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Competition, Proprietary Costs of Financial Reporting, and Financial Statement Comparability

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Abstract

Competitors often pay close attention to rivals' financial reports. For firms with high levels of proprietary information, competition may increase the costs of public disclosure. Theory suggests that such costs, which we refer to as the *proprietary costs of financial reporting*, may lead to strategic financial reporting. We find that financial statement comparability is decreasing in the proprietary costs of financial reporting. Our results are robust to the use of alternative measures of comparability and alternative measures of proprietary costs of financial reporting. In addition, theory suggests that financial reports will contain stronger signals of managers' private information when information asymmetry is high. We show that the negative relation between the proprietary costs of financial reporting and financial statement comparability is stronger for firms with poorer information environments. Together, our findings suggest that through the discretion afforded in Generally Accepted Accounting Principles (GAAP), managers of firms with high levels of proprietary information report in a way that reduces the comparability of their financial statements, particularly when information asymmetry is high.

Keywords

proprietary costs, competition, comparability, financial reporting, public disclosure

Disciplines

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Comments

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Competitors often pay close attention to rivals' financial reports. For firms with high levels of proprietary information, competition may increase the costs of public disclosure. Theory suggests that such costs, which we refer to as the *proprietary costs of financial reporting*, may lead to strategic financial reporting. We find that financial statement comparability is decreasing in the proprietary costs of financial reporting. Our results are robust to the use of alternative measures of comparability and alternative measures of proprietary costs of financial reporting. Additionally, theory suggests that financial reports will contain stronger signals of managers' private information when information asymmetry is high. We show that the negative relation between the proprietary costs of financial reporting and financial statement comparability is stronger for firms with poorer information environments. Together, our findings suggest that through the discretion afforded in GAAP, managers of firms with high levels of proprietary information report in a way that reduces the comparability of their financial statements, particularly when information asymmetry is high.

Keywords
Proprietary Costs, Competition, Comparability, Financial Reporting, Public Disclosure

JEL Classification
M41; M48

Data Availability
All data are publicly available from the sources identified in the text.

Competition, Proprietary Costs of Financial Reporting and Financial Statement Comparability

Introduction

Theory recognizes that, similar to voluntary disclosure, financial statements can reveal proprietary information to competitors (Dye, 1986; Bagnoli & Watts, 2010).[1] While there exists a well-developed literature investigating the role of proprietary costs in managers' voluntary disclosure choices (e.g., Grossman, 1981; Milgrom, 1981; Verrecchia, 1983; Darrough & Stoughton, 1990; Wagenhofer, 1990), less is known about how proprietary costs impact managers' financial reporting decisions. Our study enhances scholarly understanding of the determinants of managers' financial reporting choices, by examining the association between the proprietary costs of financial reporting and financial statement comparability. Prior research predicts that demand for financial reporting will be higher in firms with poorer information environments (e.g., Healy & Palepu, 2001; Bagnoli & Watts, 2005). Therefore, we also investigate whether information asymmetry affects the relation between competition and financial statement comparability.

Though financial reporting is mandatory, there is latitude in *how* managers report, due to discretion afforded within Generally Accepted Accounting Principles (GAAP) (Bagnoli & Watts, 2005). For example, managers may deliberately overstate (understate) expenses or losses, such as bad debts or restructuring costs, to decrease (increase) profits in the current year, and increase (decrease) profits in later periods, leading to lower comparability of earnings. This strategy is possible because financial statements depend heavily on estimates (Sherman &Young,

[1] We follow Leuz and Wysocki (2016) and characterize financial statements as a broad form of mandatory disclosure. Thus, we distinguish financial statements and more specific mandatory disclosure.

2016).[2]

Prior accounting research suggests that to protect proprietary information, managers may strategically report when competitive pressures are high (Bagnoli & Watts, 2010; Ellis, Fee, & Thomas, 2012). For example, Botosan and Stanford (2005) find that before SFAS No. 131, firms used the latitude in SFAS No. 14 to hide profitable operations. Datta, Iskandar-Datta, and Singh (2013) document that industry concentration, a common proxy for product market competition, is positively associated with earnings management, suggesting that managers attempt to mislead competitors through accrual manipulation. Dhaliwal, Huang, Khurana, and Pereira (2014) find that industry concentration and asymmetric loss recognition are positively associated, and conclude that managers report losses more quickly than gains to discourage new entrants.

In contrast to prior studies, we examine how competitive pressures affect the comparability of financial statements. In the Financial Accounting Standards Board's (FASB) conceptual framework, comparability is considered an enhancing characteristic of financial information that is distinct from other qualitative characteristics, such as faithful representation, relevance, or timeliness (FASB, 2013). Comparability increases a user's ability to evaluate a subject firm's performance against its competitors by enabling better identification of similarities and differences between entities (FASB, 2010). Jiang, Wang, and Wangerin (2017) examine the attention of the FASB when setting 211 financial accounting standards from 1973-2014, and report that, "improving comparability is the most frequently cited reason for the FASB to add a project" (Jiang et al. 2017, p. 3). Highlighting its potential for enhancing a firm's information environment, empirical evidence suggests a negative relation between comparability and the cost of external capital (Kim, Kraft, & Ryan, 2013; Imhof, Seavey, & Smith, 2017).

[2] Over provisioning of expenses and losses is especially prevalent under U.S. GAAP because it involves relatively low litigation risk, and thus, is usually tolerated by external auditors (Sherman and Young, 2016).

When competition is intense, however, comparability can be costly. Managers often rely on information from competitors' financial reports when formulating their own strategies (Bagnoli & Watts, 2010; Beatty, Liao, & Yu, 2013), but financial reports require resources to process and decipher (Fishman & Hagerty, 1989). More comparable financial statements can lessen the information-processing costs of a firm's competitors, increasing revelation of proprietary information. Thus, this study addresses whether managers of firms operating in highly competitive product markets report in a way that lessens financial statement comparability.

We employ an earnings-based measure of financial statement comparability proposed by De Franco, Kothari and Verdi (2011), which considers the accounting system to be a "mapping" of information from economic events into financial statements, and thus captures commonalities in how two firms account for similar transactions. The measure has also been extensively used in research investigating how financial reporting comparability is affected when companies change from national-based accounting standards to International Financial Reporting Standards (IFRS) (e.g., Barth, Landsman, Lang & Williams, 2012; Cascino & Gassen 2015).[3]

Proprietary information is not uniform across firms within industries (Darrough, 1993; Tang, 2010). Therefore, we capture firm-level variation in the proprietary costs of financial reporting two ways. First, we use a measure from Hoberg and Phillips (2010) and Hoberg, Phillips, and Prabhala (2014), referred to as *product market fluidity* ("*fluidity*"). Fluidity is calculated for a subject firm *i* using a text-based analysis of rival firms'10-K reports, and

[3] A potential limitation of the De Franco et al. (2011) measure is that it is based on GAAP earnings, which are a summary of economic performance (Dechow, 1994). While earnings does not directly relate to balance sheet accounts, their balances are affected as revenues and expenses are recognized. Therefore, we use the De Franco et al. (2011) measure to proxy for the comparability of the entire accounting system (Lang, Maffett & Owens, 2010). However, in robustness tests, we employ alternative, accruals-based measures of financial statement comparability (Francis, Pinnuck, & Watanabe [2014]), discussed in the section "Empirical Findings."

captures changes in competitors' product portfolios in response to firm *i*'s 10-K report. Because it focuses on competition at the firm-level, Dedman and Lennox (2009) suggests that fluidity may better capture proprietary costs of financial reporting than broad industry-level measures of competition, such as industry concentration.[4]

For our second measure of proprietary costs of financial reporting, we use Miles and Snow's (1978; 2003) strategy typology to identify firms whose competitive strategies are most likely to generate high levels of proprietary product information. Specifically, we sort firms into three viable strategies according to their tendency to innovate. We posit that managers of firms known as *Prospectors*, which consistently pursue and develop new products and technologies, have the greatest incentive to make reporting choices that limit the divulgence of proprietary information to competitors.[5]

In univariate and multivariate analyses, we find that financial statement comparability is decreasing in fluidity and is lower for firms identified as *Prospectors*. In terms of economic significance, moving from the first to the third quartile of *fluidity* results in a decrease in financial statement comparability of nearly 6%, while comparability for *Prospectors* is nearly 5% lower than for other firms, holding other variables at their means. Our results are robust to alternative measures of financial statement comparability, and alternative measures of proprietary costs of financial reporting. We conclude that as competition intensifies, the need to protect proprietary information from competitors increases, leading managers to make financial reporting decisions that ultimately reduce the comparability of their financial statements.

[4] Dedman and Lennox (2009) discuss theoretical and empirical issues that arise from using industry concentration to capture product market competition. First, competition within an industry is likely to vary significantly across firms. Second, traditional SIC coding schemes employed in academic research may be noisy. In practice, two companies classified under the same SIC code may not consider themselves competitors, especially if they are geographically distant. Furthermore, empirical evidence provided by studies employing industry concentration measures as proxies for product market competition is inconsistent with regards to the provision of financial information (e.g., Harris, 1998; Botosan & Stanford, 2005; Verrecchia & Weber, 2006).

[5] We discuss the detailed operationalization of the Miles and Snow (1978; 2003) typology in Appendix C.

We also find that the negative association between proprietary costs of financial reporting and financial statement comparability is increasing in information asymmetry. This result supports prior research suggesting that financial reports become more important sources of managers' private information when significant information asymmetries exist between the firm and its competitors (e.g., Botosan & Stanford, 2005). Together, our findings extend research on the role of competition in determining managers' financial reporting choices (e.g., Ellis et al., 2012; Datta et al., 2013; Dhaliwal et al., 2014).

We also contribute to research examining the determinants of financial statement comparability. Prior studies focus primarily on the benefits of comparability for investors (e.g., De Franco et al., 2011; DeFond, Hu, Hung, & Li, 2011; Choi, Choi, Myers, & Ziebart, 2018). We consider how competitive pressures incentivize managers to reduce comparability. To that end, our paper underscores the argument outlined in Francis et al. (2014) that standards alone do not define comparability. Rather, economic agents and industry characteristics are important as well.

The rest of the paper is structured as follows. In the next section, we review relevant literature and develop testable hypotheses. In the subsequent sections, we present our research design, sample selection, descriptive statistics, and results of our multivariate tests, including robustness tests. The final section concludes.

Relevant literature and hypothesis development

Given the importance of financial reporting for communicating a firm's activities to external stakeholders, we investigate the association between the proprietary costs of financial reporting and financial statement comparability. Mechanical attributes of financial statements lend to their comparability, such as convention in how they are formatted. However, our interest is on financial statement comparability, as reflected in revenues and expenses. Financial reporting

choices made by managers, such as: estimates for bad debt expenses, loan loss provisions, deferred tax asset valuation allowance, property/casualty reserves, impairment losses, pension and warranty expenses, revenue accruals, etc., can result in either more or less comparable earnings. Thus, the discretion afforded to managers in the application of GAAP, can significantly affect investors' ability to compare operating performance across firms. We assume that given accounting choices within GAAP, footnote disclosures explaining those choices are either insufficient for external users to fully comprehend variations in reporting choices and how they relate to the actual economic events that firms experience, or that the additional footnotes offer only minimal information, given managers' incentives to not be transparent in a competitive market.

Although financial reports, which are broad mandatory disclosures, are generally treated by academic researchers as being distinct from voluntary disclosures, our investigation is motivated partly by voluntary disclosure theory, which models the voluntary disclosure decision as a tradeoff between external capital needs and the costs of divulging proprietary information to rivals (e.g., Verrecchia 1983; Darrough & Stoughton 1990; Feltham & Xie 1992; Newman & Sansing 1993; Darrough 1993; Gigler 1994). The basic tenet of voluntary disclosure models is that if proprietary costs exceed capital market benefits, managers will not initiate, or will reduce or cease, disclosure. Empirical and anecdotal evidence supports this argument. Hayes and Lundholm (1996) show that competition creates a disincentive to report segment operations, while Harris (1998) finds that managers are less likely to report segment information in less competitive industries, presumably to protect abnormal profits. Graham, Harvey, and Rajgopal (2005) and Dedman and Lennox (2009) survey executives in the U.S. and the U.K., respectively, and find that the risk of divulging valuable proprietary information is a major barrier to voluntary

disclosure. We infer from voluntary disclosure theory that managers also weigh the risks of divulging proprietary information through financial reporting. Thus, we contribute to literature examining how managers respond to competitive pressures through their financial reporting choices (e.g., Tang, 2010; Datta et al., 2013, Dhaliwal et al., 2014).

Our study is also motivated by research suggesting that managers pay attention to rival firms' financial reports. Bushman and Smith (2001, p. 310) argue that financial reports allow other firms "to identify good and bad investment opportunities" while Bagnoli and Watts (2010) suggest managers glean information about competitors' production costs from their financial reports and bias their own firm's reporting in response. Beatty et al. (2013) show that peer firms increase investment during fraudulent reporting periods, indicating that managers make strategic decisions based on information from competitors' financial reports.

Our inquiry is also motivated by literature examining the determinants of financial statement comparability. Both the FASB and the International Accounting Standards Board (IASB), in their joint conceptual framework project, emphasize that comparability enhances the usefulness of financial information for decision makers (FASB, 2013). In fact, according to the FASB, one of the most important roles of accounting standards is to facilitate comparability between firms (FASB, 2010, par BC3.33). Internally, comparability can help directors make hiring/firing and compensation decisions by facilitating the evaluation of managers relative to their industry peers. Externally, investors benefit from comparability by being better able to distinguish between alternative investment opportunities.

However, there can be disadvantages to comparability. External users of financial reports

face information-processing costs (Fishman and Hagerty 1989). We posit that when financial statements are more comparable, the information-processing costs of a firm's competitors will be lower, *ceteris paribus*. Because GAAP allows managers to limit the divulgence of proprietary information in financial reports, we predict a negative association between the proprietary costs of financial reporting and financial statement comparability. This leads to our first testable hypothesis, stated in the alternative:

> **Hypothesis 1**: Propriety costs of financial reporting will be negatively associated with financial statement comparability.

Porter (2008) argues that the forces of competition will be most intense when rival firms cannot read each other's signals well. Consequently, competitors will rely more on financial reports when rivals are less transparent, and when other sources of information are lacking (Fischer & Verrecchia, 2004; Bagnoli & Watts, 2010). This leads to our second hypothesis, stated in the alternative:

> **Hypothesis 2**: The negative association between proprietary costs of financial reporting and financial statement comparability will be stronger when there is high information asymmetry.

Research Design

Comparability

Our primary measure of financial statement comparability captures commonalities of firms' accounting systems, as reflected in the mapping of economic events into earnings. We follow the method developed by De Franco et al. (2011), who argue that two firms have comparable financial reporting if they have similar accounting for the same type of transactions, and use stock returns to proxy for economic events and earnings to proxy for accounting system output. The formal calculation of *Comparability* is detailed in Appendix SA (supplemental).

Proprietary Costs of Financial Reporting

Fluidity. Our first proprietary costs of financial reporting proxy is a measure of product market competition known as *fluidity*. Developed by Hoberg and Phillips (2010) and Hoberg et al. (2014), *fluidity* captures how rival firms change product-related references in their 10-Ks in response to a subject firm *i*'s product vocabulary in its 10-K. Changes in rival firms' product language is perceived as competition by managers of firm *i*. Thus, *fluidity* represents year-to-year changes in competition from the viewpoint of managers.[6] The calculation of *Fluidity* is detailed in Appendix SB (supplemental).

Competitive Strategy. To create our second proprietary costs proxy, we obtain data from Bentley, Omer, and Sharp (2013), which operationalizes the strategy typology developed in Miles and Snow (1978, 2003) to identify firms with competitive strategies most likely to generate high levels of proprietary information. Miles and Snow (1978) suggest that there are three types of sustainable firms: Prospectors, Defenders, and Analyzers. Each type adopts a competitive strategy along a continuum, based on the firm's rate of change in its product portfolio. At one end of the continuum are Defenders, which maintain a narrow, but stable domain of products. These firms seek to "deliberately create stability through a series of decisions and actions which lessen the organization's vulnerability to environment change and uncertainty" (Miles & Snow, 1978, p. 37). Defenders focus on production efficiencies rather than on new product development. At the opposite end of the spectrum are Prospectors. Prospectors operate across multiple product domains and are constantly "finding and exploring new product and market opportunities" (Miles & Snow, 1978, p. 55). For this reason, Prospectors' profits are inconsistent, and they often grow in spurts. Prospectors' greatest threats are other Prospectors. In the middle of the continuum are Analyzers. Analyzers are interested in both production efficiencies and

[6] Because we focus on competition arising from rivals, we prefer this measure to a related measure based on textual analysis of annual reports (Li, Lundholm, & Minnis, 2013). However, in robustness tests, our inferences are unchanged using Li et al.'s (2013) measure.

research and development, although their product domains remain smaller than those of Prospectors. Analyzers can pose a threat to Prospectors because they often adopt and/or pursue Prospectors' best products and technologies. Thus, among the three types of firms, Prospectors generate the highest levels of proprietary information and are most vulnerable to competition. We argue that incentives to limit the divulgence of proprietary information in financial reports will be highest for Prospectors.

We provide details of the strategy typology calculations in Appendix SC (Supplemental). In our multivariate tests, we form two dichotomous variables using data from Bentley et al. (2013). *Prospector* is set equal to 1 if a firm is considered a Prospector, 0 otherwise; this variable serves as a proxy for proprietary costs of financial reporting; *Defender* is set equal to 1 if a firm is considered a Defender, 0 otherwise. Using two indicators allows us to differentiate the incremental effects of strategy on comparability across the three firm types.

Unconditional Multivariate Test

To examine the association between proprietary costs of financial reporting and financial statement comparability, we estimate the following ordinary least squares (OLS) model:

$$Comparability_{it} = \alpha_{0it} + \alpha_1 Proprietary\_Costs_{it} + \alpha_2 Controls_{it} + \varepsilon_{it}, \quad (1)$$

In Equation (1), $Comparability_{it}$ represents our primary measure of comparability (*DKV_mean*), and $Proprietary\_Costs_{it}$ represents either *Fluidity* or *Prospector*, defined above.[7] If proprietary costs of financial reporting are associated with lower financial statement comparability, α_1 will be negative and statistically significant, supporting H1.

We follow existing empirical research and control for the determinants of comparability. We follow Lang et al. (2010) and control for size and book-to-market. We follow Francis et al.

[7] Tests of variance inflation factors suggest that *Fluidity* and *Prospector* do not pose multicollinearity problems. In a robustness test, we estimate Equation (1) including both *Fluidity* and *Prospector*. These results are reported in Table 5, as column 3.

(2014) and control for leverage, cash flows from operations, the variance of quarterly cash flows, quarterly sales and growth in sales, and stock returns. We include the absolute value of discretionary accruals (Kothari et al., 2005), and a dichotomous variable for whether a firm engages a Big 4 auditor, to control for financial reporting quality. We control for information demand from intermediaries, firm monitoring, and information asymmetry using of analyst following, institutional holdings, and bid-ask spread, all of which play important roles in managers' reporting choices (Fischer & Verrecchia, 2004; Arya, Mittendorf, & Sappington, 2005; Porter 2008).

Differences in firms' economic or business transactions may also affect comparability. Thus, we control for product market similarity [measured as Hoberg and Philip's (2010) industry concentration measure, *Similarity*], firm profitability, and the number of operating segments (to capture operating complexity). We control for major corporate events by including dichotomous controls for changes in the chief executive officer (CEO), chief financial officer (CFO), and auditor, and a dichotomous control for whether or not the firm was involved in a merger and/or acquisition during the year. All test and control variables are defined in Appendix A. We include industry fixed-effects based on 2-digit SIC codes and year fixed-effects, to control for industry- and year-specific characteristics, respectively.[8] Standard errors are clustered at the firm-level to control for serial-dependence due to repeated firms in our dataset (Petersen, 2009).

Conditional Multivariate Test

To test H2, we expand Equation (1), to include an interaction between proprietary costs of

[8] *Fluidity* varies by firm over time and so allows for the addition of firm fixed-effects in place of industry fixed-effects (however, multicollinearity becomes problematic when adding firm fixed-effects to the *Prospector* and *Defender* analyses). Our main inferences hold with the addition of firm fixed-effects in place of industry fixed-effects (when maintaining year fixed-effects in the model, the coefficient on *Fluidity* is –0.057, $p < 0.01$).

financial reporting and information asymmetry.

$$Comparability_{it} = \alpha_{0it} + \alpha_1 Proprietary\_Costs_{it} + \alpha_2 Asymmetry_{it} + \alpha_3 Proprietary\_Costs_{it} \times Asymmetry_{it} + \alpha_4 Controls_{it} + \varepsilon_{it}, \quad (2)$$

In Equation (2), $Comparability_{it}$ represents our primary measure of financial statement comparability (*DKV_mean*), and $Proprietary\_Costs_{it}$ represents either *Fluidity* or *Prospector*. We proxy for information asymmetry, $Asymmetry_{it}$, using either the bid-ask spread (*Bid_ask*), which is a dichotomous variable set to 1 if above the sample-year median of the *Bid_ask_spread* (defined in Appendix A), 0 otherwise; or a dichotomous variable (*Low_analyst*) set to 1 for firms covered by fewer analysts than the sample-year median, 0 otherwise.[9] Theory suggests that a large portion of the bid-ask spread is driven by information differences between informed and uninformed traders (Amihud & Mendelson, 1986; Coller & Yohn, 1997). Thus, the bid-ask spread is widely used as a proxy for information asymmetry (e.g., Kim & Verrecchia, 1994; Welker, 1995; Leuz and Verrecchia, 2000). Analysts are important information intermediaries who both produce firm information and cover firms for which information is more readily available (Liu 2011; Xu, Chan, Jiang & Xi, 2013). Similar to the bid-ask spread, past research uses analyst coverage to proxy for information asymmetry (e.g., Armstrong, Core, Taylor & Verrecchia, 2011). Given H2, we expect α_3 to be negative and significant, suggesting that the negative association between proprietary costs of financial reporting and financial statement comparability is stronger when there is high information asymmetry.

Sample Selection and Data

Sample Construction

In Table 1, Panels A and B, we detail our sample selection attrition and provide a sample

[9] In untabulated tests we define *Bid_ask* and *Low_analyst* as dichotomous variables based on the top tercile of values, instead of above medians. Our inferences are unchanged using the modified categorization.

breakdown by industry. We start with all observations from non-financial U.S. firms in Compustat from 1997 through 2011, with total assets of at least $10 million.[10] We retain only those observations with at least 10 firms in a given industry, based on two-digit SIC codes. We obtain stock returns from the Center for Research in Securities Prices (CRSP), analyst coverage from I/B/E/S, governance data from Execucomp, and institutional holdings from Thompson Reuters, and we merge the resulting datasets with the Compustat data. We obtain product market fluidity and product market similarity from Gerard Hoberg's website (http://cwis.usc.edu/projects/industrydata/), which reduces the sample to 28,515 observations. We calculate earnings-returns covariations using Compustat and CRSP data, as in De Franco et al. (2011), which, after merging, results in 18,331 firm-year observations.[11] Our sample is reduced to 15,945 observations after merging the strategy typology dataset. We winsorize all continuous variables, by year, at the 1st and 99th percentiles.

[INSERT TABLE 1 HERE]

Our sample distribution by industry is similar to the Compustat population (see Table 1, Panel B). Although manufacturing companies are somewhat over-represented and Transportation, Communications, Electric, Gas and Sanitary companies are somewhat under-represented, the differences are not likely large enough to bias our findings, or overall generalizability.

Descriptive Statistics

In Table 2, we provide additional descriptive information about *DKV_mean* and other variables in our OLS models, by samples using *Fluidity* (Columns 1-5) or *Prospector* (Columns 6-10) to

[10] Hoberg et al.'s (2014) fluidity dataset is available only for these years, restricting our sample.
[11] Comparability data and SAS code are available from Rodrigo Verdi's website: http://www.mit.edu/~rverdi/.

measure proprietary costs of financial reporting.[12]

[INSERT TABLE 2 HERE]

In the *Fluidity* sample, mean (median) values of *DKV_mean* are –3.34 (–2.93), similar to prior research. *Fluidity* has a mean (median) value of 7.03 (6.37), similar to Hoberg et al. (2014). Overall, firms in the *Fluidity* sample are large, reasonably profitable, have a mean market-to-book ratio of 1.94, and have mean leverage of 20% of assets. They have positive average operating cash flows (mean of 8.3% of total assets) and relatively stable operating cash flows and sales. The average company returns nearly 17% annually to shareholders, but the median is just over 6%. Firms in the *Fluidity* sample have average absolute discretionary accruals of 6.2% of total assets, are primarily audited by Big 4 audit firms (88.5%), are followed by a mean (median) of 7.32 (5) analysts, have an average of 61.4% of their outstanding common shares owned by institutional investors, and have a mean (median) bid-ask spread of 1% (0.42%). *Profit_margin* has a mean of –0.21, but the median value is 0.04.[13] Firms average just under three operating segments and 5.8% (2.7%) of firm-years involve a change in CEO (CFO). Finally, approximately 7% of firms change auditors each year, and firms record a merger or acquisition in 20% of firm-years.

In Columns 6-10, we report similar statistics for the strategy sample. We also include *Strategy* (the overall strategy score defined in Appendix SC), and *Defender* (a dichotomous variable equal to 1 if a firm is categorized as a Defender, 0 otherwise). The strategy score has a mean (median) value of 18.22 (18). 7.7% of firms are Prospectors, while 4.8% are Defenders.

[12] The number of observations is evenly dispersed over the sample period (untabulated, from a minimum of 6.28% of the sample in 1997, to a maximum of 7.14% in 2010). The mean (median) value of *DKV_mean* fluctuates over the sample period from a low of –4.282 (–3.955) to a high of –2.238 (–1.940), but does not reveal a systemic pattern.

[13] Return on assets (*ROA*) is often used to measure profitability. We use *Profit_margin* because of the high correlation between *ROA* and cash flows from operations (*Cashflows*) (Pearson correlation = 0.77). Nonetheless, our inferences hold if we substitute *ROA* for *Profit_margin*.

Table 3 reports Pearson correlations between *DKV_mean*, our proprietary costs of financial reporting proxies, and controls. Supporting H1, financial statement comparability is negatively correlated with both product market fluidity and a Prospector strategy, suggesting that as market competition increases, financial statements become less comparable. Correlations between all other variables are generally as expected. For example, comparability is increasing in firm size, profitability, cash flows, being audited by a Big 4 audit firm, analyst coverage, and institutional holdings. Overall, with two exceptions, none of the correlations between our control variables exceeds the absolute value of 0.55, and no variables have VIF values greater than 5.[14]

[INSERT TABLE 3 HERE]

In Table 4, Panels A and B, we conduct univariate comparisons. In Panel A, we partition the sample at the industry-year mean on high versus low fluidity. As our first hypothesis predicts, comparability is lower for firms with higher fluidity. Specifically, mean (median) *DKV_mean* for firms that exhibit high fluidity is –3.61 (–3.14), whereas mean (median) *DKV_mean* for firms that exhibit low fluidity is –3.07 (–2.73), with both differences significant at $p < 0.01$. Also of note, Prospectors constitute 11.3% of the high fluidity sub-sample, compared to 4.8% of the low fluidity sub-sample, indicating significant overlap between the two proprietary costs proxies.

[INSERT TABLE 4 HERE]

In Panel B, we partition the sample on Prospectors versus Analyzers/Defenders. Mean (Median) *DKV_mean* for Prospectors is –3.71 (–3.19) whereas mean (median) *DKV_mean* for Analyzers/Defenders is –3.27 (–2.90), and both are significant at $p < 0.01$. Other company characteristics are significantly different between Prospectors and Analyzers/Defenders. For

[14] The two exceptions are the correlation between *Size* and *Analysts* (0.69) and between *Fluidity* and *Similarity* (0.68). Removing *Analysts* and *Similarity* does not change our inferences.

example, Prospectors have higher fluidity, report larger abnormal accruals, and have less stable operating environments (higher variance of cash flows and higher sales growth).

Empirical Findings

Unconditional Multivariate Test Results

In Table 5, we report the results from estimating Equation (1) using either *Fluidity* (column 1), or *Prospector* (column 2), as the measure of proprietary costs of financial reporting. In column 3, we include both *Fluidity* and *Prospector*. In *Prospector* estimations, we also include the *Defender*, which leaves Analyzers, the largest group, in the intercept. This allows for a more intuitive interpretation of the coefficient on the *Prospector* dummy variable.

[INSERT TABLE 5 HERE]

Adjusted R-squares are 40% (column 1) and 39% (columns 2 and 3). *Fluidity* and *Prospector* are negatively associated with financial statement comparability, whether estimated separately or included in the same regression; the coefficient on *Fluidity* (column 1) is –0.041, $p < 0.01$, on *Prospector* (column 2) is –0.181, $p < 0.05$ and, in column 3, on *Fluidity* (*Prospector*) is –0.033, $p < 0.01$ (–0.185, $p < 0.05$).[15] However, the difference in the coefficients on *Prospector* and *Defender* is not statistically significant (*F*-stat of 0.02, *p*-value of 0.87 for column 2, and *F*-stat of 0.02, *p*-value of 0.89 for column 3). These results reveal that as proprietary costs of financial reporting increase, financial statement comparability decreases. In terms of economic significance, moving from the first to the third quartile of *Fluidity* in column 1 is associated with a decrease in comparability of nearly 6%, holding other variables at their means. Comparability for Prospectors is almost 5% lower than for Analyzers, holding other

[15] *Fluidity* is a continuous measure of proprietary costs and *Prospector* is a discrete measure of high proprietary costs. As an alternative test, we separately estimate our model on the *High_* and *Low_fluidity* subsamples. The coefficient on *Prospector* is significant in the *High_fluidity* subsample (coefficient = –0.213, $p = 0.03$) but not significant in the *Low_fluidity* subsample (coefficient = –0.173, $p = 0.15$).

variables at their means (column 2). The results for control variables, where significant, are generally as expected. For example, larger firms and firms with greater cash flows exhibit higher comparability, while firms with more volatile quarterly sales and cash flows from operations, and higher absolute discretionary accruals, exhibit lower comparability.

The Association between Proprietary Costs of Financial Reporting and Financial Statement Comparability Conditional on Information Asymmetry

Next, we estimate extended versions of Equation (1) (columns 1 and 3), which include either *Bid_ask* or *Low_analyst*, to control for information asymmetry, and of Equation (2) (columns 2 and 4), which include either *Bid_ask* or *Low_analyst*, and an interaction between *Bid_ask* or *Low_analyst* and *Fluidity*/*Prospector*.

[INSERT TABLE 6 HERE]

In Table 6, Panel A, bid-ask spread proxies for information asymmetry. In columns 1 and 3, we find that *Bid_ask* is negatively associated with comparability (coefficients = –0.140, $p <$ 0.01 and –0.151, $p < 0.01$, respectively).[16] Coefficients on the interactions between *Bid_ask* and either *Fluidity* or *Prospector* (columns 2 and 4) are also negative and significant. In Panel B, we present similar results using *Low_analysts* to proxy for information asymmetry. In column 1, *Low_analysts* is negatively associated with comparability (coefficient is –0.076, $p <$ 0.10). Interactions between *Low_analysts* and *Fluidity*/*Prospector* in columns 2 and 4 are similar to those reported in Panel A (coefficients on the interactions are –0.028, $p < 0.01$ and –0.298, $p <$ 0.10, respectively). In sum, the results presented in Tables 5 and 6 suggest that as propriety costs of financial reporting increase, financial statement comparability decreases, more so for firms with high information asymmetry.

[16] *Bid_ask* is determined for year *t* in our primary analysis. However, over the same period, earnings comparability may result in changes in information asymmetry. Thus, in sensitivity tests (not reported) we lag *Bid_ask* by one year and re-estimate our models. Doing so does not change our inferences.

Robustness Tests

Matched sample analysis. As reported in Table 4, there are significant differences between *High_* and *Low_Fluidity* firms and between *Prospector* and *Analyzer/Defender* firms. We control for these differences in our multivariate analyses, but additional idiosyncrasies may explain our results. To help to alleviate this concern, we implement a matched sample design. For analysis using the *Fluidity* sample, we match *High_Fluidity* (treatment) firms with *Low_Fluidity* (control) firms based on total assets, one-to-one by year, with replacement (Stuart 2010). We require control observations to be the closest match and within 10% of the size of the corresponding test observation (based on the smaller firm in each matched pair). Our matched sample consists of 9,040 treatment observations and 9,040 control observations. Mean and median *Total Assets* (untabulated) are not significantly different between treatment and control firms (p = 0.99 [p = 0.95] for difference in means [medians]). Although some differences remain after the matching procedure, the two subsamples are generally similar.

[INSERT TABLE 7 HERE]

In Table 7, we report results from estimating Equations (1) and (2) on the matched fluidity sample. The results are similar to those presented in Tables 5 and 6; *Fluidity* is negatively related to proprietary costs of financial reporting, and incrementally more so where information asymmetry is high.

For our strategy score analysis, the matching procedure is slightly different, given the unequal distribution of observations across the partitions: *Prospectors* (n = 1,158), *Analyzers* (n = 13,018), and *Defenders* (n = 708). First, we match *Prospectors* (treatment) to *Analyzers* (control #1) by year and total assets, with replacement, and retain pairs with the closest absolute difference in total assets (portfolio #1). Next, we match *Prospectors* (treatment) to *Defenders*

(control #2) in the same manner (portfolio #2), and then we merge portfolios #1 and #2. The final sample consists of 2,577 unique observations (some *Analyzers* and some *Prospectors* are matched more than once), and 3,474 full sample observations.[17] As recommended in Stuart (2010), we estimate Equations (1) and (2) using the final matched strategy sample, including duplicated control firms. Differences in firm characteristics, reported in Table 8, Panel A, remain across the partitions, however, in general, the differences are smaller and less significant than in the unmatched sample (for brevity, the significance is shown only for total assets).

[INSERT TABLE 8 HERE]

In Panel B, we report the results from estimating Equation (1). The results are similar to those presented in Tables 5 and 6, except that the coefficient on *Defender* is no longer significantly different from zero. Consequently, we reject the null that the coefficient on *Prospector* equals the coefficient on *Defender*. If we estimate Equation (1) on the matched sample of only Prospectors and Defenders, the coefficient (untabulated) on *Prospector* is negative and significant (–0.184, $p = 0.04$). Overall, our matched-sample analysis for the strategy sample supports our main findings and suggests that financial statements for Prospectors are less comparable than those of Analyzers/Defenders, more so in the presence of high information asymmetry.

Validity tests for strategy score. In robustness tests, we alternatively classify firms as Prospectors, Analyzers, and Defenders using the top, middle, and bottom third of strategy scores, respectively. Second, we use the strategy score as a categorical variable (6-30), and because the relationship between the three categories of companies is not intuitively linear, we include a

[17] The final matched sample contains 1,155 unique *Prospector* observations, 1,017 unique *Analyzer* observations, and 405 unique *Defender* observations. When we estimate Equations (1) and (2) using the matched sample for strategy score, we do not cluster standard errors by firm as in our primary regressions, due to the repeated firm-year observations. If we do cluster standard errors by firm, *t*-statistics are generally reduced but our inferences are the same.

squared term. Third, we perform subsample analysis (using three separate subsamples) with either 1) Prospectors versus Analyzers, 2) Defenders versus Analyzers, or 3) Prospectors versus Defenders. In all additional tests, our inferences are unchanged. Finally, focusing on extreme partitions, we re-classify companies as *High_Prospector* (score of 25-30) and *Low_Defender* (score of 6-10), and we estimate our models with the alternate indicators. The inferences are robust but with lower economic significance.[18]

Alternative measures of proprietary costs. We estimate Equation (1) using four alternative proxies for proprietary costs of financial reporting. The first three alternative proxies are firm-specific and include research and development expenses (*R&D*), selling, general, and administrative expenditures (*SG&A*), both scaled by beginning period total assets, and Li, et al.'s (2013) measure of competition based on textual analysis of 10-K reports (*Textual*). *R&D* and *SG&A* reflect firms' proprietary information (Wang, 2007; Ellis et al., 2012). *Textual* is calculated by dividing the number of times management mentions competition by the number of words in the MD&A section of the firm's 10-K. Additionally, we use an industry-based measure of competition, the Herfindahl-Hirschman index (*HHI_sales*), which calculates the intensity of sales within an industry (based on 2-digit SIC codes) adjusted for firm size. We multiply *HHI_sales* by –1 for consistent interpretation of OLS coefficients.

In Table 9, Panel A, we report descriptive statistics for the alternative measures of proprietary costs. Mean (median) values are similar to Ellis et al. (2012) and Li et al. (2013).

[18] In addition, Bentley et al. (2013) perform several sensitivity tests to validate the use of their strategy score (*Strategy*) as a proxy for business risk. First, they decompose *Strategy* into its individual components and perform factor analysis, noting that all six components load onto a single factor. They then replace *Strategy* with the factor score in their audit fee and financial reporting irregularity models and obtain similar results. Second, they test the consistency of *Strategy* by analyzing how often firms change scores from year to year. For their sample and sample period, on average, 34% of firm scores in an industry-year do not change, 42% change by a value of 1 (e.g., moving from 10 to 11), and 5% of firms never change scores. Only 3% of firms change scores more than 3 points from one industry-year to the next. Furthermore, they note that *Strategy* is correlated with its one-year lag by over 90%, indicating year-to-year stability in firms' competitive strategies.

Correlations (untabulated) are all significant and positive, but as a group, the correlations range from 0.02 to 0.53, indicating that the six proxies capture different aspects of firms' competitive environments, with varying degrees of overlap.

[INSERT TABLE 9 HERE]

In Panel B, we report the results from estimating Equation (1) using each of the alternative proxies for proprietary costs of financial reporting (coefficients on controls are not reported for brevity). Collectively, the results support our primary findings that as competitive pressures increase, comparability decreases. In each column, the coefficient on the alternative proxy is negative and significant (*RD* = –1.131; *SG&A* = –0.434; *Textual* = –0.187; *HHI_sales* = –2.988; $p < 0.01$ for all).[19]

Alternative specifications of the De Franco et al. (2011) comparability measure. De Franco et al. (2011) provide alternative specifications of their measure of comparability, including values based on median within-industry earnings-returns co-movements, and constructions using only the 4 or 10 closest peers in an industry. Using these alternative measures does not affect our inferences. We conduct additional sensitivity tests, discussed below.

The De Franco et al. (2011) measure is as of year *t* but is calculated over the current and prior 3 years (rolling 16 quarters), while our proprietary costs of financial reporting measures are contemporaneous. Thus, there may be a timing bias in our estimations. We therefore conduct three additional untabulated tests. First, we reduce the number of quarters included to 12 and shift the estimation period by one year, moving from a rolling (*t*–3 to *t*) window to a (*t*–1 to *t*+1) window. Our inferences hold using the shifted measurement window. Second, we estimate Equation (1) using only every fourth year of data (1997, 2001, 2005 and 2009), so that there is

[19] Li et al.'s (2013) textual measure is highly correlated within industry groupings, and *HHI_sales* is an industry-level measure. To avoid problems related to multicollinearity, we do not include industry fixed effects when estimating our model with either *Textual* or *HHI_sales*.

no "carryover" of information due to the rolling nature of *DKV_mean*. Our inferences are robust to these estimations as well. Finally, we reduce the estimation period for the *DKV_mean* variable from 16 quarters (*t*–3 to *t*) to just 8 quarters (*t*–1 to *t*). Here, we observe a reduction in significance of our test variables, but our inferences are unchanged.

Bhojraj, Lee and Oler (2003) compare industry classification schemes and suggest that SIC codes are not as efficient at classifying firms as other industry classification systems (most notably, Global Industry Classification Standards, GICS). We recalculate the DKV measures using both two-digit GICS codes and two-digit North American Industry Classification System (NAIC) codes and re-estimate Equations (1) and (2). Our inferences hold with both alternative classifications.

Alternative measure of comparability. We also test whether our main inferences hold using alternative measures of financial statement comparability from Francis et al. (2014, p. 612). Specifically, we measure comparability based on the closeness of either total accruals (*–1×Total_acc_diff_mean*) or discretionary accruals (*–1×Abn_acc_diff_mean*) for firm-pairs, within industries. We then estimate Equations (1) and (2) using the accruals-based measures and both our primary measures of proprietary costs of financial reporting and the four additional measures discussed above. Descriptive statistics of our accrual-based measures, untabulated, are similar to values reported by Francis et al. (2014) and correlations between *DKV_mean, –1×Total_acc_diff_mean*, and *–1×Abn_acc_diff_mean* are positive and significant.

In untabulated results, the coefficients on all measures of proprietary costs are negative and significantly different from zero, regardless of which accruals-based measure is the dependent variable. Economic significance (a reduction in comparability moving from the first to the third quartile for continuous measures, or from 0 to 1 for *Prospector*) ranges from 1.0% to

7.3%. Finally, results (not shown) with our matched samples using accruals-based measures of proprietary costs of financial reporting are similar to those presented in Table 10. In all, our sensitivity tests support our primary results: as proprietary costs of financial reporting increase, financial statement comparability decreases.

Conclusion

We investigate whether competition influences managers' financial reporting choices by examining the association between the proprietary costs of financial reporting and financial statement comparability. Managers often depend on information from competitors' financial reports when formulating their own strategies (e.g., Bagnoli & Watts, 2010; Beatty et al., 2013). Consequently, when competition is intense, greater financial statement comparability may exacerbate the risk of revealing proprietary information to rivals. Because managers have discretion in how to report the results of operations in their financial statements, they may do so in a way that lessens financial statement comparability.

To examine the link between competition and financial statement comparability, we use a measure of comparability that considers how similar firms' accounting systems are in terms of their mapping of information from economic events into earnings (De Franco et al. 2011). We use two measures of the proprietary costs of financial reporting (one based on a textual analysis of firms' 10-K reports, and the other based on firms' competitive strategies). Using univariate and multivariate analyses, we find that financial statement comparability is decreasing in the proprietary costs of financial reporting. Our multivariate results are robust to the use of alternative measures of comparability, and to alternative measures of proprietary costs of financial reporting. We conclude that as competition intensifies, the need for strategic reporting to protect proprietary information from competitors also increases, leading managers to make

reporting decisions that result in lower financial statement comparability.

Prior research suggests that financial reporting reveals managers' private information more when information asymmetry between a firm and its rivals is high (Bagnoli & Watts, 2010). Therefore, we also examine whether information asymmetry influences the relation between proprietary costs of financial reporting and comparability. We find that the negative relation between proprietary costs of financial reporting and financial statement comparability is increasing in information asymmetry.

Our study makes an important contribution to research investigating the antecedents and consequences of financial statement comparability. Although a growing literature identifies the capital market benefits of increased comparability, few studies investigate the determinants of comparability. Most research examining financial statement comparability focuses on how more comparable financial statements benefit investors from an information acquisition and risk perspective (De Franco et al. 2011; Kim et al., 2013; Imhof et al., 2017; Choi et al. 2018). Research focusing on the determinants of comparability has generally examined how transparency regulations, such as IFRS, impact comparability at the market-level (e.g., Li, 2010; Brochet, Jagolinzer & Riedl, 2013). Our paper is the first to consider the potential for competition to influence managers' discretionary financial reporting choices in a way that significantly affects the comparability of their firm's financial statements. Our findings suggest that although comparability is one of the core qualitative characteristics of financial statements outlined in the FASB's conceptual framework, the need for more comparable information competes with the need to protect private information. Our study may therefore also be of interest to standard setters. Finally, our study provides a baseline for additional research. For example, future studies may examine how analysts, investors, and other external users of

financial statements, manage lower comparability when evaluating companies in competitive markets.

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Appendix A. Variable definitions

DKV_mean	Accounting comparability, calculated as the within industry mean of earnings-returns co-movement for all firm-pairs in an industry as in De Franco et al. (2011).
Total_acc_diff_mean	Accounting comparability, based on the closeness of total accruals between firm pairs in an industry (Francis et al. 2014).
Abn_acc_diff_mean	Accounting comparability, based on the closeness of discretionary accruals between firm pairs in an industry (Francis et al. 2014).
Fluidity	Product market competition for firm *i*, based on the changes in rival firms' 10-K product descriptions in response to firm *i's* 10-K product descriptions. See Appendix B for details (Hoberg et al. 2014).
Strategy	Product market competition, based on firm strategy typology as in Bentley et al. (2013), based on Miles and Snow (1978, 2003). From 0 to 30. See Appendix C.
Prospector	Dichotomous variable set to 1 if *Strategy* is between 24 and 30, and 0 otherwise.
Defender	Dichotomous variable set to 1 if *Strategy* is between 6 and 12, and 0 otherwise.
Size	Natural logarithm of total assets at the beginning of year *t.*
Market-to-book	Market value of equity divided by book value of equity.
Leverage	The ratio of total debt to total assets.
Cashflows	Cash flows from operations scaled by total assets.
Std_cashflows	Standard deviation in quarterly cash flows from operations, scaled by end of quarter assets, for preceding 16 quarters.
Std_sale	Standard deviation of preceding 16 quarter sales, scaled by end of quarter assets.
Std_sales_grth	Standard deviation of growth in quarterly sales for preceding 16 quarters.
Stock_return	12-month stock return for the current fiscal year.
Abs_abnacc	Absolute value of discretionary accruals calculated using the Jones (1991) model, as modified by Kothari et al. (2003).
Big 4	Dichotomous variable set to 1 if firm's auditor in year *t* is a Big 4 firm, 0 otherwise.
Num_analysts	Number of unique analysts that provide a financial forecast for firm *i* in year *t*.
Inst_own%	Average quarterly institutional holdings (percentage of common stock) in year *t*.
Bid_ask_spread	Absolute value of the annual average difference between daily bid and ask price in year *t*, scaled by closing price, and multiplied by 100.
Similarity	Industry measure of "market structure and market power" (Hoberg & Phillips 2016).
Profit_margin	Income before extraordinary items divided by sales.
Num_segments	The number of operating segments a company reports.
CEO_change	Dichotomous variable set to 1 if there is a change in CEO in year *t*, 0 otherwise.
CFO_change	Dichotomous variable set to 1 if there is a change in CFO in year *t*, 0 otherwise.
Auditor_change	Dichotomous variable set to 1 if a company changed auditors in year *t*, 0 otherwise.
Mergers	Dichotomous variable set to 1 if a company reports a merger and/or acquisition in *t*, 0 otherwise.
Bid_ask	Dichotomous variable set to 1 if the absolute value of the annual average difference in daily bid and ask price, scaled by price, in year *t* is above median, 0 otherwise.
Low_analyst	Dichotomous variable set to 1 if analyst coverage is below median, and 0 otherwise.
RD	R&D expenses scaled by beginning and end of year average total assets.
SGA	Selling, General and Administrative expenses scaled by average total assets.
Textual	Text-based measure of product market competition (Li et al., 2013).
HHI_sales	Hefindahl-Hirschman Index by 2-digit SIC code, based on company sales, annually.

Table 1. Description of sample observations.

Panel A: Sample selection.

Compustat available data from 1997 to 2011	134,661
Delete firm-years with negative assets and assets less than $10 mil.	–37,952
	96,709
Delete firm-years for which Compustat-based control variables cannot be computed	–41,942
	54,767
Remove financial firms (SIC2 between 60 and 69)	–4,972
	49,795
Remove firm-years with missing CRSP data to compute annual returns and bid-ask spreads	–8,084
	41,711
Remove firm-years with missing analysts data (I/B/E/S) and institutional ownership data (Thompson)	–12,801
	28,910
Remove missing observations of Hoberg et al. similarity score and missing observations of Hoberg et al. fluidity measure	–395
	28,515
Remove missing observations of De Franco et al. (2011) comparability measure	–10,184
Final sample for tests with fluidity measure	**18,331**
Remove missing observations of strategy score	–2,386
Final sample for tests with strategy measure	**15,945**

Panel B: Distribution of sample by industry.

		Sample		Compustat
SIC	Description	N	%	%
000-999	Agriculture, Forestry, Fishing	–	0.0	0.5
1000-1499	Mining	1,001	5.5	6.0
1500-1799	Construction	100	0.5	1.2
2000-3999	Manufacturing	10,934	59.6	46.0
4000-4999	Transportation, Communications, Electric, Gas and Sanitary	1,163	6.3	12.8
5000-5199	Wholesale Trade	706	3.9	4.0
5200-5999	Retail Trade	726	4.0	6.7
7000-8999	Services	3,658	20.0	22.6
9000-9999	Nonclassifiable	43	0.2	0.2
		18,331	100	100

Fluidity sample and Compustat population by industry. Compustat population is all non-financial firms with positive assets and sales, 1997-2011. Industry breakdown is similar for the *Prospector* sample.

Table 2. Descriptive statistics for *Fluidity* ($N = 18{,}331$) and strategy (*Prospector*, $N = 15{,}945$) sample distributions.

	***Fluidity* Sample**					***Prospector* Sample**				
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Variable	Mean	Median	Std. Dev.	Q1	Q3	Mean	Median	Std. Dev.	Q1	Q3
DKV_mean	–3.341	–2.930	1.855	–3.980	–2.140	–3.341	–2.930	1.822	–3.940	–2.180
Fluidity	7.032	6.372	3.579	4.377	8.948	N/A	N/A	N/A	N/A	N/A
Strategy	N/A	N/A	N/A	N/A	N/A	18.224	18.000	3.551	16.000	21.000
Prospector	N/A	N/A	N/A	N/A	N/A	0.077	0.000	0.267	0.000	0.000
Defender	N/A	N/A	N/A	N/A	N/A	0.048	0.000	0.215	0.000	0.000
Size	6.277	6.128	1.771	4.966	7.437	6.410	6.299	1.754	5.107	7.572
Market-to-book	1.941	1.400	1.799	0.862	2.330	1.831	1.369	1.597	0.862	2.214
Leverage	0.203	0.169	0.202	0.008	0.320	0.196	0.165	0.194	0.009	0.307
Cashflows	0.083	0.096	0.148	0.037	0.158	0.100	0.102	0.122	0.050	0.162
Std_cashflows	0.033	0.025	0.027	0.016	0.039	0.031	0.024	0.025	0.015	0.037
Std_sale	0.042	0.031	0.038	0.018	0.052	0.042	0.031	0.037	0.018	0.052
Std_sale_grth	0.269	0.127	0.663	0.078	0.218	0.186	0.120	0.340	0.075	0.197
Stock_return	0.169	0.058	0.666	–0.229	0.382	0.166	0.065	0.628	–0.209	0.376
Abs_abnacc	0.062	0.041	0.068	0.019	0.079	0.059	0.040	0.064	0.018	0.076
Big 4	0.885	1.000	0.319	1.000	1.000	0.873	1.000	0.333	1.000	1.000
Num_analysts	7.320	5.000	6.600	2.000	10.000	7.575	5.000	6.794	2.000	11.000
Inst_own%	0.614	0.652	0.265	0.421	0.823	0.638	0.683	0.258	0.461	0.839
Bid_ask_spread	1.000	0.428	1.300	0.139	1.389	0.898	0.338	1.235	0.120	1.202
Similarity	4.147	1.971	5.332	1.272	4.229	3.285	1.799	3.792	1.233	3.543
Profit_margin	–0.209	0.042	1.330	–0.012	0.087	–0.019	0.045	0.550	0.002	0.089
Num_segments	2.779	2.000	2.252	1.000	4.000	2.906	2.000	2.270	1.000	4.000
CEO_change	0.058	0.000	0.234	0.000	0.000	0.066	0.000	0.248	0.000	0.000
CFO_change	0.027	0.000	0.162	0.000	0.000	0.033	0.000	0.179	0.000	0.000
Auditor_change	0.066	0.000	0.249	0.000	0.000	0.066	0.000	0.248	0.000	0.000
Merger	0.200	0.000	0.400	0.000	0.000	0.210	0.000	0.407	0.000	0.000

Summary statistics for variables used in our regression analysis when the proprietary costs of financial reporting measure is *Fluidity* (columns 1-5) or *Prospector* (columns 6-10). The sample period is from 1997 to 2011. All continuous variables are winsorized at the 1% and 99% levels. Variable definitions are provided in Appendix A.

Table 3. Pearson correlations of variables in primary empirical models.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1.	*DKV_mean*	1																						
2.	*Fluidity*	**–0.22**	1																					
3.	*Prospector*	**–0.06**	**0.19**	1																				
4.	*Size*	**0.15**	**–0.10**	**–0.08**	1																			
5.	*Market-to-book*	**0.00**	**0.24**	**0.16**	**–0.15**	1																		
6.	*Leverage*	**–0.11**	0.00	0.00	**0.27**	**–0.02**	1																	
7.	*Cashflows*	**0.26**	**–0.27**	**–0.18**	**0.27**	**–0.02**	**–0.07**	1																
8.	*Std_cashflows*	**–0.16**	**0.14**	**0.06**	**–0.38**	**0.17**	**–0.12**	**–0.24**	1															
9.	*Std_sale*	**–0.08**	**–0.05**	**0.01**	**–0.23**	**0.02**	**–0.07**	**–0.04**	**0.47**	1														
10.	*Std_sale_grth*	**–0.14**	**0.26**	**0.11**	**–0.16**	**0.15**	**0.02**	**–0.33**	**0.33**	**0.18**	1													
11.	*Stock_return*	**–0.07**	**0.03**	0.00	**–0.02**	**0.33**	**–0.05**	**0.12**	**0.03**	**0.03**	–0.01	1												
12.	*Abs_abn_acc*	**–0.18**	**0.16**	**0.10**	**–0.23**	**0.14**	**–0.04**	**–0.18**	**0.32**	**0.21**	**0.14**	**0.03**	1											
13.	*Big 4*	**0.06**	**0.02**	0.01	**0.29**	**0.02**	**0.09**	**0.04**	**–0.07**	**–0.07**	–0.01	0.00	**–0.04**	1										
14.	*Num_analysts*	**0.13**	**0.11**	0.01	**0.69**	**0.14**	**0.04**	**0.22**	**–0.23**	**–0.17**	**–0.07**	–0.01	**–0.11**	**0.22**	1									
15.	*Inst_own%*	**0.13**	–0.01	**–0.03**	**0.50**	**0.07**	**0.02**	**0.24**	**–0.21**	**–0.16**	**–0.11**	**0.04**	**–0.14**	**0.21**	**0.41**	1								
16.	*Bid_ask_spread*	**–0.02**	**–0.09**	**–0.02**	**–0.42**	**–0.16**	**0.11**	**–0.14**	**0.15**	**0.15**	**0.03**	**–0.05**	**0.08**	**–0.05**	**–0.04**	**–0.55**	1							
17.	*Similarity*	**–0.16**	**0.68**	**0.25**	**–0.15**	**0.29**	**–0.01**	**–0.36**	**0.25**	**–0.04**	**0.40**	**0.01**	**0.18**	**0.08**	**0.08**	–0.01	**–0.05**	1						
18.	*Profit_margin*	**0.21**	**–0.32**	**–0.16**	**0.20**	**–0.18**	**–0.03**	**0.54**	**–0.20**	**0.06**	**–0.42**	**0.04**	**–0.13**	0.01	**0.08**	**0.12**	**–0.01**	**–0.47**	1					
19.	*Num_segments*	**0.06**	**–0.16**	**–0.07**	**0.44**	**–0.16**	**0.11**	**0.11**	**–0.17**	**–0.06**	**–0.12**	**–0.01**	**–0.12**	**0.10**	**0.18**	**0.16**	**–0.17**	**–0.25**	**0.13**	1				
20.	*CEO_change*	**0.03**	**–0.05**	**–0.01**	**0.14**	**–0.02**	0.01	**0.04**	**–0.05**	**–0.03**	**–0.04**	–0.01	**–0.03**	**0.06**	**0.09**	**0.10**	**–0.05**	**–0.04**	**0.03**	**0.09**	1			
21.	*CFO_change*	**0.00**	–0.01	0.00	**0.10**	**–0.04**	0.00	**0.03**	**–0.03**	**–0.02**	**–0.03**	**–0.03**	**–0.02**	**0.02**	**0.07**	**0.12**	**–0.10**	**–0.03**	**0.03**	**0.06**	**0.09**	1		
22.	*Auditor_change*	**–0.04**	–0.01	0.01	**–0.09**	–0.01	0.00	**–0.02**	**0.02**	**0.02**	0.00	**–0.03**	**0.03**	**–0.15**	**–0.07**	**–0.07**	**0.06**	**–0.01**	0.00	**–0.03**	0.00	**–0.02**	1	
23.	*Merger*	**0.06**	**–0.04**	0.01	**0.12**	**–0.06**	**0.06**	**0.08**	**–0.10**	–0.01	**–0.07**	**–0.02**	0.01	**0.04**	**0.06**	**0.10**	**–0.06**	**–0.09**	**0.07**	**0.09**	0.00	0.00	0.01	1
24.	*Defender*	**–0.05**	**–0.07**	**–0.07**	**–0.02**	**–0.05**	**0.08**	**0.03**	0.01	0.00	**0.01**	0.00	–0.01	0.01	**–0.09**	–0.01	**0.06**	**–0.06**	**0.02**	0.00	0.00	–0.01	0.00	**–0.03**

Numbers in bold represent significance at $p < 0.10$. Correlations are estimated from the *Prospector* sample.

Table 4. Univariate statistics.

Panel A. Univariate comparisons of variables by *Fluidity* sample.

	High_Fluidity		*Low_Fluidity*		Difference:		Difference:	
Variable	Mean	Median	Mean	Median	Mean		Median	
DKV_mean	–3.612	–3.140	–3.069	–2.730	–0.543	***	–0.410	***
Prospector	0.113		0.048		0.065	***		
Size	6.096	5.878	6.459	6.362	–0.364	***	–0.484	***
Market-to-book	2.274	1.613	1.609	1.226	0.665	***	0.388	***
Leverage	0.193	0.125	0.213	0.199	–0.020	***	–0.074	***
Cashflows	0.061	0.088	0.105	0.101	–0.044	***	–0.014	***
Stock_return	0.182	0.036	0.155	0.077	0.027	***	–0.042	***
Abs_abn_acc	0.078	0.046	0.057	0.037	0.021	***	0.009	***
Num_analysts	7.982	6.000	6.656	5.000	1.326	***	1.000	***
Bid_ask_spread	0.968	0.410	1.033	0.448	–0.065	***	–0.038	***
Similarity	6.439	3.676	1.853	1.399	4.586	***	2.277	***
Profit_margin	–0.434	0.036	0.017	0.045	–0.451	***	–0.010	***
Num_segments	2.477	1.000	3.081	3.000	–0.604	***	–2.000	***
Defender	0.031		0.061		–0.030	***		

Panel B. Univariate comparisons of variables by strategy sample.

	Prospector		*Analyzer/Defender*		Difference:		Difference:	
Variable	Mean	Median	Mean	Median	Mean		Median	
DKV_mean	–3.707	–3.190	–3.273	–2.900	–0.434	***	–0.290	***
Fluidity	8.695	8.194	6.394	5.918	2.301	***	2.276	***
Size	5.911	5.809	6.429	6.312	–0.519	***	–0.503	***
Market-to-book	2.673	1.963	1.769	1.342	0.904	***	0.621	***
Leverage	0.192	0.134	0.197	0.170	–0.004		–0.035	***
Cashflows	0.025	0.069	0.107	0.104	–0.082	***	–0.035	***
Stock_return	0.164	0.018	0.168	0.067	–0.005		–0.049	***
Abs_abn_acc	0.081	0.051	0.058	0.039	0.023	***	0.012	***
Num_analysts	7.722	6.000	7.479	5.000	0.243		1.000	***
Bid_ask_spread	0.824	0.316	0.904	0.339	–0.080	**	–0.023	*
Similarity	6.524	3.182	3.017	1.762	3.507	***	1.420	***
Profit_margin	–0.318	0.020	0.005	0.046	–0.323	***	–0.026	***
Num_segments	2.328	1.000	2.954	3.000	–0.626	***	–2.000	***

Univariate comparisons for select variables used in multivariate analysis, partitioned by either high versus low *Fluidity* in Panel A, (*High_Fluidity* equal to or above the annual median, *Low_Fluidity* below the annual median) or by *Prospector* versus other firms in Panel B. Variables are described in Appendix A.

Table 5. Proprietary costs of financial reporting and financial statement comparability: OLS estimations

	1.			2.			3.		
	Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.	
Fluidity	–0.041	–4.95	***				–0.033	–3.56	***
Prospector				–0.181	–2.47	**	–0.185	–2.55	**
Size	0.031	1.57		0.039	1.85	*	0.026	1.23	
Market-to-book	0.076	7.09	***	0.085	6.36	***	0.083	6.19	***
Leverage	–1.475	–11.48	***	–1.579	–10.54	***	–1.530	–10.49	***
Cashflows	1.293	8.78	***	1.116	5.70	***	1.007	5.22	***
Std_cashflows	–2.702	–3.10	***	–2.520	–2.30	**	–2.711	–2.46	**
Std_sale	–3.199	–3.199	***	–3.236	–4.58	***	–2.928	–4.33	***
Std_sale_grth	0.004	0.11		0.041	0.41		0.024	0.24	
Stock_return	–0.266	–11.05	***	–0.284	–10.31	***	–0.278	–9.88	***
Abs_abn_acc	–2.781	–11.56	***	–3.194	–11.72	***	–3.083	–11.08	***
Big 4	–0.122	–2.00	**	–0.124	–1.88	*	–0.099	–1.53	
Num_analysts	0.007	1.82	*	0.003	0.80		0.005	1.28	
Inst_own%	0.363	4.23	***	0.365	3.85	***	0.326	3.44	***
Bid_ask_spread	–0.215	–9.73	***	–0.186	–7.48	***	–0.194	–7.82	***
Similarity	0.012	2.17	**	–0.010	–1.78	*	0.006	0.88	
Profit_margin	0.083	4.81	***	0.245	4.14	***	0.24	3.97	***
Num_segments	0.02	2.29	**	0.024	2.72	***	0.026	2.93	***
CEO_change	–0.073	–1.58		–0.057	–1.27		–0.062	–1.34	
CFO_change	–0.027	–0.35		–0.039	–0.52		–0.040	–0.50	
Auditor_change	–0.112	–2.40	**	–0.115	–2.20	**	–0.113	–2.21	**
Merger	0.118	3.95	***	0.131	4.12	***	0.137	4.22	***
Defender				–0.203	–1.87	*	–0.202	–1.90	*
Intercept	–1.374	–5.10	***	–0.273	–1.15		–1.385	–4.85	***
F-Stat: *Prospector* = *Defender*	N/A			0.03			0.02		
N	18,331			15,945			15,945		
Adjusted R^2	0.402			0.389			0.394		
Year & Industry FE	Y			Y			Y		

Results from OLS estimation of Equation (1). ***, **, and * denote two-tailed significance at the 1%, 5% and 10% levels, respectively. *T*-statistics are reported in brackets and are based on robust standard errors clustered at the firm level. The dependent variable is *DKV_mean*, *Fluidity*, is a measure of product market competition from Hoberg et al. (2014) and *Prospector* is coded 1 if firm strategy score is between 24 and 30, 0 otherwise. Control variables are described in Appendix A.

Table 6. Proprietary costs of financial reporting and financial statement comparability: OLS estimations, conditional on information asymmetry.

Panel A. Interactions with *Bid_ask* as a measure of information asymmetry.

	1.			2.			3.			4.		
	Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.	
Bid_ask	–0.140	–3.24	***	0.141	2.05	**	–0.151	–3.22	***	–0.130	–2.76	***
Fluidity	–0.042	–5.01	***	–0.023	–2.87	***						
Fluidity × *Bid_ask*				–0.040	–4.70	***						
Prospector							–0.190	–2.59	***	–0.065	–0.83	
Prospector × *Bid_ask*										–0.286	–2.04	**
Size	0.018	0.90		0.021	1.04		0.024	1.11		0.026	1.20	
Market-to-book	0.071	6.71	***	0.071	6.70	***	0.079	6.03	***	0.08	6.08	***
Leverage	–1.458	–11.43	***	–1.468	–11.57	***	–1.558	–10.53	***	–1.568	–10.60	***
Cashflows	1.267	8.63	***	1.235	8.41	***	1.079	5.53	***	1.05	5.42	***
Std_cashflows	–2.727	–3.13	***	–2.568	–2.97	***	–2.567	–2.34	**	–2.521	–2.29	**
Std_sale	–3.191	–5.35	***	–3.213	–5.39	***	–3.210	–4.56	***	–3.222	–4.58	***
Std_sale_grth	0.005	0.14		0.009	0.24		0.041	0.42		0.043	0.44	
Stock_return	–0.261	–10.94	***	–0.261	–10.95	***	–0.278	–10.21	***	–0.279	–10.22	***
Abs_abn_acc	–2.771	–11.54	***	–2.782	–11.59	***	–3.183	–11.72	***	–3.188	–11.74	***
Big 4	–0.127	–2.08	**	–0.117	–1.91	*	–0.130	–1.97	**	–0.128	–1.94	*
Num_analysts	0.006	1.53		0.005	1.30		0.002	0.52		0.002	0.49	
Inst_own%	0.324	3.72	***	0.301	3.46	***	0.32	3.33	***	0.311	3.23	***
Bid_ask_spread	–0.194	–8.18	***	–0.198	–8.37	***	–0.165	–6.24	***	–0.166	–6.27	***
Similarity	0.012	2.21	**	0.012	2.16	**	–0.010	–1.77	*	–0.011	–1.90	*
Profit_margin	0.084	4.89	***	0.079	4.73	***	0.246	4.16	***	0.242	4.12	***
Num_segments	0.02	2.32	**	0.022	2.51	**	0.025	2.76	***	0.024	2.74	***
CEO_change	–0.070	–1.53		–0.063	–1.38		–0.054	–1.23		–0.054	–1.23	
CFO_change	–0.033	–0.43		–0.037	–0.48		–0.042	–0.56		–0.041	–0.55	
Auditor_change	–0.110	–2.36	**	–0.110	–2.35	**	–0.113	–2.15	**	–0.113	–2.16	**
Merger	0.116	3.91	***	0.114	3.85	***	0.129	4.08	***	0.13	4.12	***
Defender							–0.198	–1.81	*	–0.200	–1.84	*
Intercept	–1.269	–4.59	***	–1.471	–5.40	***	–0.123	–0.49		–0.142	–0.55	
N	18,331			18,331			15,945			15,945		
Adjusted R^2	0.411			0.413			0.396			0.396		
Year FE	Y			Y			Y			Y		
Industry FE	Y			Y			Y			Y		

(*continued*)

Table 6. (continued)

Panel B. Interactions with *Low_analyst* as a measure of information asymmetry.

	1.			2.			3.			4.		
	Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.	
Low_analyst	–0.076	–1.79	*	0.112	1.47		–0.042	–0.92		–0.019	–0.42	
Fluidity	–0.042	–5.00	***	–0.030	–3.38	***						
Fluidity × *Low_analyst*				–0.028	–2.90	***						
Prospector							–0.183	–2.50	**	–0.068	–0.87	
Prospector × *Low_analyst*										–0.298	–1.93	*
Size	0.028	1.44		0.031	1.60		0.038	1.79	*	0.039	1.85	*
Marke-to-book	0.075	6.97	***	0.076	7.06	***	0.084	6.30	***	0.085	6.33	***
Leverage	–1.481	–11.48	***	–1.499	–11.61	***	–1.582	–10.53	***	–1.586	–10.54	***
Cashflows	1.293	8.77	***	1.271	8.60	***	1.115	5.69	***	1.094	5.63	***
Std_cashflows	–2.708	–3.10	***	–2.664	–3.06	***	–2.521	–2.30	**	–2.458	–2.23	**
Std_sale	–3.215	–5.37	***	–3.237	–5.42	***	–3.243	–4.59	***	–3.266	–4.64	***
Std_sale_grth	0.004	0.12		0.006	0.17		0.041	0.41		0.041	0.42	
Stock_return	–0.264	–10.95	***	–0.264	–10.94	***	–0.283	–10.27	***	–0.284	–10.29	***
Abs_abn_acc	–2.777	–11.54	***	–2.792	–11.60	***	–3.190	–11.71	***	–3.199	–11.74	***
Big 4	–0.124	–2.03	**	–0.121	–1.99	**	–0.125	–1.90	*	–0.122	–1.85	*
Num_analysts	0.004	1.04		0.003	0.85		0.002	0.41		0.002	0.42	
Inst_own%	0.333	3.75	***	0.319	3.58	***	0.348	3.55	***	0.34	3.47	***
Bid_ask_spread	–0.212	–9.52	***	–0.211	–9.54	***	–0.184	–7.38	***	–0.185	–7.41	***
Similarity	0.012	2.15	**	0.01	1.92	*	–0.010	–1.80	*	–0.010	–1.88	*
Profit_margin	0.083	4.82	***	0.081	4.68	***	0.246	4.14	***	0.243	4.12	***
Num_segments	0.020	2.29	**	0.021	2.42	**	0.024	2.72	***	0.024	2.71	***
CEO_change	–0.072	–1.56		–0.069	–1.49		–0.056	–1.26		–0.055	–1.24	
CFO_change	–0.027	–0.35		–0.028	–0.36		–0.040	–0.53		–0.039	–0.53	
Auditor_change	–0.112	–2.40	**	–0.113	–2.42	**	–0.115	–2.19	**	–0.112	–2.15	**
Merger	0.116	3.91	***	0.118	3.96	***	0.13	4.10	***	0.131	4.13	***
Defender							–0.201	–1.85	*	–0.205	–1.88	*
Intercept	–1.292	–4.71	***	–1.416	–5.16	***	–0.235	–0.98		–0.247	–1.00	
N	18,331			18,331			15,945			15,945		
Adjusted R^2	0.411			0.412			0.395			0.395		
Year FE	Y			Y			Y			Y		
Industry FE	Y			Y			Y			Y		

Panels A and B: Results from OLS estimation of Equation (1), interacting variables of interest with a measure of information asymmetry. ***, **, and * denote two-tailed significance at the 1%, 5% and 10% levels, respectively. *T*-statistics are reported in parentheses and are based on robust standard errors clustered at the firm level. The dependent variable, *DKV_mean*, is calculated as the mean value of the degree to which the earnings of firm-pairs across 16 quarters in an industry map to stock returns, and proxies for the similarity with which the accounting systems of two firms capture similar economic shocks. *Fluidity*, is a measure of product market competition from Hoberg et al. (2014), based on changes by rival firms to firm *i's* product descriptions in the 10-K. *Prospector* is coded 1 if firm strategy score is between 24 and 30, 0 otherwise.

In Panel A, the measure of information asymmetry is *Bid_ask*, which is a dichotomous variable coded 1 if the absolute value of the difference between average daily bid and ask price is above the annual median; 0 otherwise. In Panel B, the measure is based on analyst coverage; *Low_analyst* is a dichotomous variable equal to 1 if the number of analysts providing unique forecasts is below the year median; 0 otherwise. Control variables are defined in Appendix A.

Table 7. Proprietary costs of financial reporting and financial statement comparability – Matched sample for *Fluidity*: OLS estimations, unconditional and conditional on information asymmetry (N = 18,080).

Measure of Info_Asym:	*N/A*			*Bid_ask*			*Low_analyst*		
	1.			2.			3.		
	Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.	
Fluidity	–0.042	–4.94	***	–0.022	–2.71	***	–0.031	–3.71	***
Info_Asym				0.156	1.86	*	0.058	0.62	
Fluidity×Info_Asym				–0.042	–4.44	***	–0.028	–2.66	***
Size	0.016	0.73		0.006	0.28		0.015	0.69	
Market-to-book	0.078	6.84	***	0.073	6.48	***	0.077	6.73	***
Leverage	–1.454	–10.01	***	–1.449	–10.05	***	–1.483	–10.17	***
Cashflows	1.309	7.92	***	1.245	7.52	***	1.287	7.74	***
Std_cashflows	–2.352	–2.34	**	–2.264	–2.27	**	–2.342	–2.34	**
Std_sale	–4.167	–5.46	***	–4.196	–5.52	***	–4.223	–5.54	***
Std_sale_grth	0.047	0.93		0.052	1.06		0.05	1.01	
Stock_return	–0.251	–8.84	***	–0.244	–8.64	***	–0.247	–8.70	***
Abs_abnacc	–2.853	–9.08	***	–2.844	–9.08	***	–2.855	–9.10	***
Big 4	–0.138	–1.97	**	–0.129	–1.84	*	–0.137	–1.96	*
Num_analysts	0.011	2.56	**	0.008	1.99	**	0.005	1.12	
Inst_own%	0.197	1.99	**	0.14	1.40		0.136	1.32	
Bid_ask_spread	–0.238	–8.62	***	–0.224	–7.55	***	–0.233	–8.40	***
Similarity	0.007	1.28		0.007	1.27		0.006	1.02	
Profit_margin	0.081	4.58	***	0.078	4.56	***	0.079	4.50	***
Num_segments	0.019	2.06	**	0.021	2.28	**	0.021	2.20	**
CEO_change	–0.024	–0.40		–0.014	–0.24		–0.018	–0.31	
CFO_change	–0.071	–0.67		–0.079	–0.74		–0.071	–0.67	
Auditor_change	–0.107	–1.60		–0.101	–1.53		–0.110	–1.65	*
Merger	0.145	3.95	***	0.144	3.91	***	0.145	3.96	***
Intercept	–2.104	–4.46	***	–2.120	–4.53	***	–2.066	–4.36	***
Adjusted R^2	0.403			0.405			0.404		
Year & Industry FE	Y			Y			Y		

OLS estimation of Equation (2). ***, **, and * denote two-tailed significance at the 1%, 5% and 10% levels, respectively. *T*-statistics are based on robust standard errors clustered at the firm level. The dependent variable is *DKV_mean* and *Fluidity* is a measure of product market competition from Hoberg et al. (2014). *Bid_ask* is coded 1 if the absolute value of the difference between average daily bid and ask price is above the annual median; 0 otherwise. *Low_analyst* is equal to 1 if the number of analysts providing forecasts is below the year median; 0 otherwise. Control variables are defined in Appendix A.

Table 8. Proprietary costs of financial reporting and financial statement comparability – Matched sample for strategy.

Panel A. Summary statistics by strategy type.

	Prospectors		*Analyzers*		*Defenders*	
Variable	Mean	Median	Mean	Median	Mean	Median
DKV_mean	–3.704	–3.190	–3.424	–2.980	–3.703	–3.400
Total Assets	1938.7	333.4	1938.5	332.9	1465.1	324.1
Market–to–book	2.680	1.963	1.798	1.359	1.504	1.136
Leverage	0.192	0.134	0.171	0.133	0.256	0.233
Cashflows	0.025	0.069	0.092	0.096	0.111	0.104
Std_cashflows	0.036	0.026	0.034	0.027	0.033	0.027
Std_sale	0.044	0.033	0.045	0.034	0.045	0.034
Std_sale_grth	0.298	0.157	0.198	0.126	0.186	0.119
Stock_return	0.162	0.018	0.173	0.056	0.235	0.110
Abs_abnacc	0.080	0.051	0.063	0.042	0.056	0.041
Big 4	0.889	1.000	0.832	1.000	0.844	1.000
Num_analysts	7.722	6.000	6.074	4.000	4.282	3.000
Inst_own%	0.607	0.655	0.587	0.617	0.568	0.563
Bid_ask_spread	0.355	0.856	1.092	0.514	1.369	0.710
Similarity	6.533	3.182	3.257	1.796	1.922	1.323
Profit_margin	–0.327	0.020	–0.034	0.040	0.038	0.043
Num_segments	2.328	1.000	2.632	2.000	2.844	2.000
CEO_change	0.053	0.000	0.051	0.000	0.061	0.000
CFO_change	0.028	0.000	0.029	0.000	0.022	0.000
Auditor_change	0.072	0.000	0.065	0.000	0.069	0.000
Merger	0.213	0.000	0.190	0.000	0.158	0.000
N	1,158		1,158		1,158	

Difference in Means, *Total Assets*:
Prospector vs Defender: difference = 473.5, *t*-stat = 2.19, *p*-value = 0.03
Prospector vs Analyzer: difference = 0.2, *t*-stat = 0.00, *p*-value = 0.99
Defender vs Analyzer: difference = –473.3, *t*-stat = –2.20, *p*-value = 0.03

Difference in Medians, *Total Assets*:
Prospector vs Defender: difference = 9.3, *z*-stat = 0.00, *p*-value = 0.80
Prospector vs Analyzer: difference = 0.5, *z*-stat = 0.00, *p*-value = 1.00
Defender vs Analyzer: difference = –8.8, *z*-stat = –0.25, *p*-value = 0.80

(continued)

Table 8. (continued)

Panel B. Matched sample for strategy: OLS estimations, unconditional and conditional on information asymmetry (N = 3,474).

Measure of Info_Asym:		*N/A*			*Bid_ask*			*Low_analyst*	
	Coef.	*t*-stat.		Coef.	*t*-stat.		Coef.	*t*-stat.	
Prospector	–0.226	–3.22	***	–0.079	–0.86		–0.051	–0.59	
Info_Asym				–0.114	–1.27		0.135	1.46	
Prospector×Info_Asym				–0.309	–2.62	***	–0.396	–3.35	***
Size	0.01	0.30		–0.003	–0.07		0.017	0.49	
Market-to-book	0.124	6.45	***	0.119	6.15	***	0.126	6.54	***
Leverage	–1.800	–11.03	***	–1.804	–11.05	***	–1.806	–11.07	***
Cashflows	1.343	5.65	***	1.227	5.13	***	1.277	5.36	***
Std_cashflows	–2.185	–1.64		–2.278	–1.71	*	–1.929	–1.45	
Std_sale	–2.168	–2.43	**	–2.147	–2.41	**	–2.242	–2.52	**
Std_sale_grth	–0.044	–0.60		–0.039	–0.54		–0.047	–0.64	
Stock_return	–0.327	–7.56	***	–0.324	–7.51	***	–0.332	–7.68	***
Abs_abnacc	–4.312	–10.62	***	–4.320	–10.65	***	–4.354	–10.73	***
Big 4	–0.048	–0.54		–0.036	–0.41		–0.032	–0.36	
Num_analysts	0.019	2.47	**	0.014	1.88	*	0.017	2.01	**
Inst_own%	0.253	1.76	*	0.177	1.21		0.239	1.63	
Bid_ask_spread	–0.122	–3.72	***	–0.100	–2.93	***	–0.124	–3.79	***
Similarity	0.011	1.55		0.009	1.29		0.01	1.33	
Profit_margin	0.161	4.47	***	0.158	4.39	***	0.158	4.41	***
Num_segments	0.056	3.55	***	0.055	3.49	***	0.056	3.57	***
CEO_change	–0.115	–0.98		–0.116	–0.98		–0.104	–0.88	
CFO_change	–0.221	–1.30		–0.220	–1.30		–0.202	–1.19	
Auditor_change	–0.111	–1.02		–0.106	–0.97		–0.098	–0.90	
Merger	0.08	1.13		0.084	1.19		0.081	1.15	
Defender	0.056	0.78		0.05	0.70		0.034	0.47	
Intercept	–3.498	–8.01	***	–3.297	–7.46	***	–3.517	–7.88	***
F-Stat: *Prospector = Defender*	12.45	***		N/A			N/A		
Adjusted R^2	0.396			0.398			0.398		
Year & Industry FE	Y			Y			Y		

Panel A: Descriptive statistics of sample matched on assets by strategy type. Panel B: OLS estimation of Equation (2). ***, **, and * denote two-tailed significance at the 1%, 5% and 10% levels, respectively. *T*-statistics, in brackets, are based on robust standard errors clustered at the firm level. The dependent variable is *DKV_mean*, *Fluidity* measures product market competition (Hoberg et al. 2014). *Bid_ask* is 1 if the absolute value of the difference between average daily bid and ask price is above the annual median; 0 otherwise. *Low_analyst* is 1 if the number of analysts providing forecasts is below the year median; else 0. Estimations include year and industry fixed effects. Controls are defined in Appendix A.

Table 9. Alternative proxies of proprietary costs of financial reporting.

Panel A. Descriptive statistics.

Variable	N	Mean	Median	Std Dev	Q1	Q3
RD	18,331	0.061	0.017	0.098	0.000	0.087
SGA	18,331	0.288	0.237	0.220	0.126	0.386
Textual	10,610	0.519	0.376	0.462	0.207	0.684
–1×HHI_sales	18,331	–0.051	–0.039	0.004	–0.055	–0.032

Panel B. OLS estimations of alternative proxies of proprietary costs of financial reporting and financial statement comparability.

	R&D			*SG&A*			*Textual*			*HHI_sales*		
PC_of_Competition	–1.131	–3.57	***	–0.434	–4.41	***	–0.187	–3.69	***	–2.988	–4.66	***
Controls	Y			Y			Y			Y		
N	18,331			18,331			10,610			18,331		
Adjusted R^2	0.41			0.41			0.277			0.312		
Year FE	Y			Y			Y			Y		
Industry FE	Y			Y			N			N		

Panel A: Descriptive statistics for alternative proxies of proprietary costs of financial reporting. *RD* is research and development expenses scaled by average total assets, while *SGA* is selling, general, and administrative expenses scaled by average total assets. *Textual* is a firm-specific, text-based measure of produce market competition based on Li et al. (2013). *HHI_sales* is an industry-based measure of product market concentration based on company sales, known as the Herfindahl-Hirschman index.

Panel B: Results from OLS estimation of Equation (1), using alternative proxies for the proprietary costs of financial reporting. ***, **, and * denote two-tailed significance at the 1%, 5% and 10% levels, respectively. *T*-statistics are reported in parentheses and are based on robust standard errors clustered at the firm-level. Control variables are defined in Appendix A, but coefficients are not shown for brevity.