DIVERSIFICATION AND EARNINGS MANAGEMENT

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CERTIFICATE OF ORIGINALITY

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Abstract

This dissertation focuses on benchmark-driven earnings management by diversified firms. It is comprised of two essays. The first essay draws a comparison between diversified and focused firms of their propensity to meet or beat earnings benchmarks and investors' reaction to such earnings news. The second essay investigates the impact of diversified firms meeting or beating earnings benchmarks on 'diversification discount'.

The operations of diversified firms are inherently more complex and financial information produced by such firms is also more difficult to analyze compared to focused firms (Cohen and Lou, 2012). In the first essay, I reason that this lower transparency in information environment and higher operational complexity gives managers of these firms greater flexibility in making decisions which influence reported earnings. This greater flexibility enables managers to use earnings management when presented with an incentive to do so, for example to achieve important earnings targets. Using annual and quarterly data from 1998 to 2012, I find that diversified firms are more likely to meet or just beat analysts' forecasted earnings as compared to focused firms. I also find evidence that firms are more likely to meet or beat earnings benchmarks in the years following an increase in firm diversification. Further support for greater susceptibility of diversified firms to earning management is gained with evidence that when "unmanaged" earnings of firms fall just below important earnings benchmarks, diversified firms are more likely to use accruals to achieve those targets.

Prior studies have demonstrated that firms that meet or beat earnings benchmarks are 'rewarded' by markets in the form of positive stock price reactions. If investors recognize that managers of diversified firms have greater flexibility in manipulating reported earnings through accruals or real business decisions, the positive stock price reaction to meeting such targets by these firms is expected to be of smaller magnitude. I examine 5-days stock price reaction around earnings announcements and find that investors reward less (punish more) the diversified firms, as compared to focused firms, when they (fail to) meet or beat earnings targets.

Accounting and finance literature has documented that diversified firms are valued at a discount compared to imputed value of pseudo-conglomerates of stand-alone firms. The source of this discount has been proposed to be agency problems, poor corporate governance and greater information asymmetry associated with diversified firms. In the second essay I investigate whether earnings quality of diversified firms, as a reflection of such problems, is associated with this 'diversification discount'. I find evidence that diversified firms which just meeting or beating earnings forecasts and especially the firms suspected of using accruals to meet or beat these targets suffer larger discount. These results further support the suggestion that markets account for the relatively lower earnings quality of diversified firms in pricing decisions.

Taken together, results in these essays indicate that diversified firms enjoy more flexibility in financial reporting and are subject to greater asymmetric information problems than focused firms. I also show that investors recognize this flexibility in their capitalization of earnings and in valuation of the diversified firms' stocks.

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Table of Contents

List of Tables

Chapter 1: Overview

1.1 Introduction

This dissertation is composed of two related essays. The first essay compares the propensity of meeting or beating earnings benchmarks between diversified and focused firms and investors' reaction to such earnings news. Diversified firms by their nature are more complex than focused firms. This complexity is manifests itself in at least two ways in relation to financial reporting. One, it provides greater flexibility to the managers to structure transactions in a way which enables them to achieve their desired reporting goals. Two, it is relatively more difficult to analyze financial information of these firms by outsiders (Cohen and Lou, 2012).

Capital market pressures induce managers to manipulate reported earnings to achieve earnings targets. A survey by Graham et al. (2005) revealed that meeting earnings targets is one of the major considerations for managers while making financial reporting decisions and they might even be willing to sacrifice value-enhancing projects in order to achieve those targets. One of the most important targets they describe is analysts' earnings forecasts. Given the complexity of diversified firms and importance of meeting earnings targets, I hypothesize in the first essay that diversified firms find it easier to manage their reported earnings in order to meet or beat such targets. Using financial, stock market and analyst forecast data from 1998 to 2012, I find that diversified firms indeed have greater propensity to report earnings which just meet or beat analysts' consensus forecasts. However, it appears that investors do consider information and agency issues related to diversified firms and their reaction

to such earnings news reflects this consideration. Their reaction to diversified firms just meeting or beating analysts' forecasts is relatively less positive.

In the second essay, I explore the association between meeting or beating analysts' earnings forecasts and diversification discount. If investors do consider agency and information issues related to diversified firms, then it should also be reflected in long term valuation of firms. I find that firms which just meet or beat analysts' forecasts suffer from deeper discount. This essay also confirms that variations in accruals quality within diversified firms are also reflected in their diversification discount.

1.2 Motivation and Research Questions

The benefits and costs of firm diversification have been debated for decades in accounting and finance literature. For example, diversification is considered to be value enhancing when the firms efficiently use internal markets (Gertner, Scharfstein, and Stein, 1994; Tong, 2011) and match existing skills and resources with new lines of business or resources (Matsuska, 1997). Diversification can also be value destroying if the managers indulge in rent seeking and empire building (Scharfstein and Stein, 1996) or when the managers of individual divisions manipulate information about their divisions in order to compete for resources (Shin and Stulz, 1998). Managers of multi-segment firms also have opportunity to derive private benefits through politically motivated allocation of resources or cross-subsidization of internal lines of business (Rajan et al., 2000). Denis et al. (1997) point to agency problems within diversified firms which negatively affect market valuations of these firms. It is also difficult to effectively monitor diversified firms (Krishnaswami and

Subramaniaum, 1999). Conglomerates are not required to disclose as much details about financial performance and position of individual lines of business as would be required if those business segments were stand-alone firms. Managers may also be motivated to hide abnormal segment profits because of proprietary or agency costs (Berger and Hann, 2007). With limited mandatory financial disclosure requirements regarding individual business segments of diversified firms, benchmarking and analyzing financial performance of diversified firms can pose a challenge because of limited information available for comparison with industry peers.

In the presence of these agency and information transparency problems, managers of diversified firms enjoy more flexibility in making real business and financial reporting decisions as compared to focused firms. It then becomes a question of interest whether diversified firms generally exhibit lower earnings quality. In the first essay, I explore this questions using firms' ability to meet or just beat analysts' earnings forecasts as an indicator of earnings management.

One of the primary motivations for managers to be concerned about meeting or beating earnings benchmarks is expectation from capital markets to achieve these targets. Investors "reward" firms which report earnings that meet or beat these targets with positive stock price reactions (Barth, Elliot and Finn, 1999). The question I address is whether investors realize the extra cushion available to managers of diversified firms for earnings manipulation. If the investors appreciate this flexibility, the stock price reaction to diversified firms meeting or beating earnings targets may be less positive than reaction for such earnings news from focused firms.

In the second essay, I explore the relationship between earnings quality and diversification discount. This study adds to the debate on sources of diversification

discount, proposing poor earnings quality as one of the determinants of lower market valuations for diversified firms. The specific question I address is whether the investors incorporate adjustments for greater flexibility available to managers of diversified firms in meeting or beating earnings forecasts in long horizon valuations. The agency problems associated with diversified firms may lead to lower valuations for these firms in capital markets. Empirical evidence suggests that diversified firms are valued at a discount compared to focused firms and this discount is labelled as 'diversification discount' (Berger and Ofek, 1995). Corporate governance and agency problems associated with diversified firms have been identified plausible causes of diversification discount observed in literature (Hoechle et al., 2012). In the second essay, I propose that if agency and corporate governance problems are a cause for lower valuations of diversified firms, then earnings quality, as an expression of such agency problems, might also be a factor influencing diversification discount.

1.3 Research Design and Main Findings

I use annual and quarterly data from COMPUSTAT, IBES and IBES from 1998 to 2012 for this study. Propensity to meet or just beat analysts' consensus earnings forecasts is used an indicator of earnings management. If managers of diversified firms enjoy a bigger cushion while making financial reporting decisions, they should be able to manipulate earnings to a greater extent when unmanaged earnings are expected to fall just below analysts' earnings forecasts. We might not be able to learn much if we compare average level of abnormal accruals of diversified and non-diversified firms. The aggregate accruals of diversified firms depend on underlying business processes and industry conditions of individual segments. Traditional

accruals based measures of earnings management rely on industry benchmarking to determine 'abnormal' or 'discretionary' accruals. Accruals generated by different segments of a diversified firm may not be correlated with each other and might even cancel each other out. These issues with using discretionary accruals as a measure of general earnings management tendencies lead me to use propensity of meeting or beating earnings benchmarks as a measure of earnings management. I use logistic regressions to estimate relative propensity of diversified firms to meet or just beat analysts' earnings forecasts. I find that after controlling for firm characteristics, diversified firms are more likely to meet or just beat analysts' earnings forecasts.

I also use change analysis where I analyze association between changes in diversification and changes in propensity to meet or beat earnings forecasts. I find that increase in diversification in a year, identified by increase in number of reported segments, is associated with greater propensity to meet or just beat analysts' earnings forecasts in later years.

I use cumulative abnormal returns around earnings announcement days as a measure of investors' reaction to firms reporting earnings equal to or very close to analysts' median earnings forecasts. I find that the stock price reaction to diversified firms meeting or just beating analysts' earnings forecasts is less positive compared to the reaction for single segment firms. I also find that the 'punishment' from stock market for just missing these earnings targets is more severe for diversified firms. These results suggest that investors do recognize the greater flexibility available to diversified firms in manipulating reported earnings.

In the second essay, I follow Berger and Ofek (1995) to compute diversification discount based on the difference between firm value and sum of imputed values of its

individual segments. I use OLS regressions to study the association between diversification discount and earnings quality. I find evidence that this discount at the end of a year is greater for diversified firms which just meet or beat earnings forecasts in the previous year. This association sustains for diversified firms which consistently meet or just beat analysts' forecasts for several quarters. I also find that diversification discount is greater for diversified firms which might have used positive discretionary accruals to hit earnings targets. In another set of analysis, I use accruals quality as a proxy for earnings quality. I find that within diversified firms, diversification discount is negatively associated with accruals quality.

The results from these essays suggest that opaque information environment surrounding diversified firms provides managers of these firms with extra cushion for manipulating reported earnings. However, stock markets do appreciate this flexibility and adjust short term and long term pricing decisions accordingly.

The remainder of the thesis is structured as follows. Chapter 2 presents the first essay on firm diversification and earnings management. Chapter 3 covers second essay on diversification discount and earnings quality. Chapter 4 summarizes the results with concluding remarks and proposes avenues for further research.

Chapter 2: Firm Diversification and Earnings Management

2.1 Introduction

The inherent complex nature of multi-segment firms contributes to the opacity of their financial information environment and increases the information asymmetry between managers and outsiders. This study therefore proposes that when managers of a diversified firm are faced with a need to 'manage' reported earnings, they find it easier to accomplish that goal.

Satisfactory evidence of motive, means and opportunity often needs to be presented to convince a court of law to establish guilt in a crime. We can structure investigation of earnings management by managers of corporations considering it somewhat similar to a crime scene investigation (Lo, 2008). Managers of firms would only be inclined to manipulate earnings if they have the ability and motivation to do so and perceived benefits associated with such actions outweigh the perceived costs. Healy and Wahlen (1999) define earnings management as:

> *Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.*

The ability of managers to indulge in earnings management is dependent on how well they can conceal such activity. The objective of misleading stakeholders can only be achieved if information asymmetry exists between managers and the stakeholders

they intend to mislead. The greater the transparency in the information environment, more easily the stakeholders can see through attempts to deceive them and lower the ability of managers to actually achieve their objective. This condition of opaqueness in the financial information environment also makes it very challenging for researchers to sufficiently conclude existence of earnings management for a class of firms and extremely difficult to establish a definitive case of earnings management for individual firms.

The managers also need to be sufficiently motivated to plan and execute earnings management. It has been suggested that managers sometimes indulge in self-serving behavior which can be value destroying for their firms. Managers' remuneration is often tied to earnings or stock market performance of their firms. Personal goals of managers (entrenchment and compensation) provide incentives for them to manage earnings. Such incentives have been categorized by Healy and Wahlen (1999) into capital market, contracting and regulatory incentives. Contracting incentives arise when accounting data are used for establishing and monitoring contracts with stakeholders, for example lending or management compensation contracts. Regulatory incentives represent management's efforts to circumvent regulation or to avoid investigation by regulatory bodies through manipulation of reported accounting numbers.

Capital market incentives affect managerial behavior towards earnings management in two broad ways. First through market participants rewarding (penalizing) firms that beat (miss) certain earnings targets and second through managers themselves trying to influence decision makers in events such as raising capital. There is a growing body of evidence indicating that the capital market participants pay a lot of attention to the

earnings figure. The stock prices are sensitive to the earnings number meeting or beating analysts' expectations (e.g. Bartov et al., 2002), avoiding reporting a loss (Bhattacharya et al., 2003), beating earnings figure in same quarter last year (e.g. Brown and Caylor, 2005). Second, the perceptions of investors about a firm's future performance are important consideration for managers planning to issue debt or equity (Healy and Palepu, 1993). The managers are inclined to manipulate reported numbers to achieve favorable outcomes in capital market events such as seasoned equity offerings or debt issue (e.g. Teoh et al., 1998). In the interviews and surveys conducted by Graham et al. (2005), a majority CFOs of US corporations indicated that for external stakeholders, earnings is the most important number in the financial statements. More than 80% of the surveyed CFOs believed that stock prices of their firms are affected by meeting or beating earnings benchmarks. The survey also suggested that the managers are even willing to sacrifice value adding opportunities in order to achieve those short-term targets.

This study examines the ability and motivation of managers to manage reported earnings in the context of firms comprising multiple business segments. These firms are not only characterized by opaqueness surrounding their information environment but also flexibility available to the managers in terms of judgements and estimations while making financial reporting decisions. This complexity and opaqueness provides flexibility to the managers of such firms in manipulation of reported numbers and hence the expectation that such firms are prone to earnings management to a larger extent than focused firms. The complexity of such organizations also makes effective monitoring of the managers more difficult and hence designing their compensation contracts. Divisional managers of firms operating in several industries are therefore

more likely to be compensated based on accounting metrics of the division they manage rather than firm-level or stock price related matrices (Keating, 1997), providing additional incentive for them to manipulate accounting outcomes of their respective divisions. Such segment data is also prone to manipulations through transfer pricing and cost allocation decision (Givoly et al., 1999). Cohen and Lou (2012) contend that the existence of multiple lines of business adds complexity to not only the operations but also the information environment of conglomerates. They argue that this added complexity makes it difficult for users of financial statements to impound industry-related information into the price of a firm which operates in multiple industries. They form pseudo-conglomerates composed of focused firms to match with existing complex (multi-segment) firms. They find that industry-wide information is impounded in the prices of stand-alone firms first which can predict movements in prices of conglomerates. They attribute this result to the notion that it is easier to analyze information relating to focused firms and quicker to impound new information relating to the industry in which they are operating. I, therefore, expect that managers of diversified firms find it easier and more likely to manage earnings in order to meet or beat earnings targets than the managers of focused firms.

I use analysts' forecasts as principle targets managers strive to achieve, possibly managing reported earnings towards this end. The importance of this target can be gleaned from the observation that while reporting earnings announcements by firms, the financial press normally appends a comparison between announced earnings and market expectations. Brown and Caylor (2005) document a significant increase in propensity for firms to meet or beat analysts' forecasts and from 1992 to 2005. They also document propensity to avoid losses and earnings decreases remaining more or

less unchanged over time. They also find that valuation consequences of meeting or beating earnings targets are the greatest (and increasing over time) among all the targets. They attribute these results to investors and media paying more attention to analysts' forecasts in recent years. In a survey of earnings management literature, Dechow et al. (2010) discuss meeting or beating different earnings targets as indicator of earnings management and conclude that "evidence that earnings are likely managed when firms just meet or beat an external target (i.e., an analyst forecast) is more persuasive." Executive compensation contracts of top-level managers of diverse organizations tend to include greater portion of equity or market based incentives. These managers, therefore, have greater incentive to manage earnings in order to meet or beat analysts' forecasts. The results of survey by Graham et al. (2005) also suggest that managers consider achieving earnings benchmarks as very important. The managers even admitted that they would be willing to take operations related potentially value-reducing decisions in order to achieve those targets. The motivation of managing earnings to achieve benchmarks originates from the belief that firms that meet or beat earnings targets (especially analyst forecasts), are rewarded with positive stock price movements and those that miss such targets are penalized by the market. Managers of diversified firms can take advantage of inherent flexibility in making operational and financial reporting decisions to achieve those targets more easily than managers of focused firms. I, therefore, use the propensity of achieving earnings benchmarks as the principal indicator of earnings management.

I use logistic regression models to investigate propensity of firms to meet or just beat[1] analysts' consensus forecasts of Earning Per Share (EPS) using data of non-financial firms from 1998 to 2012. Results indicate that, compared to focused firms, diversified firms are more likely to meet or beat analysts' earnings forecasts. The results hold for different definitions of diversification and are consistent for both annual and quarterly data. These results suggest that managers of diversified firms find it easier to report earnings that meet analysts' forecasts, utilizing financial reporting flexibility that diversified firms enjoy.

I also find that propensity to just meet or beat analysts' forecast earnings is higher for firms after an increase in diversification. I classify each of three years after the year of an increase in number of reported segments as "post-increase" firm-years and three years after a decrease in the number of reported segments as "post-decrease" firm-years. I run logistic regressions to examine the propensity of firms to meet or just beat analysts' forecast earnings after such increase or decrease in diversification. I find that diversified firms are more likely to meet or beat analysts' forecasts after an increase in the number of reported segments. However, there is no significant difference in propensity to meet or just beat such targets in years after a decrease in diversification. I also test if such changes in diversification are associated with changes in propensity to just meet or beat analysts' forecasts. Using a regression model with the change in propensity to meet or just beat analysts' forecasts from three years before and after a change in number of reported segments as a dependent variable, I find that changes in diversification are positively related with changes in propensity to meet or just beat analysts' forecasts. These results suggest that increasing complexity of diversified

[1] I define "just beat" as the situation where the firm's reported per share earnings exceed analysts' median per share earnings forecasts by no more than 1 cent

firms results in greater tendency of them meeting or just beating analysts' forecasts. I also find that even though, on average, diversified firms have report 'lower' discretionary accruals compared to focused firms, they have greater ability to use these accruals in order to meet or beat analysts' forecasts. I examine this by removing discretionary accruals from reported earnings of firms which meet or beat analysts' median forecasts. If the earnings fall below the analysts' forecast after such adjustment, we can suspect that these firms used discretionary accruals to cross the earnings benchmark. I find that diversified firms have greater tendency to use discretionary accruals to meet or beat analysts' forecasts.

Meeting or beating earnings targets is rewarded by market with positive stock price reactions (Barth, Elliot and Finn, 1999). Previous studies also suggest that investors expect firms to engage in some form of earnings management to meet or beat earnings targets (e.g. Graham, Harvey and Rajgopal, 2005) and incorporate expectations of earnings management into prices (e.g. Baber, Chen and Kang, 2006). I test whether investors' reaction to earnings announcements adjusts for greater flexibility available to managers of diversified firms in reporting financial results. Using quarterly announcements of results from 1998 to 2012, I find that 5-day cumulative abnormal returns around quarterly earnings announcements for firms which just meet or beat analysts' median earnings forecasts are less positive for diversified compared to focused firms. A negative reaction to firms marginally missing analysts' forecasts has also been documented (e.g. Bhojraj et. al, 2009). This study finds that 5-day cumulative abnormal returns surrounding the earnings announcements for firms marginally falling below analysts' median forecast is more negative for diversified firms compared to focused firms. These results suggest that investors recognize and

adjust their pricing decisions for the additional flexibility of diversified firms to manage reported earnings.

Traditionally, a significant segment of accounting literature deals with identification of earnings management practices by examining the magnitude of 'abnormal' accruals for firms which are suspected of reporting managed earnings. Comparisons of average levels of abnormal accruals of focused firms with those of diversified firms with a view to gauge earnings management practices might not be meaningful. Accruals generated by different segments of a multi-segment firm are not correlated with each other and might even cancel each other out (Jiraporn et al., 2008). Abnormal accruals models using cross-sectional approaches often assume that firms in a particular industry have similar accruals generating processes and hence an expectation of 'normal' levels of accruals for firms operating in those industries can be formed. This leads to a difficulty in estimating 'normal' levels of accruals for firms which operate in multiple industries. Comparisons of abnormal accrual levels between diversified and non-diversified firms as indicators of earnings management therefore might not produce meaningful results.

This study contributes to accounting literature in several ways. This study provides evidence that managers of diversified firms have greater flexibility as compared to focused firms when they need to manage earnings in order to meet or beat earnings targets. Earnings quality of diversified firms has not been studied in the context of meeting or beating earnings targets. This study supports the 'Transparency Hypothesis" (Thomas, 2002) which suggests that because of the complex nature of diversified firms, there is greater information asymmetry between the firm and outsiders. Managers take advantage of this complexity and find it easier to manipulate

earnings to report desired outcomes. In this study I also demonstrate that investors partially understand this flexibility and tend to discount small positive earnings surprises offered by diversified firms.

The essay is structured as follows. In section 2.2, I provide a background and literature review on motivation for and consequences of earnings management in the context of diversified firms. Hypothesis development is discussed in section 2.4. Research design, including variable definitions and measurement, are introduced in section 2.4. I then discuss results of empirical analysis in section 2.5. The conclusions and limitations of this essay are discussed in section 2.6.

2.2 Background and Literature Review

2.2.1 Earnings Management

GAAP give managers some degree of choice and judgment in processing transactions and balances for external financial reporting. This freedom is designed to allow managers to adapt accounting and reporting of transactions and events according to the substance of transactions and industry practices, thereby increasing usefulness of information provided to the users of these financial statements. However, such flexibility in making financial reporting choices can also facilitate self-serving behavior by managers if they intend to mislead readers of financial statements. Earnings management refers to intentionally, but legally, moving reported earnings away from what would have been reported under 'neutral' application of GAAP (Dechow et al., 1995). Schipper (1999) defines earnings management as "implementation that impairs an element of decision usefulness or implementation that is inconsistent with the intent of the standard."

Firms have implicit and explicit claims with a variety of stakeholders such as investors, employees, customers, suppliers, regulators etc. The value of such claims and eventually the firm's value and managers' payout is affected by information about the financial health and performance of the firm (Cornell and Shapiro, 1987). These claims therefore affect the financial reporting choices of firms, motivating managers to make deliberate interventions in the information dissemination process. The sensitivity of such claims to financial information is conjectured to provide incentive to manage reported earnings (Bowen et al., 1995).

Separation of ownership and management of business firms necessitates designing contracts between the owners and managers in order to align their interests. The performance indicators used for monitoring and compensating managers are often based on accounting numbers. Such contracts provide incentives for the managers for opportunist consumption of private benefits at the cost of the owners (Jensen and Meckling, 1976) and to manage reported accounting numbers to facilitate such behavior. Managers of firms, especially those operating in highly regulated industries, face constraints which are sometimes tied to accounting data (e.g. Jones, 1991 and Beaver et al., 2003). These managers, therefore, also have an incentive to manipulate reported accounting information if such constraints are in danger of being breached.

Capital market incentives also play a significant role in motivating managers to manage reported earnings. Stock prices are, at least in part, informed by reported earnings and this relationship is one of the most widely studied phenomenon in accounting research. Reported earnings number, as an indicator of future firm performance, is an important input for investors and other players in the capital markets for their decision making and is frequently used as a benchmark to evaluate a firm's performance. However, investors often assign more weight to reported earnings while making their decisions than they should and such 'fixation' stimulates earnings management behavior by managers with an expectation of influencing stock prices (Sloan, 1996). Several capital market considerations encourage managers to influence reported earnings. These include meeting or beating earnings benchmarks (e.g. last year's earnings, zero earnings and analyst forecasts), achieving favorable IPO outcomes, debt issues, mergers and acquisitions and opportunities for insider trading.

Managers use several methods of managing reported earnings. These methods have been broadly categorized into accrual-based earnings management and real earnings management. Accrual-based earnings management refers to taking advantage of flexibility offered by accounting regulations to manipulate accruals for a reporting period with the aim to influence reported earnings. Most of the accounting principles and standards are based on accruals accounting. Accruals accounting refers to the practice of recognizing expenses when they are incurred and recognizing revenues when they are earned, regardless of timings of the actual related cash flows. These principles and standards also allow flexibility and judgment in their application in order to facilitate the preparers of financial statements in reflecting the substance of transactions and events. Accruals management or accruals based earnings management refers to the practice of manipulating reported earnings by using this discretion allowed under accounting and financial reporting regimes. Accruals like depreciation, amortization, provisions, post-retirement benefits, movements in valuation of financial instruments, etc. are often based on several assumptions and estimations by the preparers of financial statements and therefore susceptible to manipulation. Although permissible under accounting regulations and corporate laws, accruals-based earnings management involves the use of such assumptions and estimations in arriving at reported earnings different from earnings which would have been reported without such interventions designed to mislead the readers of financial statements. The use of total accruals as a measure of earnings management was first suggested by Healy (1985). Jones (1991) refined the methodology by presenting a model which intended to extract ‘non-discretionary’ portion from the total accruals based on firm characteristics (revenue and property, plant and equipment) leaving us with an estimate of ‘discretionary accruals’ or ‘abnormal accruals’ as a measure of

earnings management. The 'discretionary accruals' are the portion of total accruals which cannot be explained by firm's characteristics and hence thought to be subject to manipulations by the management. Some modifications have since been suggested to Jones (1991) model. These include addition of changes in accounts receivables in the model (Dechow et al., 1995) and performance matching (Kothari et al., 2005). Some researchers have also studied management using specific accrual accounts to influence reported earnings. Examples of using accruals to manage earnings include manipulating provision for bad debts (McNichols and Wilson, 1988), pension plan assumptions (An, Lee and Zhang, 2014), depreciation expense (Teoh, Wong, and Rao, 1998) and revenue recognition (Dechow et al., 1998). Marquardt and Wiedman (2004) examine accounts receivable, inventory, accounts payable, accrued liabilities, depreciation and special items reported by firms offering equity from 1995 to 1999 and compare them to industry, performance and sized matched control firms. They find that accounts receivable for equity offering firms are higher than non-equity offering firms while reported depreciation is lower. This evidence suggests that firms intending to raise capital engage in earnings management through specific accrual accounts to report desired earnings.

Real Earnings Management is described as a practice where management deviates from normal business practices with an aim of meeting certain earnings thresholds (Gunny, 2010; Roychowdhury, 2006). It refers to deliberate actions taken by management to influence business operations driven by a desire to influence reported earnings. Managers either alter the timings or structure of transactions to alter financial reporting outcomes (Ewert and Wagenhofer, 2005). Managers might increase, decrease, defer or expedite discretionary expenditure (like maintenance,

advertising, research and development costs), increase or decrease production volume, sell long-term assets, etc. with an aim to manipulate reported earnings. For example, Roychowdhury (2006) finds evidence that in order to meet or beat earnings benchmarks, managers offer discounts to increase sales, reduce discretionary expenses like advertising and research and development or increase production to lower cost of goods sold. Compared to accruals-based earnings management, real earnings management has not been extensively studied (DeFond, 2010) even though there are suggestions that it is a prevalent practice. A well-known survey of finance professionals by Graham et al. (2005) found that a significant majority of CFOs admitted resorting to managing earnings and deliberately taking real business decisions to achieve short term earnings targets even when this might be detrimental to their firms' health in the long run. Compared to accruals management, real earnings management is less likely to be detected by auditors and other outside monitors. This conjecture is reinforced by evidence provided by Cohen et al. (2008). They find that managers shifting away from accruals based earnings management to real earnings management after implementation of Sarbanes–Oxley Act. This shift is probably a reflection of desire on the part of management to avoid using accruals based earnings management in the face of several high profile accounting scandals garnering much attention from the regulators and media.

2.2.2 Segment Reporting

Public business enterprises operating in several distinct business sectors or geographical areas qualifying as 'segments' under Generally Accepted Accounting

Principles (GAAP) are required to report a summary of disaggregated financial information relating to their segments in addition to firm-wide aggregated information. However, the information available for each segment of these firms is significantly less in detail than the information that would have to be disclosed if these segments were stand-alone firms. The firms are required to report a measure of segment profit or loss, segment assets and some items of segment revenue and expense.

There has historically been a considerable debate surrounding merits, demerits and extent of mandatory segment or line of business disclosures. The demand for greater transparency and disclosure by diversified firms has been a long-standing one. Investment analysts and antitrust advocates were at the forefront of initial demands for disaggregated disclosure of financial information by conglomerates and were met with loud opposition from business community citing, among other reasons, competitive disadvantages of divulging such information (Givoly at al., 1999). Limited requirements to state the summarized results of individual segment operations were instituted by Securities and Exchange Commission (SEC) for registration statements in late 1969 followed by Financial Accounting Standards Board (FASB) statement number 14 in 1976 which required disclosure of line of business segment information from conglomerates.

FASB issued Statement of Financial Accounting Standards (SFAS) No. 131 "Disclosures about Segments of an Enterprise and Related Information" in June 1997 and was effective for fiscal years beginning or after December 15, 1997. The statement deals with reporting and disclosure of an enterprise's operating and geographical segments. The statement replaced SFAS 14, "Financial Reporting for

Segments of a Business Enterprise". One of the major changes was adoption of "management approach" where determination of 'reportable segments' by enterprises was mandated to be consistent with internal managerial and reporting practices of the organization. Previously, SFAS 14 required line-of-business information classified according to the industry segments regardless how internal reporting structure of the firm was organized. This change was a result of concerns from the stakeholders, especially financial analysts, claiming that SFAS 14 was ambiguous and the definition of 'industry segment' was imprecise which provided considerable flexibility to enterprises in reporting their industry segment information (AIMR, 1993). There were also concerns that this discretion allowed firms to aggregate segment data for external reporting purposes. Such aggregation reduced usefulness of segment information (Ernst & Young, 1998). Prior studies (e.g., Herrmann and Thomas 2000; Berger and Hann 2003) document a significant increase in the number of reported segments after adoption of SFAS No. 131.

2.2.3 Diversification and Earnings Quality

The potential motivations for managers of diversified firms to manage reported earnings have been studied in two perspectives. One context for studying financial reporting quality of diversified firms is agency cost perspective. For example, in a bid to try and hide information indicative of unresolved agency problems, managers of multi-segment firms can channel resources from one segment to another (Stulz, 1990; Lamont, 1997; Rajan et al., 2000). The aim is to build their own managerial empire

and increase their own private wealth or consumption rather than to maximize value of the firm and such transfers are often suboptimal (Meyer et al., 1992; Denis et al.1997; Rajan et al., 2000). Morck et al. (1990) suggest that often poor investment decisions by managers of diversified firms are guided by maximization of self-interest. Stein (1997) suggests that multi-segment firms tend to inefficiently allocate capital among their business segments.

The other context is where managers 'manage' information in the financial statements to obscure proprietary information which could be of strategic value to competitors. Proprietary costs motivate managers to withhold information about profitable segments or to distort such information to discourage competitors from entering into those industry segments. Researchers have used information revelation models (e.g. Verrecchia, 1983 and Hayes and Lundholm, 1996) to study the impact of proprietary information cost on financial reporting. The focus of such research has been attempts by management to conceal information by aggregating industry segments data. For example, Harris (1998) finds that multi-segment firms attempt to reduce disclosure when they are operating in less competitive environment possibly with an intention to protect abnormal profits and market share in these industries. Later evidence does not lend much support to proprietary cost argument. For example Botosan and Harris (2000) studied 107 multi-segment firms which initiated quarterly segment information between 1987 and 1994 and find no association between industry concentration (proprietary costs) and voluntary increases in segment disclosure frequency. Using information about changes in reported segments before and after mandatory application of SFAS 131, Botosan and Stanford (2005) find that managers used discretion available under SFAS No. 14 to hide profitable segments operating in less

competitive industries and even reported segment information as if they were underperforming their competition when this was not the case. Some analytical models even predict greater disclosure in the presence of proprietary cost concerns (e.g. Newman and Sansing 1993; Gigler 1994). Berger and Hann (2007) argue that if proprietary costs are a major concern, managers would tend to hide profitable segments and if agency costs are important, managers would tend to hide information relating to relatively poorly performing segments. They find evidence consistent with agency cost hypothesis but only mixed evidence to support proprietary cost hypothesis.

Greater agency costs and information asymmetry associated with diversified firms can lead these firms to have poorer earnings quality. Richardson (2000) examines the relationship between information asymmetry and earnings management. Using discretionary accruals as a proxy for earnings management and bid-ask spread as a measure of information asymmetry, he finds that a positive association between magnitude of information asymmetry and earnings management. Habib et al. (1997) suggest that spinning off divisions of a conglomerate reduces uncertainties in equity prices and hence increases the informative of stock prices. Krishnaswami and Subramaniam (1999) find that information asymmetry problems associated with firms operating in several business segments decreases after spin-off of divisions into independent entities. Thomas (2002) challenges the notion that diversified firms suffer from greater information problems. He studied properties of analysts' forecasts and earnings response coefficients (ERCs) of diversified and focused firms and finds that analysts' forecasts are more accurate and less dispersed for diversified firms as compared to focused firms. He also finds that diversified firms have slightly larger

ERCs. He concludes that it is not entirely apparent that diversified firms strictly suffer from information problems. Tong (2011) finds that value of cash holdings by diversified firms is significantly less than such holdings by single-segment firms. The marginal value of a dollar held by diversified firms is valued 16 cents less than a dollar held by single-segment firm. This result is attributed to greater agency problems faced by diversified firms.

In addition to agency problems between owners and managers, information asymmetry and personal objectives make diversified firms more likely to have greater agency problems between top and divisional managers as well. Using survey data from 78 division managers of diversified firms, Keating (1997) finds accounting metrics, both divisional and firm-level, are claimed to be the most important determinants for divisional managers' performance evaluation. If it is more difficult to directly monitor managers' effort, then indirect measures, such as accounting information, is used for performance evaluation. Since managers of single-segment firms can be monitored relatively easily, their compensation is less likely to be tied to divisional earnings and therefore single-segment firms' are less likely to be manipulated earnings for compensation motive (Healy and Palepu, 2001).

Three recent studies examine financial reporting quality of diversified firms using abnormal accruals as an indicator of earnings management. These studies yield mixed results. Demirkan et al. (2012) use a sample of US firms between the years 1984 to 2003 and find that multi-segment firms have lower accruals quality than single-segment firms. Using geographical and Industrial segment data from 1994 to 1998, Jiraporn et al. (2008) find evidence of negative relationship between firm diversification and abnormal accruals suggesting that multi-segment firms exhibit

better earning quality as compared to single-segment firms. Rodríguez-Pérez and Hemmen (2010) study a sample of 1,853 Spanish listed firms from the year 1992 to 2002. Using Discretionary Accruals as a proxy for earnings management, they find that earnings management is more intense for diversified firms as compared to stand-alone firms. Absolute value of discretionary accruals might not be a good measure to compare earnings management practices between diversified and focused firms. The accruals generated by segments of diversified firms might not be correlated with each other and might be influenced by industry-specific factors unrelated to earnings management. On average, these factors can suppress the overall value of absolute discretionary accruals in diversified firms. I, therefore, suggest using meeting or beating earnings targets as a proxy for earnings management to compare earnings management practices in diversified and focused firms. I next turn to review literature related to firms meeting or beating earnings targets.

2.2.4 Meeting or Beating Earnings Targets

A discontinuity or 'kink' in the frequency distribution of reported earnings around particular benchmarks has been observed by researchers. These benchmarks include zero profits (Hayn, 1995), small earnings increases (Burgstahler and Dichev, 1997) and consensus analyst forecasts (DeGeorge, Patel, and Zeckhauser 1999). These researchers have documented a concentration of frequency of reported earnings just above these targets and 'fewer than expected' cases of reported earnings just below them. This pattern suggests that if earnings are expected to fall just below these targets, firms engage in earnings management to make up for the gap.

The proposition that firms manipulate earnings to cross into positive earnings from negative earnings and achieve increment over previous period's earnings was

empirically tested by Burgstahler and Dichev (1997). Their explanation of why managers might be motivated to meet these targets stems from transaction cost theory and prospect theory. The assumption that "at least some stakeholders determine the terms of transactions with the firm based on heuristic cutoffs at zero levels or zero changes in earnings" causes transaction costs of firm with those stakeholders to increase. Prospect theory can also explain motivation for managers to strive for avoiding losses and earnings decreases if decision makers perceive zero profits or last period's earnings as reference points. They find a significant upward shift in levels of current assets, current liabilities, cash flow from operations and changes in working capital in the portfolio of firms immediately below and above earnings target. They interpret these findings as evidence of earnings management by firms just beating earnings targets since it is 'less costly' for firms to manipulate these components of earnings.

Myers, Myers and Skinner (2006) find evidence of earnings management to achieve at least last reported earnings by documenting 746 firms with one or more "strings" of consecutive earnings increases between 1963 and the first quarter of 2004. They perform simulations to show that the number of firms with such "strings" is much larger than expected. Further indications of earnings management are provided by evidence of smooth earnings stream of such firms, negative correlation between changes in cash flows and changes in accruals of these firms, stock repurchase activities of such firms to boost EPS and inverse relation between these firms' changes in effective tax rate and changes in earnings. Dechow et al. (2003) test the idea that if firms use discretionary accruals to cross the zero profit line, then firms with small profits should have higher discretionary accruals than firms with small

losses. They find there is no significant difference between discretionary accruals of small loss firms and those of small profit firms which indicates that earnings management is not a complete explanation for the 'kink' in the profit distribution. There have been some objections to using discontinuities in earnings distributions as evidence of intentional earnings manipulations. For example, Durtschi and Easton (2005; 2009) claim that such discontinuities can result from errors in the designs of tests used to demonstrate earnings management. These errors include inappropriate deflation of the earning, sample selection biases and averaging across quarters.

In addition to typical discretionary accruals analysis, a few studies also look at other mechanisms used by the firms to beat analysts' earnings forecasts. These include manipulating tax expense (Dhaliwal et al., 2004), using restructuring charges (Moehrle, 2002), shifting classification of income statement items (McVay, 2006), stock repurchases (Bens et al., 2003; Hribar et al., 2006) and sale of assets (Hermann et al., 2003).

Stock price reaction to earnings surprises and consequently managers' performance evaluation have been suggested as primary reasons for managers to manipulate reported earnings to achieve benchmarks. Barth, Elliott and Finn (1999) document that firms with a pattern of increasing earnings have higher price-earnings multiples (positive coefficients on earnings in price regressions). Using data from 1982 to 1992, they find that such 'rewards' are increasing in the length of time that firms exhibit earnings increases and decrease when such firms reported earnings decline. Myers, Myers and Skinner (2006) also report abnormal stock returns for firms with strings of consecutive increasing quarterly EPS and negative market reaction at end of such

strings. Kasznic and McNichols (2002) provide evidence that indicates positive valuations for firms which report earnings beating analysts' forecasts. In an international study, Bhattacharya et al. (2003) find that countries where loss avoidance is more prevalent have comparatively greater cost of capital.

Beatty et al. (2002) investigate capital market incentives to meet or beat earnings targets using an interesting sample of banking firms. They find that public banks report fewer small declines in earnings and more small increases in earnings than privately held banks. Considering that public banks are more concerned about "shareholders' reliance on simple earnings-based heuristics" than private banks, the results suggest that capital market incentives are one of the reasons managers manipulate earnings to achieve targets. Bhojraj et al. (2009) find that firms that apparently manage earnings through accruals to just beat analysts' forecasts have a better short-run stock price performance than firms that do not manage earnings and miss such benchmarks. In the long run, however, they find some evidence of stocks of firms with higher quality earnings but missing targets outperforming those of firms that beat the forecasts with lower quality earnings.

Considering the problems associated with the use of discretionary or abnormal accruals discussed earlier, the propensity of meeting or beating earnings targets could be a more useful proxy in order to compare the extent of earnings management in diversified and focused firms. I now move to hypothesis development in the next section.

2.3 Hypothesis Development

Opacity in financial information generated by multi-segment firms comes from various sources. Givoly et al. (1999) discuss some inherent features of segment level information which can make it error prone. These features include imprecise industry definition for individual segments, common cost allocation to various segments and transfer pricing. Givoly et al. (1999) also summarize various incentives for managers of conglomerates to manipulate reported results. One such incentive is income-shifting between different segments if managers' compensation contracts are based on firm-level results and they believe that investors value the firm using different P/E multiples to different segments. Other incentives include avoiding scrutiny from regulators, labor unions or customers. Managers are also reluctant to divulge potentially sensitive information to competitors.

The approach that is typically used in accounting literature to measure abnormal accruals relies on an assumption that firms within one industry have similar accruals generating processes. Dopuch et al. (2011) explore this assertion and propose several 'accrual determinants' which determine levels of accruals for a particular firm. These include firm's credit policies, inventory policies and credit terms granted by the firm's suppliers. Dopuch et al. (2011) contend that these determinants vary significantly among firms in a particular industry and hence induce noise in the abnormal accruals secured from traditional estimation models. Applying these traditional abnormal accruals based models to diversified firms adds to difficulties of accurately estimating accrual generating process and consequently interpreting results. The models based on cross-sectional determination of 'normal' accruals for a particular industry can be

difficult to apply to conglomerates operating in several industries. The accruals generating process of different segments of a diversified firm would also be different for each business segment and for example, positive accruals of one segment can offset negative accruals of other segments. The traditional accruals models also ignore the fact that multi-segment firms operate in several industries. In order to derive non-discretionary accruals, the firm has to be classified into a particular industry, normally the principal industry assigned by COMPUSTAT. The accruals generation process of segments of the firm not belonging to that industry would further aggravate measurement issues with using such models.

These complications in comparing abnormal accruals for complex and diversified firms to those of focused firms leads me to focus on meeting or beating earnings targets as an indicator for earnings management. The equity markets in the US reward meeting or beating earnings targets with valuation consequences. Three out of four Chief Financial Officers surveyed by Graham et al. (2005) consider meeting or beating targets as 'very important' while making financial reporting choices. Managers take preemptive actions to meet or beat such targets and such behavior is considered a form of managerial opportunism. A study of quarterly financial data for the 1985 to 2002 time period by Brown and Caylor (2005) find that managers are increasingly interested in meeting or beating analysts' forecasts compared to other earnings benchmarks. Inherent complexity of firms operating in several segments leads to greater degree of information asymmetry and agency conflicts between managers and outsiders of diversified firms as compared to focused firms. We also have evidence that as organizational complexity increases with increasing diversification, it becomes increasingly unlikely that remuneration of executives is

based primarily on accounting outcomes and therefore executive compensation contracts of top-level managers of diverse organizations tends to include greater portion of equity or market based incentives (e.g. see Duru and Reeb, 2002; Bushman et al., 2004). This complexity and information asymmetry surrounding diversified firms gives managers of these firms greater flexibility to make financial reporting or real business decisions aimed at meeting short-term earnings targets.

With sufficient prior literature demonstrating that meeting or beating earnings targets as an indicator of opportunistic behavior which can be facilitated by information asymmetry, I state my hypothesis 1 as follows.

H_1: The likelihood of just meeting or beating earnings benchmarks is greater for diversified firms as compared to focused firms.

There is substantial evidence that market rewards achieving analyst expectations (Bartov et al., 2002, Kasznik and McNichols, 2002 and Brown and Caylor, 2005). The question to consider now is that if there are considerable difference between ability of diversified firms and focused firms to manage earnings and achieve earnings benchmarks, do the investors recognize such difference? Bartov et al. (2002) find that the premium to meeting or beating earnings benchmarks is smaller if that benchmark is likely to have been achieved though accruals management. They also suggest that such reaction to meeting or beating earnings forecast is not overreaction but appears to be a rational reaction and beating earnings benchmarks possess information content. In this context, if investors discount meeting or beating earnings benchmarks

by diversified firms on account of suspected lower quality of earnings, the 'premium' to such surprise should be lower for these firms.

Market expects manipulation by firms to meet or beat targets. If a firm misses the earnings targets by a small margin, the investors infer serious problems with the firm being unable to emulate its peers. Firms are therefore 'obligated' to try and boost earnings to meet such targets in a 'signal-jamming equilibrium' (Stein, 1989). Similar beliefs were expressed by executives of corporations in a survey by Graham et al. (2005). For example, one of the executives was quoted as saying "if you see one cockroach, you immediately assume that there are hundreds behind the walls, even though you may have no proof that this is the case."

One the other hand if, because of greater information asymmetry between managers and investors of diversified firms, investors consider the firm beating earnings benchmarks as a signal from management of future firm performance, the premium to beating benchmarks by these firms might be higher than focused firms. Hence, I state my second hypothesis as follows.

H_2: The stock price reaction to just meeting or beating analysts' consensus forecast earnings is less positive for diversified than that for focused firms.

A negative stock price reaction to firms missing analysts' earnings forecasts has been documented previously (Skinner and Sloan 2002). Survey evidence from Graham et al. (2005) suggests that missing earnings targets signal serious problems in the firm. Generally, the market expects firms to be able to meet earnings target if the real earnings fall slightly below it. In the periods with good financial performance,

managers can create a reserve or 'cushion' by taking a small hit to the reported earnings in that period. This 'cushion' can be utilized later in situations where the firm is marginally behind the target. If the firm, without violating GAAP, cannot manage to close the gap and hit earnings target, the market "concludes that the firm probably has poor future prospects". If diversified firms enjoy greater flexibility in reporting choices, then it should be easier for them to hit the earnings target if actual earnings fell just short of those targets. If the investors are aware of greater flexibility available to managers of diversified firms in reporting earnings and some of these firms still marginally miss analysts' forecasts, then they might conclude that there are severe problems associated with these firms constraining them from making adjustments to reported earnings. Therefore, I hypothesize;

H_3: The stock price reaction to just missing analysts' analysts' consensus forecast earnings is more negative for diversified firms than that for focused firms.

2.4 Methodology

2.4.1 Measures of Diversification

I use several measures of firm diversification which have been utilized in previous literature (e.g., Berger and Ofek, 1995; Anderson and Reeb, 2003). For most of the analysis, I indicate a firm-year with a variable 'DIVERSIFIED' which takes the value of 1 if the firm reports two or more segments with different 4-digit SIC codes in that year and 0 otherwise. If the firms has segments operating in very different industries, the SIC code would differ for such industries at 2-digit level. As a proxy for unrelated diversification, I use a variable labelled as "DIVERSIFIED2", which is coded as 1 when a firm reports two or more segments with different two-digit SIC codes in that

year and 0 otherwise. A similar variable "FDIVERSIFIED" is used to describe a firm as diversified when it reports two or more segments in different 48 industries as defined in Fama and French (1997). The variable 'SEGMENTS' takes the value of number of segments belonging to different SIC codes as reported by the firm. For example, a firm reporting two segments in same SIC code will not be considered diversified and 'SEGMENTS' will take the value of 1. This variable will take value of 2 if a firm reports two segments in different SIC codes. Another measure of diversification is based on Hefindahl Index which is calculated as the sum of squares of each segment's sales as a proportion of total sales. A 'segment' for this calculation is defined as one SIC industry and therefore if a firm discloses more than one segments belonging to same SIC industry, they are treated as a single segment. The variable, labelled as "HI", is decreasing in diversification with a value of 1 depicting a non-diversified firm. Table 2.1 presents the number of firms which are classified as diversified and the number of their segments corresponding to the above measures. The percentage of diversified firms exhibits a slightly declining trend over the sample period.

2.4.2 Propensity of Meeting or Beating Earnings Benchmarks

I use two dummy variables to indicate firm periods where a firm just beats or just misses earnings targets. JUSTBEAT takes the value of 1 when the firm only meets or marginally exceeds the target by not more than one cent and 0 otherwise. JUSTMISS takes the value of 1 when the firm only marginally misses the target by not more than one cent and 0 otherwise. I use the following logistic equation to model probability of meeting or beating earnings targets:

$$\text{Prob (JUSTBEAT = 1)} = \beta_0 + \beta_1 DIV_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 MB_{i,t} + \beta_4 SGROWTH_{i,t} + \beta_5 NOA_{i,t} + \beta_6 SHARES_{i,t} + \beta_7 LIT_i,t + \beta_8 IMPLICIT_{i,t} + \beta_9 ANALYST_{i,t} + \beta_{10} DISPERSION_{i,t} + \text{INDUSTRY FE} + \text{YEAR FE} + e_{i,t} \quad \ldots\ldots \text{ Equation (1)}$$

I use analysts' median forecast as relevant target earnings threshold as it has been demonstrated to be the most important for managers to achieve. Unadjusted estimates of analysts' earnings forecasts issued within 90 days before the firm's earnings announcement day are used and adjusted for stock distributions. DIV is the variable describing diversification of firm 'i' in period 't'. I use DIVERSIFIED, DIVERSIFIED2, FDIVERSIFIED and HI in different models as a measure of diversification. If diversified firms have greater flexibility in reporting earnings, I would expect diversification measures to be positively associated with propensity to meet or just beat analysts' forecasts.

The control variables are those that affect propensity for a firm to meet or beat earnings targets based on prior literature. SIZE is log of total assets, MB is market to book ratio, SGROWTH is percentage growth in sales during the period, NOA is net operating assets calculated as sum of book values of equity and debt reduced by cash and short term investments of the firm deflated by lagged revenue. SHARES is the log of number of outstanding shares at the end of the period. LIT is an indicator variable which takes the value of 1 if the firm operates in a litigation prone industry and 0 otherwise. A firm's implicit claims are modelled through a proxy IMPLICIT which is measured as 1 minus proportion of a firm's gross property, plant and equipment to its total assets. ANALYST is the number of analysts following the firm and DISPERSION is the uncertainty among analysts measured as standard deviation of forecasts for that period divided by the number of forecasts. The regression

standard errors are corrected for two-way clustering for firm and period. The variable SIZE controls for disparity in information environments for firms of different sizes. Larger firms may have more flexibility to engage in earnings management but they are also subject to more monitoring. The effect of size on propensity to meet or just beat earnings targets cannot be predicted. Skinner and Sloan (2002) suggest that firms with high growth prospects might have greater motivation to meet or just beat earnings targets because they face greater penalty for just missing these targets. I therefore expect the sign for MB and SGROWTH to be positive. The magnitude of net operating assets in the balance sheet may indicate cumulative result of earnings management activities and poses a constraint on further earnings management (Barton and Simko, 2002). I, therefore, expect the sign for the variable NOA to be negative. Firms with greater number of outstanding shares may be under greater scrutiny by several external monitoring mechanisms. Such firms might also find it difficult to manage earnings by one cent per share. I cannot predict the sign on the coefficient of SHARES variable. I expect the sign on coefficient of LIT to be positive because firms in more litigious industries are more likely to avoid negative earnings surprises. Managers also have greater incentive to avoid negative earnings surprises when the reliance on implicit claims with stakeholders is greater (Matsumoto, 2002). The expected sign on coefficient of IMPLICIT is therefore positive. Firms with more analyst following are expected to be more sensitive about market expectations and are expected to avoid negative surprises as well and therefore I expect a positive sign on the coefficient for ANALYST. Payne and Robb (2000) suggest that when analysts' forecast dispersion is higher, managers are less likely to manage earnings to reduce forecast errors because the consensus analyst forecast is less likely to reflect market expectations. However, the effect of analyst forecast dispersion in a situation where

the firm is striving to just hit the target cannot be predicted. Firms which are audited by Big4 auditing firms are less likely to use earnings management to just meet or beat earnings targets. The predicted sign on BIG4 is therefore negative. I estimate this model using both annual and quarterly data.

I also analyse the effect of change in diversification on propensity to meet or beat analysts' earnings forecasts. I identify the years in which a firm increased or decreased the number of reported segments in different SIC industries. I denote three firm-years after such an increase or decrease as POST_INC or POST_DEC respectively for that firm. I also denote three years before the year of such increase or decrease as PRE_INC or PRE_DEC respectively. I use the following logistic regressions for this analysis.

$$\text{Prob (JUSTBEAT = 1)} = \beta_0 + \beta_1 \text{POST\_INC}_{i,t} + \beta_2 \text{SIZE}_{i,t} + \beta_3 \text{MB}_{i,t} + \beta_4 \text{SGROWTH}_{i,t} + \beta_5 \text{NOA}_{i,t} + \beta_6 \text{SHARES}_{i,t} + \beta_7 \text{LIT}_{i,t} + \beta_8 \text{IMPLICIT}_{i,t} + \beta_9 \text{ANALYST}_{i,t} + \beta_{10} \text{DISPERSION}_{i,t} + \text{INDUSTRY FE} + \text{YEAR FE} + e_{i,t} \quad \ldots\ldots \text{ Equation (2)}$$

And

$$\text{Prob (JUSTBEAT = 1)} = \beta_0 + \beta_1 \text{POST\_DEC}_{i,t} + \beta_2 \text{SIZE}_{i,t} + \beta_3 \text{MB}_{i,t} + \beta_4 \text{SGROWTH}_{i,t} + \beta_5 \text{NOA}_{i,t} + \beta_6 \text{SHARES}_{i,t} + \beta_7 \text{LIT}_{i,t} + \beta_8 \text{IMPLICIT}_{i,t} + \beta_9 \text{ANALYST}_{i,t} + \beta_{10} \text{DISPERSION}_{i,t} + \text{INDUSTRY FE} + \text{YEAR FE} + e_{i,t} \quad \ldots\ldots \text{ Equation (3)}$$

If the firms find it easier to just meet or beat analysts' earnings forecasts, I expect the coefficient β_1 to be positive for Equation 2. Similarly, if the firms find it harder to just meet or beat earnings forecasts, I expect β_1 to be negative for equation 3.

I also examine the change in propensity to meet or just beat analysts' earnings forecasts for individual firms. I use the following OLS regression for this analysis.

$$\Delta JUSTBEAT = \beta_0 + \beta_1 \Delta HI_{i,t} + \beta_2 \Delta SIZE_{i,t} + \beta_3 \Delta MB_{i,t} + \beta_4 \Delta SGROWTH_{i,t} + \beta_5 \Delta NOA_{i,t} + \beta_6 \Delta SHARES_{i,t} + \beta_7 \Delta LIT_{i},t + \beta_8 \Delta IMPLICIT_{i,t} + \beta_9 \Delta ANALYST_{i,t} + \beta_{10} \Delta DISPERSION_{i,t} + e_{i,t}$$

…… Equation (4)

Where ΔJUSTBEAT is the difference in average incidence for the firm to meet or just beat analysts' earnings forecasts between PRE_INC and POST_INC and between PRE_DEC and POST_DEC years. ΔHI is the change in average diversification (measured as Herfindahl Index of sales of individual segments) from PRE to POST years. Other variables are also changes in their averages from PRE to POST years. The coefficient β_1 signifies the association between changes in diversification and changes in propensity to meet or just beet earnings targets.

2.4.3 Investor Reaction to Meeting or Beating Earnings Benchmarks

To examine investor reaction of meeting or beating earnings targets, I use Cumulative Abnormal Returns (CAR) in the five days around earnings announcement for both quarterly and annual periods. CARs are obtained by subtracting the CRSP returns of value-weighted decile the firm belongs to from the raw returns of the firm's equity. I use following OLS regression model to estimate the market's reaction to earnings announcements:

$$CAR_{i,q} = \beta_0 + \beta_1 DIVERSIFICATION_{i,q} + \beta_2 JUSTBEAT_{i,q} + \beta_3 DJUSTBEAT_{i,q} + \beta_4 ES_{i,q} + \beta_5 DSURP_{i,q} + \beta_6 SIZE_{i,q} + \beta_7 LIT_{i,q} + \beta_8 LOSS_{i,q} + \beta_9 MB_{i,q} + \varepsilon_{i,q}$$

…… Equation (4)

and

$$CAR_{i,q} = \beta_0 + \beta_1 DIVERSIFICATION_{i,q} + \beta_2 JUSTMISS_{i,q} + \beta_3 DJUSTMISS_{i,q} + \beta_4 ES_{i,q} + \beta_5 DSURP_{i,q} + \beta_6 SIZE_{i,q} + \beta_7 LIT_{i,q} + \beta_8 LOSS_{i,q} + \beta_9 MB_{i,q} + \varepsilon_{i,q}$$

…… Equation (5)

Where 'i' is the firm index and 'q' denotes the quarter. $CAR_{i,q}$ is the cumulative abnormal return over five trading days (days −2, 0, and +2) around the quarterly earnings announcement date. The daily abnormal return is computed as the difference between the stock's return and the CRSP value-weighted average return for the size decile the firm belongs to. DIVERSIFICATION signifies measure of diversification which can be DIVERSIFIED, DIVERSIFIED2 OR FDIVERSIFIED. JUSTBEAT is an indicator variable that takes value of 1 if the firm meets or beats analysts' consensus forecast by not more than one cent. DJUSTBEAT is interactions between DIVERSIFIED and JUSTBEAT. ES is earnings surprise which is calculated as reported EPS minus analysts' median EPS forecast. DUSRP is interaction between DIVERSIFIED and ES. SIZE is natural log of total assets. LIT is a binary variable that takes value of 1 if the firm operates in a high litigation industry and 0 otherwise. LOSS is a dummy variable which takes value of 1 if the firm reports a loss in the quarter. MB is market to book ratio of the firm. JUSTMISS is a dummy variable that takes value of 1 if the firm misses median analysts forecast by not more than one cent. DJUSTMISS is interaction term between DIVERSIFIED and JUSTMISS. The coefficient β_3 of these equations signifies incremental reaction to earnings news of narrowly beating or missing analysts' earnings forecasts if the firm is diversified.

2.4.4 Data and Sample

The sample consists of non-financial firms over the time period 1998 to 2012 with data available on Compustat's industry segment file. The requirements of segment

reporting, especially the definition of reportable segments, changed substantially with the introduction of SFAS 131. The statement is effective for fiscal years commencing after December 15, 1997 and therefore the sample period starts with fiscal years ending after December, 15 1998.

I only include those segments described as "Business" or "Operating" segments from COMPUSTAT segments database. Since the focus of the study is on diversification and SIC codes assigned to segments indicate whether different segments of a firm operate in distinct industries, the instances where segment SIC code is not available were removed. COMPUSTAT identifies segment information which relates to elimination of inter-segment transactions as a separate line item, indicated by segment identification number (SID) 99. Therefore, data items where segment type is 'Eliminations' or with SID 99 were removed. Following Berger and Ofek (1995), segments with missing sales data or assets data or sales less than $1m and segments in financial industry (sic 6000 to sic 6999) were also removed from the sample to filter out erroneous data. Another condition for being able to be included in the sample is that the sum of sales of all the segments of a firm should not exceed the total firm's sale and should not be less than 90% of the firm's total sale. This sample was interacted with annual and quarter data from COMPUSTAT of non-financial firms with sales greater than $20 million. I obtain actual and forecast annual earnings per share values from the Institutional Brokers Estimate System (I/B/E/S) and stock return information from Center for Research in Security Prices (CRSP). Financial data from years prior to 1998 is used for constructing some variables which require such information.

Descriptive statistics relating to the variables describing meeting or beating targets using annual data are given in Table 2.2. I use the first measure of diversification i.e. DIVERSIFIED to classify the sample into focused and diversified firms. Diversified firms are on average larger, with greater market to book valuations and with more analysts following. Panel C of Table 2.2 describes the pairwise correlations among these variables. The statistics for full sample are similar to the studies covering similar periods (e.g. Demerjian et al, 2013).

2.5 Results and Discussion

2.5.1 Meeting or Beating Earnings Targets

Prior literature suggests managers desire to report earnings which meet or beat certain thresholds in order to either be rewarded or to escape scrutiny. These targets mostly have to do with reported earnings in addition to sales and cash flow targets. It has also been suggested that managers 'manage' reported accounting numbers to achieve those targets and the firms that just meet or beat these targets can be considered suspect of manipulating the numbers. I model likelihood of meeting or beating annual and quarterly accounting targets as a function of firm diversification, incentives for managers to manipulate earnings, firm characteristics and analyst's related characteristics.

I use equation (1) to analyze difference in propensity to achieve earnings targets between diversified and focused firms. The results of multivariate analysis using annual data are presented in Table 2.3. The dependent variable JBEAT is an indicator variable that takes value of 1 when firms report earnings which are equal to or exceed

median analysts' forecasts by a maximum of 1 cent. BEAT takes the value of 1 if reported earnings meet or exceed analysts' forecasts.

The results in Table 2.3 suggest that diversified firms are more likely to marginally beat analysts' forecasts as indicated by the coefficients on DIVERSIFIED, DIVERSIFIED2, FDIVERSIFIED and HI. These coefficients are all significant and indicate that diversification is positively related to propensity to just beat analysts' forecasts. The coefficients are slightly higher for FDIVERSIFIED and DIVERSIFIED2 indicating that unrelated diversification may slightly improve probability of meeting or just beating analysts' forecasted earnings. The variable HI being inverse indicator of diversification also suggests that higher diversification is related to greater propensity to just meet or beat analyst forecasts. Greater analyst following is also significantly related to meeting or just beating their forecast. These results support the notion that diversified firms have greater flexibility in managing earnings if the actual earnings fall just below analysts' median forecasts. These results are economically significant as well. The incremental probability of a firm just meeting or beating earnings targets is 1.23% compared to unconditional probability of 13% for undiversified firms.

The correlations in cash flows between different segments of a diversified firm may not be perfect or even negative. In these conditions, managers have greater flexibility to transfer resources between different segments of the firm and take real business decisions to mask poor performance (Hann et al., 2013). Such negative correlations, therefore, provide managers with greater opportunity to manage earnings. If we consider FDIVERSIFIED and DIVERSIFIED2 as proxies for unrelated diversification, we can expect that the correlation in cash flows between segments of

such firms may not be considerably positive or even negative. The results in Columns 2 and 3 of Table 2.3 indicate that such firms have a slightly greater propensity to just meet or beat targets compared to firms considered to be diversified at a coarser level in Column 1. A negative coefficient of continuous variable HI in column 4 also suggests that greater diversification is associated with greater propensity to just meet or beat analysts' forecasts. This lends some support to the idea that greater diversification can lead to greater opportunities for managers to manipulate earnings.

I compare the results discussed above with similar analysis but replacing BEAT as the dependent variable. This is a binary variable that takes value of 1 if the firm meets or beats analysts' median earnings forecasts by any margin. This analysis indicates whether propensity of meeting or beating targets is higher for diversified firms regardless of the magnitude of earnings surprise. The results are presented in Columns 5 to 8 of Table 2.3. The insignificant coefficients for diversification variables show that diversified and focused firms have similar propensity to report earnings that comfortably beat analysts' forecasts. This suggests that perhaps diversified firms use greater flexibility in reporting earnings when earnings just fall short earnings targets to just hit those targets. The coefficients on control variables are mostly in expected directions. It seems that larger firms find it difficult to just meet or beat earnings targets but the propensity to beat targets regardless of margin is higher for larger firms. Firms with more analyst following also care about meeting or beating targets more as suggested by a positive coefficient on ANALYST. A firm being audited by a big 4 auditing firm reduces the propensity of such firms to meet or beat earnings targets. As expected, firms with higher growth prospects have greater propensity to meet or beat earnings targets as well.

Just missing earnings targets might not be considered a mirroring situation of just beating those targets. Managers of firms with expected actual earnings very close to analysts' forecasts would make an effort to manipulate those numbers in order to make sure they report earnings in line with market expectations. Those managers who fail to reach such targets might resort to taking a "big bath" i.e. under-report the earnings enabling them to report higher earnings in the future (Kirschenheiter and Melumad, 2002). In the presence of such a financial reporting equilibrium, analysis of firms reporting earnings just below earnings targets might not be very meaningful.

The analysis so has so far concentrated on annual data. Managers' incentive to meet or beat quarterly analysts' forecast earnings has been increasing over the years (Matsumoto, 2002). Table 2.4 presents similar regressions run on quarterly data. The results are similar to those obtained from annual data with a strong indication that diversified firms are likely to just beat analysts' median forecasts compared to focused firms. It also appears that propensity of just meeting or beating analysts' forecasts for firms which are operating in relatively unrelated industries (DIVERSIFIED2 and FDIVERSIFIED) is slightly higher than firms exhibiting related diversification (DIVERSIFIED). These results also suggest that that larger firms, loss making firms and firms audited by Big4 auditing firms find it harder to just meet or beat analyst forecast earnings.

Diversified firms are complex and hence it is more difficult for analysts to process information about them. The difficulty in forecasting earnings for diversified firms accurately has been documented in empirical studies (e.g. Cohen and Lou, 2012). Descriptive statistics in Table 2.2 also suggest that forecasts for diversified firms are more dispersed compared to those for single segment firms. This difference in

dispersion of analysts' forecasts for diversified and focused firms can introduce noise in my results. However, more dispersed forecasts would also make it less likely for firms to just meet or marginally beat median forecasts and hence such noise should work against my findings of diversified firms being more likely to achieve these earnings targets.

2.5.2 Increasing and Decreasing Diversification and Propensity of Meeting or Beating Earnings Benchmarks

In the previous analysis, there can be endogeneity issues that affect our results because of omitted correlated variables. One way to get around this problem is to see if changes in diversification are related to changes in propensity of meeting or beating earnings benchmarks. In order to study the effect of increasing or decreasing diversification on propensity to meet or beat earnings targets, I consider the years in which the reported number of segments operating in different industries increase or decrease for a particular firm. I label each of 3 years after the year of such increase in the number of reported segments as 'POST_INC' and 3 years after the year of decrease in the number of segments as 'POST_DEC' years. For this analysis, I do not consider firm years in which the number of reported segments increase or decrease because the financial statements for such years could be severely affected by acquisitions or disinvestments. If diversified firms have more flexibility to manage reported earnings, then I expect that incidence of just meeting or beating analysts' forecasts would be higher in the years following increase in diversification and lower in the years following decrease in diversification.

I find that incidence of 'Just Beating' analysts forecast is 15.31% in POST_INC years as opposed to 12.41% in all other firm-years which is statistically significantly higher (t-value 3.21). I also find that the percentage of firms posting small positive earnings (up to 1% of total assets) is also statistically significantly higher (t value 3.41) in POST_INC years i.e. 5.15% as compared to 3.44% in other years. The incidence of beating last year's earnings is 1.93% in post-increase years which is not statistically significantly higher than 1.48% in other years. These univariate results suggest that adding reported segments might help reporting entities to achieve earnings targets through increased accounting complexity and opacity.

I run a logistic regression with probability of just beating analyst forecast as dependent variable and adding a dummy variable 'POST_INC' as an independent variable which takes the value of 1 for three firm-years after an increase in the number of reported segments. Table 2.5 presents the result of such logistic regression where I use median analysts' forecast as benchmark earnings and 'JUSTBEAT' is an indicator dependent variable taking the value of 1 if the firm beats benchmark by a maximum of $0.01 per share. The coefficient on 'POST_INC' is positive and that on 'POST_DEC' is negative (although not significant) providing evidence that increasing diversification is related to increasing ability to meet or beat analysts' consensus earnings benchmarks. These results suggest that increasing diversification increase the propensity of firms to report earnings that meet or just beat analysts' forecasts.

I also consider the relationship between change in propensity to just meet or beat analysts' forecasts. Table 2.6 presents the results of such analysis. The table describes the results of a regression where dependent variable is the change in average

incidence of meeting or beating earnings forecasts three years before and after a change in number of reported segments by that firm. Our variable of interest is ΔHI which is the change in average Herfindahl Index (HI) of that firm's segment sales before and after the firm reports increased or decreased number of segments. An increase in average HI would indicate decreasing diversification and vice versa. Other control variables are also changes in their average levels three years before and after a change in diversification.

The results in first column of this table suggest that increases in diversification (decreasing HI) associated with increases the propensity to meet or beat analysts' forecasts. I get similar results if we only consider cases where the reported number of segments by a firm increased as presented in column titled "Diversification Increase". However, the average propensity to meet or beat earnings forecasts does not differ much before and after the change if the reported number of segments is decreased as described in column titled "Diversification Decrease". These results provide further evidence that diversification might help firms to meet or just beat earnings targets.

2.5.3 Using Discretionary Accruals to Meet Earnings Targets

It is argued that the firms which fall just below earnings benchmarks can use income increasing accruals to get past those earnings benchmarks. (e.g. Payne and Robb, 2000; and Matsumoto, 2002). An alternative measure of earnings management has been developed which looks at abnormal accruals of firms which meet or beat earnings forecasts. If we reduce reported earnings of firms which meet or beat earnings targets by discretionary accruals for that period and these 'pre managed'

earnings fall below the earnings benchmarks as a result, we can classify such firms as 'suspect' of earnings management.

I follow the method outlined by Koh et al. (2008) to carry out this analysis. Specifically, I take the sample of all firms which meet or beat earnings benchmarks. Then, for each firm, I calculate 'discretionary accruals per share' [(discretionary accruals x lagged assets) / number of shares]. I used modified Jones (1991) model to calculate discretionary accruals[2]. I deduct 'discretionary accruals per share' from the reported earnings per share and arrive at 'pre-managed' earnings. The firm-years for which the reported earnings fall below the analysts' median forecast earnings after this process are 'suspect' firms which likely used discretionary accruals to achieve that target.

Table 2.7 presents logistic regressions using a sample of such firms using annual data and modified jones model to calculate abnormal accruals. The logistic regression is similar to Equation (1) except that the dependent variable is an indicator variable which is set to 1 if earnings of a firm fall below analysts' median forecast earnings if abnormal discretionary accruals are removed from reported earnings. So the value of 1 for the dependent variable indicates firms which likely used discretionary accruals to hit the earnings target. The independent variable DIVERSIFICATION is the measure of diversification used as identified in the column headings. Significantly positive coefficients for models 1,2 and 3 and significantly negative coefficient for model 4 indicate that diversified firms are more likely to use income increasing discretionary accruals to meet or beat earnings targets. The results (not reported) are

[2] The methodology used to calculate these discretionary accruals is described in Appendix A to this dissertation.

similar if performance adjusted discretionary accruals are used. These results across all four models suggest that diversified firms find it significantly easier to meet or beat analysts' forecasts using discretionary accruals. In addition, larger and high growth firms are also able to use the flexibility available in the shape of accruals to meet or beat analysts' forecasts. However, being audited by a Big4 firm somewhat reduces a firm's ability to manage earnings to meet or beat analysts' forecast earnings using discretionary accruals. This result is consistent with the notion that diversified firms have more flexibility in using accounting accruals to manager reported earnings.

2.5.4 Investors' Reaction to Meeting or Beating Earnings Targets

This section explores the short term market reaction to earnings announcements by diversified and focused firms in order to test Hypothesis 2. I focus on firms which meet or beat earnings thresholds and examine whether the investors' reaction to such announcements is different for diversified and undiversified firms. I use value weighted cumulative abnormal returns from 2 days before to 2 days after earnings announcement (CARS) as an indication of market's reaction to quarterly earnings announcements.

I use three measures of diversification i.e. DIVERSIFIED, DIVERSIFIED2 AND FDIVERSIFIED. These have been defined earlier. JUSTBEAT is an indicator variable set to 1 if the firm beats analysts' median forecast by one cent or less. DJUSTBEAT is an interaction variable set to 1 when a diversified firm just beats analysts' forecast. JUSTMISS is an indicator variable which takes the value of 1 if the firm misses analysts' median forecast earnings by not more than 1 cent. DJUSTMISS is the interaction term of JUSTMISS and diversification measure. Variable ES

denotes earnings surprise which is calculated as the difference between the firm's reported earnings and analysts' median forecast. Control variables include SIZE (log of total assets), LIT (binary variable taking the value 1 if the firms belongs to a litigation prone industry and 0 otherwise), LOSS (takes a value of 1 if the firm reports a loss in the quarter/year and 0 otherwise) and MB (market to book ratio). The t-statistics are adjusted for two-way clustering for firms and quarters. DSURP is an interaction variable between measures of diversification and earnings surprise.

The descriptive statistics presented in table 2.8 suggest that although diversified firms report slightly higher earnings surprises and abnormal returns around earnings announcement, they are traded at a much lower market to book ratio. Table 2.9 presents the results of regressions using CARS around quarterly earnings announcement days as a dependent variable using quarterly data. I use analysts median earnings forecast as an earnings benchmark since earlier results demonstrate that it seems to be the most important for diversified firms to achieve.

The market's reaction to just meeting or beating the analysts' forecasts is positive as demonstrated by the coefficient on JUSTBEAT in the results presented in Table 2.9. The coefficient on DJUSTBEAT indicates the incremental reaction from investors if the firm just meeting or beating analysts' forecasts is a diversified firm. The results in table 2.9 show that the coefficients of DJUSTBEAT are negative for all measures of diversification. Similarly, the coefficients on DJUSTMISS indicate investors' differential reaction to diversified firms just missing earnings forecasts. DJUSTBEAT has a negative coefficient for all three measures of diversification. This result indicates that investors' reaction to diversified firms just meeting or beating analysts' forecasts are less positive for diversified firms, providing support for Hypothesis 2.

The coefficient on DSURP is also negative but not too significant in all models. This indicates that earnings announcement reaction for diversified firms is slightly discounted regardless of the firms exhibiting signs of earnings manipulation.

The coefficients for DJUSTMISS are negative although not very significant, indicating a slightly more negative investor reaction to diversified firms which just miss analysts' forecast earnings. This result suggests that investors 'punish' diversified firms more for missing earnings forecasts. If a diversified firm has not been able to meet or beat earnings forecast despite enjoying greater flexibility in financial reporting choices, it might signal severe problems with the firm. These results provide support for Hypothesis 3.

These results suggest that investors' reaction to earnings news partially discounts the significance of diversified firms meeting or beating analysts' forecasts suggested that they adjust for the flexibility available to diversified firms to manage earnings.

2.5.5 Discretionary Accruals and Diversification

In this section, I report results from traditional methods for identification of earnings management through 'abnormal accruals' across diversified and focused firms. Appendix A details the methods used to calculate discretionary or 'abnormal' accruals. Univariate analysis in Table 2.10 and multivariate analysis in Table 2.11 show that on average diversified firms have lower absolute discretionary accruals. This suggests on average they indulge in 'lesser' accruals manipulation. Real earnings management measures tell a similar story. Overall, the results indicate that diversified

firms have ‘better’ earnings quality using traditional earnings quality measures. If we limit ourselves to these measures for comparison of diversified and focused firms without consideration for a ‘motive’ for earnings management, we might conclude that on average diversified firms have lower levels of ‘abnormal’ accruals and ‘abnormal’ real activities management indicators.

However, the mean of discretionary accruals calculated from modified jones model for firms which just beat the analysts’ forecasts by $0.01 or less is 0.0025 for diversified firms and -0.0052 for non-diversified firms. Average performance adjusted discretionary accruals for focused firms which just beat analysts’ forecasts are -0.00213 while those for diversified firms are 0.0034. These discretionary accruals are significantly higher for diversified firms which just beat the forecasts (at 5% level) compared to all non-diversified firms. This indicates that diversified firms might have more flexibility in terms of adjusting accruals to meet targeted earnings levels.

2.5.6 Expectations Management

An instrument available to the managers to aid in achieving their goal of meeting analysts’ forecasts is to ‘guide’ analysts to adjust their forecasts in line with expected actual results. If expected performance of the firm is worse than what analysts expect, the management can communicate such information to the analysts who could then revise their forecasts downwards (e.g. see Hutton (2005) and Cotter et al. (2006)). The process benefits the firm’s managers who subsequently report earnings in line with analysts’ forecasts and the analysts can claim to have made accurate forecasts. It is possible that greater propensity of diversified firms meeting or beating analysts’

forecasts is driven by such expectations management. It is, however, not apparent why diversified firms would be systematically more successful in expectations management.

The SEC introduced Regulation Fair Disclosure (Reg FD) in the year 2000 which prohibited the practice of management privately disclosing information to selected analysts. Empirical evidence suggests that the regulation worked to reduce the practice of expectations management to meet or beat earnings targets (Canace et al., 2010). If successful expectations management rather than earnings management was the principal instrument used by diversified firms to meet or beat analysts' forecasts, then we can expect the propensity for diversified firms to meet or beat such forecasts to reduce after Reg FD became effective.

Reg FD became effective in October 2000. I slice my sample into pre-Reg FD (up to September 31, 2000) and post-Reg FD (from January 2001) periods and use quarterly financial data to compare propensity of diversified firms just meeting or beating analysts' forecasts in these period using Equation (1). The results are reported in Table 2.12. The results reveal that diversified firms are more likely to just meet or beat analysts' earnings forecasts both before and after implementation of Reg FD. The results remain consistent if only 3 years of data after the year 2000 is considered for the analysis in order to balance the number of observations pre- and post- Reg FD. This analysis suggests that expectations management by diversified firms might not be a significant device driving my earlier results.

2.6 Conclusions

This study explores earnings management behavior of diversified firms in the context of meeting or beating earnings targets. I reason that since information environment surrounding diversified firms is relatively opaque as compared to focused firms, and managers of these firms enjoy greater flexibility in making financial reporting decisions, it is easier for such firms to manipulate financial statements. The study enhances our understanding of sources of agency costs related to diversified firms. The results suggest that compared to focused firms, diversified firms are more likely to just meet or beat analysts' forecast. Increasing diversification is associated with a firm's ability to meet or just beat analysts' forecast earnings as well. Diversified firms also seem to be more capable of using accruals to achieve earnings targets as compared to focused firms.

The study also finds that, gleaning from their reaction to earnings announcements, investors at least partially see through attempts to meet or beat analysts' forecasts. The abnormal returns around earnings announcement dates suggest that investors' reaction to diversified firms just meeting or beating earnings targets is less positive compared to the reaction to focused firms achieving such earnings benchmarks. This suggests that investors do acknowledge either the information opacity surrounding diversified firms or flexibility available to the managers of such firms to manipulate reported earnings.

The study has implications for regulators, auditors and users of financial statements. Although there have been several improvements relating to financial reporting by diversified firms, there are still calls from the users of financial statements for more

transparent information dissemination by such firms. This study provides some indications that there is still room for improvement in financial reporting regime for conglomerates. This study provides some insight into methodologies used to detect earnings management as well. Traditional accruals quality measures might not be suitable for comparing earnings quality of firms if treatment or control sample consists of disproportionate number of diversified firms.

Chapter 3: Diversification Discount and Earnings Quality

3.1 Introduction

Since the influential papers by Lang and Stulz (1994) and Berger and Ofek (1995), researchers have consistently found that diversified firms are priced at a 'discount' relative to focused firms. This discount is computed by imputing market values of individual business segments of diversified firms, adding them up and comparing the resulting imputed value with market value of the firm as a whole. The difference between the firm value and imputed value is known as "diversification discount" or "excess value". This study explores the relationship between this "diversification discount" and earnings quality. I find that the diversified firms which just meet or beat analysts' consensus forecasts, and the diversified firms suspected of using discretionary accruals to meet those earnings targets are subject to greater discount. Such valuation discount is also observed for diversified firms that 'habitually' beat analysts' forecasts. I also find that traditional measure of accruals quality, based on Jones Model and Dechow-Dichev Model, are also related to diversification discount. The discount is greater for firms with lower accruals quality.

Several explanations for the sources of this 'diversification discount' have been advanced. These include agency problems like over investing in low value segments (e.g. Rajan, Servaes and Zingales, 2000), corporate governance issues (e.g. Hoechle, Schmid, Walter and Yermark, 2012), disclosure quality (e.g. Bens and Monahan, 2004) and lack of information transparency (e.g. Krishnaswami and Subramaniaum, 1999). These studies contend that valuation of diversified conglomerates is negatively affected, among other things, by difficulties in effective monitoring of the managers,

inefficient allocation of resources among divisions of such firms, empire building behavior of the managers and opaqueness in information environment surrounding these firms. One of the possible consequences of greater agency problems is deteriorating earnings quality resulting from attempts to hide such problems in the financial statements. If the investors consider earnings quality a factor in firm valuation and diversification discount is a consequence of investors' pricing decisions, then the earnings quality of diversified firms should affect diversification discount as well.

Although, the influence of voluntary disclosure quality (e.g. Bens and Monahan, 2004) on diversification discount has been studied, the association between meeting or beating earnings benchmarks and diversification discount remains unexplored. The study by Bens and Monahan (2004) examining the association between disclosure quality and diversification discount is based on restricted samples because their disclosure quality measure is AIMR (Association for Investment Management and Research) disclosure scores. These scores are based on groups of analysts subjectively scoring voluntary disclosures by firms. AIMR scores are available only for years before 1997 and cover only large firms with significant analyst following. These scores are based on analysts' evaluation of quality of disclosures made by firms in an industry. AIMR rankings of disclosure quality within an industry do not consider impact of management's attempts at earnings management through accruals manipulation.

In essay 1 of this dissertation, I find that on average, propensity of diversified firms to just meet or beat analysts' forecasts is higher, compared to focused firms. I suspect that the difference can be attributed to greater flexibility available to the managers of

diversified firms when making financial reporting choices and relatively opaque information environment surrounding such firms. In this essay, I extend prior research into possible explanations for diversification discount by relating it to earnings quality, specifically the ability to meet or beat analysts' forecasts and accruals quality of diversified firms.

Theoretical models (e.g., Diamond and Verrecchia 1991) predict that poor disclosure quality leads to higher information asymmetry in capital markets and results in increased cost of capital. Greater diversification leads to greater information asymmetry between managers and outsiders and this information asymmetry may be priced by capital markets (Bhattacharya et al., 2013). If the ease in meeting or beating analysts' earnings forecasts using accruals is an expression of this higher information asymmetry, then it can also affect long run pricing decisions by investors and reflected in observed diversification discount for such firms. Francis et al. (2005) provide evidence on the influence of accruals quality on the cost of capital. If diversified firms suffer from greater agency problems and accruals quality helps to reduce agency and monitoring costs, then accruals quality can also be expected to be related to diversification discount, which is claimed to be a reflection of such costs. Also, if diversified firms suffer from greater information asymmetry which is partly responsible for observed diversification discount, then varying earnings quality within diversified firms can also affect such discount.

In this study, I find that measures of accruals quality, based on discretionary accruals models, are also related to diversification discount. In essay 1 of this dissertation, I find that on average diversified firms exhibit lower 'absolute discretionary accruals' and better accruals quality than focused firms. This does not necessarily mean that on

average diversified firms' reported earnings quality is better than stand-alone firms. Total accruals reported by diversified firms are sum of accrual generation process from several different divisions of the organization. These accruals generated by different segments may not be perfectly correlated and results from factors that may be unique to individual industries in these segments are operating. Therefore, comparisons of average levels of accruals between diversified and non-diversified firms might not be meaningful. However, comparisons of abnormal accruals and mapping of accruals to cash flows within diversified firms can provide us some insights into variations in earnings quality among such firms. I use modified Jones (1991) model, performance adjusted Jones model as suggested by Kothari et al. (2005), cash flows to accruals mapping model by Dechow and Dichev (2002) and improvements suggested cash flows to accruals mapping model by Francis et al. (2005) to examine the impact of accruals quality on diversification discount. I find that the discount is generally greater for firms with lower accruals quality.

This study contributes to the debate about sources of diversification discount. I find that this discount or negative excess value can partly be attributed to greater information asymmetry between the managers and outsiders of complex multi-segment firms. If investors believe that diversified firms enjoy greater flexibility in financial reporting, they discount the news about these firms achieving earnings benchmarks.

The essay is structured as follows. I discuss background and literature review on diversification discount and its relation to earnings management in Section 3.2. I develop testable hypothesis in Section 3.3. Next, Section 3.4 introduces Research

design, including variable definitions and measurement. Results of empirical analysis are discussed in Section 3.5. I conclude the essay with Section 3.6.

3.2 Literature Review

3.2.1 Diversification Discount

Costs and benefits of conglomeration have been extensively studied in accounting, finance and management literature. One strand of literature proposes that diversification is beneficial because such firms can more efficiently allocate resources to its different segments as compared to individual investors and the managers of such firms are also better informed about available investment opportunities (e.g. Gertner, Scharfstein, and Stein 1994; Stein 1997). Matsusaka (1993) studied the merger wave and resulting rise of prominence of conglomerate firms in the USA during late 1960s and early 1970s. The study finds significantly positive announcement-period returns for shareholders of acquiring companies. Matsusaka (1993) attributes these results to 'managerial-synergy', where acquirer managers' skills are complementary to the skills of target management creating additional value. This explanation is in contrast with the view that managers' decision to diversify is often driven by opportunistic behavior and empire building (Morck, Shleifer and Vishny 1990).

In contrast, a substantial body of literature suggests that diversified firms trade at a discount relative to focused firms and such discount has been terms as ''diversification discount''. Using Tobin's q as a valuation measure, Lang and Stulz (1994) showed that valuations of multi-segment firms were lower than a pure-play portfolio of single-segment firms. There is also evidence that when diversified firms

spin-off their segments to increase focus, the investors view the move as a positive one. This reaction is reflected in better stock price performance of such firms (Comment and Jarrell, 1995). Berger and Ofek (1995) use equity-to-sales ratio as valuation measure and find a similar discount for diversified firms as compared to a portfolio of single-segment firm mimicking industry segment weights in diversified firm. They found that diversified firms are valued at 13 to 15 percent discount compared to sum of imputed values of their individual segments. Diversification discount has been documented in several later studies including a study of diversified financial institutions (e.g. Laeven and Levine, 2007).

Several studies have attempted to explain lower market valuations of conglomerates. Many such studies point towards greater agency problems inherent in conglomerates as compared to focused firms (e.g., Lang and Stulz, 1994; Berger and Ofek, 1995; Lamont, 1997; Shin and Stulz, 1998). The 'agency' perspective of diversification visualizes diversification as a result of managerial self-interest rather than stockholders value maximization. Examples of these agency problems include suboptimal transfer of funds across segments in firms with diversified Lines of Business (LOB), over or under investment in individual segments, cross-subsidization of segments and opportunistic or rent-seeking behavior of managers. Mock, Shleifer, and Vishny (1990) hypothesize that acquisitions are often carried out to fulfil managers' own objectives (e.g. empire building) rather than value maximization of the firm. Stulz (1990) also suggests that managers of diversified firms indulge in self-serving behavior and irrational investments which negatively impact overall value of such firms. Denis et al. (1997) provide evidence that managers of diversified firms tend to hold less equity of the firm they manage as compared to managers of focused

firms. They also suggest that monitoring costs for such firms is also higher as evidenced from lower outside blockholdings of these firms as compared to focused firms. Lamont (1997) investigates conglomerates with interests in oil industry and finds that managers tend to subsidize their oil related segments through non-oil related segments. Rajan et al. (2000) also attribute diversification discount to inefficient investment decisions made by managers of conglomerates. Internal politics and conflicts between chief executives and divisional managers of conglomerates can also result in inefficient investment decisions (Scharfstein and Stein, 2000). A theoretical model developed by Ozbas (2005) reveals that competition among managers of individual divisions of a multi-division firm can lead to managers exaggerating the outcomes of their divisions' operations resulting in reduced resource allocation efficiency of the firm as a whole. Ozbas and Scharfstein (2010) demonstrate agency problems associated with conglomerates through a comparison of investment in industries with high "investment opportunities" (Q) by segments of diversified firms and stand-alone firms. They find that diversified firms tend to invest less than stand-alone firms in high-Q industries. They suggest that these results indicate greater agency problems in diversified firms. These agency problems induce investors to require greater return from diversified firms (Martin and Sayrak, 2003).

This 'agency' view of diversification discount is also substantiated by literature on corporate spin-offs and acquisitions. Meyer et al. (1992) develop a theoretical model which suggests that in certain situations, divestiture can be a value enhancing for conglomerates. Managers of individual units of a conglomerate lobby for resources and manipulate information provided to the top management about their unit's future prospects in an attempt to influence resource allocation decisions. These efforts by

managers to influence top management are more intense in business units where future prospects are relatively worse. Such manipulation may not be feasible if those business units were stand-alone firms. Spinning off such divisions of a conglomerate can be value enhancing for both the remaining firm and the spun-off unit. Analyzing data from spinoffs announced during 1979–1996, Burch and Nanda (2003) find that those events were generally value enhancing. They also find that this value-increasing effect of spin-off persists even after controlling for investment opportunities available to the spun-off division. They attribute these results to greater agency costs associated with diversified conglomerates. Several studies document a positive stock price reaction around spin-off announcements (e.g. Schipper and Smith, 1983; Rosenfeld, 1984; Cusatis et al., 1993; Desai and Jain, 1999). This positive reaction is attributed to improved contracting and monitoring of the managers after a spin-off, among other things. Morck et al. (1990) and Agrawal et al. (1992) also find negative returns for investors of acquiring firms that increase corporate diversification.

Another line of literature suggests that diversification is not inherently value destroying and the observed diversification discount is a reflection of factors other than agency or information asymmetry problems. There have been suggestions that observed diversification discount is a result of self-selection (Campa and Kedia, 2002). Firms choose to diversify and the factors that lead firms to such decisions are also correlated with firm value. Fluck and Lynch (1999) use a theoretical model to propose that perhaps the lower valuations of diversified firms are a result of their ability to invest in marginally positive net present value projects which are beneficial as an investment but would lower the overall value of the firm if compared to focused firms which do not invest in such projects. It also has been proposed that the observed

diversification discount can result from measurement and methodological errors (Whited, 2001). The notion that diversified firms are not efficient in resource allocation and productivity across their business segments was challenged by Maksimovic and Philips (2002). In a study on the plant level data, they find that conglomerates are not inefficient in making resource allocation decisions across segments and such agency problems are not severe for such firms.

3.2.2 Diversification Discount and Financial Reporting Quality

The 'diversification discount' has also been partly attributed to higher cost of capital for diversified firms as compared to focused firms resulting from greater information asymmetry between managers and outsiders (Bens and Monahan, 2004). Berger and Hann (2003) find that firms that were "forced" to start reporting multiple segments (as opposed to one segment before) when SFAS No. 131 came into effect experienced an increase in their diversification discount in the year of the disclosure change. Using security analyst ratings of voluntary disclosures developed by the Association for Investment Management and Research (AIMR) as a proxy for disclosure quality, Bens and Monahan (2004) study a sample of US firm from 1980 to 1996. They document a negative relationship between diversification discount and disclosure quality, providing evidence that diversification discount can be partly explained by disclosure practices of diversified firms. These studies suggest that lack of transparency in the financial disclosures made by diversified firms could be one of the factors that impact market valuation of diversified firms.

The difference in disclosure quality between diversified and focused firms has often been attributed to be agency problems associated with conglomerates. Managers of

diversified firms are motivated to reduce transparency in financial information to avoid effective monitoring (Bens and Monahan, 2004). Huson and MacKinnon (2003) find that information environment improves for firms which increase focus through spin-offs leading to reduced information asymmetry between the investors and firm. Diversified firms operate in relatively more complex business and information environments as compared to focused firms (Cohen and Lou, 2012) and hence may find it easier to manipulate reported earnings. Taking advantage of additional disclosure requirements for diversified firms introduced by Statement of Financial Accounting Standards (SFAS) number 131, Botosan and Stanford (2005) investigate disclosure practices of diversified firms pre- and post-implementation of SFAS 131. They find that before introduction of these requirements, diversified firms were actively attempting to hide information about their profitable segments in less competitive industries. Diversified firms operating in competitive industries also tend to reduce disclosure for proprietary cost reasons (Harris, 1998). Overall, the literature suggests that information environment surrounding diversified firms is relatively more opaque compared to focused firms.

3.2.3 Meeting or Beating Earnings Targets

A substantial body of literature suggests that managers consider it very important to report earnings that meet a 'benchmark'. Burgstahler and Dichev (1997) notice discontinuities in distributions of earnings levels and distributions of changes in reported earnings around zero. They find disproportionately larger number of firms reporting small positive income and small increases in earnings. This result is interpreted as management of such firms actively taking steps to avoid reporting

losses and decreases in earnings. Managers have incentive to meet or beat earnings targets because their performance is often judged by outsiders by comparing reported earnings with these targets (Degeorge, Patel, and Zeckhauser, 1999). Brown (2001) documents an increasing trend of firms reporting earnings surprise of 0 or just above zero using data from 1984 to 1999. The tendency of managers to take actions to avoid negative earnings surprises is greater for firms which are more concerned about negative reaction from outsiders. Such firms include those with higher transient ownership, firms with greater reliance on implicit claims with external stakeholders and firms with higher value relevance of earnings (Matsumoto, 2002). Results of a survey of senior financial managers by Graham et al. (2005) also reflect this notion. A majority of managers responding to the survey and interview questions in the study admitted that they are willing forgo a project with positive net present value (NPV) if accepting this project could cause them to report earnings that fall short of the analysts' consensus forecast.

Several studies have explored the use of discretionary accruals by management to meet or beat earnings thresholds. Payne and Robb (2000) report significantly positive discretionary accruals for firms which would miss analysts' forecasts if those discretionary accruals were not used. They also report downward earnings management using discretionary accruals for firms which comfortably beat earnings targets. This behavior is interpreted as managers 'storing' discretionary accruals for future use. Matsumoto (2002) also reports greater incidence of positive discretionary accruals for firms which meet or beat analysts' forecasts, compared to firms missing such earnings targets. Burgstahler and Eames (2006) also note an upward shift in

discretionary accruals for firms reporting earnings which just meet or beat analysts' consensus earnings forecasts.

A major incentive for managers to meet or beat earnings thresholds is capital market's reaction to earnings news. Capital markets reward meeting or beating earnings benchmarks with positive stock price reaction and punish missing such targets with negative price movements (e.g. Conrad et al., 2002). Several studies document a positive stock price reaction to reported earnings meeting or beating benchmarks and a negative price reaction to reported earning falling short of such benchmarks (e.g. Bartov, Givoly, and Hayn, 2002; McNichols, 2002; Myers, Myers and Skinner, 2006; Bernhardt and Campello, 2007; Bhojraj et al., 2009; Hermann et al., 2011). Skinner and Sloan (2002) report a significant negative reaction from stock market for firms falling short of analysts' expectations. Kinney, Burgstahler and Martin (2002) study 'earnings surprise', defined as the difference between reported earnings and analysts' consensus forecasts. They group firm-year observations from 1992 to 1997 into portfolios based on magnitude of earnings surprise. They find that the portfolios with small positive earnings surprises result in significant positive market reaction and portfolios of small negative earnings surprises generate large negative returns around annual earnings announcements. Bhojraj et al. (2009) find that stock prices of firms which use discretionary accruals to just beat analysts' forecasts move positively in the short-term, compared to the firms that do not manage earnings and miss such benchmarks. In the long run, however, firms with higher quality earnings but missing targets outperform those of firms that beat the forecasts with lower quality earnings. This is perhaps the result of managers actively engaging in real or accruals based

earnings management to achieve earnings benchmarks (Graham et al., 2005).[3] In a more recent survey of Chief Financial Officers, Dichev et al. (2013) report that 93.5% of the respondents agreed that desire to influence stock price is a motivation for managing earnings and 92.9% agreed that pressures from outside the firm to hit earnings benchmarks is another goal for misrepresenting earnings. Overall, the literature suggests that reported earnings thresholds are important benchmarks for managers and outsiders and managers are normally willing to sacrifice real value to achieve those benchmarks.

3.3 Hypothesis Development

Several incentives for managers to strive for meeting or beating earnings thresholds were discussed in the previous essay. In the presence of these incentives, managers are willing to engage in earnings manipulation to achieve earnings targets, either through accruals management or by taking real business decision (Gunny, 2010). Firms which report earnings which meet or beat expectations or benchmarks are rewarded by markets with positive stock price reactions (Bartov et al. 2002). The firms which report earnings that fall slightly below the benchmark earnings have an incentive to manage such earnings so as to meet or beat such benchmarks (Burgstahler and Eames, 2006). It is, therefore, likely that that firms that just meet or beat earnings forecasts used accruals or real earnings management to achieve this target. This upward shift in earnings is not related to performance and indicated poor earnings quality (Srinidhi, Gul and Tsui, 2011). The consequences of poor earnings quality include higher cost of capital and lower stock price (Dechow et al., 2010). I

[3] Abnormal positive accruals for one period reverse in the future resulting in lower reported income. Real Earnings Management strategies may also negatively influence future performance.

expect that the investors, if they can recognize such misrepresentations, adjust their valuations for management's attempt to meet or beat earnings targets through accruals manipulation or real business decisions. Excerpts from interviews of CEOs in Dichev et al. (2013) express similar concerns. These CEOs recognize that if the market is able to discover poor earnings quality, the valuations and price multiples are negatively affected.

However, the managers are constrained by limited discretion available to them in applying accounting principles and conventions and cannot consistently use positive discretionary accruals in order to hit earnings benchmarks (Barton and Simko, 2002). In general, managers of diversified firms enjoy greater flexibility in making such financial reporting decisions compared to focused firms. In the previous essay, stock price reaction to earnings announcements suggests that investors recognize greater flexibility available to diversified firms to manage reported earnings. If the investors recognize this greater flexibility that managers of diversified firms enjoy, they may identify meeting or beating earnings targets by diversified firms as an indication of earnings management and discount their valuation. In other words, the 'reward' for meeting or beating earnings thresholds for diversified firms will be lower for diversified firms. We can consider diversification discount a result of long horizon valuation of firms by the investors. Therefore, I state my first hypothesis as follows.

H1: Diversification discount is greater for diversified firms which just meet or beat analysts' earnings forecasts.

It has been suggested that diversification discount is a consequence of higher agency costs in diversified firms because of cross-subsidization of operating divisions, inefficient investments or managers indulging in self-serving behavior (e.g. Scharfstein and Stein, 2000 and Lamont and Polk, 2001). If diversification discount is partly a consequence of such agency problems, then earnings quality could be one of factors explaining such discount. Bens and Manohan (2004) find evidence that analyst ratings of voluntary disclosures as a proxy for disclosure quality can party explain this phenomenon.

Meeting earnings benchmarks using earnings management techniques is also likely to be a reflection of agency problems (Burgstahler and Eames, 2006; Bhojraj et al., 2009) and can result in poor stock performance (An, Lee and Zhang, 2014). Also, use of high accruals in order to meet or beat earnings expectations would result in reversal of these accruals, reducing future earnings (Sloan, 1996), dampening firm valuation. I, therefore, expect that the diversified firms taking advantage of greater flexibility in financial reporting to meet or beat analysts' earnings forecasts to be valued at a greater discount.

H_2: Diversification discount (excess value) is positively (negatively) associated with meeting or beating analysts' consensus earnings forecasts using discretionary accruals.

A line of research analyses the effects of information asymmetries on diversification discount. These researchers argue that complex and opaque information environment surrounding multi-segment firms is a source of observed diversification discount

(Krishnaswami and Subramaniam, 1999; Gilson et al., 2001). Earnings quality has been debated to be a source of information risk. Francis et al. (2005) document adverse effects of poor earnings and accruals quality reflected in cost of equity and debt. Bhattacharya et al. (2013) document association between poor earnings quality (using Francis et al. (2005) accruals quality measures) and higher information asymmetry. They also find that this association is stronger for firms with poor information environment. They link the impact of poor earnings quality on market price of capital through liquidity. They argue that poor accruals quality results in higher information asymmetry which increases liquidity costs for investors ultimately increasing cost of capital. There have also been suggestions that a source of observed diversification discount is information asymmetry between managers and outsiders of diversified firms (Lamont and Polk, 2001). I can, therefore, state my third hypothesis as follows.

H_3: Diversification discount (excess value) is negatively (positively) associated with accruals quality of diversified firms.

3.4 Research Design

3.4.1 Measurement of Variables

3.4.1.1 Diversification

I classify a firm as 'DIVERSIFIED' in a financial year if it disclosed segments in more than one 4 digit SIC industry for that year. I only include those segments

described as “Business” or “Operating” segments from COMPUSTAT segments database.

3.4.1.2 Diversification Discount

I follow the methodology proposed by Berger and Ofek (1995) for measuring diversification discount or excess value of diversification. The excess value is computed as follows:

EXVAL = ln [V / IV]

Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm’s segments’ imputed values. A segment’s imputed value is obtained by multiplying an industry median multiplier of total value to sales (assets) by the segment’s sales (assets). Industry median multiplier is median of [V/SALE] for all single segment firms in the same industry as that segment with at least 5 firms. “Same Industry” is defined as firms which belong to same 4 digit SIC code and if I cannot find 5 matching single digit firms in 4 digit SIC code, then I consider single segment firms in same 3 digit SIC codes failing which I resort to 2 digit SIC codes. Following Berger and Ofek (1995), I delete all observations with excess value in excess of 1.386 or less than -1.386.

3.4.1.3 Earnings Benchmarks

I use analysts' median forecast as earnings threshold as it is considered to be one of the most important benchmarks for managers to achieve (Dichev et al., 2013). Unadjusted estimates of analysts' earnings forecasts issued within 90 days before the firm's earnings announcement day are used and adjusted for stock distributions. I use a binary variable JBEAT which takes value of 1 if the reported earnings of the firm just meet or beat median analysts' earnings forecast by not more than 1 cent. JBEAT is 0 for other firm-years. I follow Bartov et al. (2002) to identify those firms which 'habitually' meet or beat earnings forecasts. I use a dummy variable HABITUAL which takes value of 1 for firms which just meet or beat earnings forecast in at least 6 out of last 8 (75%). Consistently meeting or beating earnings targets is rewarded by positive stock price reaction in the short run but can signal poor performance once this streak is broken. This behavior can signal opportunistic behavior by the management (Kross et al., 2011).

I follow Koh et al. (2008) to examine whether the diversification discount is associated with the propensity for using accruals management to beat analysts' forecasts. I identify firms which beat analysts' forecasts through use of discretionary accruals. I start with all firms that meet or beat analysts' forecasts and deduct discretionary accruals from the reported earnings. I use an indicator variable EMMEET to identify the firm-years where the reported earnings fall below analysts' median earnings forecast after such deduction. These instances may represent attempts by management to use discretionary accruals for beating earnings benchmarks. The average instances of firms using assistance of discretionary accruals to meet or beat analyst's median earnings forecast for focused firms is 41% compared to 45% for diversified firms and the difference is statistically significant.

3.4.1.4 Accruals Quality

I also use several measures of accruals quality used in accounting and finance literature to proxy for disclosure quality of firms. The variable ADA_MJ is absolute value of discretionary accruals as measured by modified Jones model. ADA_PERF is absolute value of performance-adjusted modified Jones model. These variables indicate the magnitude by 'discretionary' accruals deviate from median accruals of firms in that industry-year. The discretionary accruals are identified by extracting non-discretionary portion of accruals from total reported accruals. The non-discretionary accruals represent 'expected' magnitude of accruals for the firm given its industry, size and performance. Absolute values of discretionary accruals indicate the extent of suspected manipulation by the managers of the firm in that year. The other variables signifying accruals quality, i.e. DD_AQ and DISC_AQ emphasize how neatly a firm's accruals match with leading and lagging cash flows based on based on the measure of earnings quality developed by Dechow and Dichev (2002) as refined by Francis et al. (2005). DD_AQ is a measure developed by Dechow and Dichev (2002) defined as standard deviation of residual of a regression of current period working capital accruals on past, current and future operating cash flows.

Francis et al. (2005) amended this measure to remove 'innate' components of accruals from the residuals and extract true 'discretionary' accruals from Dechow-Dichev residuals. Francis et al. (2005) contend that the accruals quality measure (DD_AQ) is composed of two components; innate and discretionary. They extract discretionary component (DISC_AQ) of accruals quality by controlling for sales, long-term assets,

operating cycle and volatility in sales. The 'innate' factors can be attributed to the business model a firm is subject to while the 'discretionary accruals quality' reflects the managers' use of estimates and judgement while choosing and implementing accounting policies. The details regarding calculation of these measures can be found in appendix to this dissertation.

3.4.2 Regression Models

I use the following OLS regression results with excess value of diversified firms as dependent variable. The model is estimated as follows:

$$EXVAL_{i,t} = \beta_0 + \beta_1 JBEAT_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_JBEAT_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE + \varepsilon_{i,t}$$

… Equation (1)

DIVERSIFIED is an indicator variable which takes value of 1 if the firm 'i' reports more than one segment in different SIC 4-digit industries in year 't' and 0 otherwise. The coefficient β_2 captures diversification discount. The negative value of β_2 indicates the extent of reduction in value diversified firms suffer compared to focused firms. JBEAT is a lagged indicator which takes the value of 1 if the firm just meets or beats analysts' median earnings forecast by not more than 1 cent in the previous year. I expect the coefficient of JBEAT to be positive since firms are 'rewarded' in capital markets for meeting or beating earnings forecasts. The variable of interest for testing H1 is DIV_JBEAT. It is an interaction variable computed as DIVERSIFIED x JBEAT. A negative coefficient on this variable would suggest greater diversification

discount (or lower excess value) for diversified firms which just meet or beat analysts' forecasts.

As control variables I use; (1) SIZE, defined as natural log of total assets; (2) GROWTH, which is percentage growth in sale for the year; (3) LEV, which is leverage defined as total debt (long term and current) divided by total assets; (4) INVEST, which is capital investment for the year computed as total capital expenditure for the year divided by total assets; (5) EARNINGS, which is return on assets computed as operating income for the year divided by total assets and (6) LOSS, which is a binary variable taking value of 1 if the firm reports a loss during the year. Considering the results obtained by Berger and Ofek (1995) for similar regressions, I expect SIZE, INVEST, EARNINGS and GROWTH to have a positive effect on EXVAL. The sign on the coefficient of LEV and LOSS is expected to be negative (Bens and Monahan, 2004).

It has been suggested that firms prefer to consistently meet or beat earnings targets but this may be viewed as opportunistic behavior by outsiders when such a streak is broken or when analysts' suspect management of indulging in expectations management (Kross et al., 2011). I study the effect of consistently meeting or just beating earnings forecasts on diversification discount using the following OLS regression model:

$$EXVAL_{i,t} = \beta_0 + \beta_1 HABITUAL_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_HABIT_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE + + \varepsilon_{i,t}$$

… Equation (2)

I follow Bartov et al. (2002) to define the binary variable HABITUAL. This variable takes value of 1 if the firm just meet or beat analysts' forecast in at least six out of

eight (75%) previous quarters and 0 otherwise. DIV_HABIT is an interaction variable computed as DIVERSIFIED x HABITUAL. The coefficient β_3 would indicate if investors value the firms which habitually beat earnings forecasts differently if they are diversified.

In order to test H2, I compute a lagged indicator for firms which are suspected of using discretionary accruals to just meet or beat analysts' forecasts (EMMEET) as the independent variable. Specifically, to calculate EMMEET, I start with all firms which meet or beat analysts' median earnings forecasts for that year's earnings. I then deduct discretionary accruals calculated from modified jones model from the reported earnings. If the firm falls below the analysts' median forecast after this adjustment, then it is suspected that the firm used discretionary accruals to meet the forecast and is identified by a binary variable EMMEET taking value of 1. EMMEET takes value of 0 for all other firms. I take lagged value of EMMEET to determine the effect of information about the firm possibly manipulating accruals to meet earnings target to be assimilated in the value. I estimate the following model:

$$EXVAL_{i,t} = \beta_0 + \beta_1 EMMEET_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_EMMEET_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE + \varepsilon_{i,t}$$

… Equation (3)

In Equation 3, DIV_EMMEET is an interaction variable that is defined as DIVERSIFIED x EMMEET. The coefficient on this variable signifies the effect of diversified firms suspect of using accruals to meet or beat earnings targets on their excess value. The excess value based on assets and sales is denoted as EXVAL_A and EXVAL_S respectively. The other variables are same as defined before.

I use the following OLS regression to analyze the effect of accruals quality on diversification discount:

$$EXVAL_{i,t} = \beta_0 + \beta_1 ACCRUALS\ QUALITY_{i,t-1} + \beta_3 DIV\_EMMEET_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE + \varepsilon_{i,t}$$

… Equation (4)

I only consider diversified firms for this analysis because I intend to determine the effect of accruals quality on diversification discount within this group of firms. I use ADA_MJ, ADA_PERF, DD_AQ and DD_DISC to measure ACCRUALS QUALITY in four different regressions. A negative coefficient for the variable ACCRUALS QUALITY would indicate greater diversification discount for firms with poorer accruals quality.

3.4.3 Description of Sample

The sample consists of non-financial firms over the time period 1998 to 2012 with data available on COMPUSTAT's industry segment file. The requirements of segment reporting, especially the definition of reportable segments, changed substantially through introduction of SFAS 131. The statement is effective for fiscal years commencing after December 15, 1997 and therefore the sample period starts with fiscal years ending after December, 15 1998.

I only include those segments disclosed as "Business" or "Operating" segments from COMPUSTAT segments database. Since the focus of the study is on diversification and SIC codes assigned to segments indicate whether different segments of a firm

operate in distinct industries, the instances where segment SIC code is not available were removed. COMPUSTAT identifies segment information which relates to elimination of inter-segment transactions as a separate line item, indicated by segment identification number (SID) 99. Therefore, the data items where segment type is 'Eliminations' or with SID 99 were removed. Following Berger and Ofek (1995), Segment with missing sales data or assets data or sales less than $20 million are also removed. Segments in financial industry (sic 6000 to sic 6999) are also removed from the sample. To remove discrepancies in segment and firm level data, I impose a condition that sales of all the segments of a firm should not exceed the total firm's sale and should not be less than 90% of the firm's total sale. This sample was interacted with annual and quarter data from COMPUSTAT of non-financial firms with sales greater than $20 million. I obtain actual and forecast annual earnings per share values from the Institutional Brokers Estimate System (I/B/E/S) and stock price information from Center for Research in Security Prices (CRSP). Financial data from years prior to 1998 is used for constructing some variables which require such information.

Descriptive statistics of the data classified into 'diversified' and 'focused' firms is presented in Table 3.1. Diversified firms are bigger and more profitable on average. However, they exhibit lower growth rates compared to single-segment firms. The median excess value for diversified firms is around 11% based on segment sales and around 7% based on segment assets. These are in line with excess values reported in earlier literature (e.g. Bens and Monahan, 2004). There are fewer companies with disclose asset values for individual segments on COMPUSTAT segment database which accounts for fewer firms available for measuring diversification discount using

asset multiples. As discussed in Essay 1 of this dissertation, diversified firms have 'better' accruals quality measures as compared to focused firms when we compare average absolute discretionary accruals or variance in residuals from mapping of accruals to cash flows.

Table 3.2 reports Pearson correlations between variables used in the study. EMMEET is negatively correlated with excess value measures. This indicates that firms using accruals to meet or beat analysts' forecasts are traded at a higher discount. Most of the accruals quality measures are also negatively correlated with EXVAL_S and EXVAL_A indicating adverse impact of poor accruals quality on diversification discount.

3.5 Results and Discussion

In this section, I explore whether diversification discount (or excess value) documented in prior literature is influenced by earnings quality of diversified firms using regression analysis. I use annual data for focused and diversified firms for this analysis.

The regression results for equation 1 are presented in Table 3.3. The dependent variable, EXVAL is the excess value calculated based on sales multiples in model (1) and based on assets multiples in model (2). The coefficient of DIVERSIFIED is negative and significant. This variable indicates the discount in value for diversified firms as compared to focused firms. The coefficient on JBEAT is positive representing value enhancing effect of beating earnings benchmarks. The coefficient

on DIV_JBEAT is negative but only significant at 5% level in model (1) and at 10% level in model (2). This result indicates that the market valuation for beating analysts' forecasts is lower for diversified firms compared to focused firms. The coefficients on this variable are not very significant but they do provide some support for H1. The signs on coefficients of control variables are in expected direction. I find that there is no statistical difference in diversification discount between diversified and undiversified firms which just miss the analysts' forecasts. However, just missing analysts' forecasts cannot be interpreted as a mirroring situation to just meeting or beating earnings targets. A well-known practice of management taking a "big bath" (e.g. see Elliott and Hanna (1996)) when reporting bad news can add further complexity in attempting to interpret incidence of firms just missing earnings targets.

I consider the effect on excess value of firms which consistently report earnings that are same as or just above analysts' consensus forecasts in Table 3.4. The number of firm-years identified as HABITUAL is 1,713 which is around 7% of total number of firm-years considered in these regressions. The coefficient of HABITUAL is positive and significant indicating that the capital markets generally view consistently meeting earnings forecast as good news. This result is consistent with intuition provided in Bartov et al. (2002). The coefficient on DIV_HABIT (calculated as DIVERSIFIED x HABITUAL) is, however, negative but again not very significant. This suggests that investors' positive outlook towards consistently meeting or beating analysts' forecasts is dampened if the firm in question is diversified. This result again provides some evidence in support of H1.

I use Equation (3) to test H2. The results of this regression are presented in Table 3.5. Negative coefficient on EMMEET that excess value is lower for firms which are

suspect of using discretionary accruals to meet or beat analysts' earnings forecasts. This suggests a slight discount for firms that are suspect of meeting earnings thresholds using discretionary accruals. The coefficient on DIV_EMMEET is negative but again not very significant. This suggests that the discount in value for firms which use discretionary accruals to meet or beat analysts' consensus forecasts is higher for diversified firms. The investors seem to adjust for lower earnings quality of diversified firms. Overall, these results suggest that the diversified firms with lower earnings quality suffer from deeper diversification discounts or lower excess values.

To study the effect of accruals quality within diversified firms on diversification discount, I sort diversified firms into quintiles based on accruals quality measures and compute average diversification discount for each quintile for every year. The results of this analysis are presented in Table 3.6. The diversification discount increases monotonically for almost all measures of accruals quality except for ADA_PERF where the difference between diversification discount in quintile 2 is not significantly different from that in quintile 5. However, the difference between quintile 1 and quintile 5 is still significant. The mean and median diversification discount for first quintile of DD_AQ is a higher than those for quintile 2 but then increases monotonically after quintile 2. The general trend, however, exhibits increasing diversification discount as accruals quality worsens. Table 3.7 presents results of OLS regression using equation (4) and excess value based on sales multiples as dependent variable. The data relates to diversified firms only. I expect that accruals quality of firms would be reflected in diversification discount with a delay, so diversification discount of time 't' is dependent variable while accruals quality of time t-1 is independent variable. Other variables that have been suggested to have an impact on

diversification discount in prior literature are included in the regression. These include leverage of the firm denoted by LEV, year-on-year sales growth (GROWTH), Capital investment by the firm deflated by total assets (INVEST), SIZE which is natural log of total assets of the firm, net operating income scaled by total assets (EARNINGS) and an indicator variable that takes value of 1 if the firm reported loss for the year and 0 otherwise (LOSS). The variable ACCRUALS QUALITY refers to absolute discretionary accruals computed using modified jones model in column (1), performance adjusted absolute discretionary accruals in column (2), Dichow-Dichev model based accruals quality in column (3) and a measure of discretionary accruals based on Dichow-Dichev model in column (4). Table 3.8 presents results for similar regression with dependent variable being excess value based on assets multiples. A negative coefficient for ACCRUALS QUALITY indicates lower excess value or higher diversification discount for firms with poor accruals quality. The results are stronger if innate accruals quality is extricated in column (4). Other control variables are in line with previous studies concerning diversification discount (e.g. Bens and Monahan, 2004). These results confirm previous observation that worsening accruals quality results in deeper diversification discounts and provide support for H3. Overall, the results suggest that investors adjust for greater flexibility available to the diversified firms in making financial reporting choices in their pricing decisions.

3.6 Conclusions

I analyze relationship between earnings quality and diversification discount. The source of this ‘discount’ has been suggested to be greater agency and transparency

problems with diversified firms compared to focused firms. Diversification reduces information transparency and allows managers greater flexibly in managing reported earnings. The results of this study suggest that investors account for this flexibility and discount the value of diversified firms which meet or beat earnings benchmarks. Accruals quality being one of the determinants of diversification discount means that investors consider lower information transparency of diversified firms as a factor in pricing decisions. However, market participants seem to recognize this flexibility available to diversified firms and adjust their pricing decisions accordingly. The diversification discount seems to be greater for firms with poorer accruals quality measured through traditional earnings quality measures based on identification of 'abnormal' accruals. Within the sample of diversified firms, poor accruals quality leads to greater diversification discount. These results suggest that investors consider information asymmetry problems to be severe in diversified firms. This problem is reflected in their market valuations where investors discount the value of diversified firms especially when their earnings quality is suspect.

In addition to immediate price reactions to earnings news, there is evidence suggesting that investors discount perceived lower accounting quality of diversified firms over a longer time horizon. This study also contributes to the debate about the sources of diversification discount. It appears that lack of transparency in information environment surrounding diversified firms is one of the determinants of the observed diversifications discount.

Chapter 4: Conclusions and Future Research

This dissertation focused on the ability of diversified firms to meet or beat analysts' earnings forecasts and its consequences.

First essay concentrates on propensity of firms to just meet or beat such targets. I find that managers of diversified firms find it easier to achieve such financial reporting targets. Diversified firms carry out their operations in multiple lines of business and mandatory disclosure requirements for these lines of business are not as comprehensive as requirements they would have to satisfy if they were stand-alone businesses. This information opacity and I speculate that it is the flexibility available to managers of diversified firms in making accounting choices and real business decisions which helps them achieve those targets. In the second essay, I find that long term valuations of diversified firms reflected in diversification discount are affected by earnings quality. Together, these results suggest that diversification helps firms in manipulating the information transmitted to outsiders. The information opacity surrounding these firms and flexibility available to the managers of these firms is considered by investors while making pricing decisions.

There has been considerable debate regarding pros and cons of diversification and form and extent of mandatory reporting for financial performance and position of individual segments of diversified firms. This work suggests that the current financial reporting regime regarding financial reporting by diversified firms might not be adequate to remove information opaqueness surrounding such firms.

This work can be extended by determining whether proprietary costs play any role in financial reporting decisions and how do they interact with agency costs related to diversified firms. An investigation into the sources of difference in the levels of information asymmetry between diversified firms and focused firms can be a further avenue of research. These differences might be caused by greater asymmetric information about assets in place for diversified firms and greater growth opportunities for focused firms (Wu and Yeung, 2012). The role of real earnings management in helping managers of diversified firms to achieve their objectives is also an area that needs further investigation. Deeper investigation of the channels through which financial reporting quality impacts stock prices can also be an avenue of further exploration. The design of compensation contracts and management turnover decisions in response to suspected earnings management by managers of diversified firms is also an interesting area that needs to be explored.

Appendix – Measures of Accruals Quality and Real Earnings Management

This appendix gives details of accruals quality and real earnings management measure I used in the dissertations. Following is the description of the models I used:

Modified Jones

Modified versions of 'Discretionary Accruals' model proposed by Jones (1991) have been used in accounting and finance literature to measure earnings quality or as indicators of earnings management. Traditionally, researchers form an expectation of 'Non-discretionary accruals' (NDA) and the difference between Total Accruals and NDA results in 'Discretionary Accruals' which are thought to be subject to manipulation by the management. Following Dechow, Sloan, and Sweeney (1996), I define total accruals as follows:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta CASH_{it} + \Delta STD_{it} - DEP_{it}) \quad (1)$$

where for firm i at time t, TA_{it} represents total accruals, ΔCA_{it} is the change in current assets, ΔCL_{it} is the change in current liabilities, $\Delta Cash_{it}$ is the change in cash holdings, ΔSTD_{it} is the change in long-term debt in current liabilities, and DEP_{it} represents depreciation and amortization expense.

Abnormal accruals are measured as the difference between actual accruals and the expected accruals estimated from a time-series or cross-sectional model. Discretionary Accruals are the difference between total accruals and non-

discretionary accruals. I estimate Non-discretionary accruals using the following modified Jones (1991) model for each period and two-digit SIC code industry composed of at least 20 firms:

$$\frac{TA_{it}}{A_{it-1}} = \beta_0 \frac{1}{A_{it-1}} + \beta_1 \frac{(\Delta REV_{it} - \Delta AR_{it})}{A_{it-1}} + \beta_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it} \qquad (2)$$

Where ΔREV_{it} represents change in revenue of firm i at time t, ΔAR_{it} represents change in accounts receivable of firm i at time t, PPE_{it} represents property, plant, and equipment of firm i at time t, and A_{it-1} represents lagged total assets of firm i.

Performance adjusted Discretionary Accruals

There is a concern that the above model might be misspecified if portioning event is related to firm performance (Kothari, Leone, and Wasley (2005)). Kothari, Leone, and Wasley (2005) suggested that using performance-matched firm's discretionary accruals can diminish the impact of such misspecifications. Thus, following Kothari, Leone, and Wasley (2005), for each sample observation, I find a matched firm-period with the sample fiscal-period, within the same two-digit SIC and with a similar lagged ROA, defined as income before extraordinary items divided by total assets and then compute performance-adjusted abnormal accruals by subtracting the abnormal accruals of the matched firm-period.

Dechow and Dichev's Model

Accruals are effectively accounting instruments which intend to match revenues and expenses of a period when the related cash flows occur in earlier or later periods. Dechow and Dichev (2002) argue that a firm's earnings quality is better if the accruals 'map' better with cash flows in the preceding, current and subsequent periods. Their model can be represented by the following equation:

$$TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + \varepsilon_{i,t} \quad (3)$$

The variability of error term in the above equation indicated the 'accruals quality'; larger variations representing poorer quality. McNichols (2002) argued that the error term still contained some information other than poor 'mapping' of cash flows to accruals and suggested using growth in revenue and property, plant and equipment to mitigate this problem. Francis et al. (2005) extend the Dechow and Dichev (2002) accrual quality model by adding these two variables to it; change in revenues (ΔRev), and property, plant and equipment (PPE). The model is as follows:

$$TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t} \quad (4)$$

Where TCA is total current accruals, CFO is cash flow from operations, ΔRev is change in revenue and PPE is net property, plant and equipment. All variables are scaled by the average of total assets.

Few studies use a time series measure of accrual quality, the model is estimated over minimum of 8 periods and standard deviation of the residual is measured as the 'firm specific' measure of accruals quality.

I use a cross sectional measure which is estimated by industry-year within each one of the 48 industry groups (containing at least 20 observations) defined by Fama and French (1997) for each year. The Accruals Quality (AQ) is defined as the standard deviation of the residual, $\varepsilon_{i,t}$ for years t-4 to year t. A higher value of standard deviation reflects lower earnings quality.

Discretionary AQ

Francis et al. (2005) disaggregate accruals quality (AQ) into innate and discretionary components. A firm's operating environment and business model has an impact on measured AQ. They argue that since such factors are not a reflection of accounting choices and judgements made by management, the residual AQ after extracting innate factors, is a better reflection of their opportunistic or signalling behaviour. They call this residual Discretionary Accruals Quality (DISC_AQ) and is defined as residual from the following yearly regressions:

$$AQ_{i,t}=\lambda_0+\lambda_1 STD\_SALES_{i,t}+\lambda_2 STD\_CF_{i,t}+\lambda_4 NEG\_EARN_{i,t}+\lambda_5 OC_{i,t}+ \lambda_6 SIZE_{i,t} + \mu_{i,t}, \quad (5)$$

where AQ is accruals quality as measured above, $STD\_SALES_{i,t}$ and $STD\_CF_{i,t}$ are standard deviation of sale and operating cash flows scaled by total assets during

previous 5 years, $OC_{i,t}$ is length of operating cycle calculated as log of the sum of inventory days and days receivable and $SIZE_{i,t}$ is the log of total assets.

Quarterly Discretionary Accruals

I follow the literature to calculate quarterly discretionary accruals using the modified Jones Model. Specifically, for each industry-quarter (two-digit SIC industry), I estimate the following regression

$$\frac{TA_{it}}{A_{it-1}} = \beta_0 \frac{1}{A_{it-1}} + \beta_1 \frac{(\Delta\Delta RE_{it} - \Delta AR_{it})}{A_{it-1}} + \beta_2 \frac{PPE_{it}}{A_{it-1}} + \beta_3 Q_2 + \beta_4 Q_3 + \beta_5 Q_4 + \varepsilon_{it} \quad (6)$$

where TAit is total quarterly accrual of firm I in quarter t, defined as income before extraordinary items minus net cash flow from operating activities. The data item for cash flow from operating activities (OANCFY) is cumulative to date and needs to be adjusted to find cash flows during current period. Change in revenue (ΔREVi) is quarterly change in sales (SALEQ in compustat) and ΔARi is the quarterly change in accounts receivables (RECTQ). PPEi is net property plant and equipment (PPENTQ). The model has three dummy variables Q1, Q2 and Q3 which equal 1 for each quarter they represent. All variables, including the dummy variables, are scaled by total assets at the beginning of the quarter. All scaled variables are winsorized at the 1st and 99th percentiles

Following Kothari et al (2005), I also calculate performance adjusted discretionary accruals. Each quarter, I divide firms within a two-digit SIC industry into quartiles based on Return on Assets. Abnormal accruals for each firm in every quarter is then calculated as that firm's discretionary accruals minus mean discretionary accruals in that industry-quarter quartile.

Real Earnings Management

I follow Gunny's (2010) methodology, which refined the empirical models used in prior literature (Roychowdhury 2006), for arriving at indicators of real earnings management. The underlying principle is similar to that used for evaluating 'abnormal accruals'. I use three models suggested by Gunny (2010) for estimating 'abnormal' Research and Development expenses (R&D), Selling and General and Administrative Expenses (SG&A), and Production Costs.

Gunny (2010) expresses the "normal" level of R&D expense by the following model:

$$\frac{RD_{it}}{TA_{tt-1}} = \frac{\alpha_0}{TA_{it-1}} + \alpha_1\left(\frac{MV_{it}}{TA_{it-1}}\right) + \alpha_2\left(\frac{Q_{it}}{TA_{it-1}}\right) + \alpha_3\left(\frac{INT_{it-1}}{TA_{it-1}}\right) + \alpha_4\left(\frac{RD_{it-1}}{TA_{it-1}}\right)\varepsilon_{it} \qquad (7)$$

Where RD is Research and Development expense for firm i during period t, TA is Total Assets, MV is log of market value, Tobin is Tobin's Q and INT is internal funds (defined as income before extraordinary items plus research and development expense plus depreciation and amortortization).

Another indicator of real earnings management is the "abnormal" SG&A expenses. The normal level of SG&A is estimated using the following model:

$$\frac{SGA_{it}}{TA_{it-1}} = \frac{\alpha_0}{TA_{it-1}} + \alpha_1\left(\frac{MV_{it}}{TA_{it-1}}\right) + \alpha_2\left(\frac{Q_{it}}{TA_{it-1}}\right) + \alpha_3\left(\frac{INT_{it-1}}{TA_{it-1}}\right) + \alpha_4\left(\frac{\Delta S_{it}}{TA_{it-1}}\right) + \alpha_5\left(\frac{\Delta S_{it}}{TA_{it-1}}\right) * DD + \varepsilon_{it} \quad (8)$$

Where SGA is Selling, General & Administrative expenses, TA is the Total Assets, MV is the natural logarithm of market value, Q is Tobin's Q, INT is Internal funds (defined above), S is total sales and DD is an indicator variable taking the value of 1 when total sales decrease between t - 1 and t and zero otherwise. The equation is similar to the one used for estimating normal levels of R&D except for the use of sales growth and the implication for the idea that selling, general and administrative expenses tend to be 'sticky' and hence would tend to decrease at a slower rate than the rate of decrease in sales (Gunny 2010).

The last indicator I use as a proxy for real earnings management is the level of production costs. Normal levels of product costs are determined by estimating the following equation for each industry period:

$$\frac{PROD_{it}}{TA_{it-1}} = \frac{\alpha_0}{TA_{it-1}} + \alpha_1\left(\frac{MV_{it}}{TA_{it-1}}\right) + \alpha_2\left(\frac{Q_{it}}{TA_{it-1}}\right) + \alpha_3\left(\frac{S_{it}}{TA_{it-1}}\right) + \alpha_4\left(\frac{\Delta S_{it}}{TA_{it-1}}\right) + \alpha_5\left(\frac{\Delta S_{it-1}}{TA_{it-1}}\right) + \varepsilon_{it} \quad (9)$$

Where PROD is production cost calculated as Costs of Goods Sold plus change in inventory during the period**.** Other variables are same as defined for other proxies of real earnings management.

References

Agrawal, A., J. F. Jaffe, and G. N. Mandelker, 1992. The post-merger performance of acquiring firms: A re-examination of an anomaly. *Journal of Finance* 47(4):1605-1621.

AIMR, 1993. Financial reporting in the 1990s and beyond. *Association for Investment and Management Research, Virginia*.

Alchian, A., 1950. Uncertainty, Evolution and Economic Theory. *Journal of Political Economy* 58(3): 211-221.

Anderson, R. C. and D. M. Reeb, 2003. Founding-family ownership, corporate diversification, and firm leverage. *Journal of Law and Economics* 46(2): 653–684.

An, H., Y. Lee and T. W. Zhang, 2014. Do corporations manage earnings to meet/exceed analyst forecasts? Evidence from pension plan assumption changes. *Review of Accounting Studies*. 19(2): 698-735.

Bagnoli, M. and S. Watts, 2010. Oligopoly, Disclosure, and Earnings Management, *The Accounting Review* 85(4): 1191-1214.

Barth, M., J. Elliott, and M. Finn, 1999. Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research* 37(2): 387-413.

Barton J. and P. Simko, 2002. The balance sheet as an earnings management constraint. *Accounting Review* 77(s-1):1–27.

Bartov, E., 1993. The timing of asset sales and earnings manipulation. *The Accounting Review* 68(4): 840-855.

Bartov, E., D. Givoly and C. Hayn, 2002. The rewards to meeting or beating earnings expectations. *Journal of Accounting and Economics* 33(2): 173–204.

Beatty, A., B. Ke and K. Petronti, 2002. Differential earnings management to avoid earnings declines and losses across publicly and privately held banks. *The Accounting Review* 77(3): 547-570.

Beaver,W. H., M. F. McNichols and K. K. Nelson, 2003. Management of the loss reserve accrual and the distribution of earnings in the property-casualty insurance industry. *Journal of Accounting and Economics* 35(3): 347–376.

Bens, D. and S. Monahan, 2004. Disclosure quality and the excess value of diversification. *Journal of Accounting Research* 42(4): 691–730.

Bens, D., V. Nagar, D. Skinner, and M. Wong, 2003. Employee stock options, EPS dilution, and stock repurchases. *Journal of Accounting and Economics* 36(1): 51–90.

Berger, P., and R. Hann, 2003. The impact of SFAS No. 131 on information and monitoring. *Journal of Accounting Research* 41(2): 163–223.

Berger, P. and R. Hann, 2007. Segment profitability and the proprietary and agency costs of disclosure. *The Accounting Review* 82(4): 869–906.

Berger, P. G. and E. Ofek, 1995. Diversification's effect on firm value. *Journal of Financial Economics* 37(1): 39–65.

Bergstresser, D. and T. Philippon, 2006. CEO Incentives and Earnings Management. *Journal of Financial Economics* 80(3): 511-529.

Bernhardt, D. and M. Campello, 2007. The dynamics of earnings forecast management. *Review of Finance* 11(2): 287–324.

Bhattacharya, U., H. Daouk and M. Welker, 2003. The world price of earnings opacity. *The Accounting Review* 78(3):641–678.

Bhattacharya, N., H. Desai and K. Venkataraman, 2013. Does Earnings Quality Affect Information Asymmetry? Evidence from Trading Costs. *Contemporary Accounting Research* 30(2): 482–516.

Bhojraj, S., P. Hribar, M. Picconi, and J. McInnis, 2009. Making sense of cents: an examination of firms that marginally miss or beat analyst forecasts. *Journal of Finance* 64(5): 2361–2388.

Botosan, C. and M. Harris, 2000. Motivations for a Change in Disclosure Frequency and Its Consequences: An Examination of Voluntary Quarterly Segment Disclosures. *Journal of Accounting Research* 38(2):329-353.

Botosan, C., and M. Stanford, 2005. Managers' motives to withhold segment disclosures and the effect of SFAS No. 131 on analysts' information environment. *The Accounting Review* 80(3): 751–771.

Bowen, R., L. DuCharme and D. Shores, 1995. Stakeholders' implicit claims and accounting method choice. *Journal of Accounting and Economics* 20(3): 255-295.

Brown, L.D, 2001. A Temporal Analysis of Earnings Surprises: Profits vs. Losses. *Journal of Accounting Research* 39(2):221–41.

Brown, L. and M. L. Caylor, 2005. A temporal analysis of quarterly earnings thresholds: Propensities and valuation consequences. *The Accounting Review* 80(2): 423-440.

Burgstahler, D. and I. Dichev, 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics* 24(1): 99-126.

Burgstahler, D. and M. Eames, 2006. Management of Earnings and Analysts' Forecasts to Achieve Zero and Small Positive Earnings Surprises. *Journal of Business Finance & Accounting* 33(5-6): 633–652

Bushman, R., J. Piotroski, and A. Smith, 2004. What determines corporate transparency? *Journal of Accounting Research* 42 (2): 207-252.

Burch, T. R. and V. Nanda, 2003. Divisional diversity and the conglomerate discount: evidence from spin-offs. *Journal of Financial Economics* 70(1): 69 – 98.

Campa, J. M. and K. Simi, 2002. Explaining the Diversification Discount. *Journal of Finance* 57(4): 1731-1762.

Canace, T., M. Caylor, P. Johnson, and T. Lopez, 2010. The effect of Regulation Fair Disclosure on expectations management: International evidence. *Journal of Accounting and Public Policy* 29(5): 403-423.

Cao, Y., L. A. Myers, and T. C. Omer, 2012. Does company reputation matter for financial reporting quality? Evidence from restatements. *Contemporary Accounting Research* 29(3): 956–990.

Clarke, R. N., 1983. Collusion and the incentives for information sharing. *Bell Journal of Economics* 14(2): 383-394.

Cohen, D., A. Dey, and T. Lys, 2008. Real and accrual based earnings management in the Pre and Post Sarbanes Oxley periods. *The Accounting Review* 83(3): 757–787.

Cohen, L., and D. Lou, 2012. Complicated Firms. *Journal of Financial Economics* 104(2): 383-400.

Comment, R. and G. A. Jarrell, 1995, Corporate focus and stock returns, *Journal of financial Economics* 37(1): 67-87.

Conrad, J., B. Cornell and W. Landsman, 2002. When is Bad News Really Bad News? *Journal of Finance* 57(6): 2507-2532.

Cornell, B. and A. Shapiro, 1987. Corporate stakeholders and corporate finance. *Financial Management* (Spring): 5-14.

Cotter, J., I. Tuna and P.D. Wysocki, 2006. Expectations Management and Beatable Targets: How do Analysts React to Explicit Earnings Guidance? *Contemporary Accounting Research* 23(3): 593–624.

Cusatis, P., J. Miles, and J. Woolridge, 1993. Restructuring through spin-offs: the stock market evidence. *Journal of Financial Economics* 33(3): 293-311.

Dechow, P., W. Ge, and C. Schrand, 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50(2): 344-401.

Dechow, P. M., S. P. Kothari, and R. L. Watts, 1998. The relation between earnings and cash flows. *Journal of Accounting and Economics* 25(2): 133-168.

Dechow, P.M., R.G. Sloan and A.P. Sweeney, 1995. Detecting Earnings Management, *The Accounting Review* 70(2):193-225.

Dechow, P. and I. Dichev, 2002. The quality of accruals and earnings: the role of accrual estimation errors, *The Accounting Review* 77(s-1): 35-59.

Dechow, P., S. Richardson and I. Tuna, 2003. Why are earnings kinky? An examination of the earnings management explanation. *Review of Accounting Studies* 8(2-3): 355–384.

DeFond, M. L., 2010. Earnings quality research: advances, challenges and future research. *Journal of Accounting and Economics* 50(2): 402-409.

Degeorge, F., J. Patel, and R. Zeckhauser, 1999. Earnings management to exceed thresholds. *Journal of Business* 72(1):1–33.

Demirkan, S., S. Radhakrishnan, and O. Urcan, 2012. Discretionary accruals quality, cost of capital, and diversification. *Journal of Accounting, Auditing and Finance* 27(4): 496-526.

Demerjian, P. R., B. Lev, M. F. Lewis, and S. E. Mcvay, 2013. Managerial Ability and Earnings Quality. *The Accounting Review* 88(2): 463-498.

Denis, D. J., D. K. Denis, and A. Sarin, 1997. Agency problems, equity ownership, and corporate diversification. *Journal of Finance* 52(1):135–160.

Desai, H. and P. C. Jain, 1999. Firm performance and focus: long-run stock market performance following spinoffs. *Journal of Financial Economics* 54(1): 75–101.

Dhaliwal, D., C. Gleason and L. Mills, 2004. Last-chance earnings management: using the tax expense to meet analysts' forecasts. *Contemporary Accounting Research* 21(2): 431–459.

Diamond, D., and R. Verrecchia, 1991. Disclosure, liquidity and the cost of capital. *The Journal of Finance* 46(4): 1325–359.

Dichev, I., J. Graham, C. Harvey, and S. Rajgopal, 2013. Earnings Quality: Evidence from the Field, *Journal of Accounting and Economics* 56(1): 1-33.

Dopuch, N., R. Mashruwala, C. Seethamraju and T. Zach, 2011. The impact of a heterogeneous accrual-generating process on empirical accrual models. *Journal of Accounting, Auditing & Finance* 1(1): 1–26.

Durtschi, C. and P. Easton, 2005. Earnings management? The shapes of the frequency distribution of earnings metrics are not evidence of Ipso Facto. *Journal of Accounting Research* 43(4): 557-592.

Durtschi, C., and P. Easton, 2009. Earnings management? Erroneous inferences based on earnings frequency distribution. *Journal of Accounting Research* 47(5): 1249-1281.

Duru, A. and D. M. Reeb, 2002. Geographic and industrial corporate diversification: The level and structure of executive compensation. *Journal of Accounting* 17(1): 1-24.

Elliott, J. A., and J. D. Hanna. 1996. Repeated accounting write-offs and the information content of earnings. *Journal of Accounting Research* 34: 135-155.

Ernst & Young LLP, 1998. *Disclosures about Segments of an Enterprise and Related Information: FASB SFAS No. 131*. New York, NY: Ernst & Young.

Ewert, R. and A. Wagenhofer, 2005. Economic Effects of Tightening Accounting Standards to Restrict Earnings Management. *The Accounting Review* 80(4): 1101-1124

Fama, E. F., and K. R. French, 1997. Industry costs of equity. *Journal of Financial Economics* 43: 153–193.

Fluck Z, and A. Lynch, 1999. Why do Firms Merge and then Divest? A Theory of Financial Synergy. *Journal of Business* 72: 319-346.

Francis, J., R. LaFond, P. Olsson, and K. Schipper, 2005. The market pricing of accruals quality. *Journal of Accounting and Economics* 39 (2): 295–327

Gertner, R. H., D. S. Scharfstein, and J. C. Stein, 1994. Internal versus external capital markets, *Quarterly Journal of Economics* 109: 1211-1230.

Gigler, F., 1994. Self-enforcing voluntary disclosures. *Journal of Accounting Research* 32(2): 224-240.

Gilson, S., P. Healy, C. Noe, and K. Palepu, 2001. Analyst specialization and conglomerate stock breakups. *Journal of Accounting Research* 39(3): 565–582.

Givoly, D., C. Hayn and J. D'Souza, 1999. Measurement errors and information content of segment reporting. *Review of Accounting Studies* 4(1): 15–43.

Graham, J. R., C. R. Harvey, and S. Rajgopal, 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40(1): 3–73.

Gunny, K.A., 2010. The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks. *Contemporary Accounting Research* 27(3): 855–888.

Habib, M., Johnson, and N. Naik, 1997. Spinoffs and information. *Journal of Financial Intermediation* 6(2): 153-176

Hann, R. N., M., Ogneva, and O. Ozbas, 2013. Corporate diversification and the cost of capital. *The journal of finance* 68(5): 1961-1999.

Harris, M., 1998. The association between competition and managers' business segment reporting decisions. *Journal of Accounting Research* 36 (1): 111–128.

Hart, O. (1983): The market mechanism as an incentive scheme, *Bell Journal of Economics*, 14(1), 366 382.

Hayn, C., 1995. The information content of losses. *Journal of Accounting and Economics* 20(2): 125-153.

Hayes, R., and R. Lundholm, 1996. Segment reporting to the capital market in the presence of a competitor. *Journal of Accounting Research* 34(2): 261–279.

Healy, P. M., 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7(1):85-107

Healy, P. M. and K. G. Palepu, 1993. The effect of firms' financial disclosure strategies on stock prices. *Accounting Horizons* 7(1): 1-11.

Healy, P. M., and K. G. Palepu, 2001. Information asymmetry, corporate disclosure and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31(1): 405-440.

Healy, P. M. and J. M. Wahlen, 1999. A review of the earnings management literature and its implications for standard setting. *Accounting Horizons* 13(4): 365–383.

Herrmann, D., and W. Thomas, 2000. An analysis of segment disclosures under SFAS No. 131 and SFAS No. 14. *Accounting Horizons* 14(3): 287–302.

Herrmann, D., T. Inoue, and W. Thomas, 2003. The sale of assets to manage earnings in Japan. *Journal of Accounting Research* 41(1): 89–108.

Herrmann, D., O.-K. Hope, J. L. Payne and W. B. Thomas, 2011. The Market's Reaction to Unexpected Earnings Thresholds. *Journal of Business Finance & Accounting*, 38(1-2): 34–57.

Hoechle, D., M. Schmid, W. Walter, and D. Yermack, 2012. How much of the diversification discount can be explained by poor governance? *Journal of Financial Economics* 103(1): 41–60.

Hribar, P., N. Jenkins, and W. Johnson, 2006. Stock repurchases as an earnings management device. *Journal of Accounting and Economics* 41(1): 3–27.

Huson, M. R., and G. MacKinnon, 2003. Corporate spinoffs and information asymmetry between investors. *Journal of Corporate Finance* 9 (4): 481-503.

Hutton, A.P., 2005. Determinants of Managerial Earnings Guidance Prior to Regulation Fair Disclosure and Bias in Analsyts' Earnings Forecasts. *Contemporary Accounting Research* 22(4): 867–914.

Jensen, M., 1986. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76(2): 323–329.

Jensen M. C., W. H. Meckling, 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3: 305-360.

Jiraporn, P., Y. S. Kim, and I. Mathur, 2008. Does Corporate Diversification Exacerbate or Mitigate Earnings Management?: An Empirical Analysis. *International Review of Financial Analysis* 17(5): 1087-1109.

Jones, J., 1991. Earnings Management during Import Relief Investigations. *Journal of Accounting Research*, 29: 193-228.

Kasznik, R., M. McNichols, 2002. Does meeting earnings expectations matter? Evidence from analyst forecast revisions and share prices. *Journal of Accounting Research* 40(3): 727–759.

Keating, A. S., 1997. Determinants of divisional performance evaluation practices. *Journal of Accounting and Economics* 24(3): 243-273.

Kinney,W., D. Burgstahler and R. Martin, 2002. The Materiality of Earnings Surprise. *Journal of Accounting Research* 40(5): 1297–329.

Kirschenheiter, M., and N. D. Melumad, 2002. Can "Big Bath" and Earnings Smoothing Co-exist as Equilibrium Financial Reporting Strategies?. *Journal of Accounting Research* 40(3): 761-796.

Koh, K., D. Matsumoto, and S. Rajgopal, 2008. Meeting or Beating Analyst Expectations in the Post-Scandals World: Changes in Stock Market Rewards and Managerial Actions. *Contemporary Accounting Research* 25(4): 1067–1098.

Kothari, S.P., A. Leone, and C. Wasley, 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting & Economics* 39(1): 163-197.

Krishnaswami, S. and V. Subramaniam, 1999. Information asymmetry, valuation, and the corporate spin-off decision. *Journal of Financial Economics* 53(1): 73–112.

Kross, W., B. Ro, and I. Suk, 2011. Consistency in meeting or beating expectations and management earnings forecasts. *Journal of Accounting and Economics* 51(1): 37-57.

Laeven, L. and R. Levine, 2007. Is There a Diversification Discount in Financial Conglomerates? *Journal of Financial Economics* 85(2): 331-367.

Lamont, O., 1997. Cash flow and investment: Evidence from internal capital markets. *Journal of Finance* 52(1): 83–109.

Lamont, O. A., and C. Polk, 2001. The diversification discount: Cash flows versus returns. *Journal of Finance* 56(5): 1693-1721.

Lang, L. H. P., and R. M. Stulz, 1994. Tobin's Q, corporate diversification and firm performance. *Journal of Political Economy* 102: 1248-1280.

Lim, C., T, T. and D. Ding, 2008. Firm diversification and earnings management: evidence from seasoned equity offerings. *Review of Quantitative Finance and Accounting*, 30(1): 69 -92.

Li, X., 2010. The impacts of product market competition on the quantity and quality of voluntary disclosures. *Review of Accounting Studies* 15(3): 663-711

Lo, K., 2008. Earnings management and earnings quality. *Journal of Accounting and Economics* 45(2): 350-357

Maksimovic, V. and G. Phillips, 2002. Do Conglomerate Firms Allocate Resources Inefficiently Across Industries? Theory and Evidence. *Journal of Finance* 57(2): 721-767.

Marquardt, C. A., and C. I. Wiedman, 2004. How are earnings managed? An examination of specific accruals. *Contemporary Accounting Research* 21(2): 461-491.

Martin, J., and A. Sayrak, 2003. Corporate diversification and shareholder value: A survey of recent literature. *Journal of Corporate Finance* 9(1):37–57.

Matsumoto, D., 2002. Management's Incentives to Avoid Negative Earnings Surprises. *The Accounting Review* 77(3): 483–514.

Matsusaka, J. G., 1993. Takeover motives during the conglomerate merger wave, *RAND Journal of Economics* 24: 357-379.

McNichols, M., 2002. Discussion of "The quality of accruals and earnings: The role of accrual estimation errors". *The Accounting Review* 77(s-1): 61-69.

McNichols, M., and G. P. Wilson, 1988. Evidence of Earnings Management from the Provision for Bad Debts. *Journal of Accounting Research* 26(1):1-31.

McVay, S., 2006. Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review* 81(3): 501–531.

McVay, S., V. Nagar and V. W. Tang, 2006. Trading Incentives to Meet the Analyst Forecasts. *Review of Accounting Studies* 11(4): 575–98.

Meyer, M., P. Milgrom and J. Roberts, 1992. Organizational prospects, influence costs, and ownership changes. *Journal of Economics & Management Strategy* 1(1): 9-35.

Moehrle, S., 2002. Do firms use restructuring charge reversals to meet earnings targets? *The Accounting Review* 77(2): 397–4β.

Morck, R., A. Shleifer, and R. W. Vishny, 1990. Do managerial objective drive bad acquisitions?, *Journal of Finance* 45(1):31–48.

Myers, J. N., L. A. Myers and D. J. Skinner, 2006. Earnings momentum and earnings management. *Journal of Accounting, Auditing and Finance* 22(2): 249–284.

Newman, P., and R. Sansing, 1993. Disclosure policies with multiple users. *Journal of Accounting Research* 31(1): 92–112.

Ozbas, O., 2005. Integration, Organizational Processes, and Allocation of Resources. *Journal of Financial Economics* 75(1): 201-242.

Ozbas, O. and S. Scharfstein, 2010. Evidence on the Dark Side of Internal Capital Markets. *Review of Financial Studies* 23(2), 581-599.

Payne, J. L, and S. W. G. Robb, 2000. Earnings Management: The Effect of Ex-ante Earnings Expectations. *Journal of Accounting, Auditing & Finance* 15(4): 371–92.

Phillips, J., M. Pincus and S. Rego, 2003. Earnings management: new evidence based on deferred tax expense. *The Accounting Review* 78(2): 491–521.

Rajan, R., H. Servaes, and L. Zingales, 2000. The cost of diversity: The diversification discount and inefficient investment. *Journal of Finance* 55(1): 35–80.

Rangan, S., 1998. Earnings management and the performance of seasoned equity offerings. *Journal of Financial Economics* 50(1): 101–122.

Richardson, V. J., 2000. Information asymmetry and earnings management: Some evidence. *Review of Quantitative Finance and Accounting* 15(4): 325–347.

Rodríguez-Pérez, G. and S. van Hemmen, 2010. Debt, diversification and earnings management. *Journal of Accounting and Public Policy* 29(2): 138–159.

Rosenfeld, J., 1984. Additional evidence on the relation between divestiture announcements and shareholder wealth. *Journal of Finance* 39(5), 1437-1448.

Roychowdhury, S. 2006. Earnings management through real activities manipulation. *Journal of Accounting and Economics* 41(3): 335-370.

Scharfstein, D. S. and J. C. Stein, 2000. The dark side of internal capital markets: divisional rent-seeking and inefficient investment. *Journal of Finance* 55(6): 2537-2564.

Schipper, K., 1999. Implications of requirement to discuss quality (not just acceptability) of reporting on accounting research and the decision making of standard setter, regulators, management, audit committees, and auditors. Address at the 1999 AAA/FASB Financial Reporting Issues Conference.

Schipper, K. and A. Smith, 1983. Effects of recontracting on shareholder wealth: the case of voluntary spin-offs. *Journal of Financial Economics* 12(4), 437-467.

Scott, T. W., 1994. Incentives and Disincentives for Financial Disclosure: Voluntary Disclosure Pension Plan Information by Canadian Firms. *The Accounting Review* 69(1): 26-43.

Shin, H. H., and R. M. Stulz, 1998. Are internal capital markets efficient? *Quarterly Journal of Economics* 113(2): 531–552.

Skinner, D. and R. Sloan, 2002. Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies* 7(2-3): 289-312.

Sloan, R. G., 1996. Do stock prices fully reflect information in accruals and cash flows about future earnings?. *Accounting Review* 71(3): 289–315.

Srinidhi, B., F. A. Gul and J. Tsui, 2011. Female Directors and Earnings Quality. *Contemporary Accounting Research* 28(5): 1610-1644.

Stein, J. C., (1989). Efficient capital markets, inefficient firms: A model of myopic corporate behavior. *The Quarterly Journal of Economics* 104(4): 655-669.

Stein, J., 1997. Internal capital markets and the competition for corporate resources. *Journal of Finance* 52(1): 111–133.

Stulz, R., 1990. Managerial discretion and optimal financial policies. *Journal of Financial Economics* 26(1): 3–27.

Teoh, S. H., I. Welch, and T. J. Wong., 1998. Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial Economics* 50(1): 63–99.

Teoh, S., T. Wong, and G. Rao, 1998. Are accruals during initial public offerings opportunistic? *Review of Accounting Studies* 3(1–2): 175–208.

Thomas, S., 2002. Firm diversification and asymmetric information: evidence from analysts' forecasts and earnings announcements. *Journal of Financial Economics* 64(3): 373–396.

Tong, Z., 2011. Firm diversification and the value of corporate cash holdings. *Journal of Corporate Finance* 17(3): 741–58.

Tucker, J. and P. Zarowin, 2006. Does income smoothing improve earnings informativeness? *The Accounting Review* 81(1): 251–270.

Verrecchia, R.E. 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5(3): 179-194.

Warfield, T. D., J. J. Wild, and K. L. Wild, 1995. Managerial Ownership, Accounting Choices and Informativeness of Earnings. *Journal of Accounting and Economics*, 20(1): 61-91.

Whited, T., 2001. Is it inefficient investment that causes the diversification discount? *Journal of Finance* 56(5): 1667–1692.

Wu, X., and C. K. A. Yeung, 2012. Firm growth type and capital structure persistence. *Journal of Banking & Finance* 36(12): 3427-3443.

Table 2.1: Number of Firms with Multiple Business Segments

Panel A: Number of segments based on 4 digit SIC codes

	Number of Segments							
Year	Focused	2	3	4	5	>5	Diversified	Diversified %
1999	3456	930	422	175	70	48	1645	32.25
2000	3325	893	407	178	70	47	1595	32.42
2001	3122	841	401	164	62	36	1504	32.51
2002	3018	790	391	147	58	42	1428	32.12
2003	2956	738	363	135	72	35	1343	31.24
2004	2938	740	361	138	54	45	1338	31.29
2005	2866	715	365	114	52	44	1290	31.04
2006	2769	709	348	128	49	42	1276	31.55
2007	2682	672	322	129	49	31	1203	30.97
2008	2641	673	310	122	51	29	1185	30.97
2009	2542	651	305	120	47	30	1153	31.20
2010	2457	622	281	107	41	27	1078	30.50
2011	2314	586	285	103	44	22	1040	31.01
2012	2321	611	268	100	45	21	1045	31.05

Panel B: Number of segments based on 2 digit SIC codes

	Number of Segments							
Year	Focused	2	3	4	5	>5	Diversified	Diversified %
1999	3790	884	301	87	28	11	1311	25.70
2000	3654	825	309	94	34	4	1266	25.73
2001	3431	800	280	84	25	6	1195	25.83
2002	3307	767	263	76	29	4	1139	25.62
2003	3235	708	253	82	19	2	1064	24.75
2004	3202	728	250	71	18	7	1074	25.12
2005	3143	684	241	63	21	4	1013	24.37
2006	3031	706	211	70	24	3	1014	25.07
2007	2918	674	206	65	17	5	967	24.89
2008	2876	650	221	59	16	4	950	24.83
2009	2778	625	217	55	17	3	917	24.82
2010	2683	599	185	47	19	2	852	24.10
2011	2533	579	176	47	17	2	821	24.48
2012	2542	596	154	52	19	3	824	24.48

Table 2.1 (Continued)

Panel C: Number of segments based on Fama French 48 Industries

	Number of Segments							
Year	Focused	2	3	4	5	>5	Diversified	Diversified %
1998	4134	832	245	68	20	5	1170	22.06
1999	3881	868	250	73	19	9	1219	23.90
2000	3737	843	246	70	19	3	1181	24.01
2001	3533	794	214	63	17	3	1091	23.59
2002	3410	750	208	59	15	2	1034	23.27
2003	3327	701	187	62	14	0	964	22.47
2004	3320	695	181	55	17	2	950	22.25
2005	3239	661	184	47	15	1	908	21.90
2006	3162	651	163	55	9	4	882	21.81
2007	3048	613	160	52	7	4	836	21.52
2008	3008	594	167	45	9	2	817	21.36
2009	2889	590	163	38	9	3	803	21.75
2010	2790	552	142	37	10	2	743	21.03
2011	2632	528	144	38	10	1	721	21.50
2012	2647	532	135	41	7	2	717	21.31

The table presents the number of firms and the number of segments they disclosed each year during the sample period. The column heading Focused presents the number of firms which did not report more than one segment in that year. The columns with headings 2, 3, 4, 5 and > 5 present the number of firms which reported the corresponding number of segments in that year. Segment information is gathered from COMPUSTAT 'segments' file. The number of segments exclude inter-segment transactions, segments in financial industry and segments with less than 1 million sales. For Table 1(a) Number of segments is the number of distinct 4 digit SIC industries that a firm's disclosed segments belong to. Table 1(b) describes the number of disclosed segments distinct 2 digit SIC industries. The number of segments in Table 1(c) is based on the number of disctinct Fama French 48 industries a firm's disclosed segments belong to. The column Focused details the number of single segment firms each year and the colums 'Diversified' describe the total number of diversified firms in that year. Diversified % is the percentage of diversified firms in the total sample each year.

Table 2.2: Meeting or Beating Targets, Descriptive Statistics
Panel A: Descriptive Statistics

Non-Diversified Firms

Variable	N	Mean	S.D.	25%	Median	75%
JBEAT	25,059	0.13	0.33	0.00	0.00	0.00
SIZE	25,057	6.12	1.60	4.93	5.94	7.14
MB	24,929	3.16	4.31	1.25	2.12	3.74
SGROWTH	22,812	-0.17	0.35	-0.26	-0.10	0.00
NOA	22,710	1.03	1.41	0.32	0.60	1.13
SHARES	25,021	3.64	1.17	2.82	3.50	4.27
LIT	25,059	0.42	0.49	0.00	0.00	1.00
IMPLICIT	24,905	0.51	0.39	0.28	0.63	0.83
ANALYST	25,059	1.79	0.96	1.10	1.79	2.48
DISPERSION	22,471	0.12	0.93	0.01	0.07	0.24

Diversified Firms

Variable	N	Mean	S.D.	25%	Median	75%
JBEAT	12,363	0.12	0.33	0.00	0.00	0.00
SIZE	12,361	7.35	1.79	6.10	7.31	8.63
MB	12,317	2.41	3.16	1.21	1.82	2.84
SGROWTH	12,024	-0.13	0.30	-0.20	-0.08	0.01
NOA	11,998	1.01	1.09	0.43	0.70	1.18
SHARES	12,339	4.12	1.41	3.11	3.92	4.97
LIT	12,363	0.15	0.36	0.00	0.00	0.00
IMPLICIT	12,322	0.40	0.37	0.14	0.46	0.70
ANALYST	12,363	1.84	0.97	1.10	1.95	2.56
DISPERSION	11,090	0.16	0.83	0.02	0.09	0.27

Table 2.2 continued…

Table 2.2 cont…

Panel B: Correlation Table

	DIVERSIFIED	DIVERSIFIED2	FDIVERSIFIED	HI	JBEAT	SIZE	MB	SGROWTH	NOA	SHARES	LIT	IMPLICIT	ANALYST	DISPERSION
DIVERSIFIED	1.00													
DIVERSIFIED2	0.85	1.00												
	(0.00)													
FDIVERSIFIED	0.78	0.85	1.00											
	(0.00)	(0.00)												
HI	0.71	0.61	0.58	1.00										
	(0.00)	(0.00)	(0.00)											
JBEAT	-0.01	-0.01	-0.00	-0.02	1.00									
	(0.26)	(0.22)	(0.44)	(0.17)										
SIZE	0.33	0.30	0.26	0.37	-0.00	1.00								
	(0.00)	(0.00)	(0.00)	(0.00)	(0.97)									
MB	-0.09	-0.08	-0.08	-0.09	0.06	-0.04	1.00							
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)								
SGROWTH	0.06	0.05	0.04	0.07	-0.02	0.02	-0.14	1.00						
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)							
NOA	-0.01	-0.01	-0.01	-0.01	-0.04	0.21	-0.06	-0.39	1.00					
	(0.06)	(0.03)	(0.01)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)						
SHARES	0.18	0.16	0.12	0.23	0.04	0.82	0.11	-0.00	0.15	1.00				
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.94)	(0.00)					
LIT	-0.26	-0.23	-0.22	-0.27	0.05	-0.20	0.13	-0.03	-0.17	0.00	1.00			
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.49)				
IMPLICIT	-0.14	-0.12	-0.10	-0.11	0.06	-0.27	0.12	-0.12	-0.19	-0.13	0.27	1.00		
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			
ANALYST	0.02	0.03	0.01	0.04	0.09	0.52	0.14	-0.10	0.12	0.54	0.09	0.00	1.00	
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.59)		
DISPERSION	0.02	0.02	0.02	0.03	-0.00	0.07	-0.02	-0.02	0.05	0.04	-0.05	-0.06	0.05	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.47)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	

This table describes the variables used in meeting or beating earnings targets analysis.

DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
HI:	Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
DIVERSIFIED2	Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED	Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
JBEAT	is a binary variable set to 1 if the firm just meets or beats analysts'' median forecast earnings by a maximum of 1 cent and 0 otherwise
SIZE:	Natural log of total assets.
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
SGROWTH:	Percentage sales growth during the year
NOA	net operating assets, calculated as sum of book values of equity and debt reduced by cash and short term investments, of the firm deflated by lagged revenue
SHARES	Log of number of shares outstanding
LOSS:	Takes value of 1 if a firm reports net loss for that year and 0 otherwise
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
IMPLICIT:	Implicit claims calculated as 1 – (PPE / Total Assets)
ANALYST	number of analysts' forecast for the firm in the period
DISPERSION:	Standard deviation of analysts' forecasts

Table 2.3: Propensity of meeting of beating earnings targets – Annual

	JBEAT				BEAT			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DIVERSIFIED	**0.158*** **				0.0323			
	(3.669)				(0.416)			
FDIVERSIFIED		**0.178*** **				0.0221		
		(4.017)				(0.739)		
DIVERSIFIED2			**0.185*** **				0.0325	
			(4.016)				(1.121)	
HI				**-0.193** **				-0.0702
				(-2.547)				(-1.168)
SIZE	-0.220***	-0.215***	-0.213***	-0.215***	0.120***	0.119***	0.123***	0.126***
	(-9.555)	(-9.227)	(-9.378)	(-9.183)	(7.590)	(7.661)	(7.896)	(7.866)
MB	0.018***	0.018***	0.018***	0.018***	0.037***	0.036***	0.035***	0.038***
	(4.092)	(4. 434)	(4.078)	(4.057)	(10.07)	(10.07)	(10.05)	(10.05)
SGROWTH	-0.048	-0.044	-0.048	-0.050	-0.708***	-0.708***	-0.709***	-0.708***
	(-0.822)	(-0.859)	(-0.814)	(-0.849)	(-15.74)	(-15.74)	(-15.76)	(-15.73)
NOA	-0.0123	-0.013	-0.0135	-0.0139	-0.160***	-0.160***	-0.161***	-0.162***
	(-0.669)	(0.618)	(-0.738)	(-0.756)	(-13.04)	(-13.04)	(-13.14)	(-13.16)
SHARES	0.279***	0.279***	0.276***	0.275***	-0.068***	-0.068***	-0.069***	-0.070***
	(9.776)	(9.237)	(9.667)	(9.642)	(-3.448)	(-3.436)	(-3.518)	(-3.527)
LIT	-0.0389	-0.0443	-0.0494	-0.0442	0.132***	0.133***	0.129***	0.124***
	(-0.569)	(-0.682)	(-0.724)	(-0.644)	(2.755)	(2.778)	(2.687)	(2.579)
IMPLICIT	0.160**	0.155**	0.156**	0.152**	0.206***	0.206***	0.207***	0.208***
	(2.354)	(2.168)	(2.298)	(2.226)	(4.791)	(4.789)	(4.810)	(4.834)
ANALYST	0.378***	0.374***	0.374***	0.377***	0.319***	0.319***	0.318***	0.315***
	(12.510)	(11.311)	(12.41)	(12.40)	(16.06)	(16.12)	(16.02)	(15.80)
DISPERSION	0.0170	0.0174	0.0174	0.0169	-0.0497***	-0.0497***	-0.0497***	-0.0498***
	(0.835)	(0.804)	(0.853)	(0.829)	(-3.684)	(-3.684)	(-3.686)	(-3.690)
BIG4	-0.136***	-0.134***	-0.140***	-0.131***	-0.129***	-0.126***	-0.121***	-0.119***
	(-5.151)	(-5.003)	(-5.222)	(-4.998)	(-4.125)	(-4.223)	(-4.201)	(-4.002)
CONSTANT	-3.033***	-3.058***	-3.050***	-2.830***	-1.823***	-1.822***	-1.822***	-1.903***
	(-5.007)	(-5.606)	(-5.035)	(-4.622)	(-6.213)	(-6.213)	(-6.212)	(-6.359)
Observations	32,698	32,698	32,698	32,684	32,707	32,707	32,707	32,693
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES
Pseudo R2	0.0518	0.0518	0.0516	0.0514	0.0710	0.0710	0.0710	0.0710

This table presents the regression of propensity of meeting or beating earnings targets for firms between the years 1998 and 2012. The t-stats are given in brackets and are adjusted for clustering for firms and years. Dependent variable Jbeat is 1 if the firm meets or beats analysts' median forecast by a maximum of one cent and 0 otherwise. Beat is 1 if the firm meets or beats analysts' median forecast and 0 otherwise. SP is 1 if the firm reports a profit up to a maximum of 1 percent of firms' assets and 0 otherwise. BLYE is set to 1 if the firm beats last year's earnings and 0 otherwise. Other variables are defined as:

DIVERSIFIED: Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
HI: 1- Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
DIVERSIFIED2 Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
SIZE: Natural log of total assets.
MB: Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
SGROWTH: Percentage sales growth during the year
NOA net operating assets, calculated as sum of book values of equity and debt reduced by cash and short term investments, of the firm deflated by lagged revenue
SHARES Log of number of shares outstanding
LIT: Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
LOSS: Takes value of 1 if a firm reports net loss for that year
IMPLICIT: Implicit claims calculated as 1 – (PPE / Total Assets)
ANALYST number of analysts' forecast for the firm in the period
DISPERSION: Standard deviation of analysts' forecasts
BIG4: Takes value of 1 if the firm is audited by one of Big4 auditing firms and 0 otherwise

Table 2.4: Propensity of just meeting or beating analyst forecast earnings – Quarterly

	(1)	(2)	(3)	(4)
DIVERSIFIED	**0.095*** **			
	(3.584)			
FDIVERSIFIED		**0.124*** **		
		(4.312)		
DIVERSIFIED2			**0.117*** **	
			(4.249)	
HI				**-0.106** **
				(-2.459)
SIZE	-0.438***	-0.437***	-0.435***	-0.434***
	(-8.41)	(-8.72)	(-8.54)	(-8.66)
MB	0.013***	0.013***	0.013***	0.013***
	(6.616)	(6.616)	(6.617)	(6.702)
LOSS	-0.505***	-0.504***	-0.505***	-0.504***
	(-4.50)	(-4.49)	(-4.53)	(-4.46)
LIT	0.009	0.007	0.003	0.005
	(0.243)	(0.181)	(0.072)	(0.139)
SHARES	0.643***	0.643***	0.641***	0.640***
	(4.43)	(4.48)	(4.40)	(4.21)
ANALYST	0.008***	0.009***	0.009***	0.009***
	(4.255)	(4.310)	(4.341)	(4.305)
DISPERSION	-0.003	-0.003	-0.001	-0.001
	(-0.050)	(-0.071)	(-0.051)	(-0.057)
BIG4	-0.142***	-0.142***	-0.143***	-0.150***
	(-3.900)	(-3.903)	(-3.932)	(-4.125)
CONSTANT	-2.530***	-2.551***	-2.543***	-2.428***
	(-3.843)	(-3.876)	(-3.864)	(-3.678)
Observations	86,735	86,735	86,735	86,587
Quarter FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Pseudo R2	0.0614	0.0615	0.0614	0.0612

This table presents the regression of propensity of meeting or beating earnings targets for firms between the years 1998 and 2012 using quarterly data. The t-stats are given in brackets and are adjusted for clustering for firms and quarters. Dependent variable Justbeat is 1 if the firm meets or beats analysts' median forecast by a maximum of one cent and 0 otherwise. Beat is 1 if the firm meets or beats analysts' median forecast and 0 otherwise. SP is 1 if the firm reports a profit up to a maximum of 1 percent of firms' assets and 0 otherwise. BLYQ is set to 1 if the firm beats earnings reported in same quarter of last year and 0 otherwise. Other variables are defined as:

DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
HI:	Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
DIVERSIFIED2	Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED	Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
SIZE:	Natural log of total assets.
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
LOSS:	Takes value of 1 if a firm reports net loss for that year
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
SHARES:	Log of number of shares outstanding
ANALYST	number of analysts' forecast for the firm in the period
DISPERSION:	Standard deviation of analysts' forecasts
BIG4:	Takes value of 1 if the firm is audited by one of Big4 auditing firms and 0 otherwise

Table 2.5: Impact of increasing or decreasing diversification on the probability of meeting analyst forecast

	Coefficient	z	P value	Coefficient	z	P value
POST_INC	**0.323**	**3.55**	**0.000**			
POST_DEC				**-0.148**	**-1.10**	**0.271**
SIZE	-0.177	-5.37	0.000	-0.176	-5.29	0.000
MB	0.023	2.91	0.004	0.023	2.89	0.004
SGROWTH	-0.075	-0.83	0.407	-0.072	-0.80	0.423
NOA	-0.085	-4.37	0.000	-0.085	-4.35	0.000
SHARES	0.173	3.66	0.000	0.170	3.62	0.000
LIT	0.057	1.12	0.265	0.058	1.12	0.264
IMPLICIT	0.348	6.23	0.000	0.349	6.19	0.000
ANALYST	0.363	10.45	0.000	0.364	10.50	0.000
DISPERSION	0.003	0.27	0.784	0.002	0.20	0.839
CONSTANT	-2.384	-17.32	0.000	-2.378	-17.28	0.000
Industry FE		Yes			Yes	
Year FE		Yes			Yes	
Number of Observations		31,005			31,005	
Pseudo R2		0.029			0.028	

This table presents the results of logistic regression of propensity of meeting or beating earnings targets for firms on years after increase or decrease in number of segments reported by firms between the years 1998 and 2012 using annual data. The t-stats are given in brackets and are adjusted for clustering for firms and years. Dependent variable Justbeat is 1 if the firm meets or beats analysts' median forecast by a maximum of one cent and 0 otherwise. Other variables are defined as:

DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
POST_INC	Binary variable set to 1 in 3 years following increase in number of reported operating segments
POST_DEC	Binary variable set to 1 in 3 years following decrease in number of reported operating segments
SIZE:	Natural log of total assets.
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
SGROWTH:	Percentage sales growth during the year
NOA	Net operating assets, calculated as sum of book values of equity and debt reduced by cash and short term investments, of the firm deflated by lagged revenue
SHARES	Log of number of shares outstanding
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
IMPLICIT:	Implicit claims calculated as 1 – (PPE / Total Assets)
ANALYST	Number of analysts' forecast for the firm in the period
DISPERSION:	Standard deviation of analysts' forecasts for the year

Table 2.6: Effect of increasing or decreasing diversification on the changes in probability of meeting analyst forecast

	All Changes	**Diversification Increase**	**Diversification Decrease**
INTERCEPT	-0.024	-0.003	-0.044
	(-1.53)	(-0.17)	(-1.31)
ΔHI	**-0.128****	**-0.181****	**-0.137**
	(-2.33)	**(-2.01)**	**(-1.38)**
ΔSIZE	-0.046**	-0.091**	-0.006
	(-2.36)	(-1.89)	(-0.13)
ΔMB	0.002	0.001	0.004
	(0.45)	(0.1)	(0.64)
ΔSGROWTH	-0.015**	-0.032**	-0.006**
	(-2.27)	(-2.34)	(-2.18)
ΔNOA	0.007	0.011	0.012
	(0.33)	(0.4)	(-1.31)
ΔIMPLICIT	0.102	0.021	0.100
	(1.08)	(0.18)	(0.66)
ΔANALYST	-0.004	-0.035	0.025
	(-0.15)	(-0.85)	(0.63)
ΔDISPERSION	-0.013	-0.031	0.023
	(-0.67)	(-1.14)	(0.72)
n	537	215	322
R^2	0.02	0.04	0.03

This table presents the regression of changes in propensity of meeting or beating earnings targets on changes in Herfindahl index as a measure of firm diversification. The dependent variable is change in average propensity of a firm to just meet or beat analyst forecasts by a maximum of 0.1 cents three years before and after change in number of segments reported by a firm. The sample includes annual data of firms between the years 1998 and 2012. The t-stats are given in brackets. The regression results described in column 'All Changes" consider all increases and decreases in number of reported segments. The column "Diversification Increase" presents results of regression with only cases of increases in number of reported segments. The results in column "Diversification Decrease" only consider cases where reported number of segments by the firm decreased. Dependent variable ΔHI is change in average Herfindahl index based on segment sales of a firm three years before and three years after the year a change in number of segments is reported by a firm. Other variables also changes in their averages in three years before and three years after the year the number of reported segments change, defined as:

ΔSIZE:	Change in average natural log of total assets.
ΔMB:	Change in average market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
ΔSGROWTH:	Change in average percentage sales growth during the year
ΔNOA	Change in average net operating assets, calculated as sum of book values of equity and debt reduced by cash and short term investments, of the firm deflated by lagged revenue
ΔIMPLICIT:	Change in average implicit claims calculated as 1 – (PPE / Total Assets)
ΔANALYST	Change in average number of analysts' forecast for the firm in the period
ΔDISPERSION:	Change in average standard deviation of analysts' forecasts for the year

Table 2.7: Using Discretionary Accruals to Meet Earnings Targets

	DIVERSIFIED (1)	DIVERSIFIED2 (2)	FDIVERSIFIED (3)	HI (4)
INTERCEPT	-0.479	-0.566	-0.466	-0.633
	(0.234)	(0.883)	(0.248)	(0.1237)
DIVERSIFICATION	**0.129 *****	**0.119 *****	**0.138 *****	**-0.141 ****
	(0.0005)	**(0.0038)**	**(0.0005)**	**(0.0389)**
SIZE	-0.104 ***	-0.164 ***	-0.108 ***	-0.110 ***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)
MB	0.005	0.014	0.005	0.004
	(0.186)	(0.1003)	(0.1777)	(0.1917)
SGROWTH	0.154 ***	0.011 ***	0.152 ***	0.153 ***
	(0.0002)	(0.0001)	(0.0003)	(0.0003)
NOA	-0.003	-0.024 *	-0.004	-0.005
	(0.736)	(0.0644)	(0.7223)	(0.6754)
SHARES	-0.228 ***	-0.250 ***	-0.229 ***	-0.231 ***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)
LIT	-0.318 **	-0.087 **	-0.324 **	-0.323 **
	(0.021)	(0.0200)	(0.0199)	(<.0201)
IMPLICIT	-0.503 ***	0.164 **	-0.509 ***	-0.505 ***
	(<.0001)	(0.0131)	(<.0001)	(<.0001)
ANALYST	0.003	0.387	0.003	0.003
	(0.205)	(0.2001)	(0.2607)	(0.2403)
DISPERSION	0.009	0.016	0.009	0.009
	(0.665)	(0.4314)	(0.6556)	(0.6597)
BIG4	-0.197 **	-0.137 **	-0.199 **	-0.203 **
	(0.020)	(0.0232)	(0.0214)	(0.0203)
OBSERVATIONS	19,024	19,024	19,024	19,024
YEAR FE	YES	YES	YES	YES
INDUSTRY FE	YES	YES	YES	YES
PSEUDO R2	0.044	0.047	0.048	0.051

This table presents results for logistic regression for the firms that are suspect of meeting earnings targets through discretionary accruals. The observations contain all firm-years in which the firm beats analysts' median forecasts. The dependent variable is a binary which is set to 1 when a firm's earnings fall below the labelled target when discretionary accruals (using Modified Jones model described in the appendix) are subtracted from its earnings. Discretionary accruals are calculated using modified Jones (1991) model. Signifcance is determined by Pr > ChiSq given in the brackets below coefficients. DIVERSIFICATION is the measure of diversification identified in the column headings. Other variables are :

DIVERSIFIED: Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
DIVERSIFIED2 Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
HI: Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
SIZE: Natural log of total assets.
MB: Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
SGROWTH: Percentage sales growth during the year
NOA net operating assets, calculated as sum of book values of equity and debt reduced by cash and short term investments, of the firm deflated by lagged revenue
SHARES Log of number of shares outstanding
LIT: Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
LOSS: Takes value of 1 if a firm reports net loss for that year
IMPLICIT: Implicit claims calculated as 1 – (PPE / Total Assets)
ANALYST number of analysts' forecast for the firm in the period
DISPERSION: Standard deviation of analysts' forecasts
BIG4: Takes value of 1 if the firm is audited by one of Big4 auditing firms and 0 otherwise

Table 2.8: Descriptive Statistics for Cumulative Abnormal Returns around Earnings Announcement Dates

Focused Firms

Variable	Obs	Mean	Median	Std. Dev.
CAR	94,583	0.0015	-0.0011	0.1030
ES	101,131	-0.0004	0.01	0.2149
SIZE	101,382	5.1736	5.0636	1.0214
LIT	101,382	0.4082	0	0.4915
LOSS	101,382	0.3805	0	0.4855
MB	107,355	3.3544	2.1255	2.4874
BEAT	101,131	0.5514	1	0.4974
JUSTBEAT	101,131	0.1788	0	0.3832

Diversified Firms

Variable	Obs	Mean	Median	Std. Dev.
CAR	37,073	0.0034	0.0019	0.0869
ES	38,476	0.0033	0.01	0.2805
SIZE	41,899	6.6906	6.7055	1.1115
LIT	41,899	0.1697	0	0.3754
LOSS	41,899	0.2385	0	0.4262
MB	45,682	2.8197	1.7861	3.7925
BEAT	38,476	0.5633	1	0.4960
JUSTBEAT	38,476	0.1555	0	0.3624

This table presents descriptive statistics for analysis of cumulative abnormal returns around quarterly earnings announcement days. Diversified firms are those which report business or operating segments in more than one SIC4 Digit industries. Other firms are considered 'Focused Firms'. The Variables are defined as:

CAR:	Value weighted cumulative abnormal returns 5 days around quarterly earnings announcement days
ES:	Earnings Surprise measured as the difference between reported Earnings Per Share and Median of Analysts' forecasts of Earnings Per Share made during 90 days prior to earnings announcement.
SIZE:	Natural log of total assets.
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
LOSS:	Binary variable that takes value of 1 if the firm reports a loss in the quarter and 0 otherwise
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
BEAT:	Set to 1 if the earnings meet or beat analysts' median forecast for the quarter and 0 otherwise
JUSTBEAT:	Set to 1 if the earnings meet or beat analysts' median forecast for the quarter by one cent or less and 0 otherwise

Table 2.9: Market Reaction to Beating Analysts' Forecasts

Regressions with cumulative abnormal returns 5 days around earnings announcement as dependent variable

	DIVERSIFIED			DIVERSIFIED2		FDIVERSIFIED	
	(1)	(2)	(3)	(4)	(5)	(6)	(7))
DIVERSIFICATION	-0.0016	-0.0011	-0.0020**	-0.0013	-0.0009	-0.0014	-0.0009
	(-1.43)	(-1.48)	(-2.46)	(-1.59)	(-1.18)	(-1.63)	(-1.07)
JUSTBEAT	0.0199***		0.0105***	0.0214***		0.0217***	
	(9.31)		(9.01)	(10.71)		(11.08)	
DJUSTBEAT	-0.0048***		-0.0051***	-0.0040***		-0.0039***	
	(-4.49)		(-4.51)	(-4.08)		(-2.95)	
JUSTMISS		-0.0189***	-0.0199***		-0.0187***		-0.0182***
		(-10.71)	(-12.44)		(-11.32)		(-10.96)
DJUSTMISS		-0.0064*	-0.0065**		-0.0070**		-0.0049
		(-1.94)	(-2.31)		(-2.14)		(-1.38)
BIGBEAT	0.0376***		0.0418***			0.0385***	
	(16.33)		(15.44)			(17.76)	
ES	0.0109***	0.0452***	0.0367***	0.0133***	0.0452***	0.0132***	0.0452***
	(8.25)	(8.29)	(8.31)	(8.73)	(8.29)	(8.72)	(8.28)
DSURP	-0.0382	-0.0125*	-0.0131*	-0.0041	-0.0125*	-0.056**	-0.0125**
	(-1.44)	(-1.98)	(-1.89)	(-1.52)	(-1.92)	(-1.99)	(-1.98)
SIZE	0.0006	0.0048	0.0053	0.0066	0.0029	0.0066	0.0018
	(0.21)	(0.15)	(0.27)	(0.26)	(0.07)	(0.24)	(0.05)
LIT	0.0017	0.0006	0.0009	0.0014	0.0007	0.0012	0.0007
	(1.075)	(0.65)	(0.98)	(1.32)	(0.73)	(1.04)	(0.72)
LOSS	-0.0125***	-0.0196***	-0.0211***	-0.0149***	-0.0196***	-0.0149***	-0.0196***
	(-9.33)	(-15.85)	(-15.12)	(-11.61)	(-15.83)	(-11.60)	(-15.82)
MB	-0.0002	-0.0001	-0.0001	-0.0004	-0.0001	-0.0004	-0.0001
	(-1.02)	(-0.46)	(-0.41)	(-0.57)	(-0.46)	(-1.57)	(-0.46)
CONSTANT	-0.0161***	0.0085***	-0.0313***	-0.0103***	0.0112***	-0.0104***	0.0085***
	(-5.44)	(3.13)	(-4.24)	(-3.47)	(4.23)	(3.48)	(3.14)
Observations	129,617	129,617	129,617	129,617	129,617	125,641	129,617
R-squared	0.028	0.025	0.029	0.024	0.025	0.029	0.024
Quarter FE	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES

This table presents regression results for investors' reaction around quarterly earnings announcement days. The dependent variable is the value weighted cumulative abnormal returns 5 days around quarterly earnings announcement days. . T-stats adjusted for industry and quarter clustering are given in the brackets. Other variables are defined as:

Table 9 continued….

Table 2.9 continued…

DIVERSIFICATION:	Measure of diversification which is 'DIVERSIFIED' for columns 1 to 3, 'DIVERSIFIED2' for columns 4 to 6 and 'FDIVERSIFIED' for columns 7 to 9.
DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
DIVERSIFIED2:	Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED:	Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
JUSTBEAT:	Set to 1 if the earnings meet or beat analysts' median forecast for the quarter by 1 cent or less and 0 otherwise
BIGBEAT:	Set to 1 if the earnings meet or beat analysts' median forecast for the quarter by more than 1 cent and 0 otherwise
DJUSTBEAT:	Interaction of JUSTBEAT and DIVERSIFICATION MEASURE
JUSTMISS	Set to 1 if the reported earnings miss analysts' median forecast for the quarter by one cent or less and 0 otherwise
DJUSTMISS:	Interaction of JUSTMISS and DIVERSIFICATION MEASURE
ES:	Earnings Surprise measured as the difference between reported Earnings Per Share and Median of Analysts' forecasts of Earnings Per Share made during 90 days prior to earnings announcement.
DSURP:	Interaction variable between diversification dummy and ES
SIZE:	Natural log of total assets.
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961).
LOSS:	Binary variable that takes value of 1 if the firm reports a loss in the quarter
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.

Table 2.10: Accruals Management Metrics by Diversification

	MEANS			MEDIANS		
	Diversified Firms	Non-Diversified Firms	Diff t-test	Diversified Firms	Non-Diversified Firms	Diff Chi-square
MJDA	-0.0031	-0.0072	***	-0.0030	-0.0055	***
PADA	-0.0030	-0.0072	***	-0.0030	-0.0054	***
MJabs	0.0473	0.0632	***	0.0298	0.0406	***
PAabs	0.0735	0.0899	***	0.0489	0.0603	***
DD_AQ	0.0356	0.0455	***	0.0267	0.0335	***
DISC_AQ	-0.0009	0.0005	***	-0.0036	-0.0042	***
SGA_R	0.0004	0.0325	***	-0.0107	-0.0016	***
PROD_R	0.0338	0.0030	***	0.0110	-0.0083	***
RD_R	-0.0022	0.0053	***	-0.0013	-0.0002	***
SGAabs	0.1060	0.1445	***	0.0719	0.0918	***
PRODabs	0.1247	0.1547	***	0.0689	0.0935	***
RDabs	0.0106	0.0248	***	0.0045	0.0087	***
MJ_QTR	0.0386	0.0242	***	-0.0015	0.0002	***

*** Denotes a difference in the mean (median) under a t-test (Chi-square test) with a p-value of less than 0.01.

A firm is classified as 'diversified' if it reports two or more segments in two or more 4 digit SIC industries.

Variable Definitions:

MJDA: Discretionary Accruals calculated using Modified Jones Model

PADA: Discretionary Accruals calculated Performance Adjusted Modified Jones Model

MJabs: Absolute Discretionary Accruals calculated using Modified Jones model

PAabs: Absolute Discretionary Accruals calculated using Performance Adjusted Modified Jones model

DD_AQ: Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model: $TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t}$

DISC_AQ Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQ_{i,t}=\lambda_0+\lambda_1STD\_SALES_{i,t}+\lambda_2STD\_CF_{i,t}+\lambda_4NEG\_EARN_{i,t}+\lambda_5OC_{i,t}+\lambda_6SIZE_{i,t}+\mu_{i,t}$, where AQ is accruals quality as measured above, $STD\_SALES_{i,t}$ and $STD\_CF_{i,t}$ are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.

SGA_R: Level of Abnormal Selling, General and Administrative Expenses calculated as in Gunny (2005)

PROD_R: Level of Abnormal production costs calculated as in Gunny (2005)

RD_R: Level of Abnormal Research and Development expenditure calculated as in Gunny (2005)

SGAabs: Absolute abnormal SG&A expenditure

PRODabs: Absolute Abnormal Production Expenditure

RDabs: Absolute Abnormal R&D expenditure

MJ_QTR: Absolute Discretionary Accruals calculated using Modified Jones model using quarterly data

Table 2.11: Accruals Management Metrics and Diversification

Panel A: Regression with DIVERSIFIED and HI as Independent Variables

VARIABLES	(1) ADA_MJ	(2) ADA_PERF	(3) DD_AQ	(4) AQ	(5) ADA_MJ	(6) ADA_PERF	(7) DD_AQ	(8) DISC_AQ
DIVERSIFIED	-0.0046***	-0.0034***	-0.0029***	-0.0011*				
	(-6.5645)	(-3.8713)	(-4.1072)	(-1.9511)				
HI					0.0099***	0.0086***	0.0043***	0.0014*
					(7.8452)	(6.4389)	(3.2554)	(1.9842)
SIZE	-0.0049***	-0.0046***	-0.0043***	0.0009***	-0.0048***	-0.0044***	-0.0043***	0.0008***
	(-20.4230)	(-15.7394)	(-14.4956)	(4.1835)	(-19.5610)	(-15.0856)	(-14.3483)	(4.2596)
MB	0.0013***	0.0016***	0.0009***	0.0001	0.0012***	0.0015***	0.0009***	0.0001
	(7.1547)	(8.1485)	(7.5131)	(0.6256)	(7.0578)	(8.0029)	(7.4576)	(0.6603)
GROWTH	0.0342***	0.0280***	0.0027**	-0.0011	0.0340***	0.0278***	0.0027**	-0.0011
	(12.9848)	(12.4992)	(2.3955)	(-1.3503)	(12.8013)	(12.4194)	(2.4121)	(-1.3462)
LIT	0.0091***	0.0101***	0.0108***	0.0073***	0.0088***	0.0097***	0.0109***	0.0074***
	(4.7763)	(5.7912)	(6.5759)	(4.0888)	(4.4313)	(5.3456)	(6.5146)	(4.0499)
LEV	-0.0036*	-0.0022	0.0002	0.0036*	-0.0032	-0.0018	0.0003	0.0036*
	(-1.6939)	(-0.8296)	(0.0979)	(1.6492)	(-1.5018)	(-0.6468)	(0.1488)	(1.6683)
LOSS	0.0098***	0.0096***	0.0093***	-0.0007	0.0099***	0.0096***	0.0093***	-0.0007
	(7.1351)	(6.9618)	(9.3098)	(-0.8603)	(7.2200)	(7.0221)	(9.4290)	(-0.8481)
REVTA	0.0024***	0.0027***	0.0027**	0.0033***	0.0024***	0.0027***	0.0027**	0.0033***
	(2.5991)	(3.4007)	(2.0600)	(3.8763)	(2.5871)	(3.3746)	(2.0598)	(3.8773)
ROA	-0.0060***	-0.0027	-0.0013	-0.0051***	-0.0060***	-0.0027	-0.0013	-0.0051***
	(-2.8404)	(-1.3978)	(-0.4348)	(-5.2551)	(-2.8295)	(-1.3874)	(-0.4366)	(-5.2671)
BIG4	-0.0088***	-0.0071***	-0.0040***	-0.0020**	-0.0087***	-0.0071***	-0.0039***	-0.0020**
	(-6.9214)	(-4.3280)	(-3.9945)	(-2.1252)	(-6.8492)	(-4.2867)	(-3.9073)	(-2.0880)
CONSTANT	0.0965***	0.0733***	0.0640***	-0.0081***	0.0864***	0.0640***	0.0582***	-0.0097***
	(12.8834)	(35.5769)	(13.7629)	(-2.8644)	(11.5710)	(22.7095)	(13.3414)	(-3.3005)
Observations	52,032	52,240	43,951	30,601	52,032	52,240	43,951	30,601
R-squared	0.1533	0.1153	0.2236	0.0471	0.1536	0.1156	0.2231	0.0469
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES

Table 2.11 cont…

Table 2.11 cont…

Table 2.11: Accruals Management Metrics and Diversification

Panel B: Regression with DIVERSIFIED2 and FDIVERSIFIED as Independent Variables

VARIABLES	(1) ADA_MJ	(2) ADA_PERF	(3) DD_AQ	(4) AQ	(5) ADA_MJ	(6) ADA_PERF	(7) DD_AQ	(8) DISC_AQ
DIVERSIFIED2	-0.0037***	-0.0023**	-0.0017***	-0.0007				
	(-4.0060)	(-2.3153)	(-2.5875)	(-1.2109)				
FDIVERSIFIED					-0.0039***	-0.0028**	-0.0020***	-0.0009
					(-4.5791)	(-2.4710)	(-2.9710)	(-1.4311)
SIZE	-0.0050***	-0.0047***	-0.0043***	0.0008***	-0.0050***	-0.0047***	-0.0043***	0.0008***
	(-21.5551)	(-16.5957)	(-14.6315)	(4.0424)	(-20.9320)	(-16.1445)	(-14.6161)	(4.1101)
MB	0.0013***	0.0016***	0.0009***	0.0001	0.0013***	0.0016***	0.0009***	0.0001
	(7.3432)	(8.3707)	(7.7686)	(0.6957)	(7.3086)	(8.3245)	(7.7841)	(0.6742)
GROWTH	0.0344***	0.0282***	0.0028**	-0.0011	0.0344***	0.0282***	0.0028**	-0.0011
	(12.9834)	(12.4994)	(2.4853)	(-1.2957)	(13.0339)	(12.5452)	(2.4778)	(-1.2930)
LIT	0.0096***	0.0105***	0.0112***	0.0075***	0.0096***	0.0104***	0.0111***	0.0075***
	(5.1115)	(6.0917)	(6.8887)	(4.1782)	(5.1095)	(6.1012)	(6.8765)	(4.1465)
LEV	-0.0038*	-0.0024	0.0000	0.0035	-0.0039*	-0.0024	-0.0000	0.0035
	(-1.7625)	(-0.8997)	(0.0024)	(1.6197)	(-1.7951)	(-0.9027)	(-0.0025)	(1.6301)
LOSS	0.0099***	0.0097***	0.0093***	-0.0007	0.0099***	0.0096***	0.0093***	-0.0007
	(7.1987)	(7.0085)	(9.3493)	(-0.8495)	(7.1726)	(6.9884)	(9.3159)	(-0.8574)
REVTA	0.0024***	0.0027***	0.0027**	0.0033***	0.0024***	0.0027***	0.0027**	0.0033***
	(2.6041)	(3.4043)	(2.0621)	(3.8640)	(2.6033)	(3.4031)	(2.0618)	(3.8744)
ROA	-0.0060***	-0.0027	-0.0013	-0.0051***	-0.0060***	-0.0027	-0.0013	-0.0051***
	(-2.8486)	(-1.4048)	(-0.4369)	(-5.2632)	(-2.8468)	(-1.4041)	(-0.4386)	(-5.2603)
BIG4	-0.0087***	-0.0070***	-0.0039***	-0.0020**	-0.0088***	-0.0071***	-0.0039***	-0.0020**
	(-6.8846)	(-4.3046)	(-3.9285)	(-2.0994)	(-6.8889)	(-4.3069)	(-3.9383)	(-2.1037)
CONSTANT	0.0966***	0.0731***	0.0631***	-0.0081***	0.0965***	0.0729***	0.0635***	-0.0083***
	(12.9480)	(35.5638)	(13.8340)	(-2.9164)	(13.0159)	(35.4893)	(13.7842)	(-2.9999)
Observations	52,032	52,240	43,951	30,601	52,032	52,240	43,951	30,601
R-squared	0.1529	0.1151	0.2227	0.0469	0.1529	0.1151	0.2228	0.0470
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES

This table presents results of OLS regressions of indicators of diversification and control variables on earnings quality over the sample period using annual data over the sample period. T-statistics are given in the parenthesis. Standard errors have been adjusted to allow for clustering at firm and year level. Significance at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively. The t-statistics have been adjusted for two-way clustering of firms and two-digit SIC industries.

DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
HI:	Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
DIVERSIFIED2	Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED	Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
SIZE:	Natural log of total assets.
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
LEV:	Leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets
GROWTH:	Percentage sales growth during the year
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961)
LOSS:	Takes value of 1 if a firm reports net loss for that year
REVTA	Sale divided by total assets
ADA_MJ:	Absolute value of discretionary accruals using modified jones model
ADA_PERF:	Absolute value of discretionary accruals using performance adjusted modified jo nes model
DD_AQ:	Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model: $TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t}$
DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQi,t=\lambda 0+\lambda 1STD\_SALESi,t+\lambda 2STD\_CFi,t+\lambda 4NEG\_EARNi,t+\lambda 5OCi,t+ \lambda 6SIZEi,t + \mu i,t,$ where AQ is accruals quality as measured above, STD_SALESi,t and STD_CFi,t are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.
BIG4:	Takes value of 1 if the firm is audited by one of the big 4 auditing firms during that year.

Table 2.12: Propensity of just meeting or beating analyst forecast earnings – Pre- and Post- Reg FD

	Pre-Reg FD	Post Reg FD
DIVERSIFIED	**0.151*** **	**0.077*** **
	(3.73)	**(2.99)**
SIZE	-0.222***	-0.477***
	(-6.85)	(-10.72)
MB	0.003***	0.008***
	(3.75)	(3.23)
LOSS	-0.620***	-0.459***
	(-4.33)	(-3.99)
LIT	0.009	0.011**
	(0.122)	(2.28)
SHARES	0.432***	0.668***
	(5.52)	(4.77)
ANALYST	0.029***	0.005***
	(6.42)	(3.88)
DISPERSION	-0.000	-0.001
	(-0.02)	(-0.30)
BIG4	-0.060**	-0.128***
	(-1.90)	(-3.26)
CONSTANT	-1.659***	-0.907**
	(-3.99)	(-2.34)
Observations	19,123	63,606
Quarter FE	YES	YES
Industry FE	YES	YES
Pseudo R2	0.0478	0.0676

This table presents the regression of propensity of meeting or beating earnings targets for firms between the years 1998 and 2012 using quarterly data. The sample is divided into 'Pre-Reg FD' data up to September 2000 and "Post-Reg FD' data from quarters ending after December 2000. The column The t-stats are given in brackets and are adjusted for clustering for firms and quarters. Dependent variable Justbeat is 1 if the firm meets or beats analysts' median forecast by a maximum of one cent and 0 otherwise. Beat is 1 if the firm meets or beats analysts' median forecast and 0 otherwise. SP is 1 if the firm reports a profit up to a maximum of 1 percent of firms' assets and 0 otherwise. BLYQ is set to 1 if the firm beats earnings reported in same quarter of last year and 0 otherwise. Other variables are defined as:

DIVERSIFIED:	Indicator variable which takes the value of 1 if the firm has more than one segments in different SIC industries and 0 otherwise.
HI:	Herfindahl Index (HI) calculated as sum of squares proportions sales coming from different segments of the firm.
DIVERSIFIED2	Indicator variable coded as 1 if the firm has more than one segments in different two-digit SIC industries and 0 otherwise
FDIVERSIFIED	Indicator variable coded as 1 if the firm has more than one segments in different fama-french 48 industries and 0 otherwise
SIZE:	Natural log of total assets.
MB:	Market to book value ratio. Market value is computed as number of shares outstanding times share market price at financial year end date.
LOSS:	Takes value of 1 if a firm reports net loss for that year
LIT:	Takes value of 1 if a firm belongs to an high litigation risk industry (SICS 2833-2836, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and 0 otherwise
SHARES:	Log of number of shares outstanding
ANALYST	number of analysts' forecast for the firm in the period
DISPERSION:	Standard deviation of analysts' forecasts
BIG4:	Takes value of 1 if the firm is audited by one of Big4 auditing firms and 0 otherwise

Table 3.1: Descriptive Statistics for Diversification Discount Analysis

Focused Firms

	N	Mean	Median	Std Dev	25th Pctl	75th Pctl
EXVAL_S	45,643	-0.006	0.000	0.594	-0.403	0.388
EXVAL_A	48,483	0.016	0.000	0.512	-0.308	0.322
LEV	35,179	0.207	0.158	0.210	0.006	0.343
GROWTH	34,914	0.207	0.105	0.441	-0.005	0.282
SIZE	35,222	5.962	5.894	1.802	4.637	7.160
EARNINGS	55,413	0.059	0.070	0.113	0.017	0.120
LOSS	56,805	0.296	0.000	0.456	0.000	1.000
INVEST	56,266	0.067	0.041	0.083	0.020	0.080
ADA_MJ	32,717	0.062	0.041	0.068	0.018	0.080
ADA_PERF	32,867	0.095	0.064	0.098	0.028	0.127
DDIND_AQ	28,976	0.054	0.042	0.043	0.024	0.071
DDDAQ	16,766	-0.001	-0.006	0.028	-0.018	0.010

Diversified Firms

	N	Mean	Median	Std Dev	25th Pctl	75th Pctl
EXVAL_S	15,343	-0.105	-0.108	0.564	-0.491	0.271
EXVAL_A	9,785	-0.052	-0.068	0.447	-0.328	0.219
LEV	18,099	0.265	0.257	0.182	0.125	0.380
GROWTH	18,013	0.134	0.074	0.336	-0.016	0.193
SIZE	17,702	6.749	6.791	2.029	5.273	8.222
EARNINGS	19,277	0.075	0.077	0.081	0.041	0.116
LOSS	19,396	0.224	0.000	0.417	0.000	0.000
INVESTA	19,153	0.058	0.042	0.056	0.024	0.073
ADA_MJ	16,908	0.046	0.030	0.052	0.014	0.059
ADA_PERF	16,907	0.077	0.051	0.083	0.022	0.102
DD_AQ	16,262	0.043	0.033	0.035	0.020	0.054
DISC_AQ	13,112	-0.001	-0.006	0.025	-0.016	0.007

This table reports descriptive statistics for analysis of Diversification Discount or Excess Value. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. EXVAL_S is excess value based on segment sales and EXVAL_A is excess value based on segment assets. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to sales (assets) by the segment's sales (assets). Industry median multiplier is median of [V/SALE] ([V/ASSETS]) for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used.

Table 3.1 continued…

Table 3.1 continued…

Other variables:

LEV:	Leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets
GROWTH:	Percentage sales growth during the year
SIZE:	Log of total assets
EARNINGS	Operating income deflated by total assets
LOSS	Binary variable set to 1 if firm reports a loss during the period and 0 otherwise
INVEST:	Capital investment for the period deflated by total assets
ADA_MJ:	Absolute value of discretionary accruals using modified jones model
ADA_PERF:	Absolute value of discretionary accruals using performance adjusted modified jones model
DD_AQ:	Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model: $TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t}$
DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQ_{i,t}=\lambda_0+\lambda_1STD\_SALESi,t+\lambda_2STD\_CF_{i,t}+\lambda_4NEG\_EARN_{i,t}+\lambda_5OCi,t+\lambda_6SIZE_{i,t} + \mu_{i,t}$, where AQ is accruals quality as measured above, STD_SALESi,t and STD_CFi,t are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.

Table 3.2: Correlations

	EXVAL_S	EXVAL_A	EMMEET	ADA_MJ	ADA_PERF	DD_AQ	DISC_AQ	LEV	GROWTH	SIZE	EARNINGS	LOSS	INVEST
EXVAL_A	0.657												
	(<.0001)												
EMMEET	-0.046	-0.055											
	(0.0003)	(0.0005)											
ADA_MJ	-0.060	-0.031	0.078										
	(<.0001)	(0.0047)	(<.0001)										
ADA_PERF	-0.012	-0.001	0.082	0.424									
	(0.1821)	(0.9091)	(<.0001)	(<.0001)									
DD_AQ	-0.098	-0.047	0.017	0.327	0.218								
	(<.0001)	(<.0001)	(0.1657)	(<.0001)	(<.0001)								
DISC_AQ	-0.005	0.041	-0.004	0.172	0.100	0.729							
	(0.6411)	(0.0012)	(0.7776)	(<.0001)	(<.0001)	(<.0001)							
LEV	-0.073	-0.001	0.013	-0.040	-0.038	-0.102	-0.081						
	(<.0001)	(0.8943)	(0.2921)	(<.0001)	(<.0001)	(<.0001)	(<.0001)						
GROWTH	0.106	0.091	0.070	0.191	0.150	0.041	0.035	0.074					
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)					
INVEST	0.294	0.281	-0.040	-0.241	-0.178	-0.298	0.123	0.012	-0.026				
	(<.0001)	(<.0001)	(0.0008)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.1174)	(0.0005)				
SIZE	0.185	0.413	0.016	-0.112	-0.081	-0.170	0.066	-0.088	0.072	0.280			
	(<.0001)	(<.0001)	(0.1753)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)			
EARNINGS	-0.113	-0.213	-0.074	0.109	0.107	0.210	-0.056	0.134	-0.079	-0.281	-0.556		
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)		
LOSS	0.064	0.147	0.061	0.000	-0.005	-0.056	0.037	0.097	0.147	0.078	0.065	-0.041	0.013
	(<.0001)	(<.0001)	(<.0001)	(0.9561)	(0.5127)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.143)

This table reports Pearson correlations between variables used in the study using annual data. P values are given in the parenthesis. EXVAL_S is excess value based on segment sales of diversified firms and EXVAL_A is excess value based on segment assets of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV], where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to sales or assets by the segment's sales or assets respectively. Industry median multiplier is median of [V/SALE] or [V/ASSETS] for all single segment firms in the same industry as that segment with at least 5 firms. Accrual quality measures are:

EMMEET: Is a binary variable with takes value of 1 if the firm's reported earnings fall below analysts' median earnings forecast for the year if discretionary accruals are deducted from the reported earnings.

ADA_MJ: Absolute value of discretionary accruals using modified jones model

ADA_PERF: Absolute value of discretionary accruals using performance adjusted modified jones model

DD_AQ: Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model:

$TCA_{i,t} = a_0 + a_1 CFO_{i,t-1} + a_2 CFO_{i,t} + a_3 CFO_{i,t+1} + a_4 \Delta Rev_{i,t} + a_5 PPE_{i,t} + \varepsilon_{i,t}$, where TCA is total current accruals, CFO is cash flow from operations, Rev is the revenue or sales and PPE is the value of property, plant and equipment in the statement of financial position.

Table 3.2 continued……

Table 3.2 continued……

DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQ_{i,t}=\lambda 0+\lambda 1 STD\_SALES_{i,t}+\lambda 2 STD\_CF_{i,t}+\lambda 4 NEG\_EARN_{i,t}+\lambda 5 OC_{i,t}+\lambda 6 SIZE_{i,t}+\mu_{i,t}$, where AQ is accruals quality as measured above, $STD\_SALES_{i,t}$ and $STD\_CF_{i,t}$ are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.
LEV :	Leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets
GROWTH:	Percentage sales growth during the year
INVEST:	Capital investment for the period deflated by total assets
SIZE:	Log of total assets
EARNINGS	Operating income deflated by total assets
LOSS	Binary variable set to 1 if firm reports a loss during the period and 0 otherwise

Table 3.3: Just Meeting or Beating Analysts' Consensus Forecasts and Diversification Discount

	(1) EXVAL_S	(2) EXVAL_A
JBEAT	0.110***	0.077***
	(5.948)	(5.536)
DIVERSIFIED	-0.125***	-0.093***
	(-5.521)	(-6.114)
DIV_JBEAT	**-0.009****	**-0.003***
	(-2.308)	**(-1.817)**
SIZE	0.043***	0.041**
	(4.728)	(2.213)
GROWTH	0.247***	0.188***
	(4.940)	(5.201)
LEV	-0.098**	-0.145***
	(-1.965)	(-2.735)
INVEST	0.106***	0.452***
	(2.997)	(3.274)
EARNINGS	0.653***	1.497***
	(3.284)	(6.765)
LOSS	-0.068***	-0.027***
	(-3.875)	(-3.280)
CONSTANT	-0.091**	-0.121***
	(-2.453)	(-4.358)
Observations	29,747	27,089
R-squared	0.085	0.140
Year FE	YES	YES
Industry FE	YES	YES

This table reports OLS regression results for the following model:

$EXVAL_{i,t} = \beta_0 + \beta_1 JBEAT_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_JBEAT_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE$

Dependent variable is EXVAL_A or EXVAL_S which is excess value (EXVAL) calculated based on segment assets or segment sales respectively of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to assets or sales by the segment's assets or sales respectively. Industry median multiplier is median of [V/SALE(or ASSETS]] for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used. JBEAT is a dummy variable that takes value of 1 if the reported earnings of the firm meets or just beats median analysts' earnings forecast by one cent or less and 0 otherwise. DIVERSIFIED is an indicator variable that takes value of 1 if the firm reports at least two different segments in different 4 digit SIC industries and 0 otherwise. DIV_JBEAT is an interaction variable between DIVERSIFIED and JBEAT. Other independent variables are SIZE, calculated as natural log of total assets; GROWTH, which is percentage sales growth during the year; LEV which is leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets; INVEST, which is capital investment for the period deflated by total assets; EARNINGS which is operating income deflated by total assets and LOSS, which is a binary variable set to 1 if firm reports a loss during the period and 0 otherwise. Significance of coefficients at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Table 3.4: Habitual Beaters and Diversification Discount

	(1) EXVAL_S	(2) EXVAL_A
HABITUAL	0.224***	0.163***
	(5.339)	(6.243)
DIVERSIFIED	-0.158***	-0.101***
	(-7.081)	(-6.640)
DIV_HABIT	**-0.071****	**-1.037***
	(-2.189)	**(-1.818)**
SIZE	0.062***	0.014*
	(7.294)	(1.872)
GROWTH	0.268***	0.206***
	(5.704)	(5.394)
LEV	-0.045*	-0.142**
	(-1.776)	(-2.199)
INVEST	0.056**	0.498***
	(2.535)	(4.768)
EARNINGS	0.541**	1.459***
	(2.577)	(6.689)
LOSS	-0.034*	-0.007**
	(-1.792)	(-2.371)
CONSTANT	-0.119***	-0.150***
	(-3.070)	(-3.039)
Observations	24,947	21,752
R-squared	0.091	0.149
Year FE	YES	YES
Industry FE	YES	YES

This table reports OLS regression results for the following model:

$EXVAL_{i,t} = \beta_0 + \beta_1 HABITUAL_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_HABIT_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE$

Dependent variable is EXVAL_A or EXVAL_S which is excess value (EXVAL) calculated based on segment assets or segment sales respectively of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to assets or sales by the segment's assets or sales respectively. Industry median multiplier is median of [V/SALE(or ASSETS]] for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used. HABITUAL is a dummy variable that takes value of 1 if the reported earnings of the firm meets or just beats median analysts' earnings forecast by one cent or less for at least 6 of last 8 quarters and 0 otherwise. DIVERSIFIED is an indicator variable that takes value of 1 if the firm reports at least two different segments in different 4 digit SIC industries and 0 otherwise. DIV_HABIT is an interaction variable between DIVERSIFIED and HABITUAL. Other independent variables are SIZE, calculated as natural log of total assets; GROWTH, which is percentage sales growth during the year; LEV which is leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets; INVEST, which is capital investment for the period deflated by total assets; EARNINGS which is operating income deflated by total assets and LOSS, which is a binary variable set to 1 if firm reports a loss during the period and 0 otherwise. Significance of coefficients at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Table 3.5: Diversification Discount and Using Accruals to Beat Analysts' Forecasts

VARIABLES	(1) EXVAL_S	(2) EXVAL_A
EMMEET	-0.007*	-0.003
	(-1.833)	(-1.271)
DIVERSIFIED	-0.167***	-0.117***
	(-7.907)	(-7.237)
DIV_EMMEET	**-0.054****	**-0.038***
	(-2.505)	**(-1.886)**
SIZE	0.037***	0.010**
	(4.017)	(2.323)
GROWTH	0.304***	0.216***
	(7.276)	(8.129)
LEV	-0.188***	-0.255***
	(-2.689)	(-3.882)
INVEST	0.089**	0.460**
	(2.394)	(2.319)
EARNINGS	0.614***	1.570***
	(2.792)	(7.114)
LOSS	-0.020	-0.020
	(-0.701)	(-0.758)
CONSTANT	-0.097***	-0.119***
	(-3.017)	(-3.123)
Observations	22,945	21,385
R-squared	0.097	0.125
Year FE	YES	YES
Industry FE	YES	YES

This table reports OLS regression results for the following model:

$EXVAL_{i,t} = \beta_0 + \beta_1 EMMEET_{i,t-1} + \beta_2 DIVERSIFIED_{i,t} + \beta_3 DIV\_EMMEET_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 LEV_{i,t} + \beta_7 INVEST_{i,t} + \beta_8 EARNINGS_{i,t} + \beta_9 LOSS_{i,t} + INDUSTRY\ FE + YEAR\ FE + \varepsilon_{i,t}$

Dependent variable is EXVAL_A or EXVAL_S which is excess value (EXVAL) calculated based on segment assets or segment sales respectively of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to assets or sales by the segment's assets or sales respectively. Industry median multiplier is median of [V/SALE(or ASSETS]] for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used. EMMEET is a binary variable with takes value of 1 if the firm's reported earnings fall below analysts' median earnings forecast for the year if discretionary accruals are deducted from the reported earnings. DIVERSIFIED is an indicator variable that takes value of 1 if the firm reports at least two different segments in different 4 digit SIC industries and 0 otherwise. DIV_EMMEET is an interaction variable between DIVERSIFIED and EMMEET. Other independent variables are SIZE, calculated as natural log of total assets; GROWTH, which is percentage sales growth during the year; LEV which is leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets; INVEST, which is capital investment for the period deflated by total assets; EARNINGS which is operating income deflated by total assets and LOSS, which is a binary variable set to 1 if firm reports a loss during the period and 0 otherwise. Significance of coefficients at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Table 3.6: Diversification Discount – by Accruals Quality

Panel A: Means and Medians of Diversification Discount based on segment sales (EXVAL_S) for quintiles of firms formed on accruals quality

Accruals Quality Quintile (best to worst)	ADA_MJ			ADA_PERF			DD_AQ			DISC_AQ		
	N	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	Median
1	2,775	-0.0826	-0.0718	2,703	-0.0954	-0.0734	2,667	-0.0140	-0.0089	2,101	-0.1144	-0.1106
2	2,656	-0.0884	-0.0777	2,759	-0.1134	-0.1106	2,665	-0.0732	-0.0562	2,168	-0.0807	-0.0587
3	2,712	-0.0864	-0.0695	2,682	-0.1145	-0.1172	2,596	-0.1461	-0.1386	2,131	-0.0633	-0.0424
4	2,723	-0.1375	-0.1304	2,727	-0.1202	-0.1077	2,511	-0.1755	-0.1934	2,123	-0.1095	-0.1073
5	2,705	-0.1606	-0.1879	2,725	-0.1298	-0.1197	2,533	-0.2109	-0.2314	2,133	-0.1773	-0.1908

Panel B: Means and Medians of Diversification Discount based on segment assets (EXVAL_A) for quintiles of firms formed on accruals quality

Accruals Quality Quintile (best to worst)	ADA_MJ			ADA_PERF			DD_AQ			DISC_AQ		
	N	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	Median
1	1,764	-0.0452	-0.0326	1,765	-0.0569	-0.0578	1,711	-0.0043	-0.0252	1,286	-0.0418	-0.0409
2	1,724	-0.0386	-0.0341	1,777	-0.0479	-0.0626	1,640	-0.0510	-0.0689	1,222	-0.0260	-0.0262
3	1,734	-0.0386	-0.0574	1,729	-0.0719	-0.0814	1,631	-0.0532	-0.0726	1,227	-0.0095	-0.0361
4	1,703	-0.0720	-0.0914	1,705	-0.0478	-0.0654	1,621	-0.0795	-0.1145	1,288	-0.0258	-0.0308
5	1,712	-0.0815	-0.1045	1,688	-0.0654	-0.0801	1,669	-0.1051	-0.1197	1,288	-0.0598	-0.0833

This table reports mean and median diversification discount for firms sorted on quintiles of several accruals quality measures. EXVAL_S is excess value based on segment sales of diversified firms and EXVAL_A is excess value based on segment assets of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV], where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values.

Table 3.6 continued….

Table 3.6 continued….

A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to sales or assets by the segment's sales or assets respectively. Industry median multiplier is median of [V/SALE] or [V/ASSETS] for all single segment firms in the same industry as that segment with at least 5 firms. Accrual quality measures are:

ADA_MJ:	Absolute value of discretionary accruals using modified jones model
ADA_PERF:	Absolute value of discretionary accruals using performance adjusted modified jones model
DD_AQ:	Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model: $TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t}$
DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQi,t=\lambda0+\lambda1STD\_SALESi,t+\lambda2STD\_CFi,t+\lambda4NEG\_EARNi,t+\lambda5OCi,t+\lambda6SIZEi,t+\mu i,t,$ where AQ is accruals quality as measured above, STD_SALESi,t and STD_CFi,t are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.

Table 3.7: Diversification Discount (based on sales multiples) and Accruals Quality

Dependent Variable: EXVAL_S				
	ADA_MJ	**ADA_PERF**	**DD_AQ**	**DD_DISC**
	(1)	(2)	(3)	(4)
INTERCEPT	-0.527 ***	-0.554 ***	-0.604 ***	-0.720 ***
	(-4.52)	(-4.73)	(-4.33)	(-4.84)
ACCRUALS QUALITY	**-0.167 *** (-1.71)**	**-0.084 ** (-1.99)**	**-0.035 ** (-2.11)**	**-0.384 *** (-3.26)**
LEV	-0.186 ***	-0.193 ***	-0.198 ***	-0.277 ***
	(3.14)	(3.39)	(4.44)	(6.06)
GROWTH	0.199 ***	0.195 ***	0.190 ***	0.119 ***
	(10.74)	(10.61)	(10.29)	(5.04)
INVEST	0.513 ***	0.517 ***	0.422 **	0.494 ***
	(4.52)	(4.57)	(3.65)	(3.62)
SIZE	0.047 ***	0.048 ***	0.048 ***	0.053 ***
	(16.09)	(16.48)	(16.05)	(16.71)
EARNINGS	1.315 ***	1.359 ***	1.483 ***	1.989 ***
	(17.02)	(17.55)	(18.83)	(22.6)
LOSS	-0.029 **	-0.029 **	-0.018 **	-0.004 **
	(-2.03)	(-2.02)	(-2.25)	(-2.16)
N	12,368	12,380	12,191	9,987
R^2	0.14	0.15	0.15	0.18
Industry FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes

This table presents OLS regression of diversification discount or excess value on discretionary accruals of diversified firms using annual data. Dependent variable is EXVAL_A or EXVAL_S which is excess value (EXVAL) calculated based on segment assets or segment sales respectively of diversified firms. Significance of coefficients at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to assets or sales by the segment's assets or sales respectively. Industry median multiplier is median of [V/SALE(or ASSETS]] for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used.

Table 3.7 continued…

Table 3.7 continued…

ACCRUALS QUALITY is represented by ADA_MJ, ADA_PERF, DD_AQ and DD_DISC (defined below) in models (1), (2), (3) and (4) respectively. Independent variables are:

ADA_MJ:	Absolute value of discretionary accruals using modified jones model
ADA_PERF:	Absolute value of discretionary accruals using performance adjusted modified jones model
DD_AQ:	Accrual Quality defined as standard deviation of accruals errors for past 5 years using the model: $TCA_{i,t} = a_0 + a_1CFO_{i,t-1} + a_2CFO_{i,t} + a_3CFO_{i,t+1} + a_4\Delta Rev_{i,t} + a_5PPE_{i,t} + \varepsilon_{i,t}$, where TCA is total current accruals, CFO is cash flow from operations, Rev is the revenue or sales and PPE is the value of property, plant and equipment in the statement of financial position.
DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQi,t=\lambda0+\lambda1STD\_SALESi,t+\lambda2STD\_CFi,t+\lambda4NEG\_EARNi,t+\lambda5OCi,t+ \lambda6SIZEi,t + \mu i,t,$ where AQ is accruals quality as measured above, STD_SALESi,t and STD_CFi,t are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.
SIZE:	Log of total assets
GROWTH:	Percentage sales growth during the year
LEV:	Leverage compute as sum of Long Term Liabilities and Current Portion of Long Term Debt divided by Total Assets
INVEST:	Capital investment for the period deflated by total assets
EARNINGS	Operating income deflated by total assets
LOSS	Binary variable set to 1 if firm reports a loss during the period 0 otherwise

Table 3.8: Diversification Discount (based on assets multiples) and Accruals Quality

Dependent Variable: EXVAL_A

	ADA_MJ	ADA_PERF	DD_AQ	DD_DISC
	(1)	(2)	(3)	(4)
INTERCEPT	-0.474 ***	-0.481 ***	-0.659 ***	-0.692 ***
	(-3.81)	(-3.86)	(-4.4)	(-4.64)
ACCRUALS	**-0.108**	**-0.116 ***	**-0.217 ****	**-0.421 *****
QUALITY	**(-1.08)**	**(-1.91)**	**(-2.29)**	**(-2.99)**
LEV	-0.065 **	-0.076 ***	-0.052 *	-0.090 **
	(-2.26)	(-2.65)	(-1.78)	(-2.73)
GROWTH	0.084 ***	0.088 ***	0.093 ***	0.075 ***
	(4.94)	(5.31)	(5.63)	(3.50)
INVEST	0.998 ***	1.023 ***	0.961 ***	1.012 ***
	(10.4)	(10.63)	(9.9)	(8.66)
SIZE	0.021 ***	0.021 ***	0.021 ***	0.022 ***
	(5.56)	(5.40)	(5.35)	(5.71)
EARNINGS	2.554 ***	2.558 ***	2.687 ***	3.063 ***
	(33.44)	(33.46)	(34.68)	(35.42)
LOSS	-0.023 *	-0.023 *	-0.017	-0.011
	(-1.71)	(-1.74)	(-1.29)	(-0.71)
N	7,823	7,830	7,732	7,782
R^2	0.23	0.23	0.25	0.25
Industry FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes

This table reports OLS regression of diversification discount or excess value on discretionary accruals of diversified firms using annual data. Significance of coefficients at the10%, 5%, and 1% level is indicated by *, **, and ***, respectively. Dependent variable is EXVAL_A or EXVAL_S which is excess value (EXVAL) calculated based on segment assets or segment sales respectively of diversified firms. Diversification discount or 'excess value' is calculated as: EXVAL = ln [V / IV] Where V is the value of the firm calculated as sum of market value of shares and book value of debt. IV is the implied value of the firm calculated as the sum of the firm's segments' imputed values. A segment's imputed value is the sum of segment-imputed values, which are obtained by multiplying an industry median multiplier of total value to assets or sales by the segment's assets or sales respectively. Industry median multiplier is median of [V/SALE(or ASSETS]] for all single segment firms in the same industry as that segment with at least 5 firms. Industry is defined as 4 digit SIC industry and if 5 firms are not available in such industry-year, 3 digit SIC industry is used and if 5 firms are still not available, then 2 digit SIC industry is used.

Table 3.8 continued…

Table 3.8 continued…

ACCRUALS QUALITY is represented by ADA_MJ, ADA_PERF, DD_AQ and DD_DISC (defined below) in models (1), (2), (3) and (4) respectively. Independent variables are:

ADA_MJ:	Absolute value of discretionary accruals using modified jones model
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DISC_AQ	Discretionary accruals disentangled from the above DD-AQ calculated as residual from the following yearly regressions $DD\_AQi,t=\lambda0+\lambda1STD\_SALESi,t+\lambda2STD\_CFi,t+\lambda4NEG\_EARNi,t+\lambda5OCi,t+ \lambda6SIZEi,t + \mu i,t,$ where AQ is accruals quality as measured above, STD_SALESi,t and STD_CFi,t are standard deviation of sale and operating cash flows scaled by total assets during previous 5 years, OC is length of operating cycle calculated as log of the sum of inventory days and days receivable and SIZE is log of total assets.
SIZE:	Log of total assets
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INVEST:	Capital investment for the period deflated by total assets
EARNINGS	Operating income deflated by total assets
LOSS	Binary variable set to 1 if firm reports a loss during the period 0 otherwise