Mandatory Audit Committees in Australia: Are there Economic Justifications?

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Abstract

The introduction of the ASX guidelines and the subsequent introduction of the Listing Rule 12.70 resulted in mandatory audit committees for the top 500 ASX listed companies effective from 1 January 2003. Non-top 500 firms, therefore, do not have to have audit committees as they are not subject to the Listing Rule 12.70. However, these firms are subject to Listing Rule 4.10.3 and therefore, either must have audit committees or explain why not. This provided the unique opportunity for a comparative study between the firms that have audit committees and those that do not. Taking advantage of the opportunity, this paper investigated whether the new regulation mandating an audit committee is economically justified or simply window dressing. Each firm’s beta (β) and return on assets (ROA) are used as surrogates for economic benefits. After controlling for firm size, financial leverage, board size, CEO duality and industry sector, the empirical results of 100 sampled firms showed conflicting evidence in support of the hypotheses that firms with an audit committee are better able to manage risk and they also utilized firms’ resources more effectively than those without audit committees.

Key words: Audit committee, beta, returns on assets, corporate governance, agency theory
Introduction

After almost 30 years of debates, various committee recommendations, collapses of a number of high flying companies and a subsequent royal commission enquiry, mandatory audit committees arrived in Australia. As of 1 January 2003, the top 500 companies listed in the S&P/ASX all ordinaries index must have audit committees under ASX Listing Rule 12.70. Non-top 500 firms, therefore, do not have to have audit committees as they are not subject to the Listing Rule 12.70. However, these firms are subject to Listing Rule 4.10.3 and therefore, either must have audit committee or explain why not. This provided the unique opportunity for a comparative study between the firms that have audit committees and those that do not.

The trend towards mandatory audit committees was underpinned by the common belief that they would be formidable monitors of management by asking tough questions particularly about its financial reporting process. Audit committees have been advocated by some as a deterrent to fraudulent financial reporting (Menon and Williams, 1994). It was and still is hypothesised that the presence of audit committees persuades management to provide robust financial information thereby enhancing the quality of the firm’s financial reporting process.

Along with rapid changes in the business environment coupled with a number of adverse events that occurred in the corporate world, the role of audit committees has evolved to accommodate new challenges (Mohamed and Hussain, 2007). The role of audit committees is no longer limited to ensure the independence of its external auditors from management and enhance the actual and perceived quality of the external audit, but is also extended to enhance corporate reporting, governance and restoring public confidence. In fact, audit committees are responsible for overseeing the audit activities, and many of these committees are also responsible for risk and other corporate governance matters which are expected to have spill over effects on the firm’s risk management and operational performance. Therefore, it is not only plausible but also imperative to explore whether the existence of audit committees enabled the firms to better manage risk, stock volatility in particular, and enhance their operating results.

In the light of this development, this paper endeavours to investigate whether the new regulation mandating audit committee is economically justified or is it more likely to be a costly act of window dressing, producing no material benefits. Each firm’s beta (β) and return on assets (ROA) are used as surrogates for economic benefits in the form of reduced risk and increased returns respectively. A firm’s beta is a measure of stock volatility whereas ROA is the measure of the firm’s operating efficiency and effectiveness. After controlling for firm size, financial leverage, board size, CEO duality and industry sector, the empirical results of 100 sampled firms did not support the hypotheses that firms with an audit committee were better able to manage risk and utilized the ‘firms’ resources more effectively than those without audit committees. However, given the limitations of a study based on a relatively small sample, the case is made for further studies.

Historical Development Towards mandatory Audit Committees in Australia

The literature documents the presence of audit committees in the USA and UK as early as 1870 (Tricker, 1978; McKee, 1979). However, their importance was only widely recognized in 1970s primarily due to corporate misconduct that caused unexpected corporate failures in the UK, USA and Canada (Mohamed and Hussain, 2007).

In Australia, a survey of 50 companies in 1978 revealed that 14 companies (28%) had audit committees (Christofi, 1978). However, the percentage remained unchanged for the next five years according to another survey of 300 largest public companies (by asset size) in 1982 which revealed that 54 companies (27%) had audit committees (Davison, 1984). In contrast, 32 percent of US companies had audit committee in 1970 while this percentage had jumped to 87 percent as revealed by a repeat survey in 1976 (Davison, 1984).

1 Although a questionnaire was sent to 300 firms, only 200 firms replied at the rate of 67 percent respond rate.
This surge in audit committees in the US was primarily attributable to New York Stock Exchange’s (NYSE) adoption of an ‘Audit committee policy statement’ which required the establishment of audit committees for all domestic companies listed on the exchange (Vanasco, 1994). Here in Australia however; the use of an audit committee remained absolutely voluntary until the Australian Stock Exchange’s (ASX) introduction of Listing Rule 3C-3 (i) in July 1992, which required ASX listed companies to include as a ‘separate item in their annual report’ - a statement whether or not, as at the date of the directors’ report, the company had an audit committee of the board of directors and, if it did not, a statement explaining why it did not’ (ASX, 1993). The adoption of an audit committee however still remained largely voluntary since the companies were simply required to disclose whether they did or did not have an audit committee. The ASX Listing Rule 3C-3 (i) followed the series of developments towards requiring Australian publicly listed companies to have audit committees.

The development began with the State Corporate Affairs Commission urging the accounting profession and company directors to establish audit committees (Davis, 1984). This was followed by the Senate Standing Committee on Legal and Constitutional Affairs (1989) and House of Representative Standing Committee on Legal and Constitutional Affairs (1991) which respectively called for mandatory audit committees for all listed Australian companies (Business Council Australia, 1991). Also in 1991, the Bosch Committee released Corporate Practices and Conduct guidelines recommending audit committee formation. In the following year, the ASX released a discussion paper (1992) indicating its commitment to encouraging companies to establish audit committees with a majority of non-executive directors (Munro and Buckby, 2008). However, the first concrete decision towards the mandatory audit committee came in 1993 with the ASX’s introduction of Listing Rule 3C-3(i) requiring ASX listed firms to include as a ‘separate item in their annual report’- a statement whether or not, as at the date of directors’ report, the firm had audit committee of the board of directors and, if it did not, a statement explaining why it did not (ASX, 1993).

In 1995, the Bosch Committee released an updated guide on Corporate Practice and Conduct which further supported the call for mandatory audit committees with a majority of non-executive directors (Business Council of Australia, 1995). This was followed by the Ramsay report 2001 which indicated that audit committee should be compulsory for all listed companies in Australia (Ramsay, 2001). By this time, most countries particularly those that followed the Anglo Saxon system of corporate governance, mandated the use of audit committees by publicly listed companies. However, the ASX was still reluctant to make audit committees mandatory despite the criticism by the Australian Securities and Investment Commission (ASIC) for not doing so, citing that such an action would impose unnecessary compliance burdens on some companies (Baxter and Pragasam, 1999).

The financial collapse of 2000 - 2003 spearheaded by Enron in the US and HIH here in Australia, resulted in a free fall in the investor confidence. The suggestions that the collapse may have been attributable to the misleading and deceptive conduct, insolvent trading and excessive executive and director’s remuneration, made the ASX realize that its ‘less prescriptive’ approach was probably not acceptable (Fleming, 2003; Copp, 2005). Under fire from the ASIC, Government and the investor communities alike, the ASX hurriedly formed the Corporate Governance Council (CGC) comprising 21 industry and stakeholder groups with the task of developing and delivering an industry wide corporate governance framework in order to provide a practical guide for all listed companies (ASX, 2003). The CGC released a set of guidelines comprising of 10 principles and 28 recommendations in March 2003. Principle 4 of the guidelines contains recommendations governing audit committees. Immediately after the introduction of the guidelines, the ASX amended the Listing Rule 4.10.3 and also introduced the new Listing Rule 12.70.

Research Motivation

The motivation for this study stems from the introduction of the ASX’s discriminatory Listing Rule 12.70 that governs audit committee requirements for the ASX listed companies. For

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2 The policy statement stated that each domestic company with common stock listed on the Exchange, as a condition of listing and continued listing of its securities on the Exchange, shall establish an audit committee no later than 30 June 1978 and maintain it thereafter.
the purpose of compliance, the Listing Rule 12.70 divides the firms into three categories: (i) top-300, (ii) top-500 and (iii) non-top 500 and imposes different set of requirements for each category. For example, the non-top 500 companies can choose between having an audit committee or simply explaining why having an audit committee is not justified to their present condition. Such flexibility is not available for top-500 companies. In other words, top-500 companies must have audit committee under ASX recommendation 4.2, although the structure of audit committee was left up to the discretion of companies concerned. However, such discretion is not available for the top-300 companies which must have audit committee compliant with the ASX recommendation 4.3. The ASX recommendation 4.3 requires audit committee to be structured in a manner so that it consists of (i) only non-executive directors, (ii) a majority of independent directors, (iii) an independent chair, who is not chair of the board and (iv) and has at least three members (ASX, 2003).

Although the ASX’s use of size as the benchmark to determine the audit committee requirements appears justifiable considering the possible burden of compliance, it misses the point of the importance of having audit committee. Intuitively, if an audit committee is useful for one group of companies, it must also be useful for another group of companies and this also applies to the structure of the audit committee. Furthermore, companies are likely to move backward and forward between categories over the periods due to the fluctuation in their market capitalization. For example, a company can be in top-300 this year, moves to top-500 next year and moves back to top-300 a year after. Does that mean that company needs to restructure its audit committee every year? Such a discriminatory regulation implies that the ASX may be focussing on form over substance and such a focus has potential to encourage companies to take ‘tick-the-box’ approach of compliance.

This discriminatory nature of the audit committee regulations in respect of some companies (i.e. in respect of composition for company 301 upwards, and for use of an audit committee for company 501 upwards) created a business environment where it is politically correct to conform with best practice but allows some companies to opt in or to opt out. Furthermore, whilst the initial emphasis on an audit committee was to improve the quality of financial reporting, there is now an increasing emphasis on incorporating improved risk management and value enhancement into the role of the audit committee (Mohamed and Hussain, 2005). This study exploits the opportunity created by the presence of choices to test in the Australian environment whether the underlying assumption that the presence of audit committees, irrespective of their structure, reduce agency costs by improving the quality of published accounts, increasing investor confidence and hence minimise stock volatility and enhance a firm’s operating efficiency.

Audit Committee Literature Review and Its Contribution.

The impetus for mandatory audit committees was the corporate failures of the 1970s and 1980s that resulted from corporate malpractices (Vanaco, 1994; Mohamed and Hussain, 2005). The former SEC Chairman Harold Williams noted “the audit committee can enhance, if not ensure the credibility of corporate financial reporting” (Williams, 1977 p71). The statement appears to explain why the focus of most audit committee literature have been on whether audit committees enhance the quality of the financial reporting process.

A number of studies have examined differences between companies with and without audit committees based on various financial reporting characteristics, mainly fraud (McMullen, 1996; Beasley, 1996), earning management (Becker et al, 1998; Klein, 2002; Yang and Krishnan, 2005), the quality of managerial accountability to shareholders (Bradbury, 1990; Rainsbury et al, 2009) and earning-returns (Chen et al, 2008, Wild, 1994). However, the empirical support for the agency theory argument and regulators’ expectation that the presence of audit committee enhances the reliability of the financial reporting remains unclear.

McMullen (1996) investigated companies listed in the AMEX and NASDAQ indexes and reported strong evidence that the presence of an audit committee is associated with fewer errors, irregularities and other indicators of unreliable financial reporting. Likewise, Dechow et al (1996) reported that firms without audit committees were more likely to manipulate earnings relative to the firms with audit committees. Their study included a sample of 92 firms subject
to enforcement actions by Securities and Exchange Commission (SEC) between 1982 and 1992. The investigation of a sample of 41 corrections of earning overstatement errors from 1977 to 1988 revealed that firms that had audit committees were less likely to overstate earnings (DeFond and Jiambalvo, 1991).

However, some empirical studies contradict the above findings. For example, Beasley (1996) found no evidence that the presence of an audit committee significantly affect the likelihood of financial statement fraud in the investigation of 150 firms, of which 75 being fraud firms and remaining 75 being no-fraud firms. However, they also found that no-fraud firms tend to have boards with significantly higher percentage of outside members than fraud firms highlighting the importance of board independence. Furthermore, a number of studies found non-significant relations between the existence of audit committees and disclosure quality (Forker, 1992; Davidson et al., 2005; He et al., 2007). The findings confirm the arguments that the mere existence of an audit committee does not necessarily translate into better financial reporting quality (Kalbers and Fogarty, 1993; Menon and Williams, 1994). Bradbury (1990) went even further claiming that audit committees are often created for the purposes of appearances rather than to enhance stockholders’ control of management.

It appears that the focus of audit committee research has been primarily on the impact that the existence of audit committees has on the quality of firms’ financial reporting quality. Accordingly, only a few studies have investigated the potential impact of audit committees on the other aspect of firms’ measures such as earning-return association, risk assessment and management and value enhancement. In the study of a sample of 260 US firms, between 1966 and 1980, Wild (1994) found that the earnings response coefficient, a summary measure of the relationship between earnings and market returns, is significantly greater (in magnitude) for earnings releases after the formation of the audit committee. In fact, they showed that the coefficient increases from 0.15 before formation to 0.28 after formation of the audit committee, an increase in magnitude of almost 90 percent. The evidence, according to them, indicates that earnings are significantly more informative to market participants after the formation of an audit committee and therefore, is consistent with notion that the audit committee both enhances managerial accountability to shareholders and is an effective component of corporate governance (Wild, 1994).

Although, an audit committee is mandatory for all US publicly listed firms, the Form 20-F provides exemption for the so called foreign registrants (foreign issuers), registered under Form 10-K in the US, and therefore they are not required to establish audit committees pursuant to the SEC Act Section 10A-3 (Coffee, 1999). Taking advantage of this unique situation, Chen et al. (2008) examined earnings-return associations for foreign registrants without audit committees and their US counterparts with audit committees and found that earnings-return associations for foreign registrants without audit committees are significantly lower compared with those of their US-matched firms with audit committees. They also found that foreign registrants that have chosen to establish audit committees have better earnings-return associations in relations to those that have chosen otherwise (Chen et al., 2008). The findings which support similar earlier findings (Wild, 1994), highlights an important roles audit committees play to make earning more informative to market participants.

In respect to the impact of audit committee on the firm value, Chan and Li (2008) examined a sample of Fortune 200 companies and found that audit committees enhance the firm value if they consisted of expert-independent directors. This appears, to the best my knowledge, only study to date in the subject. What is even more surprising is a complete lack of research work on audit committee and firms’ various risk profiles, even though assessing and managing risk has been viewed as one of the important roles of audit committees. For example, Braiotta (2004) states that one of the duties of the audit committee is to discuss with management the company’s major financial risk exposure and the steps management has taken to monitor and control such exposures, including the company’s risk assessment and risk management policies and procedures. The Rules of New York Stock Exchange (NYSE) include among other audit committee purposes ‘compliance with legal and regulatory requirements’ and ‘policies with respect to risk assessment’ (Young, 2008).
Given the limited research on the topic and complete lack of similar studies in Australia to date, there is a considerable gap in the literature and this study aimed to address that. It is expected that the findings of this study could have potential implications for the future regulations relating to mandating audit committees for all publicly listed firms in Australia or even extending audit committee requirements to the non-listed companies.

Why Firms Do Not Have Audit Committees?
Non-top 500 firms are not subject to the ASX Listing Rule 12.70 and therefore do not have to have audit committees if that better serves their governance and operational purposes. However, these firms are still subject to the Listing Rule 4.10.3 and accordingly, they are required, either to have an audit committee or provide in the annual reports the reasons for their decision not to have an audit committee. Table 1 presents explanations given in the annual reports by a sample of 50 firms that have decided not to have audit committees.

Table 1: Reasons offered by companies for not having audit committees

<table>
<thead>
<tr>
<th>S.N</th>
<th>Explanation provided</th>
<th>Companies</th>
<th>%</th>
<th>Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Firm size is too small to warrant a separate audit committee</td>
<td>18</td>
<td>36</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Small board and straightforward nature of operations</td>
<td>9</td>
<td>18</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Full board assumes the roles of an audit committee</td>
<td>10</td>
<td>20</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>No reasons are provided</td>
<td>2</td>
<td>4</td>
<td>x</td>
</tr>
<tr>
<td>5</td>
<td>Not useful or may compromise efficiency and effectiveness</td>
<td>6</td>
<td>12</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>Costs outweigh benefits</td>
<td>2</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Under review and will have one when the situation warrants</td>
<td>3</td>
<td>6</td>
<td>✓</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

As table 1 reveals, 96 percent of sampled firms have complied with the ASX Listing Rule 4.10.3. The highest number of firms (36%) cited firm size as the reason for not having an audit committee. This is consistent with Chen et al (2009) which found a significant and positive association between firm size and the voluntary formation of audit committees. Another 20 percent of sampled firms said that their full boards take the charge of audit committee roles instead.

What is interesting however is that only 4 percent of sampled firms have cited costs and associated benefits as the reasons against having audit committees despite the fact that the burden of compliance were seen as major arguments against mandating audit committee in the first place. For example, the ASX’s decision not to go ahead with its 1992 Exposure Draft regarding mandatory audit committees to all listed companies was driven by the submissions in the responses to the draft that indicated that such requirement would be burdensome for many listed companies (Baxter and Pragasam, 1999). While 12 percent of sampled firms argued that the separate audit committees would not be useful and effective given their circumstance; 6 percent said they are constantly reviewing the situation and would introduce the audit committees once the situation becomes justifiable.

Although the ASX guidelines do not prescribe the format or content of the explanation, it suggests that explanation must be considered: meaning that it should identify the specific circumstances and justify why, and how, not having an audit committee better serves the company’s objectives (ASX, 2003). In other words, the company must review the guidelines carefully in the context of its unique situation and give considered explanation if it departs from them. After all, the core objective of the ASX guidelines is to build and maintain a strong and transparent relationship between the company and its shareholders. However, it is clear from the Table 1 that firms in question are not meeting the expected standards of the guidelines to provide informative explanations. The firm’s actions could not only undermine the spirit of the guidelines but also could encourage stricter regulations.

Agency Theory, Conflict of Interest and Audit Committee

Agency theory is the most widely used theoretical framework in the study of most accounting research in organizational control (Stevens and Thevaranjan, 2010). The theory
suggests that a conflict of interest exists between the principal and the agent in an agency relationship. Berle and Means (1932) noted that growth in size of modern firms has resulted in the dispersal of shareholdings among a large number of small shareholders. The consequence of such dispersal, according to them, was the usurpation, by default, of power by the firm’s managers who were seen as having interests not necessarily in line with those of shareholders. In other words, there is a conflict of interest between managers and shareholders with potential for managers to benefit at the expenses of shareholders. Around 45 years later, Jensen and Meckling (1976) demonstrated that a manager who owns anything less than 100 percent of the residual cash flow of the firm has a potential conflict of interest with the outside shareholders, the situation characterised by the modern organizations.

The conflict of interests is represented by the agency costs which Jensen and Meckling defined as the sum of (i) the monitoring costs by the principal, (ii) the bonding costs by the agent and (iii) the residual loss. The agency costs are seen as having a negative impact on firm value. Accordingly, financial economists, particularly after the work of Jensen and Meckling, have worked to understand, define, measure and minimize these costs in order to reduce their impact on firm value (Denis, 2001).

Attempts have also been made by government and regulatory authorities around the world to control the conflict of interests between the firms’ managers and shareholders, through the introduction of a range of governance codes and regulations. These codes and regulations recommend or mandate firms to comply with certain structures, processes and procedures which they believe would constitute “governance of best practices”, the practice which is expected to reduce the agency costs and enhance the firm value.

The potential for conflict of interest resulting from the separation of management and ownership is so great that some scholars even questioned whether the modern corporation is a tenable form of organization (Berle and Mean, 1932; Jensen, 1989). Regardless, the modern corporate form is increasingly being accepted as the most effective organizational structure and there seems no evidence to suggest why it will not be the case in the future. In fact, of the 100 largest economic entities in the world, 51 were corporations while only 49 were countries (Acquaah-Gaisie, 2005). This is probably because the modern corporate structure is an efficient way to bring together those who have money and those who know what to do with it (Denis, 2001). This also partly justifies why the focus of financial economists and governance regulators has been to reduce the deficiency within the modern organizational structure rather than looking for alternatives.

The solution to the conflict of interest (agency costs) is to devise governance mechanisms that induce and/or compel the firm management to work towards the maximization of the shareholders’ value. Denis (2001) identified three general solutions to the agency problems being the: (i) bonding solution, (ii) monitoring solution and (iii) incentive solution. Obviously, each solution has positives and negatives of its own in terms of their practicality and effectiveness. This paper will focus on the monitoring aspect of the solution mechanism and investigates whether presence of such mechanism would impact on the firms’ risk and operational effectiveness.

The theory that the agent may not act in the interest of principal if given choices, underpins the monitoring solution. The objective of monitoring is to ensure that the agents act in the interest of the principals. In the context of organizations, the management must be monitored constantly to ensure that they take decisions that are in line with the objective of maximising firm value. In other words, monitoring systems should, not only encourage management to make decisions that are consistent with its goal of maximizing firm value but also to prevent management from taking inappropriate decisions that are could potentially reduce the firm value. This is possible only if the monitors, by implication the audit committees, is effective and present credible threats to management (Denis, 2001).

The collapse of Barings, Enron, HIH insurance and many others around the world suggest that there were catastrophic failures of the monitoring systems preceding their collapses. The collapses re-enforce the importance of monitoring and more importantly the consequences of the failure of the monitoring. There exist a number of potential monitors in a firm, such as the
board of directors, creditors and institutional shareholders. However, there are certain limitations such as too much on the table, lack of knowledge, information accessibility that limits their ability to become effective monitors. One way to solve this problem is to have a dedicated body with the necessary power and access to information whose job it is to monitor the management’s actions and decisions. Recently, the firm’s audit committee is widely being accepted as such authority.

The main objective of an audit committee is to “increase the credibility of annual financial statements, assist directors in meeting their responsibilities and enhance audit independence” (Bradbury, 1990, p21). Accordingly, audit committees are generally viewed as monitoring mechanisms that enhance the audit attestation function of external financial reporting and external auditor independence by establishing a formal communication link between the board of directors, the internal monitoring system and the internal and external auditors (Blue Ribbon Committee, 1999).

An audit committee is expected to exert pressure on management to take the right decisions by presenting itself as the constant reminder to the management that their decisions will be scrutinized and individuals will be held responsible for wrong decisions, deliberate or otherwise, and will be held accountable. Therefore, it can be argued that presence of an audit committee potentially and significantly reduce the agency costs through the reduction of information asymmetry thereby increasing transparency. On the one hand, such transparency is expected to discourage the management from taking selfish decisions; on the other, investors are expected to perceive such firms as better governed and therefore potentially less risky thereby positively influencing firms’ risk portfolio and operating results.

Audit Committee and Stock Volatility (i.e. Beta)

Mohamed and Hussain (2007) argued that the role of audit committees has evolved over the years to meet new challenges brought about by rapid changes in the business environment and some undesirable events that occurred in the corporate world. Accordingly, the roles and responsibilities of audit committees continue to expand. One such area is risk assessment and risk management. Although some companies institute a risk committee for oversight of their risk management, many others elect to use the audit committee to provide assurance to the board that its risk management processes are active, credible and effective (Lvove, 2009). For example, the audit committee handbook states that the audit committee has authority and responsibility to discuss with management the company's major financial risk exposure and the steps management has taken to monitor and control such exposures, including the company’s risk assessment and risk management policies and procedures (Braiotta, 2004). Therefore, on the one hand, the presence of audit committee effectively oversight the company’s risk management policies and practices while on the other hand, it enables the firm to enhance investor confidence through the demonstration of the effective corporate governance practice of which the audit committee forms an integral component. Using this analogy, this research argues that the existence of audit committee enables the firm to stabilize the firm’s stock volatility, as measured by the firm’s beta (β). It is therefore hypothesized that:

\[ H_1: \text{The Beta (a measure of stock volatility) is lower for the firms that adopt an audit committee relative to those that do not.} \]

Audit Committee and Return on Assets (ROA)

Agency theory argues that managers are self-serving individuals and therefore require the agency solution to prevent them from benefiting personally at the expenses of shareholders and other stakeholders (Jensen and Meckling, 1976). A number of agency solutions have been discussed in the literature including, the goal alignment strategy and the strategy of effective monitoring. The audit committee which is increasingly becoming integral part of firm’s corporate governance across the global market economies has been viewed as such a monitoring mechanism. The study argues that the presence of audit committee reduces the likelihood of management taking decisions that compromise shareholders’ interest as their actions and decision are being monitored by the audit committee. This is expected to reduce the likelihood...
of company resources being invested in the unproductive projects or being driven away to satisfy the self-interest of managerial personnel thereby enhancing firm's operating effectiveness and efficiency. The firm's return on assets (ROA) is used to surrogate its operating effectiveness and efficiency. There is also empirical support for this argument. For example, Chan and Li (2008) examined a sample of Fortune 200 companies and found that audit committees enhance the firm value, as measured by Tobin's q, if they consisted of expert-independent directors. Therefore, it is hypothesized that:

$$H_2: \text{The returns on assets (a measure of operating effectiveness and efficiency) are higher for the firms that adopt an audit committee relative to those that do not.}$$

Data and Sampling Criteria

Data for the research were obtained by using the Aspect Huntley Annual Reports Online and Aspect Huntley FinAnalysis database. This study has randomly selected 100 non-top 500 ASX listed companies, 50 firms with audit committees and remaining 50 without audit committees. The purpose is to create 2 portfolios: (1) Portfolio without audit committees and (2) Portfolio with audit committees for the comparative analysis. The sample firms were selected under the following criteria:

1. The sampled firms must be in operation and therefore the necessary data available from 1 July 2000 to 30 June 2005. This is to enable the calculation of beta for each firm using 5 years (60 months) stock price observations.
2. The sampled firms must have a financial reporting date ending 30 June of the year.
3. For the portfolio of the sampled firms with audit committees, the audit committee must be present throughout the period from 1 July 2004 and 30 June 2005. The change in the audit committee composition during the study period is ignored.

Research Design

This study will apply means comparison and regression analyses to investigate the effect of an audit committee on the firm's stock volatility as measured by beta and the firm's operating efficiency as measured by returns on assets (ROA). The data will be analysed using primarily the statistical software ‘SPSS’.

Dependent and Independent Variables

The firms' betas and ROAs are the dependent variables and proxy the firm's stock volatility and operating efficiency. The beta of the firm is calculated regressing the firm's monthly returns (calculated using 60 monthly price observations) against corresponding ASX all ordinary index returns. Although there are different opinions particularly, in terms of the use of number of return observations (3 years or 5 years) or/and type of returns (daily or monthly) in the beta calculation, 60 monthly return observations were used for the purpose of this study as suggested by Stephen D. Culter from the Investment Management Center (Cutler, 2008). Firms' earnings before interest and taxes (EBIT) were divided by the average total assets to calculate the ROA. The EBIT is chosen over net operating profit after tax (NOPAT) because the ROA is a better proxy to test capital utilization. Capital utilization is defined as total profit (before interest and income tax) that firms earned on the total capital used to make that profit. An independent variable is the dummy (categorical) variable which equals ‘1’ if the firm has audit committee and ‘0’ otherwise.

Control Variables

The regression model includes additional variables to control for other factors potentially expected to influence the dependent variables being investigated. Consistent with extant governance and audit committee literature, five control variables including, board size (Yarmack, 1996; Mak and Li, 2001), financial leverage (Myers, 1977; Berger and Mester, 1977),
firm size (Baumol, 1959; Mansfield, 1962; Punnose, 2008), CEO duality (Rechner and Dalton, 1991; Baliga, 1996) and industry sector (Rumlet, 1991; McGahan, and Porter, 1997) are added to the regression model. Board size is the total number of the firm’s board members for the study period. Financial leverage is measured as the ratio of total liabilities to total assets while firm size is measured as logarithm of firms’ total assets. CEO duality and industry sector are our final two control variables both of which are dummies. For the CEO duality, the dummy variable is coded ‘1’ if the CEO is also the Chair of the board and ‘0’ otherwise. In the same way the dummy variable is coded ‘1’ if the firm belongs to the industry sector of materials and ‘0’ otherwise. The materials sector is singled out because of its relatively higher representation in the sample (i.e. 27%).

Regression Model

The following two regression models will be used to test the research hypotheses. The model 1 tests the hypothesis 1 (H₁) while the model 2 tests the hypothesis 2 (H₂).

\[ \beta = \alpha_0 + \alpha_1 A\_committee + \alpha_2 F\_leverage + \alpha_3 F\_size + \alpha_4 C\_duality + \alpha_5 I\_sector + \epsilon \ldots (1) \]

\[ ROA = \beta_0 + \beta_1 A\_committee + \beta_2 F\_leverage + \beta_3 F\_size + \beta_4 C\_duality + \beta_5 I\_sector + \epsilon \ldots (2) \]

Where:
- Beta (B): A measure of stock volatility calculated by regressing the firms’ 60 monthly stock returns against the ASX index returns for the same period
- ROA: A measure of operating efficiency calculated dividing EBIT by average total Assets
- A_committee: Categorical variable coded as ‘1’ if the firm has audit committee and ‘0’ otherwise
- F_leverage: Ratio of total liabilities to total assets
- F_size: Logarithm of firms’ total assets
- C_duality: Categorical variable coded as ‘1’ if the CEO is also the Chair of the board of directors and ‘0’ otherwise
- I_sector: Categorical variable coded as ‘1’ if the firm represents industry is “materials” and ‘0’ otherwise
- \( \epsilon \): Representation of the noise term

Empirical Findings: Discussion and Analysis

Table 3, Panels A and B provides descriptive statistics. The statistical information is based on the data of 100 sampled firms between 1 July 2004 and 30 June 2005, except for the betas which were calculated using monthly stock prices between 1 July 2000 and 30 June 2005 (60 observations). Panel A contains descriptive statistics for the portfolio of firms without audit committee whereas Panel B provides descriptive statistics for the portfolio with audit committees. Beta and returns on assets are dependent variables whereas the remaining variables are the independent and control variables.
It must be noted that the market beta is 1 and therefore any company that has beta significantly different from the market beta is considered to have greater stock volatility relative to the market volatility. The negative beta does not signify lower beta and therefore lower stock volatility. For example, Table 3 shows minimum beta for the portfolio of firm without audit committee as -2.55. This does not indicate that firm’s stock is less volatile. In fact, it indicates that firm stock is highly volatile relative to the market but it moves in opposite directions.

The mean betas of the firms without and with audit committees are 1.01 and 0.91 respectively compared to the market beta of 1. Since firms’ beta can either be positive or negative, the mean beta does not provide any practically sensibly meaning. However, the variance of betas for the portfolio without audit committees is 1.61 against 0.67 for the firms with audit committees. This could indicate that it is more likely that firms without audit committees to have betas significantly different from 1 and therefore higher stock volatility.

Table 3 also shows that the average ROAs are -0.25 and -0.07 for the firms without audit committees and the firms with audit committees respectively. This implies that the firms with audit committees used firm resources relatively effectively and efficiently. Obviously, the negative ROAs are quite contrary to what was expected given the fact that the data represented Australia’s booming economic period. Nevertheless, the reasons behind this fascinating observation have not been explored as it deemed beyond the scope of the current study.

Table 2: Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>1.01</td>
<td>-2.55</td>
<td>3.59</td>
<td>1.61</td>
</tr>
<tr>
<td>Return on assets</td>
<td>-0.25</td>
<td>-1.29</td>
<td>0.18</td>
<td>0.15</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.24</td>
<td>0.00</td>
<td>0.82</td>
<td>0.06</td>
</tr>
<tr>
<td>Firm size (log of TA)</td>
<td>6.87</td>
<td>5.56</td>
<td>7.81</td>
<td>0.28</td>
</tr>
<tr>
<td>Board Size</td>
<td>3.92</td>
<td>3.00</td>
<td>7.00</td>
<td>0.83</td>
</tr>
<tr>
<td>CEO duality</td>
<td>0.16</td>
<td>--</td>
<td>--</td>
<td>0.14</td>
</tr>
<tr>
<td>Industry</td>
<td>0.40</td>
<td>--</td>
<td>--</td>
<td>0.24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>0.91</td>
<td>-0.63</td>
<td>2.71</td>
<td>0.67</td>
</tr>
<tr>
<td>Return on assets</td>
<td>-0.07</td>
<td>-1.03</td>
<td>0.52</td>
<td>0.14</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.29</td>
<td>0.01</td>
<td>0.75</td>
<td>0.05</td>
</tr>
<tr>
<td>Firm size (log of TA)</td>
<td>7.56</td>
<td>5.83</td>
<td>8.80</td>
<td>0.37</td>
</tr>
<tr>
<td>Board Size</td>
<td>4.15</td>
<td>3.00</td>
<td>8.00</td>
<td>1.19</td>
</tr>
<tr>
<td>CEO duality</td>
<td>0.04</td>
<td>--</td>
<td>--</td>
<td>0.04</td>
</tr>
<tr>
<td>Industry</td>
<td>0.14</td>
<td>--</td>
<td>--</td>
<td>0.12</td>
</tr>
</tbody>
</table>

*Notes:* *** and ** denote significance levels at 0.01, 0.05 and 0.10 levels respectively (2-tailed).
Table 3 above presents Pearson correlation between the variables used in this study. The correlation between firm size and ROA is greatest, positive and highly significant. Most of the control variables, except leverage, appear to be correlated with the existence of audit committees and the correlations are significant. Although dependent variable the firms’ beta, is negatively associated with the presence of audit committees, the correlation is not statistically significant. However, another dependent variable ROA is positively correlated with the existence of audit committee and the correlation is also statistically significant.

Regression Analysis

Table 4 contains the outcomes of the regression analysis as modelled in the research design section.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Beta</th>
<th>Dependent variable: ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exp. ± Coefficient</td>
<td>t-value</td>
</tr>
<tr>
<td>Intercept</td>
<td>± -0.033 (-0.028 (0.977))</td>
<td>-0.028</td>
</tr>
<tr>
<td>Audit Committee</td>
<td>- -0.220 (-1.068 (0.288))</td>
<td>-1.068</td>
</tr>
<tr>
<td>Leverage</td>
<td>+ -0.557 (-1.370 (0.174))</td>
<td>-1.370</td>
</tr>
<tr>
<td>Firm Size</td>
<td>- 0.000 (-0.006 (0.995))</td>
<td>-0.006</td>
</tr>
<tr>
<td>Board Size</td>
<td>- 0.117 (1.263 (0.210))</td>
<td>1.263</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>- -0.464 (-1.588 (0.116))</td>
<td>-1.588</td>
</tr>
<tr>
<td>Industry Sector</td>
<td>+ 0.297 (1.306 (0.195))</td>
<td>1.306</td>
</tr>
</tbody>
</table>

Sample Size 100 100
F-Statistics 1.852 11.660
Adjusted R 0.049 0.392

Notes: “0” otherwise. ** and * denote significance levels at 0.01, 0.05 and 0.10 levels respectively (2-tailed).

The left hand side of the Table 4 presents SPSS output of the regression of firm's betas against independent and control variables. The market beta which is 1 is used as a benchmark of stock volatility. Since firms’ betas can be either positives or negatives, they have been adjusted by taking -1 off from the beta that is greater than zero and +1 off from beta that are less than zero. Although the sign for the coefficient of the existence of audit committee is negative as expected; the coefficient is not statistically significant. This means there is only weak (if any) evidence in support of our first hypothesis that the beta (proxy of stock volatility) is lower for the firms that adopt an audit committee relative to those that do not. The coefficients of all control variables are insignificant suggesting that they may not influence the firms' stock volatility. Although not significant, the coefficient for the leverage is -0.557 and being negative is contrary to the expected sign. One possible explanation could be investor perception. For example, investor might perceive the firm with higher leverage to be highly disciplined and its governance more effective. Negative coefficient for CEO duality suggests that the firm that has CEO duality are likely to have higher beta or vice versa and therefore, also contrary to the expected sign. The coefficient of multiple determinations $R^2$ (adjusted) is only 0.049 suggesting only 5 percent of changes in the beta is jointly explained by the independent and control variables used in the model.

3 The aim of this study is to test the firm’s stock volatility relative to the market volatility which is 1. Therefore, the adjustment is necessary to achieve that objective.
The regression report for ROA as dependent variable is presented in the right hand side of the Table 4. The coefficient of the existence of audit committee is negative, contrary to our second hypothesis, that the ROAs (proxy for operating effectiveness) are higher for the firms that adopt an audit committee relative to those that do not. However, it is statistically insignificant. The results appear a little puzzling because the Table 3 showed positive and significant correlation between the existence of audit committee and the firms' ROAs. Furthermore, descriptive statistics in Table 3 shows that average means for the portfolio of firms without audit committee is -0.25 against the -0.07 for the portfolio with audit committee. One possible explanation for this could be the presence of multicollinearity. However, average variance inflator factor (VIF) is only 1.42 which is not significantly greater than 1 for the regression to be biased (Bowerman and O'Connell, 1990). Since the tolerance is not below 0.2 either suggesting that multicollinearity is not the issue.

The coefficients of the most control variables except the firm size are statistically insignificant. However, the coefficient of the firm size is positive as expected and significant at 0.01 percent level. The negative coefficient of the board size shows that the board size and ROA are negatively correlated supporting earlier studies that documented negative relation between board size and firm performance (Yarmack, 1996, Eisenberg et al, 1998). However, the statically insignificant coefficient means the evidence is not strong. The coefficient of the CEO duality is negative. The coefficient of multiple determinations $R^2$ (adjusted) is 0.392 indicating that the level of the variance in the dependent variable explained jointly by the independent and control variables is reasonable.

Conclusion, Limitation and Future Research

The introduction of ASX guidelines and subsequent introduction of the Listing Rule 12.70 mandated audit committee for the top 500 ASX listed companies. In the light of this development, this study investigated whether such a change is economically justified by examining the potential effect of audit committees on the firm's stock volatility as measured by beta and firm's operating effectiveness as measured by returns on assets (ROA). After controlling for firm size, financial leverage, board size, CEO duality and the industry sector, the investigation of 100 sampled firms showed that the existence of audit committee does not seem to impact either firm's stock volatility as measured by beta or its operating efficiency as measured by ROA. The findings appear to suggest that mandatory audit committee may not be an economically justifiable proposition for the firms that are currently not subject to the Listing Rule 12.70.

The results of this study are subject to some limitations. Firstly, this study examined the presence of audit committees and their potential effect on the firms' beta and ROA. In other words, audit committees examined in this study were not formed in accordance with ASX recommendation 4.3 requirements, which many studies showed to be associated with audit committee effectiveness (Beasely, 1996; Chan and Li, 2008)). Secondly, this study assumed that firms are homogeneous across industries and operational structures and therefore, are directly comparable. Although such assumption, to an extent, may be plausible in theory, it has potential to significantly distort the research outcomes. Finally, this study used data immediately after the introduction of the regulations that mandated audit committees in Australia. Therefore, it is possible that it was too early to have full impact of audit committee on firm's decision making behaviour.

The research can be extended to include those firms that have formed audit committee as required by the ASX recommendations 4.3 and 4.4 and see whether audit committee composition affect audit committee effectiveness. This study investigated companies with and without audit committees after the introduction of ASX guidelines. A similar study can be undertaken to investigate the impact of the audit committee on firm's beta or/and ROA or any other performance measures by comparing the firms before and after having the audit committees

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4 The average tolerance which was not reported in Table 5 is 0.723 which is significantly greater than 0.20; the cut off point for an indication of the presence of multicollinearity.

5 The requirements are explained in research motivation in Section 3.
References


ASX (2003). Principles of Corporate Governance and Best Practice Recommendations, Sydney: ASX, CGC.


167-185.


