

CHAPTER III

REVIEW OF LITERATURE

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3 Review of Literature

3.1 Quality of Financial Reporting

Improving disclosures and the quality of financial reporting mitigate information asymmetries about a firm's performance and reduce the volatility of stock prices (Diamond and Verrecchia, 1991; Healy, et al., 1999). An increase in stock return volatility is likely to increase the information asymmetric component of the cost of capital (Leuz and Verrecchia, 2000; Froot, et al., 1992).

Leuz and Verrecchia (2000) examined the consequences of improved disclosure quality on a firm's bid-ask spreads, trading volume and stock-return volatility in the context of German firms that switched from German GAAP to U.S. GAAP or IAS. They hypothesized that these German firms switch to an arguably better financial reporting regime, commit to increased disclosure, and hence experience a reduction in the asymmetric information component of the cost of capital. The authors found that bid-ask spreads decline and trading volume improves when German firms switch to an international reporting regime.

Prior literature in international financial accounting has linked the quality of accounting parameters to the nature of country level institutional arrangements. Ball et al. (2000); Ali and Hwang (2000); Ball et al. (2003) attribute the differences in institutional systems to the legal origin of, and the nature of corporate finance in a country. Their evidence suggests that in countries where companies depend more on debt finance than on equity finance, or in countries, which have code law (compared to common law), the quality of accounting in companies is relatively inferior.

Pastor and Veronesi (2003) posited that significant uncertainty about a firm's average profitability influences stock return volatility. To the extent that financial reporting quality is poor, uncertainty about a firm's future

profitability is likely to be high. Thus, the Pastor and Veronesi (2003) model is also consistent with the hypothesis that poor information quality is associated with increased idiosyncratic volatility.

Leuz et al. (2003) also provided similar conclusions in their study on earnings management across countries. The broadly framed analyses based on country level legal or financing variables have limited explanatory power. There exists a variation in accounting quality within the broad groups of countries. For example, Ball et al. (2003) found that the East Asian common-law countries do not have levels of accounting conservatism similar to those of the other common-law countries.

Leuz et al. (2003) found that common-law countries like Singapore and Hong Kong have high aggregate earnings-management scores similar to those of code law countries such as Germany and Japan. Additionally, Graham and King (2000) found that methods of differentiating accounting practices of countries using accounting-regulation differences also lead to inconclusive results.

On the other hand, country-specific studies, like Fan and Wong (2002) provided interesting country-based explanations, but they cannot typify differences of accounting practices between countries because they do not attempt to draw comparisons.

Teruel Solano and Ballesta (2008) analyzed the effect of accounting information quality on cash holdings for firms listed in the Spanish stock exchange over the period from 1995 to 2001. They suggested that the quality of accounting information may reduce the negative effects of information asymmetries and adverse selection costs, allowing firms to reduce their level of corporate cash holdings. They also found that cash holdings decrease when firms increase their use of bank debt and in the presence of cash substitutes. In contrast with this, firms with higher cash flow hold higher levels of cash.

A flourishing stream of research suggests that liquidity-constrained firms with low accounting quality have limited access to capital for investments. Beatty, Liao and Weber (2010) found that low accounting quality firms have a higher propensity to lease than purchase assets. Also they found that association between accounting quality and leasing decreases when banks have higher monitoring incentives and when loans contain capital expenditure provisions.

Hsieh, Lee and Cheng (2010) examined the association between financial reporting quality and speed of price adjustment using common shares in the Taiwanese stock market. They found that speed of price adjustment to news is positively but insignificantly affected by the financial reporting quality and further do not significantly increase following the improvements of financial reporting quality.

Kamal Naser and Rana Nuseibeh (2003) assessed the quality of information disclosed by nonfinancial Saudi companies listed on the Saudi Stock Exchange. In particular, their study examined the extent to which Saudi firms comply with stated accounting measurement and disclosure requirements. The timeliness of their study leads to its importance. It comes a few years after the creation of the Saudi Organization of Certified Public Accountants (SOCPA) in 1993 and shortly after the Saudi authorities passed a new foreign investment law in which accounting information plays a significant role in assuring local, as well as foreign investors. They expected their study to shed light on SOCPA's impact on the extent of disclosure by national companies. Their results have the potential to assist Saudi policymakers as they develop the requirements of financial reporting. In addition, it will offer both local and foreign investors an objective assessment of the current reporting practices in Saudi Arabia. Such information is important to all investors who want to make informed decisions before they invest in a company (Kamal Naser, Rana Nuseibeh, 2003).

Ahmed and Nicholls (1994) investigated factors that influence the level of compliance by Bangladeshicompnies with mandatory disclosure requirements. They found that mandatory disclosure tends to increase in cases where the company is a subsidiary of a multinational company (the company is audited by a large audit firm) and the accounts are prepared by a qualified accountant. They found, however, that company size has no effect on the level of disclosure. In a similar line of research, Murphy (1999) looked at specific firm features distinguishing Swiss firms who voluntarily adopted the IASs from other companies that chose to use national accounting standards. He found that a firm's involvement in foreign activities, percentage of foreign sales, and foreign stock exchange listing impact the use of the IASs.

Improving

disclosures and the quality of financial reporting mitigate information asymmetries about a firm's performance and reduce the volatility of stock prices (Diamond, and Verrecchia, 1991; Healy, et al., 1999). An increase in stock return volatility is likely to increase the information asymmetric component of the cost of capital (Froot, et al., 1992; Leuz, and Verrecchia, 2000). In the finance literature, Easley and O'Hara (2004) and O'Hara (2003) posit that a firm's accounting treatment of earnings and its disclosure policy—its financial reporting quality—can influence the firm's information environment (information risk) and, consequently, its idiosyncratic volatility and the cost of capital. Francis et al. (2005) Aboody et al. (2005) used accounting earnings quality as a proxy for information risk and demonstrated that earnings quality is related to expected returns.

Francis et al. (2002) conducted an analysis of disclosures (summary of income statements with separate disclosure of transitory earnings components, summary of balance sheet and cash flow statement information) released as part of the earnings announcements and found that the temporal increase in return volatility surrounding earnings announcements was positively associated with these concurrent disclosures. Collins et al. (2009) reported a temporal increase in firms' reporting of Street

(non-GAAP) earnings that leave out items such as restructuring charges and asset impairments. Moreover, Collins et al. (2009) found that Street earnings surprises are significantly positively associated with trading volume and return volatility around earnings announcements, suggesting a temporal increase in the intensity of the market's response to Street earnings.

Shiva Rajgopal and Mohan (2010) claimed that an increase in earnings management reduces the precision of the earnings signal and is thus related to increased idiosyncratic return volatility. However, one could counter-argue that earnings management, if detectable by investors, could also provide additional information to investors (Watts, and Zimmerman, 1986). For example, Subramanyam (1996) found that the discretionary accruals have positive value implications, in that discretionary accruals (i) are positively related to contemporaneous returns and (ii) predict future profitability and dividend changes. He concludes that managerial discretion improves the informativeness of earnings. Recent work by Badertscher, et al. (2008) shows that depending on the motivation to manage earnings, i.e., opportunistic versus informational reasons, accruals can be more or less informative about future cash flows.

Shiva Rajgopal and Mohan Venkatachalam (2010) in their paper explored whether deteriorating financial reporting quality, proxied by accrual-based measures of earnings quality, is associated with increase in idiosyncratic volatility over the last four decades. Using data from 1962 to 2001, they documented a noticeable decline in earnings quality (based on increasing DD and ABACC2) over time. To examine whether financial reporting quality is related to idiosyncratic return volatility, they conducted two sets of analyses. First, they verified that in the cross-section, earnings quality explains the differences in firm-specific idiosyncratic volatility. Second, and more pertinent, they investigated whether the time-series trend in return volatility is associated with time trends in earnings quality. Shiva Rajgopal and Mohan (2010) conducted a time-series analysis because identifying a cross-sectional

association

between idiosyncratic volatility and financial reporting quality does not automatically imply a time-series relation between these constructs.

Consistent with the theory that worsening earnings quality causes noisier earnings Diamond and Verrecchia (1991) Leuz and Verrecchia (2000) O'Hara (2003) Easley and Ohara (2004) results from time-series and cross-sectional regressions indicates a strong association between rising idiosyncratic return volatility and falling earnings quality. These results obtained after they controlled for several potential confounds. First, increasing trends in voluntary disclosure of other value-relevant information could explain trends in idiosyncratic volatility. Second, an increase in idiosyncratic volatility could reflect a greater amount of trading by unsophisticated traders in the capital market through the advent of electronic trading. Third, worsening earnings quality over time could potentially be informative about firms' deteriorating future cash flows (Watts, and Zimmerman, 1986; Subramanyam, 1996). Finally, the relation between earnings quality and idiosyncratic volatility could merely reflect the effects of other omitted variables, such as stock return performance, operating performance, cash flow variability, book-to-market ratio, leverage and firm size. They documented that decrease in earnings quality is associated with higher return volatility via increased dispersion in analysts' forecasts.

Many researchers measure the quality of financial reporting indirectly by focusing on attributes that are believed to influence quality of financial reports, such as earnings management, financial restatements, and timeliness (Barth, et al., 2008; Schipper, & Vincent, 2003; Cohen, et al., 2004). Despite a considerable interest in the effectiveness of accounting standards on the quality of financial reporting, empirical literature emerged that offers contradictory findings about the questions to what extent accounting standards contribute to the decision usefulness of financial reporting information (Ferdy Van, et al., 2009). Prior empirical studies investigating the influence US GAAP and IFRS have on the quality of

financial reports show positive, insignificant and negative differential effects (Barth, et al., 2008; Van Der, et al., 2007; Barth, et al., 2006; Bartov, et al., 2005; Psaros, & Trotman, 2004; Amir, et al., 1993; and Ashbaugh, & Olsson, 2002). For instance, Barth et al. (2006) found that US firms reveal higher accounting quality than IAS firms, whereas Leuz et al. (2003) demonstrated insignificant differences in bid-ask spread between IAS and US firms. However, Psaros & Trotman (2004) results are in favor of more principles-based accounting standards.

One explanation for these inconsistent results is that the indirect measures used in the empirical analyses focus on specific attributes of financial reporting information that are expected to influence the quality of financial reporting, such as earnings management, financial restatements (Barth, et al. 2008; Schipper, and Vincent 2003; Cohen et al. 2004; and Nichols, & Wahlen, 2004).

Lunawat (2009) studied on Disclosure as a Tool for Building Trust and Stimulating Investment. While information disclosure is traditionally understood to improve the value of contracting, her work shows that voluntary disclosure improves investment efficiency by facilitating the ability to signal trustworthiness.

Lunawat (2009) in her work examines the role of disclosure as a reputation building tool. Prior works by Grossman (1981) and Dye (1985) show that voluntary disclosure occurs because it is in the best interest of rational agents. Lunawat (2009) considers a model of reputation formation under different institutional structures of disclosure and reinvestment to show that voluntary disclosure occurs because rational self-interested agents have an incentive to look like altruistic agents.

Lunawat (2009) showed that by providing opportunities for reputation building, disclosure makes possible investment even in regions where investor's prior belief about manager's trustworthiness is so low as to obviate

investment in worlds without disclosure. That is, disclosure improves investment efficiency.

Financial reporting quality is a broader concept that not only refers to financial information, but also to disclosures, and other non-financial information useful for decision making should be included in the report (Ferdy, et al., 2009).

Ferdy et al. (2009) studied qualitative characteristics of financial reporting quality and the primary aim of their study was to contribute to improving measurement of financial reporting quality. For this reason they operationalized the financial reporting quality in terms of the fundamental characteristics (i.e. relevance and faithful representation) and the enhancing qualitative characteristics (i.e. understandability, comparability, verifiability and timeliness) as defined in the ED (IASB, 2008).

They used 231 annual reports from companies listed at US, UK, and Dutch stock markets in 2005 and 2007 to test the internal validity, inter-rater and internal consistency reliability of this compound measurement tool. Their results showed that the measurement tool assesses the quality of financial reporting in a valid and reliable way. They constructed a comprehensive measurement tool to assess the quality of financial reporting, based on the qualitative characteristics, as requested for by the FASB and IASB in the 2008 ED. With this measurement tool they overcome validity and reliability issues related to prior measurement methods such as earnings management detection tools and value relevance models.

To assess the quality of financial reporting, various measurement methods have been used. Methods most widely used in prior literature to assess financial reporting quality, i.e. accrual models, value relevance models, research focusing on specific elements in the annual report, and methods operationalizing the qualitative characteristics (Ferdy, et al. 2009).

Accrual models are used to measure the extent of earnings management under current rules and legislation. These models assume that managers use discretionary accruals, i.e. accruals over which the manager can exert some control, to manage earnings (Dechow, et al., 1996; Healy, & Wahlen, 1999). It is assumed that earnings management negatively influences the quality of financial reporting by reducing its decision usefulness (e.g. Brown, 1999; Van Tendeloo & Vanstraelen, 2005).

Value relevance models measure the quality of financial reporting information by focusing on the associations between accounting figures and stock-market reactions (Barth, et al. 2001; Choi, et al. 1997; Nichols, & Wahlen, 2004). This method is also used to examine earnings persistence, predictive ability, and variability, as elements of earnings quality (Schipper, & Vincent, 2003; Francis, et al., 2004).

Research focusing on specific elements in the annual report evaluates the influence of presenting specific information in the annual report on the decisions made by the users (Ferdy et al. (2009). For instance, Hirst et al. (2004) put emphasis on the use of fair value accounting and financial reporting quality. Gaeremynck & Willekens (2003) examined the relationship between the auditor's report and decision usefulness of financial reporting information. Beretta, & Bozzolan (2004) focus on the quality of internal control and risk disclosure information, while Cohen et al. (2004) highlight the relationship between corporate governance mechanisms and financial reporting quality.

Methods that operationalize the qualitative characteristics aim to assess the quality of different dimensions of information simultaneously to determine the decision usefulness of financial reporting information (Ferdy, et al., 2009).

3.2 Financial Reporting Quality and Economic Growth

Li and Shroff (2009) investigated the implications of financial reporting quality for a country's economic growth. Also they examined whether industries that have relatively more information uncertainty grow disproportionately faster in countries with better financial reporting quality. They found evidence consistent with prediction; specifically, industries characterized with information uncertainty grew between 0.12% and 0.22% faster in countries with good financial reporting quality.

Findings show that a good financial reporting system lowers the cost of capital and improves capital allocation efficiency (Bushman, et al., 2001). These findings suggest that a high-quality financial reporting system is likely to facilitate economic growth; one of the ultimate goals of economic policy (Feng, et al., 2009). Conversely, the quality of reporting may be unrelated to economic growth if capital suppliers use other means to assess the financial conditions of potential investments. For example, China has a low quality financial reporting system by most standards (Ball, et al. 2001); and yet, in the past thirty years, its economy has grown at about ten percent per year, much higher than the world average during the same period (United Nations World Economic and Social Survey 2006). In some economies such as Germany and Italy, access to external finance depends more on firm relationships with providers of capital. Hence, external financial reporting does not play as important a role in the capital allocation process in such economies (Feng, et al., 2009).

According to this, a high-quality financial reporting system may not be a necessary condition for economic growth. Feng and Nemit (2009) examined the correlation between the quality of financial reporting in a country and its economic growth and find that there is no robust relation between ex ante measures of accounting quality and an ex post measure of economic growth (at the country level).

Feng and Nemit (2009) argued that China and India are two fast growing countries with low per capita income and comparable population sizes. By their measures, India has better financial reporting quality than China. According to this they predicted that high information uncertainty industries will grow faster in India than in China. Alternatively stated, their prediction was that the difference in growth between a high and low information uncertainty industry will be greater in India than in China. Consistent with their hypothesis, they found that industries with higher information uncertainty grow relatively faster in countries that, a priori, have higher-quality financial reporting.

They also showed that the effect of reporting quality on growth is incremental to that of financial development. Further, they found that financial development facilitates growth in industries dependent on external financing, whereas, financial reporting quality facilitates growth in industries with high information uncertainty.

3.3 The Effect of Concentration and Structure of Ownership on Financial Reporting Quality

The financial and organizational settings of countries are far more complex than what the legal and financing dichotomies reflect (Asheq, et al., 2010). For East Asian countries, Fan & Wong (2002) found that concentrated ownership and the associated pyramidal and cross-holding structures create agency conflicts between controlling owners (insiders) and outside investors, whereby, controlling owners report accounting information for self-interest purposes. Their explanations of high concentration and tightly controlled hierarchies suggest that firms in East Asia do not display separation of ownership and control. In addition, finance and management literatures suggest that there are systematic variations between countries with regard to organization of firms, which in turn affect managerial and

market behavior (Gilson, and Roe, 1993; Shishido, 1999). These firm-level idiosyncrasies that exist across many firms in a country often arise from country level institutional idiosyncrasies. For example, in the case of countries with weak shareholder protection, major shareholders tend to attempt to protect their own interests at the expense of other shareholders through majority ownership or other control measures (Asheq, et al., 2010).

Using samples of firm-year observations from the United States, Japan, Thailand, France, and Germany, Asheq Rahman et al. (2010) shown that because institutional variables such as organizational structures, ownership structures, nature of debt, and regulations vary systematically between countries, the agency variables of equity and debt affect accounting quality in each country differently. In this regard, they found that the agency expectations of how financing affects accounting quality hold only in certain settings. In other settings, the effects of financing variables depend on the nature of the institutional variables. They used a broad accounting-practice variable, the level of abnormal accruals, to assess accounting quality in each country. They divided debt into long-term and short-term components, as these components are likely to have different influences on abnormal accruals.

More than 99% of limited liability companies, in most countries, are not listed on a stock exchange (Pacter, 2004; Berzins, et al., 2008; Nagar, et al., 2010). In aggregate, non-listed firms have about four times more employees, three times higher revenues, and twice the amount of assets than do listed firms (Berzins, et al., 2008). Private firms are different from publicly traded firms in several respects. Private firms are more closely held, have different governance, and have greater managerial ownership (Feng Chen, et al., 2010). Moreover, their major capital providers often have insider access to corporate information and typically take a more active role in management (Van Tendeloo, and Vanstraelen, 2008). With greater ownership concentration, large shareholders can take advantage of their controlling positions and direct private benefits for personal consumption, which is the

typical problem of expropriation of minority shareholders and creditors (Morck, et al., 1988). Furthermore, given the stronger ownership concentration, shareholder turnover is lower, and shareholders take a more active role in management, which reduces their reliance on financial statements for monitoring managers compared with public firms (Ball, R., and L. Shivakumar, 2005). Finally, private firms' financial statements are not as widely distributed to the public and are more likely to be influenced by taxation, dividend, and other objectives (Ball, R., and L. Shivakumar, 2005).

Prior studies found evidence suggesting that private firms have lower earnings quality on an average than public firms (Feng Chen, et al., 2010). For example, Ball and Shivakumar (2005) showed that private U.K. companies exhibit less timely loss recognition than public companies. Furthermore, using a European dataset, Burgstahler et al. (2006) found that private firms exhibit lower quality earnings. Both these studies argue that the main explanation for their findings of lower FRQ is lower market demand for high-quality financial reporting for such firms (Feng Chen, et al., 2010).

Ball et al. (2000) argued that the role of accounting information is more limited in environments that are characterized by low investor protection and more concentrated ownership structures. Ali and Hwang (2000) showed that the value relevance of accounting information is lower for countries with bank-oriented (as opposed to market-oriented) financial systems and for countries with a greater degree of conformity between financial accounting and tax rules. Similarly, in another study, Atwood et al. (2010) showed that earnings have lower persistence and a lower association with future cash flows when book-tax conformity is higher.

Christof and Sophie (2007) studied the quality of financial reporting in private equity backed companies and also the impact of ownership concentration. They defined "private equity" as the provision of (quasi)equity to unquoted companies by professional intermediaries. Venture capital

provided to early stage companies is thus a subset of private equity as defined here.

In their paper Christof and Sophie (2007) have highlighted the impact of private equity investor governance on one specific aspect of the functioning and professionalization of their portfolio companies. More specifically, they explored the relationship between the ownership stake of a private equity investor and the quality of the accounting information made public by its portfolio company. Therefore, they hereby extended the finding that private equity investors positively affect the accounting information dissemination of their portfolio companies (Beuselinck, et al., 2004; Davila, and Foster, 2005; Katz, 2006). They provided evidence that the extent of private equity ownership in a company significantly influences the quality of its financial accounts. They explained this finding from basic economic theory, where high financial reporting quality is a natural outcome of private equity monitoring and governance but also depends on the proportional ownership of private equity investors.

Hand (2005) illustrates that private equity presence positively impacts the value relevance of financial statements of private equity-backed companies, especially when they are more mature. Beuselinck et al. (2004) documented that the publicly reported financial information of unlisted Belgian private equity backed firms is of a higher quality than that of similar non – private equity-backed firms. Katz (2006) finds similar results for a sample of unlisted private equity backed US firms with proportions of public debt. The positive impact of private equity investors on the quality of the financial reporting of their portfolio companies is explained by the active monitoring and governance efforts of private equity investors and the ensuing professionalization of their portfolio firms (Christof Beuselinck., Sophie Manigart, 2007).

Christof and Sophie (2007) studied the interaction between private equity ownership and the quality of external financial reporting in unquoted

companies. More specifically, they examined the relation between private equity share ownership and the quality of the financial reporting of their portfolio companies. They argue and empirically show on a sample of 270 unquoted private equity backed Belgian companies that the quality of the publicly reported accounting information of entrepreneurial companies depends on the equity percentage held by the private equity investor. They also documented that the quality of the accounting information is highest when the private equity investor has a low equity stake and that the information quality decreases when the equity stake of the private equity investor is high. Their findings can be explained from basic agency theory of Jensen and Meckling (1976) who said that high equity stakes correspond to high levels of control, which may substitute for the need for high quality financial information.

Christof and Sophie (2007) measured earnings quality in a conventional way and focus on two of its vital attributes: the extent of earnings management and the timeliness of loss reporting. They define earnings management as the intentional modification of a firm's performance by insiders to either mislead stakeholders or to influence contract terms. In general, more earnings management is associated with lower quality financial information (Leuz, et al., 2003). Timeliness of loss reporting is a measure of the conservatism of the reported earnings. Reporting losses in a timely manner, rather than spreading the losses over future periods, is an alternative indicator of earnings quality (Francis, et al., 2005).

Christof and Sophie (2007) found that private equity investors with low shareholder percentages have less contractual decision and control rights in their portfolio companies. They therefore have to monitor the portfolio company more closely and rely to a larger extent on financial accounting information, thereby essentially improving the quality of the accounting information of their portfolio companies even more than private equity investors with larger equity stakes and with other control mechanisms at their disposal.

Christof and Sophie (2007) suggest that stakeholders, interested in external accounting information, should take into account the shareholder structure of the company in order to correctly interpret the accounting information. More precisely, external stakeholders should not only consider private equity presence, but also their proportional share ownership, when assessing the quality of the reported financial accounting information.

Recent evidence suggests that private equity governance positively affects accounting information production, both internally (Kaplan, and Stro, 2004; Davila, and Foster, 2005) and externally (Beuselinck, et al., 2004; Katz, 2006). Beuselinck et al. (2004) have shown that the reporting quality is higher for unlisted private equity-backed companies than for comparable companies that did not receive private equity. Katz (2006) found similar results for US private equity backed unlisted firms with proportions of public debt.

Fan and Wong (2002) and Francis et al. (2004) in their studies showed that high managerial equity ownership may increase or decrease the credibility of accounting information. Fan and Wong (2002) argued that managers of a firm with concentrated ownership tend to disclose as little proprietary information as possible if such a decision leads to higher market valuation (information effect). For example, Verrecchia (1983), Dye (1985), and Clinch and Verrecchia (1997) showed that managers of a firm that operate in a highly competitive product market may choose to withhold information because of competitive disadvantages.

Bushee (1998), Bartov et al. (2000), and Jiambalvo et al. (2002) showed that Institutional investors are often characterized as sophisticated investors who have advantages in acquiring and processing information compared with individual investors.

Sam Han (2005) studied the relationship between ownership structure and quality of financial reporting for the period 1997 to 2001. He investigates whether managerial equity ownership of a publicly traded company affects

the quality of the firm's financial reporting. He presented evidence that, consistent with the proprietary cost story, increases in managerial ownership are negatively associated with earnings quality and the level of disclosure after controlling for the monitoring role of large institutional shareholders. He also provided evidence that managers may reduce the quality of accounting information even though their incentives are better aligned with shareholders in order to internalize the proprietary costs of disclosure.

Previous researchers such as Jacoby and Steven (2010) and Heflin and Shaw (2000) studied 3576 firms in the United States and they argued that ownership diversity is an increasing factor for market liquidity. But, Kini and Mian (1995) did not find any relationship between ownership dispersion and market liquidity. They evaluated the relationship between ownership diversity and price difference between proposed buying and selling of share of 1063 companies in the United States. Their results showed that there is no significant relationship between ownership diversity and price difference between proposed buying and selling of shares.

Bolton and Thadden (1998) argued that concentration of ownership is a reason for decreasing of shareholders who can trade shares in stock exchanges and this decrease is a factor for reduce of effective investment in market and reduce of market liquidity.

IzadiNiya and Rasaiyan (2010) studied the relation between ownership diversity and market liquidity between 156 firms during 2002 – 2009 in the Tehran Stock Exchange. They hypothesized there is significant relationship between ownership diversity and market liquidity. Their results showed that there is no significant relationship between ownership diversity and price difference between buying and selling of stock as proxy for market liquidity.

3.4 Financial Reporting Quality, Audit Committee and Board Monitoring

Arthur Levitt (1997) argued that high quality accounting standards improve liquidity and reduce capital costs and claims that quality information is the lifeblood of strong, vibrant markets. Without it, liquidity dries up. Easley and O'Hara (2004) showed that the market exacts a premium to compensate investors for such information risk, lending conceptual support to Levitt's claim.

Luo He et al. (2009) studied the relation between board monitoring, audit committee effectiveness, and financial reporting quality in US. The purpose of their study was to review and synthesize the literature on corporate oversight and its association with proxy governance measures that are presumed to be associated with financial reporting quality. They examined two components of oversight – board characteristics and audit committee characteristics – that can contribute to the effective monitoring of companies' financial reporting.

For each component, they summarized and interpreted the results of US and international empirical research examining the association between variables that can affect monitoring effectiveness and three presumptive financial reporting quality outcomes of monitoring effectiveness: (1) the ex post consequences of low financial reporting quality, such as financial reporting fraud, GAAP violations and earnings restatements; (2) earnings management measures, such as abnormal accruals; and (3) the perceived informativeness of financial reports, manifest in earnings-returns associations, earnings response coefficients over short announcement-windows, and analyst perceptions of financial reporting quality.

Empirical findings are mixed concerning the association between board independence and ex post consequences of low financial reporting

quality. Beasley (1996) analyzed 75 firms that publicly reported financial statement frauds, matched with non-fraud firms, during 1980-1991. Results indicate that the percentage of outside (or non-executive) directors on the board have a significant negative impact on the probability of fraudulent financial reporting. Uzun et al. (2004) reported similar results in a more extensive review of US fraud cases (133 pairs of fraud and non-fraud companies from 1978 to 2001).

In contrast, Agrawal and Chadha (2005) reported that the probability of financial statement restatements is unrelated to the proportion of independent directors, based on a matched-pairs logistic regression analysis of 159 US public companies announcing earnings restatements during 2000-2001.

Klein (2002) examines whether board characteristics are related to earnings management among 500 firms for fiscal 1992-93. Using a cross-sectional variant of Jones' (1991) model to capture abnormal accruals, she reports a significantly negative association between the incidence of abnormal accruals (suggesting earnings management) and (a) the percentage of outside directors on the board and (b) the fact that outsiders account for the majority of board members.

Morck et al. (1988) and Jensen (1993) argued that encouraging outside directors to hold substantial equity stakes enhances their incentives to monitor top management. Beasley (1996) found a negative association between the percentage of firm equity held by outside directors and the likelihood of financial statement fraud. Smaili and Labelle (2007) however, using financial reporting quality measures ranging from restatements to financial statement fraud, do not find a difference in board ownership between defaulting reporting issuers (DRI) and non-DRI firms in Canada.

Firms with audit committees that are independent and active are also less likely to experience other accounting irregularities (Dechow, et al., 1996;

McMullen, and Raghunandan, 1996; Abbott, and Parker, 2000; and Peasnell, et al., 2001). There is also evidence that audit committees with a majority of independent directors reduce earnings management. DeFond and Jiambalvo (1991), Klein (2002), and Jenkins (2003) found that firms which overstate their earnings are less likely to have an audit committee. Thus, prior research suggests that audit committee quality can improve financial reporting quality by reducing the incidence of fraudulent reporting, accounting irregularities, and earnings management (Elizabeth, et al., 2005).

Elizabeth et al. (2005) examined whether New Zealand firms with high quality audit committees in 2001 have higher financial reporting quality and lower external audit fees than New Zealand firms with a lower quality audit committee or no audit committee. They measured audit committee quality based on the quality of its membership using guidelines that were issued by the New Zealand Securities Commission (NZSC) in 2004. They found that, in their sample of New Zealand listed companies, firms that had voluntarily adopted higher quality audit committees did not have higher quality earnings. They also found that having a higher quality audit committee did not have an impact on audit fees. Since they did not find better quality financial reporting or lower audit fees in a setting where firms were free to create a high quality audit committee, their results suggest that the benefits of requiring firms to adopt a 'best practice' audit committee may be less than anticipated by policymakers and regulators.

3.5 Investment Efficiency and Investment Inefficiency

Using industry-level US data, Durnev et al. (2004) examined the relation between price informativeness and capital allocation efficiency. They hypothesized that more informative prices allow investors to make better investment decisions which leads to differential degree of investment

efficiency cross-sectionally. They measured investment inefficiency as the absolute and square deviations of a marginal q of one. Marginal q is estimated as the regression coefficient of the change in market value of the firm on the change in capital goods (the sum of property, plant and equipment (PPE) and inventory) both deflated by the beginning of period assets.

Bushman et al. (2006) studied the relation between country measures of timely loss recognition and capital allocation. They used Wurgler measure of capital allocation to derive a measure of the differential rate in which firms divest in bad projects compared to investment in good projects.

Recent evidence suggests that losses in share value are not limited to restating firms but also occur for their competitors due to contagion (Gleason, et al., 2004; Najand, et al., 2004). Contagion occurs if restatements signal that financial statements in the entire industry are more erroneous than previously expected (Art Durnev and Claudine Mangeny, 2006).

In industries with more restatements, the quantity of information revealed ex post to have been erroneous, is larger. Competitors in such industries thus turn out to have used a large quantity of erroneous information when making their investments. Art Durnev and Claudine Mangeny (2006) studied 713 firms between 1997 and 2002 and their study hypothesized that investments are more inefficient in industries with more restatements. The evidence was consistent with this prediction, and showed that the deviation of marginal q from its optimal level increases with the number of restatements.

Sadka (2006) examined the effect of fraudulent firms' financial reporting on the output and pricing decisions in their industry. In his model, fraudulent firms make pricing and output decisions consistent with their fraudulent financial reporting, which leads their competitors to deviate from their profit-maximizing strategies. Unlike in Sadka (2006), Art Durnev and

Claudine Mangeny (2006) linked competitors' investment inefficiency directly to the wealth losses that competitors experience around restatement announcements. They provided evidence of a relation between competitors' wealth losses and their investment inefficiencies.

Earnings can be managed for the managers' private gain (Chen, and Warfield, 2005; Burns, and Kedia, 2006; and Bergstresser, and Philippon, 2006). Few studies examine the effects of financial reporting on real decisions. For example, Roychowdhury (2005) documents that firm's grant temporary price discount to increase sales. These papers focus on how firms use real decisions to manage earnings. Art Durnev and Claudine Mangeny (2006) in their study extended this literature by showing that financial reporting affects not only the real decisions of firms that make the original financial reporting choices, but also the real decisions of other companies.

More informative stock prices are associated with higher quality capital budgeting decisions (Durnev, et al., 2004; Chen, et al., 2006). Ferreira and Laux (2006) found that higher governance quality is associated with better allocation of capital. Art Durnev and Claudine Mangeny (2006) contributed to the literature on governance, the quality of information and the efficiency of capital allocation. Their study investigates a measure of information quality other than the informativeness of stock prices or corporate governance, namely errors in published financial statements. Their findings indicate that such errors affect competitors in the industry by lowering the efficiency of their investments.

3.6 Financial Leverage, Financial Constraints and Over / Under Investment

Using cross country level data, Wurgler (2000) tested the hypothesis that capital allocation efficiency is associated with measures of financial development. He defined capital allocation efficiency as the country's ability to increase investment in growing industries and decrease investment in declining industries. He empirically estimated capital allocation efficiency as the estimated coefficient on a regression of capital formation on value added.

Almedia and Wolfenzon (2005) extended Wurgler results by linking capital allocation to shareholder protection and external financing needs. They argued that the necessity of external financing shifts control from managers to shareholders and this is especially important when shareholder protection is low.

In interpreting the empirical literature on corporate investment, Stein (2003) argued that while it is hardly questionable that financial slack matters for investment, it is less clear to what extent this relationship is due to financing constraints or to empire-building. On the one hand, by raising the costs of external funds, financial frictions may cause a sub-optimal level of investment. This makes investment sensitive to the availability of cheap internal funds. On the other hand, if managers have empire-building preferences, they will use free cash flows to fund investment projects beyond the level that maximizes shareholders' value (Jensen, 1986).

Converting cash into a less liquid asset is neutral for equity in a frictionless world. However, this action negatively impacts shareholders' value in a firm that faces costly external finance. On the other hand, the same shift in internal resources is less costly for the investors of firms in which managers pursue their own interests. In these companies, one needs to adjust the face value of internal resources by the negative NPV of the

wasteful projects that empire-building managers would undertake (Franzoni, 2009).

Investment decreases when firms make cash contributions to their defined benefit pension plans (Rauh, 2006). It is worth stressing that the use of mandatory pension contributions has the advantage of solving a serious identification problem. Following the cash flow drop, one should expect heterogeneity in price reactions across firms as a function of the different investment opportunities they face. Specifically, in firms with poor investment prospects the value of cash flows is naturally lower. This fact introduces a bias if the likelihood of paying contributions is correlated with investment opportunities. (Franzoni, 2009).

Franzoni (2009) in his study found that the low monitoring of the managers' actions brings about a significant destruction in value. Specifically, the price reaction to a given drop in cash is significantly smaller in absolute value for firms with entrenched managers and less institutional presence. The amount of overinvestment that is implied by these estimates is larger than that found in previous studies.

If the increase in the value of bondholders' claims exceeds the NPV of a project, then a positive NPV project from the perspective of the firm as a whole turns out to have a negative NPV from the perspective of its equity holders, and, therefore would not be undertaken. This effect is usually referred to as debt overhang or underinvestment (Evgeny Lyandres., Alexei Zhdanov, 2005). Myers et al. (1984) argued that information asymmetry between a firm and capital markets may be another source of underinvestment. A firm may bypass valuable investment opportunities that have to be financed by issuing equity if managers' information about that firm's value is superior to that of the market.

Evgeny and Alexei (2005) in their study argued that Myers (1977) underinvestment effect reflects just one component of the agency conflict between the firms bondholders and equity holders that leads to investment

distortions. They showed that there is a complementary effect – the accelerated investment effect, which they call overinvestment – that forces the shareholders of a levered firm to invest more intensely. Importantly, the underinvestment and overinvestment affect work in opposite directions. While the underinvestment effect causes a levered firm to reject some positive NPV projects and invest less than a similar unlevered firm, the overinvestment effect causes a firm to invest more than its unlevered counterpart (Evgeny Lyandres., Alexei Zhdanov, 2005).

Evgeny and Alexei (2005) argued that speeding up investment translates into a higher investment rate. Therefore, this overinvestment effect works in exactly the opposite direction from Myers (1977) underinvestment effect. The overall outcome of the agency conflict between the shareholders and debt holders on the net investment distortion is determined by the relative magnitudes of the underinvestment and overinvestment incentives.

Evgeny and Alexei (2005) in their study noted the overinvestment effect that they focus on is completely different from Jensen (1986) free cash flow problem follows from a conflict of interests between equity holders and managers, as opposed to the one between equity holders and debt holders in their model. Moreover, unlike overinvestment, the free cash flow argument predicts that, *ceteris paribus*, the relation between debt and investment is expected to be negative. Their model, on the other hand, predicts a positive relation between leverage and investment.

Mauer et al. (2005) showed a positive relationship between debt and investment. They examined the case in which firms debt holders commit to the terms of a debt contract in advance, prior to the actual issuance of debt. Evgeny and Alexei (2005) in order to demonstrate the overinvestment effect of debt, examined whether it is stronger or weaker than offsetting underinvestment effect in the data. They provide two types of tests:

- ❖ First, they used a broad sample of Compustat firms and provide regression based evidence on the relation between firms' investment rates and measure of leverage. In addition, the relation between investment and measures of firms' investment opportunities (usually Tobin's Q) have been examined extensively by Abel and et al. (2002). Other researches by Lang et al. (1996) found that there exists a negative relation between firms leverage ratios and their investment rates, regardless of how leverage is measured. Evgeny and Alexei (2005) showed that their finding is not robust to the choice of an estimation technique, and it may be caused by a measurement error-related bias.
- ❖ Second they used samples of firms performing public offering of equity and debt and examine the changes in firms investment rates following seasoned equity offerings and debt offerings. Their main findings are that firms that issue equity tend to increase (decrease) their investment by less (more) than similar debt issuers. They argued thus: within the sample of firms raising external capital, positive changes in leverage (debt issues) have a more positive effect on investment than negative change in leverage (equity issues).

They also re-examined the relation between firms leverage and their shareholder's investment. They argued if new investment increases a firm's cash flow and if it is financed with equity, there is transfer of wealth from the firm's existing shareholders. This reduces the profitability of investment from shareholders perspective and can result in a rejection of projects that would have increased the total value of the firm.

In addition to Myers (1977) underinvestment effects, Evgeny and Alexei (2005) argued that, there is an offsetting effect _ an accelerated investment effect _ which we call overinvestment. The latter effect forces the shareholders of a levered firm to invest faster (more intensely). This effect can only be captured in a dynamic setting, in which debt affects the value of a firms timing option.

They also provided that, when new investment is financed entirely with equity, the underinvestment effect turns out to dominate the overinvestment effect. When new investment is partially financed with debt, the underinvestment incentives are reduced or eliminated, and the overinvestment effect plays a dominant role in equity holders' investment decisions. And since the assumption that new investment is financed entirely by equity is at best questionable empirically, they argued that the overinvestment effect may dominate the underinvestment effect in the data.

A potential value-enhancing benefit of internal capital markets is the possibility to finance profitable projects that may not get financed through external capital markets due to information asymmetries (Myers, and Majluf, 1984; and Greenwald, et al., 1984) or agency problems (Jensen, and Meckling, 1986; Grossman, and Hart, 1982; Jensen 1986). This line of argument has been proposed by Alchian (1969) and Weston (1970) and further developed by Williamson (1975) and Stein (1997).

A parallel line of research suggests that the flexibility of internal capital markets to redistribute funds may also create value-destroying inefficiencies in capital allocation (Matusaka, J., and V. Nanda., 2002). In particular, rent-seeking by divisional managers, combined with agency problems between headquarters and external capital markets (Scharfstein, and Stein, 2000), and agency problems and power grabbing within conglomerates may result in overinvestment in poor projects at the expense of good ones (Rajan, et al., 2006).

Easy access to external capital and free cash flow are likely to exacerbate allocation inefficiencies by facilitating investment (Hovakimian, 2006). As pointed by Jensen (1986) and Stulz (1990), abundant capital gives managers more freedom to indulge in investing, which increases the likelihood of wasteful overinvestment in low quality projects.

Prior studies by Bernanke and Blinder (1988), Bernanke and Gertler (1995) and Bernanke et al. (1996) showed that capital market imperfections

that constrain investment spending become particularly restrictive during recessions and monetary policy tightening. Specifically, the erosion of firms' balance sheets and the reduced supply of bank financing caused by these macroeconomic events increase the cost of external capital and diminish firms' access to credit. Hovakimian (2006) has considered recessions and monetary contractions as adverse exogenous shocks to firms' liquidity.

The results of Hovakimian (2006) analysis strongly supported the hypothesis that internal capital markets are more efficient when conglomerates operate under financial constraints. He found that conglomerates are significantly more constrained during recession than non-recession periods. During recession there is considerable decline in investment in fixed capital, as well as in assets, sales, and inventory growth. Decrease in investment is accompanied by substantial increase in firms dependence on internally generated cash flows. In particular, investment-cash flow sensitivity is significantly higher during recessions. This means that during recessions investment is more constrained by the availability of cash flow even if the demand for investment may be lower.

Hovakimian (2006) studied the relationship between financial constraints and the efficiency of internal capital markets of diversified firms on 3,863 multi-segment US firms (28,688 firm-years) that have \$20 million or more in annual sales and are listed on both databases between 1979 and 1998. His analysis of capital allocation shows that during non-recession periods internal capital markets are inefficient. Conglomerates channel significantly major portion of their total capital to low q divisions relative to high q divisions. High q divisions have higher levels of unadjusted investment, which is not surprising given their higher levels of growth opportunities. However, the investment ratios, adjusted for industry and firm, indicate that relatively higher proportions of firms' total capital are being transferred to low q divisions.

Results of the study conducted by Hovakimian (2006) strongly supported the conjecture that restrictive financial conditions are associated with higher internal capital market efficiency. These results are consistent with Stein (1997) and other studies stressing the benefits of internal capital markets in the presence of external capital market imperfections. These findings are also consistent with the predictions of Jensen (1986) and Stulz (1990) regarding the valuable role financial constraints can play in limiting managerial discretion.

The impact of financial pressure on investment policy, created by high leverage, has been studied by Denis and Denis (1993) at firm level and by Peyer and Shivdasani (2001) and Ahn et al. (2006) at segment level. Denis and Denis (1993) found reduction in overinvestment and improvement in investment policy following leveraged recapitalizations, which is similar to the findings of Hovakimian (2006). Peyer and Shivdasani (2000) found that the pressure of debt obligations diverts funds towards high cash flow segments at the expense of high growth segments. Ahn et al. (2006) found that the negative impact of leverage on investment is stronger for high q segments.

Hovakimian (2006) found results that complement previous studies and also these results are different from some of them. In terms of disciplining manager's financial constraints and leverage have similar implications, since they both create financial pressure. He documented that financial constraints create pressure to obtain funding for growth opportunities, while leverage creates pressure to generate cash flows to service debt. Secondly, although, other things being equal, highly levered firms are more constrained due to cash flow obligations, firms may have differences in other dimensions such as access to external capital, internal liquidity and growth opportunities that affect their level of financial constraints. In particular, a highly levered firm that has low information asymmetry problems, stable cash flows, and low growth opportunities is less likely to be constrained, which is one reason why it may take high leverage.

A number of studies found evidence showing that internal capital markets alleviate the effect of external financial constraints on investment. For example, Hubbard and Palia (1999) linked bidder announcement returns at diversifying acquisitions in the 1960s to the potential ability of internal capital markets to overcome the informational frictions of external capital markets. Campello (2002) finds that internal capital markets at financial conglomerates alleviate the liquidity constraints faced by smaller bank affiliates. Billett, Matthew and David Mauer (2003) examined whether the value of a diversified firm is driven by the subsidies to segments that would most likely face financial constraints if they were stand-alone firms. Dimitrov and Tice (2006) examined how the “more money” aspect of diversification helps to overcome financial constraints. The study conducted by Hovakimian (2006) also complements this body of evidence by examining how the “shifting of funds” aspect of diversification helps alleviate financial constraints for projects with higher marginal returns.

3.7 Investment Inefficiency, Corporate Governance and Capital Structure

If equity holders hold at least some bargaining power, the investment delay increases with bankruptcy costs (Pawlina, 2010). As debt renegotiability is an inherent feature of private debt, his results clearly point out a disadvantage of private relative to public debt that has been so far omitted from the literature: private debt can make the underinvestment problem more severe. The choice between the private and public debt has been explained in the literature by such factors as flotation costs, monitoring incentives of the lender (Diamond, 1984), borrower's reputation building (Diamond, 1991), efficient liquidation hypothesis (Berlin, and Loeys, 1988) and the distortion of managerial incentives (Rajan, 1992).

When expanding the firm, shareholders not only incur the investment costs but also face an erosion in the value of their option to default. Upon expansion, (strategic) default becomes less attractive as it is now associated with the handover of a higher value of the firm to creditors than before expansion. Consequently, an investment makes the default option worth less, shareholders delay it until its NPV becomes sufficiently positive to compensate for the reduced option value. Pawlina (2010) explored that what about the effect of debt renegotiability on the magnitude of underinvestment? As a result, underinvestment is exacerbated by debt renegotiability. Furthermore, when shareholders have more bargaining power, their option to default is more valuable and its loss of value upon investment more significant. Consequently, in such a case, equityholders delay investments by more than they would, if creditors had dominant bargaining power. His second result also follows: higher equityholders' bargaining power in debt renegotiation upon default results in more severe underinvestment at the times of a firm's expansion. Finally, the negative effect of debt renegotiability on investment is

stronger when bankruptcy costs, which determine the surplus from renegotiation, are higher Pawlina (2010).

Pawlina (2010) in his research pointed out that a higher proportion of the growth option component in the firm's total value generally reduces the optimal market leverage (defined as the ratio of the value of debt and the total value of the firm). This is a result of the debt capacity of growth options measured as the incremental optimal debt associated with an additional asset, being lower than the debt capacity of assets in place. Consequently, market leverage of the firm with the growth option is lower than the optimal leverage of an otherwise identical firm but with assets in place only (Barclay, et al., 2006).

It is known that the investment policy of a firm is affected by its capital structure. The possibility of debt renegotiation at the times of financial distress exacerbates the underinvestment problem upon the firm's expansion. This is a consequence of the fact that the wealth transfer from equityholders to creditors which occurs upon investment is larger when the renegotiation option is present. The additional inefficiency in the investment policy is more severe when equityholders have a stronger bargaining position and the bankruptcy costs are high, and it can be eliminated by granting the entire bargaining power to creditors. This result highlights the importance of the type of debt financing and of the degree of enforcement of creditors' rights on the way corporate investment decisions are made (Pawlina, 2010).

Pawlina, (2010) also found that Debt restructuring policy itself is affected by the presence of the growth option. In most scenarios, the growth option reduces the probability of strategic default due to a higher opportunity cost of doing so. He also noted that the presence of the growth opportunity can accelerate renegotiation if shareholders' bargaining power is sufficiently high. In the opposite situation, that is, when creditors hold substantial bargaining power, renegotiation occurs later. Finally, Pawlina (2010)

provides a number of empirical implications concerning the effect of the type of debt on, among others, investment, equity systematic risk and the capital structure policy.

Using Q as a proxy for overinvestment, Lang and Litzenberger (1989) found that returns around dividend change announcements are significantly more positive for firms with Q less than one than for firms with Q greater than one. However, Denis et al. (1994) Yoon and Starks (1995) reported similar findings using comparable tests. Officer (2010) In his paper, demonstrates the importance of conditioning both Q and cash flow in these tests: dividend initiation announcement returns are significantly higher for firms with low Q than for firms with high Q, but the difference is especially pronounced in subsamples of firms with high pre-initiation cash flow. High cash flow combined with poor investment opportunities suggests that managers have both the means and opportunity to waste their shareholders' resources, and is therefore indicative of high agency costs of overinvestment.

Officer (2010) in his study presented evidence that dividend initiation announcement returns appear, to some extent, to reflect both the overinvestment and cash flow signaling hypothesis. The overinvestment hypothesis appears to have a role explaining the significantly higher returns to initiating firms with low Q and high cash flow. On the other hand, analysts appear to interpret dividend initiations as signals of higher future cash flow for low Q or low cash flow firms. This "signal" appears to translate into positive market reactions on average to initiation announcements by such firms, although the announcement returns in this subset were not as positive as those for initiating firms with low Q and high cash flow.

3.8 Financial Reporting Quality and Investment Efficiency

Wang (2003) explored the relation between capital allocation efficiency and accounting information quality. She used two measures of capital allocation efficiency. She measured accounting information quality as

the average rank scores of three earning attributes (value relevance of earnings; the persistence of earning; and the precision of earnings). She found that higher information quality is associated with higher capital allocation efficiency.

Li and Wang (2010) studied the relationship between financial reporting quality and investment efficiency in China. They found that proxies for financial reporting quality, namely self-constructed composite measures, are negatively associated with both under- and overinvestment of the listed corporations; of which the effects of accrual quality and earnings smoothness on under and overinvestment are most significant.

Chen et al. (2010) examined the role of financial reporting quality in private firms from emerging markets. They suggest that financial reporting quality positively affects investment efficiency. They also found that the relation between financial reporting quality and investment efficiency is increasing in bank financed firms and decreasing in firmintending to minimize earnings for tax purposes.

Gary biddle et al.'s(2009) analysis yields three key findings. First, they found that higher reporting quality is associated with both lower over- and under investment. Specifically, reporting quality is negatively associated with investment among firms shown by the prior literature to be more likely to over-invest (i.e., cash rich and unlevered firms) Myers (1977)Jensen (1986), and positively associated with investment among firms shown to be more likely to under-invest (e.g., firms that are cash constrained and highly levered). Thus, this finding suggests that the relationship between financial reporting quality and investment is conditional on the likelihood that a firm is in a more prone setting to over- or under investment. Second, firms with higher reporting quality are less likely to deviate from their predicted level of investment when modeled at the firm level. Third, reporting quality is negatively related to investment when aggregate investment is high and positively related when aggregate investment is low. This finding suggests

that firms with higher financial reporting quality are less affected by aggregate macro-economic shocks than firms with lower-quality financial reporting.

Khodaei, Vale, Zaghrad and Yahyaie (2011) studied the relation between financial reporting quality and investment efficiency in 210 companies in Iran during years 2005 – 2009. They hypothesized that financial reporting quality can increase the investment efficiency. They found a negative relationship between financial reporting quality and investment inefficiency. They defined and divided the investment efficiency into two groups as underinvestment and overinvestment. For assessing of financial reporting quality according to previous studies they used Dechow and Dichev's (2002) model and for evaluation of investment efficiency they used growth opportunities model which was used by previous researchers.

Their results showed that there is negative significant relationship between financial reporting quality and underinvestment, and also they found that there is negative relationship between financial reporting quality and overinvestment but it is not significant. Their study showed that improved of financial reporting quality can decrease cost of capital and investment and it can also increase company growth. They argued in their paper that quality of financial reporting can reduce the information asymmetry.

Modares and Hesarzadeh (2009) evaluated the quality of financial reporting and investment efficiency between 120 companies in Iran during the years 2001 – 2007. They hypothesized that there is negative relation between financial reporting quality and investment inefficiency. They used Dechow and Dichev(2002) model for estimating of quality of financial reporting and also they used growth opportunities model for evaluation of investment efficiency.

They also found that companies have higher financial reporting quality they have also further investment efficiency. Their study showed that

there is negative significant relationship between financial reporting quality and overinvestment and underinvestment.

Bank lending is the most common source of external capital for private firms in developing countries (Beck, et al., 2008; Brown, et al., 2008). Banks may well have access to additional information beyond the financial statements, potentially reducing the importance of accounting information (Feng Chen, et al., 2010). However, besides the large body of research documenting the role of accounting information for lending decisions in the U.S. and other developed countries, there is also extensive evidence that banks rely on borrowers' financial reports in credit decisions in emerging markets and for small firms (Danos, et al., 1989; Berry, et al., 1993; Berry, et al., 2004; Kitindi, et al., 2007).

A long line of research suggests that the value relevance of accounting information is lower in less developed countries than in highly developed countries (Feng Chen, et al., 2010). Feng et al. (2010) conducted a study on financial reporting quality and investment efficiency between private firms in emerging markets and they obtained the data from the World Bank's Enterprise Survey (WBES).

To improve generalizability and reduce measurement error they used several proxies for FRQ in their empirical tests. Specifically, they used (1) the Kothari et al. (2005) discretionary accruals measure; (2) the McNichols and Stubben (2008) and Stubben (2010) revenue-based measure; (3) the Dechow and Dichev (2002) measure as implemented by Francis et al. (2005) and Srinidhi and Gul (2007) and (4) a summary statistic formed by aggregating the three measures. All four of their FRQ proxies were significantly negatively associated with both under- and over-investment.

They introduced two conditioning hypotheses in their study. First, high quality accounting information is likely more desirable in mitigating information asymmetry for private firms when they are in need of external financing. They examined whether private firms' investment efficiency

is more sensitive to FRQ when these firms seek bank financing. They found that the importance of FRQ is increasing in the degree of bank financing, likely reflecting the use of financial statements by banks in granting credit.

As their second conditioning test, they considered the role of tax incentives. They examined that how tax incentives affect the strength of the relation between FRQ and investment decisions. There is some indication from cross-country analyses that conformity in book and tax reporting is associated with lower quality earnings (Atwood, et al., 2010) and distorts investment decisions (Cummins, et al., 1994; Hanlon, and Heitzman, 2010). They documented that for firms facing greater income tax pressures, the relation between FRQ and investment efficiency is reduced. They found for firms in which tax incentives are likely to dominate incentives to provide useful information for internal decision making as well as a source of information for outside providers of capital, the informational role of accounting is significantly diminished. Such a connection between tax-minimization incentives and the informational role of earnings has often been asserted in the literature, but to date there is limited empirical evidence on this issue (Feng Chen, et al., 2010).

Sun (2005) examined the relation between financial reporting quality and capital allocation efficiency and how financing structure affects this relation. He focused in his studies on an important part of economic growth: capital allocation efficiency. He defined an industry's capital allocation efficiency as the relative magnitude of capital movement into projects with high returns and out of projects with low returns. He predicted that industries in better accounting regimes have more efficient capital allocation.

Jialin Sun (2005) in his study separated accounting quality into two parts. One part is predicted by a country's legal, political and economic infrastructure. The other part is the residual accounting quality that is not predicted by the infrastructure factors. He found that the predicted part of accounting quality improves a country's capital allocation efficiency.

He also hypothesized that the usefulness of accounting decreases with an industry's dependence on bank financing because of the different methods used by banks to reduce information asymmetry. He found that the residual part that is not predicted by a country's legal, political and economic infrastructure improves capital allocation efficiency for industries dependent on equity financing. His results are consistent with a heterogeneous demand for accounting information beyond a country's institutional infrastructure. He showed outside shareholders are more dependent on accounting information to reduce information asymmetry than are banks.

Bushman and Smith (2001, 2003) summarized the governance role of accounting in improving investment decisions. They stated that financial accounting information is a direct input to corporate control mechanisms designed to discipline managers to guide resources toward projects identified as good and away from projects identified as bad, and to prevent managers from expropriating the wealth of investors.

Botosan (1997) examined the relation between disclosure quality and the cost of capital in the U.S. She found that for firms with a large analyst following, there is no evidence of an association between disclosure level and the cost of equity. However, for firms with low analyst following, more disclosure is associated with lower costs of equity.

Leuz and Verrecchia's (2000) found that commitment to disclosure can increase stock turnover and decrease stock volatility. Young and Guenther (2003) found that countries with greater disclosure of value-relevant accounting information have higher international capital mobility. Ashbaugh and Davis (2002) found that for non-U.S. firms, adopting IAS or U.S. GAAP will increase the likelihood of being targets in mergers and acquisitions.

The Jialin Sun (2005) study relates most closely to that of Leuz and Verrecchia (2004). They argued that managers are motivated to allocate assets efficiently to maximize stock prices because their compensation is

linked to stock prices. They used Dow and Gorton's (1997) argument on bi-directional information flow, in which the market wants to learn about the quality of managers' decisions, while managers want to learn the market valuation of prospective investments.

Rajan and Zingales (1998) argued that if the causal link that financial market development reduces information asymmetry and improves a firm's financing environment were true, financial market development should be more important to firms dependent on external financing.

Dow and Gorton (1997) argued that both stock markets and banks can promote growth. Banks hire loan officers to produce information, while the same information can be produced in stock markets via price. Their analytical model found that the allocation of capital in a bank-based economy can be as efficient as in a stock market-based economy. On the other hand, Beck and Levine (2002) found empirical evidence that the factors that promote growth and increase investment efficiency are legal system efficiency and financial market development, not the bank- or market-based system per se.

Overall, recent studies suggest that investment efficiency is dependent at macro level on the country's financial development, dependence on external financing, and on the timelines of accounting loss recognition. Further, at the industry level, investment efficiency is higher when stock prices are more informative, suggesting that managers can benefit from more informative price signals.

This study tests whether financial reporting can improve investment efficiency by improving investment selection, and also by evaluation of cash flow influence.