>-3.258</td>
<td>-1.79*</td>
</tr>
<tr>
<td>ACSIZE</td>
<td>1.033</td>
<td>3.48***</td>
</tr>
<tr>
<td>ACEXP</td>
<td>9.832</td>
<td>4.77***</td>
</tr>
<tr>
<td>COMSIZE</td>
<td>-1.881</td>
<td>-5.48***</td>
</tr>
<tr>
<td>ROA</td>
<td>-7.839</td>
<td>-2.05**</td>
</tr>
<tr>
<td>OILGAS</td>
<td>15.481</td>
<td>16.30***</td>
</tr>
<tr>
<td>BASICM</td>
<td>8.941</td>
<td>5.44***</td>
</tr>
<tr>
<td>CONSUG</td>
<td>0.167</td>
<td>0.11</td>
</tr>
<tr>
<td>INDUST</td>
<td>0.841</td>
<td>0.78</td>
</tr>
<tr>
<td>CONSUS</td>
<td>0.310</td>
<td>0.15</td>
</tr>
<tr>
<td>TELECOM</td>
<td>-3.982</td>
<td>-1.87*</td>
</tr>
<tr>
<td>HEALTH</td>
<td>-1.514</td>
<td>-1.49</td>
</tr>
<tr>
<td>TECH</td>
<td>(omitted)</td>
<td></td>
</tr>
<tr>
<td>LIQ</td>
<td>5.497</td>
<td>2.28**</td>
</tr>
<tr>
<td>Intercept</td>
<td>85.179</td>
<td>19.57***</td>
</tr>
</tbody>
</table>

R-squared: 0.176  
Number of groups: 4  
N: 908  
*p<0.10, **p<0.05, ***p<0.01

## 5 Conclusion and research limitation

This research paper aims at identifying characteristics of corporate governance mechanisms which impact audit report lag. Audit lag is a crucial factor to be studied since it directly contributes to the timely release of financial information, which will affect investors’ opinion about the company's performance and their decision to invest or no to invest. The independent variables studied are divided into two main groups. Four variables relate to the board of directors: CEO role duality, board size, board independence, and frequency of board meetings. The other four variables relate to the audit committee: audit committee size, audit committee independence, frequency of audit committee meetings, and financial expertise of audit committee members.

The results can be very helpful in analyzing the ideal kind of situation a company must adopt in order to shorten its audit lag. Both independent variables relating to the board of directors that are statistically significant have a negative relationship with audit report lag. It is determined that the CEO role duality helps in shortening audit report lag since the CEO's
cooperation with the auditor, which stems from his encompassing knowledge and control, facilitates the auditing process. Moreover, a larger board size, which consists of diverse backgrounds and intellectual resources, decreases the audit report lag. All audit committee variables are found to be significant with audit report lag. The larger the audit committee size, the more frequent the audit committee meetings, and the greater the proportion of financial experts serving on the audit committee, the bigger is the audit report lag. A larger committee size gives more opportunity for conflicts to arise among members and hinders the auditing process creating a greater audit report lag. The more the audit committee meets could be a sign of ineffectiveness, especially when the meetings focus on disclosures of certain financial weaknesses. Financial experts are a sign of resistance when it comes to following auditors' suggestions. The more they are found in an audit committee, the greater the chance of conflicting with the auditor's choices, the greater the audit report lag. The more independent, non-executive directors serving on the audit committee, the shorter the audit report lag. Independence means the lack of conflict of interests at the corporate governance level, which increases transparency and disclosures, which facilitates the audit and as such, decreases the audit report lag.

This paper is subject to some limitations. The first limitation is that the sample focuses on non-financial sector companies. It is worth conducting the same research, using the same research tools, but on the financial sector to highlight any potential differences. Another limitation is not just focusing on corporate governance variables. Studies could be made that include a comprehensive set of variables ranging from company-related, audit-related, and corporate governance-related. A third limitation is that the sample covers a developed country, the U.K. Studying the same variables but in a developing country context would be beneficial to compare the results and see if corporate governance variables affect audit report lag in similar ways when taking into consideration the type of country being studied. Another limitation is that time series panel regression is used. Further studies could focus on using longitudinal data set while studying the effect of corporate governance mechanisms on audit report lag. The future effect of a present variable has not been studied in the previous literature and it could have a strong explanatory power when it comes to determinants of audit report lag.

References