BUSINESS STRATEGY AND EARNINGS QUALITY

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Muhammad Nurul Houqe, Ryan Kerr & Reza Monem

Correspondence to:
Muhammad Nurul Houqe
Email: Noor.Houqe@vuw.ac.nz

Centre for Accounting, Governance and Taxation Research
School of Accounting and Commercial Law
Victoria University of Wellington
PO Box 600, Wellington, NEW ZEALAND

Tel: ***+ 64 4 463 5078***
Fax: ***+ 64 4 463 5076***
Website: ***http://www.victoria.ac.nz/sacl/cagtr/***

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Muhammad Nurul Houqe*, Ryan Kerr
School of Accounting & Commercial Law
Victoria University of Wellington

&

Reza Monem
Associate Professor
Griffith Business School
Griffith University
Brisbane, Queensland, Australia
Tel + 61 (0)7 3735 3598, Fax: + 61 (0)7 3735 3719
Email: r.monem@griffith.edu.au

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*Contact Author

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BUSINESS STRATEGY AND EARNINGS QUALITY

ABSTRACT

Using the Miles and Snow (1978) strategy typology, this study investigates whether business strategy is associated with the quality of reported earnings. In a sample of U.S. listed firms, we predict and find that defender-strategy firms are associated with higher levels of earnings management and prospector-strategy firms are associated with higher levels of accounting conservatism. However, this relation between business strategy and earnings quality is altered during high and low economic growth periods. In high-growth periods, while prospector firms exhibit lesser accounting conservatism, defender firms exhibit lesser earning management. In low-growth periods, the prospector firms become more conservative in reporting while the defender firms engage in more aggressive earnings management. Our findings provide direct evidence of the link between business strategy and earnings quality.

Keywords**:** *business strategy, earnings quality; accounting conservatism; earnings management.*

Paper type: Research paper

JEL classification: M41, M42, M48

BUSINESS STRATEGY AND EARNINGS QUALITY

I. INTRODUCTION

Over the last two decades or so, researchers have been investigating the determinants and consequences of earnings quality (see Dechow, Ge and Schrand, 2010). However, a central issue that has received very limited attention is the role of business strategy[1] in determining earnings quality. To the extent that investment decisions and accounting choices are jointly made (Watts and Zimmerman, 1990), earnings quality is potentially a function of business strategy because investment decisions flow from business strategy. Using the Miles and Snow (1978) strategy typology and an objective strategy-proxy based on Snow and Hrebiniak (1980), we document that defender-strategy firms are associated with higher levels of earnings management and prospector-strategy firms are associated with higher levels of accounting conservatism. We further examine the role of wider economic environments on the relation between business strategy and earnings quality. Financial reporting behavior of prospector-strategy firms and defender-strategy firms during high and low economic growth periods appears to be quite opposite. We find that during high (low) economic growth periods, prospector firms exhibit less (more) accounting conservatism whereas defender firms exhibit lesser (more) earnings management.

Our primary measure of accounting conservatism is the Givoly and Hayn's (2000) measure of non-operating negative accruals measure. We define conservatism as "a function of the firm's cumulative accounting policies which arise from both discretionary and mandatory policy decisions where, within each, there nevertheless are degrees of discretion" (Artiach and Clarkson, 2011, p. 4). Our primary measure of earnings management is the absolute discretionary accruals based on the modified Jones model (Dechow *et al.*, 1995).

We analyzed two samples of U.S. listed companies over the period 1999-2009. In particular, we analyzed 23,390 firm-years for testing the association between earnings management and business strategy, and 14,729 firm-years for testing the relation between accounting conservatism and business strategy. We argue that, to date, associations present

[1] In this paper, we focus on business-level strategy (i.e., "How do we compete in this business?") as opposed to corporate-level strategy (i.e., "What businesses should we engage in?") (Hofer and Schendel, 1978; Snow and Hambrick, 1980).

between business strategy, investor expectations and financial reporting have been largely ignored by researchers, resulting in an unexplained bias present within the financial accounting decision making process. This unknown bias has resulted in investors receiving an incomplete picture of firm performance as well as inaccurate information regarding the success of the implemented firm strategies. As such, without research to provide awareness of the plausible association between business strategy and earnings quality, investors will continue to be misled (through firm financial statements).

Therefore this paper serves to inform investors, accountants, managers, auditors and regulators on the association between business strategies and earnings quality, allowing these stakeholders to fully understand the true nature of firm performance. We propose that, in the aftermath of the global financial crisis (GFC), this literature is particularly relevant in that it can contribute to a wave of new research-led regulation that seeks to limit the systemic effects of corporate collapse through better communication between investors and firm managers.

The remainder of this paper is organized as follows. In Section II, we discuss business strategy in general and develop hypotheses by exploring the link between business strategy and financial reporting quality. Section III proposes the research methodology. Section IV discusses the sample selection produce and provides descriptive statistics. In Section V, we discuss our test rests. Section VI reports various sensitivity tests. In Section VII, we offer some conclusions.

II. BUSINESS STRATEGY AND FINANCIAL REPORTING

Business Strategy

The concept of strategy was introduced in organizational literature and advanced profoundly during the 1950s by researchers at the Harvard Business School (Snow and Hambrick, 1980). Chandler defines strategy as “the determination of the basic long-term goals and objectives of the enterprise and the adoption of resources necessary for carrying out these goals” (1962, p. 13). Mintzberg (1987) argues that an organizational strategy alludes to a firm’s plans, patterns, positions and perspectives. We view business strategy as a consistent set of decisions that defines how a firm competes within a given product market. Although there are diverse views on what exactly constitutes a strategy, researchers agree on distinguishing between strategy formulation and strategy implementation as two distinct phases of a strategy

(Snow and Hambrick, 1980). This distinction is important because it allows researchers to observe and measure strategy based on firm-level quantitative data. As such, we interpret what realized strategy was implemented within the firm (in hindsight) irrespective of the strategy formulation process.

In this study, we concentrate on strategy implementation and measure business-level strategy via objective indicators as proposed by Snow and Hambrick (1980). Snow and Hrebiniak (1980) note that "the typology of Miles and Snow (1978) is the only one that characterizes an organization as a complete system, especially its strategic orientation" (p. 318). The Miles and Snow (1978) typology classifies firms into prospectors, defenders, analyzers, and reactors, depending on the firm's market orientation. Miles and Snow (1978) also note that prospector and defender strategies are the most dominant types. Snow and Hambrick (1980) examine the different methods for the categorization of firm strategy within this typology and propose (amongst other categorization options) the examination of strategy using 'objective indicators' based on the collection of financial data of sample firms.

Employing 'objective indicators' for measuring business-level strategy has other merits. First, unlike other approaches, this approach controls for perceptual, and to a lesser extent, interpretive bias (Snow and Hambrick, 1980). Second, this approach is relatively well-suited for identifying implemented or realized strategies (Snow and Hambrick, 1980). Third, this approach is commonly used by strategy researchers (e.g., Miller and Friesen, 1978; Venkatraman and Grant, 1986).

We build on Snow and Hambrick's (1980) proposal by using objective data to classify firms based on how well they fit into the two strategy orientations: prospectors and defenders. Miles and Snow (1978), and Hambrick (1983) note that prospector firms will have a stronger commitment to product development and innovation, and frequently alter their products and markets. These firms thrive in business environments that are somewhat unpredictable and succeed by examining the market constantly for new opportunities. Further, these firms often encourage innovation over efficiency. In contrast, defender firms stress efficiency of operations and low levels of product development or a strong defense of their existing marketplaces (Miles and Snow, 1978). Hambrick (1983) describes defenders as firms which tend to compete mainly on price, delivery, or quality; defenders make large investments in process engineering; they have mechanistic structures, and they are run primarily under the influence of production and accounting executives. Defender firms promote efficiency over

innovation and they often build cost efficiency through vertical integration. These firms thrive in environments that change slowly. Readers are referred to Miles, Snow, Meyer and Coleman (1978) for a fuller treatment on all the four strategy types.

Business-level Strategy and Accounting

We invoke three theories to delineate the connection between business-level strategy and the accounting decision making process. These theories are agency theory (Jensen and Meckling, 1976), political cost theory (Watts & Zimmerman, 1978) and transaction cost theory (Coase, 1937).

Jensen & Meckling (1976) provide a sound starting point in analyzing accounting decision maker's behavior. They hold that the agents of a firm will always make decisions to maximize self-interest and will only make decisions in the firm's best interest where their personal interests and those of the firm do not diverge (the problem of managerial agency). Hence, managers will act in one of the two ways during the accounting decision making process: when their interests are aligned with those of the owners of the firm, managers will make such decisions that promote the firm's interests in order to further managers' own interests (efficient contracting); when their interests are not aligned with those of the owners, managers will make decisions to maximize their self-interest (managerial opportunism).

During accounting decision making process, the value of having an 'objective' and 'impartial' set of financial statements will likely be considered and weighed against the benefits associated with a biased accounting choice that affects earnings quality. Both the political cost theory (Watts & Zimmerman, 1978) and the transaction cost theory (Coase, 1937) explain why firms will have incentives for adopting a biased approach to financial reporting.

In proposing the political cost theory, Watts & Zimmerman (1978) argue that in making management decisions (including accounting decisions) managers must consider the wider regulatory environment. They further argue that accounting is a form of communication that is disseminated (in the case of publicly listed companies) to regulatory decision-makers and the wider public (alongside with investors). This dissemination illuminates the public's understandings of individual firms and as such influences the decision-making of regulatory bodies.

Watts & Zimmerman (1978) note that when the picture in the wider public's mind is one of a large growing firm, the public and their representatives (regulators) will associate this with excess and greed and will seek to mitigate the profits achieved by these firms through taxes, antitrust suits, product regulation, reduction or loss of awarded government contracts and industry regulation; all of which result in a reduction in the earnings capacity and wealth of the firm.

Understanding this, managers who believe that their organization has achieved or may achieve a reputation of greed and excess (large and highly profitable) may attempt to manipulate the public and regulatory perception of their firm. This manipulation can be achieved through the use of public relations staff, community work or through increased accounting conservatism (Watts & Zimmerman, 1978). Watts and Zimmerman (1978) further argue that increased accounting conservatism acts to improve the reputation of the firm by reforming the firm's image, from a greedy firm to a leaner organization.

Firm managers who are not concerned with looking highly profitable or overly wealthy are likely to focus on accounting policies that maximize investor confidence in the firm. These accounting policies include strategies of impartial accounting decision making or strategies that maximize reported earnings.

Coase (1937) defined the boundaries of the firm. Coase (1937) argued that the existence of the firm must be the reduction of transaction costs that would otherwise be associated with market transactions. A natural implication of this is that firms will be judged by potential investors, at least in part, on the basis of how efficient they are in lowering transaction costs.

Firms expanding within existing markets and new markets (prospectors in nature) are likely to attract costs associated with such expansion (with the hope of achieving costs savings or increased revenue at a future date) and as such are unlikely to be able to be compared and evaluated against other firms within the market place. In contrast, firms which are identified by investors as market defenders (with little interest in expansion) will be seen and evaluated by investors based on the transaction costs that they consistently incur in proportion to earnings.

As such when engaging in accounting decision making, firms that are market defenders will be incentivized to smooth earnings to maintain a continued level of transaction

costs while the managers of prospector's firms will place little emphasis on reducing transaction costs and instead will conserve potential earnings for future accounting periods where they can be more useful to the firm and its managers.

Owners of firms which adopt defender strategies are likely to place a higher expectation of immediate financial performance and smoothness of earnings on these firms, because defender firms are likely to be seen by investors as inherently more stable and less risky investments to hold. These investor expectations therefore will lead to higher performance requirements for the management of defender firms incentivizing the firm's management to make accounting choices that help in meeting investors' expectation of firm performance. In contrast, investors are likely to view prospector firms as more volatile with longer term investment prospects and place a lower expectation on immediate financial performance and a lower expectation of earnings smoothness. These lower financial performance expectations are likely to mitigate the need for an accounting bias in terms of earnings management. Instead, agents of prospector firms are likely to conserve earnings for future accounting periods (when the firm may be seen in transition from prospector to defender status).

The above discussion leads us to the following hypotheses:

H_1: *Ceteris paribus, prospector firms are more likely to adopt accounting conservatism than defender firms.*

H_2: *Ceteris paribus, defender firms are more likely to engage in earnings management than prospector firms.*

Impact of Wider Economic Environments

In forming strategies, firms always need to consider the wider market, industry, economic and regulatory environments. Because changes in the external environments of a firm are likely to change the supply and demand forces in the product market in which a firm is competing. Hence, realized strategy of firms will, in part, be dependent on ongoing and changing emerging strategy where firms seek to respond to changes in the firm's external environment (Mintzberg, 1987). This point is supported by the resource dependency theory (Pfeffer and Salancik, 1978), which holds that firms will be shaped by environmental and external influences and will alter firm strategy in response to economic (and regulatory) events.

This change in firm strategy in response to external environments is likely to filter down to firm accounting decision making processes. Archambault and Archambault (2003) and La Porta *et al.* (2000) note that firm's accounting tactics will often be dependent on the location of the firm (geographical and regulatory). Further, changes in a firm's external environment influence existing relations between firm characteristics and accounting decision making (Ball *et al.*, 2000; Leuz *et al.*, 2003). In sum, the effects of the macro-economic environment (as part of the external environment) are likely to alter the magnitude and structure of benefits and costs inherent in the accounting decision making processes, and thereby, change the relations between accounting policy choices and firm strategy. Thus, we hypothesize that:

***H*$_3$**: *The wider economic environment alters the relation between business-level strategy and earnings quality.*

Because changes in economic environment are unpredictable and can affect a firm either favorably or unfavorably, we are unable to make a signed prediction.

III. RESEARCH METHODOLOGY

First, we examine the level of accounting conservatism present within the annual financial statements. Our proxy for accounting conservatism is based on Givoly and Hayn's (2000) measure of negative accruals. They argue that conservative accounting results in persistently negative accruals, and more negative accruals reflect more conservative accounting. Without management intervention, accruals are expected to reverse over time. Hence, persistent cumulative negative accruals represent a conservatism bias with the firm's accounting system rather than the transitory nature of accruals (Artiach and Clarkson, 2011). We focus on non-operating accruals because operating accruals likely reflect firm economic characteristics unrelated to conservatism (Givoly and Hayn, 2000). To capture the persistence in accumulated accruals over a sufficiently long period, we use a six-year window, consistent with Ahmed *et al.* (2002), Artiach and Clarkson (2011), and Francis *et al.* (2004). Thus, our accounting conservatism measure is:

$$CON_{it} = -1X \left[\frac{1}{6}\sum_{t=1}^{6} \frac{NOPAC_{it}}{TA_{it}}\right] \quad (1)$$

Where, $NOPAC_{it}$ is non-operating accruals and TA_{it} is total assets, both for firm *i* at fiscal year-end *t*. Similar to Artiach and Clarkson (2011), we multiply the average accruals

by -1 to produce a measure that is increasing in conservatism. We use this proxy to investigate any possible relation between strategy and accounting conservatism as stated in H_1. Specifically, we employ the following econometric model:

$$CON_{it} = \beta_0 + \beta_1 STRT_{it} + \beta_2 LN\_ASSETS_{it} + \beta_3 F\_LEV_{it} + \beta_4 G\_SALES_{it} + \beta_5 M\_RISK_{it} + Industry\ and\ Year\ controls + \varepsilon_{it} \quad (2)$$

Where:

$STRT_{it}$	=	the business strategy of firm *i* in year *t*. Adopting the Snow and Hambrick (1980) typology, we create a composite strategy score for each firm. The composite score is constructed using the ratio of research and development to sales, the ratio of research and development expense per employee (Hill and Snell 1988), the ratio of employees to sales, and the Market to Book ratio. Composite scores range from 4 to 16 with firms under 10 considered to be defenders and firms scoring 10 or over considered to be prospectors [2];
LN_ASSETS	=	natural logarithm of total assets of firm *i* in year *t*;
F_LEV	=	the year-end total liabilities scaled by year-end total assets of firm *i* in year *t*;
G_SALES	=	sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t*;
G_PPE	=	the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*;
M_RISK	=	is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month end price percent changes and their relativity to a local market index;
Industry controls	=	dummy variables to capture industry differences in accounting conservatism;
Year controls	=	dummy variables to capture year-to-year differences in accounting conservatism.

[2] The coding procedure to classify the firms into the two strategy categories was as follows. First, we computed an eight-year average for each of the four strategy proxies listed above. Second, we divided each strategy-proxy into four quartiles and assigned a score of 1 (the lowest quartile, representing traits of a defender) to 4 (the highest quartile, representing traits of a prospector). Finally, a composite strategy score was computed by adding the scores of a firm across the four proxies. Thus, to get a score of 10, a firm has to score a 3 in at least two proxies with the weakest individual proxy score of 2 (i.e., 3 + 3 + 2 +2 = 10) or a 4 in at least one proxy if the weakest individual score is 1 (i.e., 4+3+2+1=10).

Then we examine the level of earnings management present within annual financial statements using the proxy $|DACCR_{it}|$ which is the absolute value of discretionary accruals of firm *i* in year *t* under the Modified Jones model (Dechow *et al.,* 1995). We use this proxy to investigate any possible relation between strategy and earnings management as stated in H_2. We employ the following econometric model:

$$|DACCR_{it}| = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2 LN\_ASSETS_{it} + \acute{\alpha}_3 F\_LEV_{it} + \acute{\alpha}_4 G\_SALES_{it} + \acute{\alpha}_5 G\_PPE_{it} + \acute{\alpha}_6 CFO_{it} + \acute{\alpha}_7 LOSS_{it} + Industry\ and\ Year\ controls + \varepsilon_{it} \quad (3)$$

where:

G_PPE	=	the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*;
CFO	=	the operating cash flows for firm *i* in year *t* scaled by total assets;
LOSS	=	loss takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

All other variables are as defined before.

To test H_3, we need a proxy for wider macro-economic environments. We argue that the real Gross Domestic Production (GDP) growth rates of a country capture the essence of the macro-economic environments of that country. Business firms regularly monitor and forecast industry and economic outlooks and accordingly make strategic and operating decisions suitable to a specific economic environment. For example, in periods of high (low) economic growth, business firms on average are expected to expand (contract) their operations. We collected the U.S. real GDP growth rates over the period 1999-2009 from the CIA World Factbook. These GDP growth rates are plotted in Figure 1. Through visual inspection, we categorize 1999, 2000 and 2004 as high-growth period and 2001, 2007, 2008, and 2009 as low-growth period. We consider other years to be moderate-growth period. We are interested to test whether the relation between business strategy and earnings quality changes across high- and low-growth periods. Hence, we estimate the following models:

$$CON_{it} = \alpha_0 + \alpha_1 STRT_{it} + \alpha_2 GDP\_Dummy + \alpha_3 STRT^{*}\ GDP\_Dummy + \alpha_4 LN\_ASSETS_{it} + \alpha_5 F\_LEV_{it} + \alpha_6 G\_SALES_{it} + Industry\_Dummy + \varepsilon_{it} \quad (4)$$

$$|DACCR|_{it} = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2\, GDP\_Dummy + \acute{\alpha}_3 STRT^{*}\ GDP\_Dummy + \acute{\alpha}_4\, LN\_ASSETS_{it} + \acute{\alpha}_5 F\_LEV_{it} + \acute{\alpha}_6 G\_SALES_{it} + \acute{\alpha}_7 G\_PPR_{it} + \acute{\alpha}_8 CFO_{it} + \acute{\alpha}_9 LOSS_{it} + Industry\_Dummy + \varepsilon_{it} \quad (5)$$

where:

GDP_Dummy	=	a binary variable coded 1 for high U.S. real GDP growth years (1999, 2000 and 2004) and 0 for low U.S. GDP growth years (2001, 2007, 2008, and 2009);
*STRT*GDP_Dummy*	=	the interaction term between *STRT* and *GDP_Dummy* to capture the effect of the wider macro-economic environments on the relation between business strategy and earnings quality.

All other variables are as defined before. Obviously, our variables of interest are *STRT* and *STRT*GDP_Dummy*. In particular, we are interested to know whether the sign of $\beta 3$ ($\acute{\alpha}_3$) differs from that of $\beta 1$ ($\acute{\alpha}_1$) in model (4) (model (5) and whether β_3 ($\acute{\alpha}_3$) is statistically significant.

We estimate all our models using ordinary least squares (OLS) regression technique. We estimate both pooled and annual samples to enhance credibility of our results.

IV. SAMPLE AND DESCRIPTIVE STATISTICS

We obtained data for U.S. listed companies from the World Scope database for the period 1999-2009. Because our sample period covers the years affected by the GFC, we are able to glean the effect of the GFC on the association between business strategy and earnings quality. Initially, we identified 25,623 firm-years for the *DACCR* sample and 16,740 firm-years for the *CON* sample. For both samples we then go on to exclude financial institutions, funds and overseas companies (81 observations in each sample) in order to keep this study within the single regulatory environment of the U.S. and to avoid repeated counting of data that may take place where a listed company is an investment vehicle or a share fund. Then we exclude the top 0.5% and the bottom 0.5% observations for each variable as we considered these to be extreme observations (*DACCR* sample: 1,565 observations; *CON* sample: 1,465 observations). Finally, we exclude 587 (465) firm-years from the *DACCR* (*CON*) sample because these observations were larger than three times of the absolute value of studentized residuals. Thus, our final sample is 14,729 (23,390) firm-years for the *CON* (*DACCR*) analysis. The sample selection process is reported in Table 1, Panel A.

[INSERT TABLE 1]

Panel B of Table 1 shows sample composition by year. As Panel B reveals, the firm-years are widely dispersed across the sample period. Table 1, Panel C shows industry

composition of firm-years, which was compiled in accordance with the Industry Classification Benchmark (ICB).[3] As Panel C shows, Technology (31.7%), Industrials (21.9%), Health Care (20.5%) and Consumer Goods (15.2%) are the four most represented industries in our earnings management (*DACCR*) sample. In the accounting conservatism (*CON*) sample, these industries represent 46.3%, 14.0%, 18.1% and 13.8% of the sample, respectively.

Table 2 presents descriptive statistics of the variables in relation to the *CON* sample (Panel A) and the *DACCR* sample (Panel B). As reported in Panel A, the overall mean metric of conservatism (*CON*) is 0.0019 with year-to-year variations ranging from 0.0069 in 1999 to 0.0180 in 2008. The overall mean score of *STRT* is 9.00 with year-to-year variations ranging from the lowest of 8.55 in 2009 to the highest of 9.84 in 2000. In Panel B, absolute mean discretionary accruals, $|DACCR|$, for the entire sample is 13.06% of total assets with year-to-year variation from the lowest of 13.13% in 2006 to the lowest of 15.90% in 2009. Clearly, absolute mean discretionary accruals have an upward trend during the GFC (2007-2009). Overall mean score for strategy, *STRT*, is 10 with year-to-year variation from the lowest of 8.90 in 2009 to 10.32 in 2000. In terms of strategy type, both panels suggest that an increasing proportion of firms adopted the defender strategy during the GFC.

[INSERT TABLE 2]

Table 3 reports the Pearson's correlation coefficients for all the variables (Panel A: *CON* sample; Panel B: *DACCR* sample). In Panel A, the dependent variable *CON* is significantly positively correlated to business strategy, *STRT*(r=0.205), at 1% level (two-tailed test). Such a positive correlation is consistent with the prediction of H_1. *CON* is significantly positively correlated with financial leverage (r=0.408), growth in sales revenue (r=0.086) and negatively correlated with firm size (r= -0.338), and firm systematic risk (r=-0.028). In Panel B, the dependent variable *DACCR* is significantly negatively correlated with *STRT*(r=-0.301) at 1% level (two-tailed test). Such a negative correlation is consistent with H_2. That is, defender firms (with lower scores in *STRT*) engage in more aggressive earnings management. Other results in Panel B suggest that growing firms (growth in sales revenue and property plant and equipment investment), firms with larger cash flow from operations

[3] Industry Classification Benchmark (ICB) was jointly developed by Dow Jones and FTSE in 2004. ICB is based on a 4-tier hierarchy and classifies securities into industries, super sectors, sectors and subsectors.

are less likely to engage in earnings management while loss-making firms are more likely to engage in earnings management.

[INSERT TABLE 3]

V. RESULTS

Accounting Conservatism

Table 4 presents the results of estimating model (2) on the pooled as well as annual samples. As reported in Table 4, the coefficient of *STRT* is statistically significant across all estimates at the 5% or better levels (two-tailed), except for 2003 and 2006. The coefficient of *STRT* is not significant at conventional levels in 2003 while it is significant at 10% level in 2006. Because we multiplied our proxy for conservatism by -1 to produce an increasing measure of conservatism, the consistently positive coefficient on *STRT* provides evidence supporting H_1. That is, prospector firms are more likely to adopt accounting conservatism than defender firms. Results in Table 4 further suggest that while larger firms and firms with greater systematic risk are less likely to adopt conservatism in reporting, more leveraged firms and growing firms are more likely to adopt accounting conservatism. Thus, while debt levels may play a monitoring role against aggressive financial reporting, incentives for aggressive earnings management decline in growing firms (through growth in sales) allowing these firms to adopt more conservative accounting policies. Further, firms with greater systematic risk cannot afford to adopt conservatism plausibly to maintain earnings performance. Overall, the results in Table 4 suggest that firms which have a higher composite score for strategy (prospector firms) are more likely to have higher levels of accounting conservatism (*CON*).

[INSERT TABLE 4]

Earnings Management

Table 5 reports the results of estimating model (3) on the pooled as well as annual samples over the period 1999-2009. As reported in Table 5, the coefficient of strategy (*STRT*) is consistently negative and statistically significant at 1% level across all the estimates. These results are consistent with H_2. That is, absolute discretionary accruals are higher for defender firms suggesting earnings management by these firms. Among other results, the coefficient of *LN_ASSETS* is negative and significant at 10% level only in 2001 and positive and significant at 1% and 5% levels in 2004 and 2005, respectively. Leverage (*F_LEV*) appears to be

positive and statistically significant at 1% level in pooled estimate and most of the annual estimates; notable exceptions are 2007, 2008 and 2009. In 2007, the coefficient becomes negative and significant at 10% level whereas it is non-significant in 2008 and 2009. Note that 2007 marks the year for the onset of the GFC and in 2008 and 2009, the GFC spread throughout Europe and other parts of the world.

In Table 5, the coefficients for *G_SALES* and *G_PPE* are consistently negative and statistically significant at 1% level across all estimates. Thus, firms experiencing growth in sales and investments in PPE are less likely to engage in earnings management. Prospector firms, as opposed to defender firms, are more likely to experience growth in these two areas. Further, firms with large, positive operating cash flows are less likely and loss-making firms are more likely to engage in earnings management. Overall, the results in Table 5 provide strong support for H_2 that defender-strategy firms are more likely to engage in earnings management via discretionary accruals than prospector firms.

[INSERT TABLE 5]

Effect of GDP Growth Rates on the Relation between Strategy and Earnings quality

Figure 1 plots the U.S. real GDP growth rates as well as the mean strategy scores of the sample firms over the period 1999-2009. A visual inspection of Figure 1 would suggest that there is some association between business strategy and the GDP growth rates in the U.S. over this period. A Pearson's correlation test between the sample strategy scores and the GDP growth rates over this period confirms a positive and significant relation between the two variables (r= 0.107, p<0.001).

[INSERT FIGURE 1]

Table 6 reports the results of estimating models (4) and (5) on the *CON* and *DACCR* samples. We have a reduced sample size now (11,286 firms) because we excluded observations related to the moderate GDP-growth rate years of 2002, 2003, 2005 and 2006. As shown in Table 6, in the *CON* sample, the variable *STRT* is positive and significant at 1% level (two-tailed). This result is consistent with the previous results in Table 4. That is, prospector firms, on average, exhibit more accounting conservatism than defender firms. Interestingly, the negative coefficient of -0.002 (significant at 1% level) on *STRT*GDP_Dummy* suggests that during periods of high GDP growth, prospector firms become less-conservative in reporting. This is potentially to match with investor sentiments

in a strongly-performing economy. On the other hand, in the *DACCR* sample, defender firms engage in less earnings-management during periods of high GDP growth. This is so because the sign on *STRT*GDP_Dummy* is positive whereas the sign on *STRT* is negative. Thus, during periods of high economic growth, earnings quality of prospector firms declines (less conservatism) while earnings quality of defender firms improve (less earnings-management). We find consistent results (untabulated) when we set *GDP_Dummy* to 1 for low GDP-growth periods. That is, in low-GDP growth periods, prospector firms become more conservative in reporting whereas defender firms become aggressive in earnings management. In summary, we find that prospector and defender firms' reporting behavior are exactly opposite in both high and low economic growth periods.

[INSERT TABLE 6]

VI. ROBUSTNESS CHECKS

We conduct additional tests to assess the sensitivity of our main results to alternative proxies for strategy (*STRT*), earnings management (*DACCR*), and accounting conservatism (*CON*).

Strategy (*STRT*) Classification

Our strategy (*STRT*) proxy is inspired by the work of Snow and Hambrick (1980). Zahra & Pearce (1990) argue that a single proxy for firm strategy is insufficient due to the differences in strategy across industries which operate in different ways. This argument holds that, due to industry characteristics, the differences between prospectors and defenders over different industries and firms may be incorrectly classified when measured in a uniform manner.

In our analysis, we mitigated this concern by incorporating industry-effects to control for any variation in strategy due to industry characteristics. Further, to ensure that our results are not driven by the significant presence of the technology sector in our samples, we now exclude the technology sector while re-estimating models (2) and (3). These results are reported in Table 7. We exclude the technology sector because of the high rate of innovation, market creation, and growth that would be expected in this industry.

[INSERT TABLE 7]

Results reported in Table 7 are consistent with our main results reported in Tables 4 and 5. In the *CON* sample, the coefficient on *STRT* is still positive but significant only at 10% level (two-tailed). In the *DACCR* sample, the coefficient of *STRT* is negative and significant

at the 1% level (two-tailed). Further, in untabulated tests, we treat strategy as a binary variable with strategy scores not less than 10 set to 1 (i.e., prospector firms). All other strategy scores are set to zero (i.e., defender firms). We find results consistent with our main results.

Alternative Measures for Accounting Conservatism (*CON*) and Earnings Management (*DACCR*)

We use the Khan and Watt's (2009) asymmetric timeliness measure of conservatism as an alternative proxy for accounting conservatism and the Jones model (1991) as an alternative proxy for earnings management. Results presented in Table 8, based on these alternative proxies, are consistent with our main results. In the *CON* sample, the coefficient of *STRT* is positive and significant at 1% level, which is consistent with the main results. In the *DACCR* sample, consistent with previous results, *STRT* is negative and significant at the 1% level.

In sum, the results are consistent with our predictions even after employing alternative proxies for accounting conservatism, earnings management, alternative coding of business strategy and exclusion of the technology sector from the analysis. Further, results are consistent across samples and across years.

[INSERT TABLE 8]

VII. CONCLUSION

We examine whether business strategy is associated with earnings quality. We also examine whether the relation between business strategy and earnings quality is affected by wider macro-economic environments. Although accounting policy choices are linked to investment decisions (Watts and Zimmerman, 1990) which follow from business strategy, evidence on the link between financial reporting quality and business strategy is sparse. We provide direct evidence of the important link between earnings quality and business strategy.

Within the Miles and Snow (1978) strategy typology, we classified U.S. listed firms into prospector and defender strategy-firms based on the 'objective-indicators' approach proposed by Snow and Hambrick (1980). We employed four proxies for strategy classification: (1) the ratio of research and development expense to sales, (2) research and development expense per employee, (3) the ratio of employees to sales, and (4) the market to book ratio. Using these four proxies, we computed composite strategy scores for each firm.

Firms that scored 10 or more were classified as prospector firms and firms that scored below 10 were classified as defender firms. In particular, we analyzed a sample of 14,729 firm-years to test accounting conservatism and a sample of 23,390 firm-years to test earnings management. Our measure of accounting conservatism is based on Givoly and Hayn's (2000) measure of non-operating accruals. We also employed the Khan and Watts (2009) measure of conservatism as an alternative proxy for conservatism. Our measure of earnings management is the absolute value of discretionary accruals based on the modified Jones model (Dechow *et al.*, 1995). We also employed the Jones model (Jones, 1991) as a further sensitivity test of our results. In our analysis, we incorporated several control variables including industry and year effects.

We predicted and found that prospector-strategy firms are associated with higher levels of accounting conservatism and defender-strategy firms are associated with higher levels of earnings management. However, this relation between business strategy and earnings quality is altered during high and low economic growth periods. In high-growth periods, while prospector firms exhibit lesser accounting conservatism, defender firms exhibit lesser earning management. In low-growth periods, the prospector firms become more conservative in financial reporting while the defender firms engage in more aggressive earnings management.

Our findings have important implications for investors and users of financial reporting. That is, an assessment of earnings quality (or lack of it) is incomplete and potentially misleading without understanding business strategy of the firms in question. Moreover, investors and other users of financial statements can develop insights into firms' earnings quality by trying to identify their business strategy in the first place. Thus, our findings provide direct evidence of the link between business strategy and earnings quality.

References

Ahmed, A., Billings, B., Morton, R., and Stanford-Harris, M. (2002). The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs, *The Accounting Review*, 77(4), 867-890.

Archambault, J., & Archambault, M. (2003). A Multinational Test of Determinants of Corporate Disclosure. The International *Journal of Accounting*, 38(1), 173-194. .

Artiach C. & Clarkson M. (2011). Disclosure, conservatism and the cost of equity capital. *Unpublished working paper*. The University of Queensland.

Ball R., Kothari S., & Robin A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics,* 29 (1), 1-51.

Coase, R. (1937). The Nature of the Firm**,** *Economica,* New Series, 4(16), 386-405.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics,* 50 (2-3), 344-401.

Dechow, P., Sloan, R. & Sweeney, A. (1995) Detecting earning management. *The Accounting Review*, 70(2), 193-225.

Francis, J., R. LaFond, R., P. Olsson, P., & K. Schipper, K. (2004). Costs of equity and earnings attributes, *The Accounting Review*, 79(4), 967-1010.

Givoly, D. & Hayn, C. (2000). The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative? *Journal of Accounting and Economics*, 29 (3), 287- 320.

Hambrick D. (1983). Some Tests of the Effectiveness and Functional Attributes of Miles and Snow's Strategic Types. *The Academy of Management Journal*, 26(1), 5-26.

Hill, C.W.L., & Snell, S. A. (1988). External Control, Corporate Strategy, and Firm Performance in Research Intensive Industries. *Strategic Management Journal*, 9(6), 577-590.

Hofer, C. W., & Schendel, D. (1978). *Strategy Formulation: Analytical Concepts*, West.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jones J. (1991). Earnings management during important relief investigations. *Journal of Accounting Research*, 29(2), 193-228.

Khan M., & Watts R. (2009). Estimation and empirical properties of a firm-year measure of accounting conservatism. *Journal of Accounting and Economics*, 48(2-3), 132-150.

La Porta R., Lopez-De-Silanes F., Shleifer A., & Vishny R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58(1-2), 3-27.

Leuz C., Nanda D., & Wysocki P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69(3), 505-527.

Miller, D., & Friesen, P. H. (1978). Archetypes of strategy formulation. *Management Science*, 24, 921-933.

Miles, R., & Snow, C. (1978). *Organizational Strategy, Structure, and Process*. New York: McGraw-Hill.

Miles, R., Snow C., Meyer, A. & Coleman, H. (1978). Organizational Strategy, Structure, and Process. *The Academy of Management Review*, 3(3), 546-562.

Mintzberg, H. (1987). The strategy concept I: Five p's for strategy. *California Management Review*, Fall, 11-24.

Pfeffer, J., & Salancik, G. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Harper & Row Publishers Inc. New York.

Snow, C. C., & Hambrick, D. C. (1980). Measuring Organizational Strategies: Some Theoretical and Methodological Problems. *The Academy of Management Review*, 5(4), 527-538.

Snow, C. C., & Hrebiniak, L. G. (1980). Strategy, Distinctive Competence, and Organizational Performance. *Administrative Science Quarterly*, 25(2), 317-336.

Venkatraman, N., & Grant, J. H. (1986). Construct measurement in strategy research: A critique and proposal. *Academy of Management Review*, 11(1), 71-86.

Watts, R., & Zimmerman, J. (1978). Towards a Positive Theory of the Determination of Accounting Standards, *The Accounting Review*, 53(1), 112-134.

Watts, R., & Zimmerman, J. (1990). Positive accounting theory: A ten year perspective. *The Accounting Review*, 65(1), 131-156.

Zahra, S., & Pearce, J. (1990). Research Evidence on the Miles –Snow Typology. *Journal of Management*, 16(4), 751-768.

Table 1

Panel A: Sample selection

	CON	*DACCR*
No. of observations with no missing values on dependent and independent variables for 1999-2009	16,740	25,623
-No. of financial institutions, funds, overseas companies	(81)	(81)
-No. of Observations with any variable registering in the top or bottom 0.5%	(1,465)	(1,565)
- No. of observations with |Studentized residuals| >3	(465)	(587)
Study sample	**14,729**	**23,390**

Panel B: Sample by year

Year	*CON*	*%*	*DACCR*	*%*
1999	1180	8.0	1980	8.5
2000	1277	8.7	2143	9.2
2001	1337	9.1	2245	9.6
2002	1347	9.1	2224	9.5
2003	1359	9.2	2276	9.7
2004	1409	9.6	2363	10.1
2005	1410	9.6	2322	9.9
2006	1510	10.3	2282	9.8
2007	1519	10.3	2190	9.4
2008	1233	8.4	1745	7.5
2009	1148	7.8	1620	6.9
Total	**14,729**	**100**	**23,390**	**100**

Panel C: Sample by industries

Industry	*CON*		*DACCR*	
	# Firm -years	*%*	*# Firm -years*	*%*
Basic Materials	1134	2.9	1449	6.2
Consumer Goods	2456	13.8	3557	15.2
Health Care	2880	18.1	4799	20.5
Industrials	3708	14.0	5122	21.9
Oil and Gas	411	0.5	493	2.1
Real Estate	87	1.0	136	0.6
Technology	3677	46.3	7408	31.7
Telecommunications	210	1.8	248	1.1
Utilities	166	1.7	178	0.8
Total	**14,729**	**100**	**23,390**	**100**

Table 2

Descriptive Statistics of Variables

Table 2

Panel A: CON sample (N=14,729)

Variables	*All Mean* *SD* *25th(P)* *75th (P)*	*1999* *Mean* *SD* *25th(P)* *75th (P)*	*2000* *Mean* *SD* *25th(P)* *75th (P)*	*2001* *Mean* *SD* *25th(P)* *75th (P)*	*2002* *Mean* *SD* *25th(P)* *75th (P)*	*2003* *Mean* *SD* *25th(P)* *75th (P)*	*2004* *Mean* *SD* *25th(P)* *75th (P)*	*2005* *Mean* *SD* *25th(P)* *75th (P)*	*2006* *Mean* *SD* *25th(P)* *75th (P)*	*2007* *Mean* *SD* *25th(P)* *75th (P)*	*2008* *Mean* *SD* *25th(P)* *75th (P)*	*2009* *Mean* *SD* *25th (P)* *75th(P)*
Dependent												
CON	0.0019 0.04780 -0.0013 0.0080	0.0069 0.03462 -0.0028 0.0047	0.0064 0.03427 -0.0030 0.0053	0.0153 0.05036 -0.0007 0.0111	0.0130 0.03695 -0.0002 0.0116	0.0117 0.04562 -0.0004 0.0074	0.0094 0.04640 -0.0016 0.0056	0.0085 0.03932 -0.0020 0.0059	0.0131 0.05462 -0.0018 0.0067	0.0139 0.05669 -0.0012 0.0073	0.0180 0.06049 -0.0009 0.126	0.0167 0.05436 0.0009 0.0116
Independent and control												
STRT	9.00 2.741 7.00 11.00	9.65 2.648 8.00 11.00	9.84 2.732 8.00 12.00	9.51 2.878 7.00 11.00	9.35 2.767 7.00 11.00	9.53 2.600 7.00 12.00	9.73 2.629 8.00 12.00	9.60 2.712 8.00 11.00	9.65 2.798 7.00 12.00	9.45 2.725 7.00 11.00	9.22 2.643 7.00 11.00	8.55 2.815 6.00 10.00
LN_ASSETS	12.5496 2.88842 10.3806 14.6936	12.2963 2.77284 10.2353 14.3530	12.4204 2.80637 10.3683 14.5447	12.4229 2.83496 10.3474 14.5494	12.3714 2.87405 10.2523 14.5688	12.4614 2.91326 10.3228 14.6701	12.4876 2.91785 10.3712 14.6704	12.5237 2.89827 10.3474 14.7186	12.5099 2.89882 10.3356 14.6903	12.6484 2.92705 10.4618 14.8370	12.6998 2.96467 10.4855 14.9574	12.8535 2.91248 10.7589 15.0462
F_LEV	0.2019 0.50573 0.0679 0.3540	0.2684 0.41882 0.0651 0.3407	0.2652 0.36945 0.0556 0.3509	0.2959 0.49713 0.0580 0.3626	0.2934 0.42845 0.0644 0.3625	0.2989 0.49279 0.0657 0.3415	0.2965 0.49155 0.0661 0.3382	0.2952 0.51015 0.0695 0.3427	0.3132 0.53120 0.0744 0.3488	0.3234 0.57284 0.0707 0.3576	0.3423 0.55226 0.0869 0.3831	0.3429 0.63611 0.0833 0.3638
G_SALES	0.0869 1.55151	0.4729 2.00765	0.6030 2.33684	0.2632 1.34009	0.1501 0.98068	0.2082 0.84789	0.4111 1.64984	0.3541 1.41895	0.4764 1.88117	0.3109 1.17855	0.3258 1.62023	0.0845 1.10875

	-0.0411	-0.0438	-0.0125	-0.1115	-0.1263	-0.0203	0.0466	0.0147	0.0166	0.0078	-0.0251	-0.2055
	0.2600	0.2999	0.4026	0.2290	0.1569	0.2178	0.2968	0.2926	0.3226	0.2797	0.2335	0.0805
M_RISK	1.2400	1.3093	1.2921	1.2995	1.3408	1.3330	1.3530	1.3561	1.3379	1.3554	1.3109	1.3186
	1.04217	1.03274	1.09075	1.02993	1.01333	0.99634	1.01084	1.07693	1.09749	1.12441	0.96841	0.97988
	0.7800	0.7600	0.7600	0.7600	0.8000	0.8000	0.8200	0.7800	0.7700	0.7900	0.7850	0.7900
	1.7000	1.6500	1.6200	1.6400	1.6900	1.7100	1.7200	1.7200	1.7200	1.7200	1.7100	1.7100

Panel B: DACCR Sample (n=23,390)

Variables	*All Mean* *SD* *25th(P)* *75th (P)*	*1999* *Mean* *SD* *25th(P)* *75th (P)*	*2000* *Mean* *SD* *25th(P)* *75th (P)*	*2001* *Mean* *SD* *25th(P)* *75th (P)*	*2002* *Mean* *SD* *25th(P)* *75th (P)*	*2003* *Mean* *SD* *25th(P)* *75th (P)*	*2004* *Mean* *SD* *25th(P)* *75th (P)*	*2005* *Mean* *SD* *25th(P)* *75th (P)*	*2006* *Mean* *SD* *25th(P)* *75th (P)*	*2007* *Mean* *SD* *25th(P)* *75th (P)*	*2008* *Mean* *SD* *25th(P)* *75th (P)*	*2009* *Mean* *SD* *25th (P)* *75th(P)*
Dependent												
|DACCR|	0.1306	0.1399	0.1339	0.1469	0.1528	0.1422	0.1320	0.1330	0.1313	0.1337	0.1355	0.1590
	0.05266	0.05547	0.05208	0.05932	0.05718	0.05090	0.04656	0.04736	0.04662	0.04834	0.05066	0.05736
	0.1098	0.1060	0.1043	0.1126	0.1184	0.1145	0.1077	0.1080	0.1066	0.1073	0.1080	0.1213
	0.1618	0.1676	0.1554	0.1724	0.1783	0.1633	0.1519	0.1616	0.1495	0.1525	0.1549	0.1817
Independent and control												
STRT	10.00	10.07	10.32	9.93	9.72	9.90	10.10	9.95	9.94	9.72	9.48	8.90
	2.736	2.720	2.799	2.864	2.746	2.608	2.608	2.669	2.725	2.713	2.634	2.801
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	7.00	7.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.00	11.00
LN_ASSETS	11.9673	11.7938	11.9202	11.9052	11.9185	12.0360	12.1024	12.2058	12.2266	12.3618	12.4368	12.5737
	2.66724	2.58153	2.61929	2.67920	2.66835	2.64629	2.64082	2.60908	2.64544	2.72613	2.75291	2.69225
	10.2087	9.9771	10.0300	9.9730	9.9501	10.1211	10.2579	10.3355	10.3350	10.4098	10.4438	10.6870
	13.9653	13.63034	13.7130	13.6995	13.7137	13.8348	13.8951	14.0169	14.0793	14.3214	14.3651	14.4459
TL_TA	0.4328	0.5078	0.5114	0.5800	0.5901	0.5617	0.5443	0.5534	0.6013	0.6056	0.6665	0.6710
	0.83857	0.57186	0.62996	0.79539	0.81595	0.68259	0.70288	0.75952	0.93121	0.88140	1.06246	1.31093
	0.2332	0.2233	0.2041	0.2217	0.2368	0.2342	0.2297	0.2314	0.2441	0.2475	0.2643	0.2452
	0.6451	0.6257	0.6230	0.6567	0.6688	0.6567	0.6334	0.6269	0.6365	0.6460	0.6892	0.6489

G_SALES	0.0878	0.4729	0.6796	0.2761	0.1513	0.2400	0.3843	0.3315	0.1723	0.2900	0.3153	0.0991
	1.50464	1.810172	2.29496	1.53811	1.04288	1.23883	1.50521	1.37047	0.45614	1.14196	1.54893	1.21665
	-0.0528	-0.0506	-0.0137	-0.1261	-0.1533	-0.0381	0.0327	0.0009	0.0143	-0.0022	-0.0285	-0.2098
	0.2825	0.3634	0.5063	0.2530	0.1675	0.2350	0.3212	0.3025	0.1927	0.2731	0.2377	0.0872
G_PPE	0.0712	0.3123	0.4111	0.1849	0.0992	0.1055	0.1473	0.1289	-0.0911	0.2008	0.1349	0.0768
	0.57701	0.80082	0.98835	0.58734	0.34386	0.40204	0.49591	0.46566	0.50948	0.60043	0.46011	0.24462
	0.0040	0.0149	0.0212	-0.0033	-0.0092	0.0020	0.0132	-0.0113	-0.0859	0.0205	-0.0060	0.0003
	0.1922	0.2983	0.3616	0.2261	0.1590	0.1570	0.1628	0.1575	0.1185	0.2135	0.1896	0.1200
CFO	0.0539	-0.0614	-0.0971	-0.1069	-0.0778	-0.0455	-0.0702	-0.0689	0.42	-0.0826	-0.0725	-0.0324
	0.44417	0.40086	0.43423	0.46576	0.44888	0.38068	0.43042	0.43138	0.494	0.49309	0.44621	0.41397
	-0.0893	-0.0826	-0.1336	-0.1374	-0.1036	-0.0818	-0.0937	-0.0838	0.00	-0.0738	-0.0622	-0.0203
	0.1176	0.1167	0.1035	0.1113	0.1191	0.1169	0.1160	0.1180	1.00	0.1211	0.1224	0.1301
LOSS	0.00	0.44	0.47	0.56	0.54	0.49	0.42	0.42	0.42	0.43	0.47	0.49
	0.499	0.496	0.499	0.496	0.498	0.500	0.494	0.493	0.494	0.495	0.499	0.500
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Variable definitions: *CON* is based on the Givoly and Hayn's (2000) measure of conservatism. *STRT* is the business strategy of firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). *LN_ASSETS* is natural logarithm of total assets of firm *i* in year *t. F_LEV* is the ratio of total debt to total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t*. *M_RISK* is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month end price percent changes and their relativity to a local market index. |*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under the modified Jones model (Dechow et al. 1995). *G_PPE* is the growth rate of gross property plant and equipment (PPE), defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*. *CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *Loss* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

Table 3 Pearson's Correlation Matrix

Panel A: CON sample (n=14,729)

Variables	*CON*	*STRT*	*LN_ASSETS*	*F_LEV*	*G_SALES*	*M_RISK*
CON	1					
	0.205***					
STRT	(0.000)	1				
LN_ASSETS	-0.338***	-0.452***				
	(0.000)	(0.000)	1			
F_LEV	0.408***	0.075***	-0.239***			
	(0.000)	(0.000)	(0.000)	1		
G_SALES	0.086***	0.279***	-0.123***	0.044***		
	(0.000)	(0.000)	(0.000)	(0.000)	1	
M_RISK	-0.028***	-0.047***	0.076***	0.033***	-0.001	
	(0.001)	(0.000)	(0.000)	(0.000)	(0.882)	1

Panel B: DACCR sample (n=23,390)

Variables	*|DACCR|*	*STRT*	*LN_ASSETS*	*TL_TA*	*G_SALES*	*G_PPE*	*CFO*	*LOSS*
|DACCR|	1							
	-0.301***							
STRT	(0.000)	1						
LN_ASSETS	-0.016**	-0.414***						
	(0.016)	(0.000)	1					
TL_TA	0.177***	0.028***	-0.218***					
	(0.000)	(0.000)	(0.000)	1				
G_SALES	-0.256***	0.277***	-0.091***	0.008				
	(0.000)	(0.000)	(0.000)	(0.226)	1			
G_PPE	-0.211***	0.198***	-0.023***	-0.066***	0.278***			
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	1		
CFO	-0.113***	-0.395***	0.480***	-0.466***	-0.126***	-0.026***		
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	1	
LOSS	0.130***	0.398***	-0.459***	0.170***	0.094***	0.057***	-0.441***	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	1

Note: Two-tailed *p*-values are in parenthesis. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Variable definitions*: CON* is based on the Givoly and Hayn's (2000) accruals based measure of conservatism. *STRT* is the business strategy of firm *i* in year *t* measured by Snow and Hambrick (1980). *LN_ASSETS* is natural logarithm of total assets of firm *i* in year *t. F_LEV* is the ratio of total debt to total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t. M_RISK* is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month end price percent changes and their relativity to a local market index. |*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under Modified Jones model (Dechow *et al.* 1995). *G_PPE* is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*. *CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *Loss* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

Table 4

OLS estimates of model (2) to test accounting conservatism: Pooled and annual samples

$$CON_{it} = \beta_0 + \beta_1 STRT_{it} + \beta_2 LN\_ASSETS_{it} + \beta_3 F\_LEV_{it} + \beta_4 G\_SALES_{it} + \beta_5 M\_RISK_{it} + \text{Industry and Year controls} + \varepsilon_{it} \quad (2)$$

Variables	All firms Coeff. (*p*-value)	1999 Coeff. (*p*-value)	2000 Coeff. (*p*-value)	2001 Coeff. (*p*-value)	2002 Coeff. (*p*-value)	2003 Coeff. (*p*-value)	2004 Coeff. (*p*-value)	2005 Coeff. (*p*-value)	2006 Coeff. (*p*-value)	2007 Coeff. (*p*-value)	2008 Coeff. (*p*-value)	2009 Coeff. (*p*-value)
Intercept	0.030***	0.029***	0.015**	0.028***	0.011*	0.047***	0.041***	0.028***	0.043***	0.049***	0.035***	0.045***
	(0.000)	(0.000)	(0.021)	(0.005)	(0.089)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)
STRT	**0.001*** **	**0.001**	**0.001** **	**0.001** **	**0.001** **	**0.001**	**0.001** **	**0.001** **	**0.001***	**0.002*** **	**0.002*** **	**0.001** **
	(0.000)	**(0.014**)**	**(0.012)**	**(0.014)**	**(0.019)**	**(0.168)**	**(0.040)**	**(0.026)**	**(0.072)**	**(0.010)**	**(0.005)**	**(0.036)**
LN_ASSETS	-0.004***	-0.003***	-0.002***	-0.003***	-0.002***	-0.004***	-0.003***	-0.003***	-0.004***	-0.005***	-0.005***	-0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F_LEV	0.033***	0.023***	0.041***	0.023***	0.033***	0.031***	0.029***	0.022***	0.042***	0.030***	0.041***	0.039***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
G_SALES	0.001***	0.000	0.001**	-0.002	0.002**	0.006***	-0.001*	0.000	-0.000	0.002	0.006***	0.002*
	(0.000)	(0.732)	(0.011)	(0.118)	(0.023)	(0.000)	(0.061)	(0.998)	(0.954)	(0.159)	(0.000)	(0.064)
M_RISK	-0.001***	-0.001	-0.002***	-0.001	-0.001	-0.003**	-0.004***	0.000	-0.002*	0.001	0.007***	-0.003**
	(0.009)	(0.126)	(0.002)	(0.637)	(0.495)	(0.018)	(0.000)	(0.647)	(0.040)	(0.253)	(0.000)	(0.033)
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N	14,729	1,180	1,277	1,337	1,347	1,359	1,409	1,410	1,510	1,519	1,233	1,148
Adjusted R^2	0.237	0.174	0.280	0.145	0.248	0.244	0.196	0.179	0.305	0.231	0.338	0.343
F-Statistics	655.152** *	42.428***	83.796***	38.869***	74.991***	73.961***	58.387***	52.276***	111.378***	76.863***	105.747	100.935** *
p-value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

Note: *p*-values are two-tailed. *CON* is based on the Givoly and Hayn's (2000) accruals based measure of conservatism. *STRT* is the business strategy of firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). *LN_ASSETS* is the natural logarithm of total assets of firm *i* in year *t. F_LEV* is the ratio of total debt to total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t. M_RISK* is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month-end price percent changes and their relativity to a local market index.

***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Table 5

OLS estimates of model (3) to test earnings management: Pooled and annual samples

$$|DACCR|_{it} = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2 LN\_ASSETS_{it} + \acute{\alpha}_3 TL\_TA_{it} + \acute{\alpha}_4 G\_SALES_{it} + \acute{\alpha}_5 G\_PPR_{it} + \acute{\alpha}_6 CFO_{it} + \acute{\alpha}_7 LOSS_{it} + IndustryandYearcontrols + \varepsilon_{it} \quad (3)$$

Variables	All firms Coeff. (*p*-value)	1999 Coeff. (*p*-value)	2000 Coeff. (*p*-value)	2001 Coeff. (*p*-value)	2002 Coeff. (*p*-value)	2003 Coeff. (*p*-value)	2004 Coeff. (*p*-value)	2005 Coeff. (*p*-value)	2006 Coeff. (*p*-value)	2007 Coeff. (*p*-value)	2008 Coeff. (*p*-value)	2009 Coeff. (*p*-value)
Intercept	0.207***	0.198***	0.193***	0.232***	0.221***	0.210***	0.159***	0.165***	0.171***	0.197***	0.204***	0.244***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
STRT	**-0.008*** **	**-0.008*** **	**-0.007*** **	**-0.009*** **	**-0.008*** **	**-0.008*** **	**-0.005*** **	**-0.005*** **	**-0.005*** **	**-0.007*** **	**-0.007*** **	**-0.010*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
LN_ASSETS	0.000	0.001	-0.000	-0.001*	-0.001***	-0.001	0.001***	0.001**	0.000	0.000	-0.001	-0.001
	(0.462)	(0.299)	(0.925)	(0.096)	(0.120)	(0.229)	(0.002)	(0.038)	(0.255)	(0.388)	(0.116)	(0.254)
TL_TA	0.005***	0.013***	0.013***	0.002	0.007***	0.005***	0.010***	0.011***	0.006***	-0.002*	0.002	0.001
	(0.000)	(0.000)	(0.000)	(0.149)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.060)	(0.182)	(0.186)
G_SALES	-0.006***	-0.004***	-0.004***	-0.005***	-0.013***	-0.006***	-0.005***	-0.006***	-0.005***	-0.008***	-0.008***	-0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
G_PPE	-0.010***	-0.010***	-0.005***	-0.010***	-0.017***	-0.011***	-0.008***	-0.013***	-0.015***	-0.008***	-0.013***	-0.029***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CFO	-0.019***	-0.017***	-0.015***	-0.031***	-0.022***	-0.013***	-0.014***	-0.020***	-0.007**	-0.027***	-0.020***	-0.017***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.014)	(0.000)	(0.000)	(0.000)
Loss	0.024***	0.027***	0.023***	0.023***	0.021***	0.024***	0.022***	0.017***	0.020***	0.018***	0.019***	0.030***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N	23,390	1,980	2,143	2,245	2,224	2,276	2,363	2,322	2,282	2,190	1,745	1,620
Adjusted R^2	0.243	0.286	0.270	0.255	0.269	0.219	0.213	0.228	0.190	0.238	0.236	0.287
F-Statistics	832.990** *	99.970***	100.231***	96.821***	103.437** *	80.852***	80.701***	86.720***	67.942***	86.680***	68.496***	82.576***
p-value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

Note: *p*-values are two-tailed. |*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under the Modified Jones model (Dechow et al. 1995). *STRT* is the business strategy of firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). LN_ASSETS is the natural logarithm of total assets of firm *i* in year *t*. *F_LEV* is the end of year total liabilities divided by end of year total assets of firm *i* in year *t*. *G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t*. *G_PPE* is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*. *CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *Loss* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

Table 6

OLS estimates of models (4) and (5) to test the effect of wider economic environments on the relation between strategy and earnings quality

$$CON_{it} = \beta_0 + \beta_1 STRT_{it} + \beta_2\ GDP\_Dummy + \beta_3 STRT^*\ GDP\_Dummy + \beta_4\ Ln\_Assets_{it} + \beta_5 F\_LEV_{it} + \beta_6 G\_SALES_{it} + Industry\_Dummy + \varepsilon_{it} \quad (4)$$

$$|DACCR|_{it} = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2\ GDP\_Dummy + \acute{\alpha}_3 STRT^*\ GDP\_Dummy + \acute{\alpha}_4\ LN\_ASSETS_{it} + \acute{\alpha}_5 F\_LEV_{it} + \acute{\alpha}_6 G\_SALES_{it} + \acute{\alpha}_7 G\_PPR_{it} + \acute{\alpha}_8 CFO_{it} + \acute{\alpha}_9 LOSS_{it} + Industry\_Dummy + \varepsilon_{it} \quad (5)$$

Variables	***Earnings Quality***	
	CON	***|DACCR|***
Intercept	0.009***	0.211***
	(0.002)	(0.000)
STRT	**0.002*** **	**-0.008*** **
	(0.000)	**(0.000)**
GDP_Dummy	**-0.000**	**-0.013*** **
	(0.983)	**(0.000)**
STRT* GDP_Dummy	**-0.001*** **	**0.001*** **
	(0.002)	**(0.000)**
LN_ASSETS	-0.002***	-0.000
	(0.000)	(0.734)
F_LEV	0.026***	0.003***
	(0.000)	(0.000)
G_SALES	0.001***	-0.005***
	(0.001)	(0.000)
G_PPE		-0.008***
		(0.000)
CFO		-0.022***
		(0.000)
LOSS		0.024***
		(0.000)
Industry_Dummy	Yes	*Yes*
N	14,286	*14,286*
Adjusted R^2	0.307	*0.252*
F-Statistics	904.204***	*481.176****
p-value	<.001	<.001

Note: *p*-values are two-tailed. .

CON is the Givoly and Hayn's (2000) accruals based measure of conservatism. |*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under the Modified Jones model (Dechow et al. 1995). *STRT* is the business strategy of sample firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). *GDP_Dummy* is a binary variable coded 1 for high U.S. GDP growth years (1999, 2000 and 2004) and 0 for low U.S. GDP growth years (2001, 2007, 2008, and 2009). *LN_ASSETS* is the natural logarithm of total assets of firm *i* in year *t. F_LEV* is the end of year total liabilities divided by end of year total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t. G_PPE* is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t. CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *LOSS* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Table 7 OLS estimates of models (2) and (3) after excluding Technology sector from the samples

$$CON_{it} = \beta_0 + \beta_1 STRT_{it} + \beta_2 LN\_ASSETS_{it} + \beta_3 F\_LEV_{it} + \beta_4 G\_SALES_{it} + \beta_5 M\_RISK_{it} + \textit{Industry and Year controls} + \varepsilon_{it} \quad (2)$$

$$|DACCR|_{it} = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2 LN\_ASSETS_{it} + \acute{\alpha}_3 TL\_TA_{it} + \acute{\alpha}_4 G\_SALES_{it} + \acute{\alpha}_5 G\_PPR_{it} + \acute{\alpha}_6 CFO_{it} + \acute{\alpha}_7 LOSS_{it} + \textit{Industry and Year controls} + \varepsilon_{it} \quad (3)$$

Variables	*CON* sample *Coeff.* *(p-value)*	|*DACCR*| sample Coeff. (*p*-value)
Intercept	0.041***	0.161***
	(0.000)	(0.000)
STRT	**0.001***	**-0.005*****
	(0.063)	**(0.000)**
LN_ASSETS	-0.003***	0.000
	(0.000)	(0.295)
F_LEV	0.041***	0.005***
	(0.000)	(0.000)
G_SALES	-0.000	-0.006***
	(0.851)	(0.000)
M_RISK	-0.002*	
	(0.045)	
G_PPE		-0.014***
		(0.000)
CFO		-0.008**
		(0.014)
Loss		0.019***
		(0.000)
Industry effects	Yes	Yes
Year effects	NA	NA
N	11,052	15,982
Adjusted R^2	0.325	0.165
F-Statistics	125.378***	37.142***
p-value	<.001	<.001

Note: *p*-values are two-tailed. *CON* is based on the Givoly and Hayn's (2000) accruals based measure of conservatism. *STRT* is the business strategy of firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). *LN_ASSETS* is the natural logarithm of total assets of firm *i* in year *t. F_LEV* is the ratio of total debt to total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t. M_RISK* is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month end price percent changes and their relativity to a local market index. |*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under the Modified Jones model (Dechow et al. 1995). *G_PPE* is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t. CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *Loss* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.
***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Table 8 OLS estimates of models (2) and (3) using alternative measures of conservatism and discretionary accruals

$$CON_{it} = \beta_0 + \beta_1 STRT_{it} + \beta_2 LN\_ASSETS_{it} + \beta_3 F\_LEV_{it} + \beta_4 G\_SALES_{it} + \beta_5 M\_RISK_{it} + Industry\ and\ Year\ controls + \varepsilon_{it} \quad (2)$$

$$|DACCR|_{it} = \acute{\alpha}_0 + \acute{\alpha}_1 STRT_{it} + \acute{\alpha}_2 LN\_ASSETS_{it} + \acute{\alpha}_3 TL\_TA_{it} + \acute{\alpha}_4 G\_SALES_{it} + \acute{\alpha}_5 G\_PPR_{it} + \acute{\alpha}_6 CFO_{it} + \acute{\alpha}_7 LOSS_{it} + Industry\ and\ Year\ controls + \varepsilon_{it} \quad (3)$$

Variables	*CON* sample *Coeff.* (*p*-value)	|*DACCR*| sample Coeff. (*p*-value)
Intercept	0.025***	0.196***
	(0.000)	(0.000)
STRT	**0.001*** **	**-0.009*** **
	(0.000)	**(0.000)**
LN_ASSETS	-0.005***	0.000
	(0.000)	(0.483)
F_LEV	0.029***	0.005***
	(0.000)	(0.000)
G_SALES	0.001***	-0.005***
	(0.000)	(0.000)
M_RISK	-0.001***	
	(0.008)	
G_PPE		-0.009***
		(0.000)
CFO		-0.017***
		(0.000)
Loss		0.028***
		(0.000)
Industry effects	Yes	Yes
Year effects	Yes	Yes
N	14,729	23,390
Adjusted R^2	0.256	0.263
F-Statistics	657.142***	886.191***
p-value	<.001	<.001

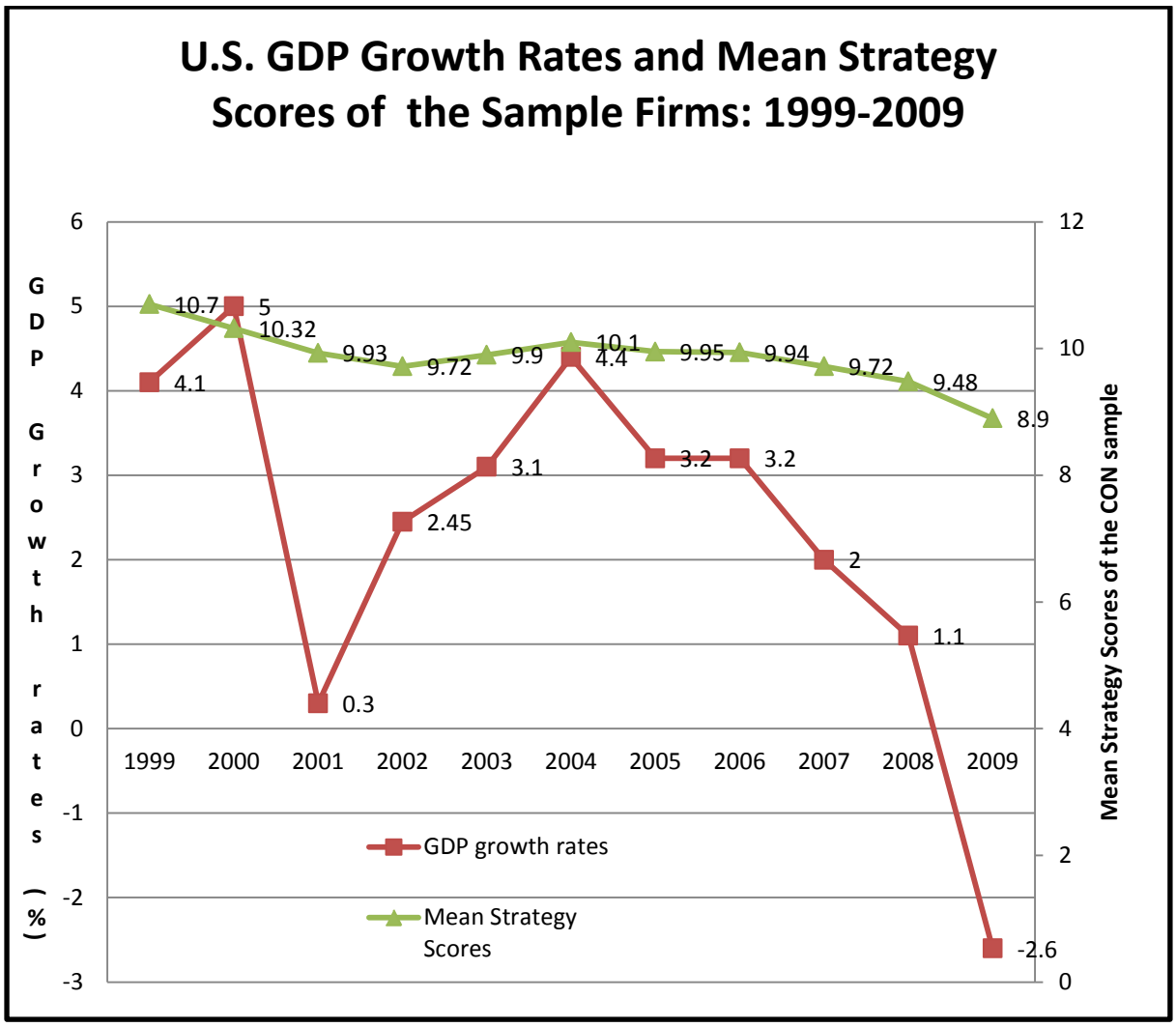
Note: *p*-values are two-tailed.

CON is based on the Khan and Watts (2009) asymmetric timeliness measure of conservatism. *STRT* is the business strategy of firm *i* in year *t* based on the approach developed by Snow and Hambrick (1980). *LN_ASSETS* is the natural logarithm of total assets of firm *i* in year *t. F_LEV* is the ratio of total debt to total assets of firm *i* in year *t. G_SALES* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t*. *M_RISK* is a measure of systematic risk which shows the relationship between the volatility of the stock and the volatility of the market. This coefficient is based on between 23 and 35 consecutive month end price percent changes and their relativity to a local market index.

|*DACCR*| is the absolute value of discretionary accruals of firm *i* in year *t* under the Jones (1991) model. *G_PPE* is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t. CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *Loss* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise.

***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Figure 1


U.S. GDP Growth Rates and Mean Strategy Scores of the Sample Firms: 1999-2009
GDP Growth rates (%)
Mean Strategy Scores of the CON sample
6
5
4
3
2
1
0
-1
-2
-3
12
10
8
6
4
2
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
10.7
5
10.32
9.93
9.72
9.9
10.1
9.95
9.94
9.72
9.48
8.9
4.1
0.3
2.45
3.1
4.4
3.2
3.2
2
1.1
-2.6
GDP growth rates
Mean Strategy Scores