Business strategy, earnings properties, and earnings quality

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Abstract

This study explores the relationship between business strategy and earnings properties that are frequently considered as proxies of earnings quality. Specifically, we examine the implications of different strategic positionings for earnings properties that are related to earnings management, conditional conservatism, earnings persistence, and earnings smoothness. Using an international sample, our empirical results indicate that business strategy is inherently linked to these earnings properties. Firms that focus on a business strategy of continuous innovation have larger discretionary accruals, more persistent earnings, and lower earnings smoothness relative to firms that focus on a business strategy of operation efficiency. We also find some evidence for differences in conditional conservatism, although the associations are weaker and sensitive to sample composition. Our main inference is that business strategy inherently affects earnings properties.

Key words: Business Strategy, Earnings Management, Conditional Conservatism, Earnings Persistence, Earnings Smoothness, Earnings Quality

JEL Classification: L10, M10, M41

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1. Introduction

This study evaluates whether business strategy inherently affects earnings properties that are frequently considered as proxies of earnings quality in the accounting literature. Strategy can be defined as the direction and the scope of an organization over the long term to achieve advantages through the configuration of its resources and competences (Johnson et al., 2008). Business strategy, in particular, refers to the strategic positioning of the business units of a corporation to achieve competitive advantage in the market that they operate by providing unique value to their customers.[2]

The management literature has examined extensively value dimensions that are promoted by business strategies to entrench competitive advantage. A common inference is that each business strategy should focus on specific value dimensions to ensure success. Therefore, several typologies have been proposed that classify firms with common value objectives under the same business strategy type.

[2] Other levels of strategy are the corporate strategy and the operational strategy. Corporate strategy is broader than business strategy and relates to the scope of the overall organization that the business units are part of. This includes decisions such as to retain the organization at the current size (stability strategy), develop the organization further (growth strategy), or downsize the scope of the organization (turnaround strategy). Operational strategy is narrower than the business strategy and relates to the effective implementation of the business strategy by the respective operations (e.g., the effective implementation of the business strategy by the marketing department, the manufacturing department, etc.).

Well-known typologies include Miles and Snow (1978) (i.e., prospectors, defenders, analyzers, and reactors), Porter (1980) (i.e., differentiation, cost leadership, and focus strategy), Herbert and Deresky (1987) (i.e., develop, stabilize, turnaround, and harvest strategy), March (1991) (i.e., exploration and exploitation strategy), and Treacy and Wiersema (1993) (i.e., operational excellence, customer intimacy, and product leadership strategy).[3]

In this study, we follow prior accounting studies and employ the Miles and Snow strategic typology to examine whether firms that implement a business strategy of continuous innovation (i.e., prospectors) inherently exhibit different earning properties compared to firms that implement a business strategy focusing on narrow product lines and efficiency (i.e., defenders), and firms that follow a hybrid approach that shares some characteristics of the former two strategies (i.e., analyzers). Specifically, we use a measure of business strategy, that has been used in prior studies (e.g., Ballas et al., 2022; Bentley-Goode et al., 2017; Bentley et al., 2013) which classifies firms into prospectors, analyzers, and defenders, and examine whether it is related to earnings properties that are customarily employed as proxies of earnings quality in the accounting literature.

To select specific earnings properties, we follow the earnings quality framework developed in Dechow et al. (2010). This framework relies on Statement of Financial Accounting Concepts No. 1 and defines earnings quality as the earnings that are more informative for a firm's future financial performance relevant to a specific decision-making context. Empirically, Dechow et al. (2010) classify earnings quality measures into three categories, namely, earnings properties, investor responsiveness to earnings, and external indicators of earnings misstatements. We focus on the effects of business strategy on the first category, that is, earnings properties, such as earnings management and conditional conservatism proxies, earnings persistence, and earnings smoothness.[4]

Our research is motivated by an intuitive distinction between two kinds of determinants of observed earnings properties, that is, financial reporting decisions and business decisions. The financial reporting decisions refers to managerial choices that form reported earnings, such as judgments, estimates, and accounting choices among available alternative accounting methods. Common examples include asset useful lives, depreciation methods, use of fair values, and revenue recognition. The extant literature has explored extensively the determinants of financial reporting decisions and there is ample

[3] It is notable that many of the above typologies argue that firms that do not adopt an explicit strategy in the proposed value dimensions may not be viable in the long term. This is justified under the view that firms with unclear business strategies are stuck in the middle due to contradictory decisions, blurred corporate culture, and organizational conflicts. For example, following Porter's typology, firms that pursue both cost leadership and differentiation lose high-margin business (due to inadequate differentiation) and high-volume customers (due to higher prices relative to low-cost competitors). In a similar vein, Miles and Snow (1978) argue that reactors are not viable in the long term.

[4] The effect of business strategy on the proxies included in the last category, that is, earnings misstatements, has already been examined in Bentley et al. (2013). We do not focus on the second category, that is, investor responsiveness, because the measures included (e.g., earnings response coefficient or the R^2 from the earnings-returns model) are endogenously dependent on the earnings properties.

empirical evidence that several factors (e.g., bonus schemes, debt covenants, stock market forces, corporate governance, audit quality, and legal enforcement) incentivize managers to make specific choices that affect earnings properties and earnings quality (e.g., Ball et al., 2003; Becker et al., 1998; Bushman & Piotroski, 2006; DeFond & Jiambalvo, 1994; Healy, 1985; Klein, 2002; Teoh et al., 1998).

On the other hand, business decisions refer to managerial choices that form the overall business structure of the firm, such as the decision to entry or exit a specific market, expansion or scaling down operations, and the strategic positioning of the firm to the industry it competes.[5] These choices are distinct to financial reporting decisions, but they may still affect reported earnings.[6] In our context, we argue that different strategic positionings entail different business characteristics that are relevant to reported earnings. For example, prospectors rely heavily on R&D and marketing expenditures, invest in innovative but risky projects, differentiate their products, sell with high margins, and experience sales momentum. Conversely, defenders have low expenditures in R&D and marketing activities, invest in low-risk projects, focus on established products, sell with low margins, and exercise cautious growth.

The above business attributes may have significant implications for several earnings properties. Many of them are inherent and may manifest regardless of financial reporting incentives. Specifically, the direct expense of R&D and marketing expenditures and sales momentum suggests a poor matching between current expenses and subsequent revenues and a greater volatility in normal accruals. Investments in projects of higher risk requires more frequent impairment tests, thereby increasing the timeliness of loss recognition. Finally, differentiated and innovative products deter imitation from competitors leading to more sustainable earnings. Therefore, inherent relationships between business strategy and earnings properties, such as estimated discretionary accruals, conditional conservatism, earnings persistence, and earnings smoothness are more than likely.

Empirically, however, each business strategy entails several attributes that may affect each earnings property in different or even oppositional ways. The overall outcome is not always clear, thereby enhancing the motivation for empirical research. Moreover, different accounting standards may affect inferences. In these respects, we use an international sample to enhance the external validity of our results, but we restrict it with firms that follow International Financial Reporting Standards (IFRS) and US firms that follow US GAAP to retain some consistency in the standards followed. Our empirical results indicate that business strategy is significantly related with the earnings properties under scrutiny. Specifically, we find that prospectors systematically have larger values of estimated discretionary accruals, higher earnings persistence, and lower earnings smoothness relative to defenders. We also find

[5] In this study, we use the terms business strategy and strategic positioning interchangeably.
[6] For example, firms in noncyclical businesses, such as some public utilities, have more stable earnings relative to firms engaging in cyclical businesses, such as those in airline industry, regardless the financial reporting choices made by managers.

some evidence for differences in conditional conservatism, although the significance of these results is limited to the US setting.

Our main inference is that business decisions, such as strategic positioning, interact with the financial reporting system and empirical models, thereby influencing earnings properties and our perception of the firm's earnings quality. Our study contributes to the current literature as it illuminates the effect of business strategy on measures of earnings quality, which is insufficiently studied in the literature (Dechow et al., 2010). So far, Bentley et al. (2013) find that business strategy is related to financial reporting irregularities. We extend this evidence in a two-fold manner. First, from an empirical perspective, we focus on the effect of business strategy on earnings properties whereas Bentley et al. (2013) focus on the effect of business strategy on accounting misstatements. Therefore, we provide empirical evidence on business strategy effects regarding a different category of earnings quality measures, as classified in Dechow et al. (2010). Second and more importantly, the inferences of the two studies are quite different. Bentley et al. (2013) find that given an accounting misstatement, the odds that the firm conducted the irregularity is also a prospector are higher. Therefore, they conclude that prospectors have higher opportunities to manipulate their earnings given financial reporting incentives to manipulate their earnings. Our inferences suggest that, even in the absence of specific financial reporting incentives, firms with different business strategies present different earnings properties which is an inherent and normally expected outcome of their operational choices.[7]

Our results are likely valuable to practitioners interested in financial statement analysis and firm valuation, as well as to academic researchers. For example, several accounting textbooks and practitioner guides underline the importance of business strategy for financial analysis and valuation purposes (e.g., Koller et al., 2020; Lev & Gu, 2016; Palepu et al., 2020; Penman, 2012; Thomas & Gup, 2011). A common inference is that business strategy is vital to sustain firm profitability in the long-term. However, the implications of different business strategies for fundamental earnings properties are rarely discussed. This study illuminates some links between different strategic positioning and earnings properties that are essential in the financial analysis and valuation process. Our results indicate that analysts should expect that average prospectors may exhibit larger values of estimated discretionary accruals, more persistent earnings, less earnings smoothness, and likely higher conditional conservatism relative to average defenders. To the extent that these relationships are inherent, they should be appropriately incorporated into earnings forecasts, ratio analysis, and stock valuation. Regarding academic research, our results suggest that models of earnings properties that are customarily used as earnings quality

[7] This inference may be a plausible explanation for the "paradoxical finding" that Bentley et al. (2013) refer to, that is, although audit effort is greater for prospectors, they still experience more financial reporting irregularities. For example, according to our findings, prospectors tend to present larger values of discretionary accruals which could trigger restatements. However, larger discretionary accruals are a mechanical outcome of their strategic positioning instead of low audit quality.

measures should include controls for business strategy. Otherwise, empirical results may be biased and lead to incorrect inferences.

The rest of the paper proceeds as follows. Section 2 reviews the relevant literature and develops our main hypotheses; section 3 delineates the research design; section 4 discusses the empirical results; section 5 presents robustness tests; finally, section 6 summarizes and concludes.

2. Literature review and hypotheses development

2.1. Literature review

2.1.1. Business strategy

Strategy is the long-term direction and scope of an organization to create and entrench competitive advantages in a changing market environment with ultimate intention to satisfy stakeholders' expectations (Johnson et al., 2008). Strategy can be classified into three levels, that is, corporate strategy (which involves decisions about expanding, retaining, or downsizing the whole organization), business strategy (which involves decisions about developing competitive advantages for the specific business units of the organization), and operation strategy (which involves decisions made by the operational departments of a business unit to accomplish the business strategy) (Grant, 2016). Therefore, business strategy refers to the configuration of each business unit's resources and competencies to achieve competitive advantage over its rivals in the market that it operates.

Each type of business strategy profoundly affects fundamental aspects of the organization that pursues it. Common examples include the structural form of the organization (e.g., functional structures versus divisional structures), performance measurement systems (e.g., cost budgets versus quality targets), investment decisions (e.g., expanding current capacity and pursuing operation efficiency versus financing research and development projects), competencies developed (specialization on functions versus increasing creativity), and products provided to the market (standardized products versus products with unique characteristics). The ultimate purpose of each business strategy is to appropriately coordinate the entire organization to offer unique value to customers, that is, to achieve competitive advantage over its rivals.

The management literature has examined extensively value dimensions that are promoted by business strategies to entrench competitive advantage. A common baseline in most studies is that a successful business strategy should choose a specific set of value objectives because pursuing leadership in many value dimensions concurrently is practically inefficient.[8] Therefore, several studies have proposed

[8] Other studies challenge this argument and assert that firms may pursue leadership across value dimensions, such as innovation and cost-efficiency, that appear incompatible under the traditional strategy theory. See for example Ward et al. (1996) and Kim and Mauborgne (2014). Moreover, many studies support the view that a firm may be successful even if it does not occupy a leadership role in a value dimension (i.e., it follows a hybrid strategy instead of innovation or cost leadership). In hybrid strategies, firm success and viability are still achievable if the firm

specific typologies that classify firms with common value objectives under the same business strategy type. Well-known typologies include Miles and Snow (1978) (i.e., prospectors, defenders, analyzers, and reactors), Porter (1980) (i.e., differentiation, cost leadership, and focus strategy), Herbert and Deresky (1987) (i.e., develop, stabilize, turnaround, and harvest strategy), March (1991) (i.e., exploration and exploitation strategy), and Treacy and Wiersema (1992) (i.e., operational excellence, customer intimacy, and product leadership strategy).[9]

Consistent with prior accounting research on business strategy (e.g., Ballas et al., 2022; Bentley et al., 2013), we adopt Miles and Snow strategic typology. This typology has the advantage that can be operationalized with archival instead survey data (Bentley et al., 2013). Miles and Snow theory considers innovation and efficiency as the value dimensions that differentiates business strategies across firms. Accordingly, it identifies four types of business strategy: (i) prospectors (i.e., innovative firms), (ii) defenders (i.e., firms focusing on efficiency), (iii) reactors (i.e., firms waiting for market signals to decide the path to take), and (iv) analyzers (i.e., a mix of prospecting and defending strategy).

A firm classified as prospector focuses on the value dimension of continuous innovation. Drivers of innovation include differentiated high-quality versions of extant products, entirely new products, and innovative ways to satisfy market needs. Consistently, prospectors adopt decentralized organizational structure to coordinate numerous and diverse operations, create innovative and diversified sets of products with different technologies, invest heavily in R&D and marketing activities, adopt decentralized control systems, and experience growth in spurts. They incur risks such as imitation from competitors, overextension of resources, and customers' price sensitivity.

A firm classified as defender focuses on the value dimension of the lower cost. Drivers of lower cost include economies of scale, economies of learning, and capacity utilization. Consistently, defenders adopt a centralized organizational structure, create a narrow and stable set of products with core technologies, continuously seek for cost reduction, adopt centralized control systems, and increase their market share through penetration. They incur risks such as rapid technological changes that eradicate cost advantage, product obsolescence due to new customers' preferences, and reduced product creditworthiness due to constant effort for low cost that may impair quality. Moreover, large sales volumes are critical for defenders because they have low profit margins per selling unit.

Analyzers adopt a hybrid strategic position because they combine elements from the strategic positions of prospectors and defenders. Therefore, they have mixed characteristics from both strategies and occupy the middle of a strategic continuum assuming that prospectors and defenders are the endpoints. Consequently, analyzers bear the potential benefits and risks of a hybrid strategy that combines

offers a "perceived value over the price" to its customers (see Faulkner & Bowman, 1995). For example, defenders follow a hybrid strategy, but Miles and Snow (1978) assert that they survive and succeed in the long term.

[9] Similar typologies are proposed in Buzzell at al. (1975), Utterback and Abernathy (1975), Miller (1988), and Venkatraman (1989).

elements of innovation and cost efficiency to create value for customers retaining a consistency in their strategic orientation. Finally, reactors have no clear strategic orientation, and they react to environmental events without any specific intention or ability to influence those events. This implies an unstable and ambiguous strategic positioning which is considered as not viable in the long term (Miles & Snow, 1978).

2.1.2. Business strategy and earnings properties

We examine the effects of business strategy on earnings properties that are frequently considered as proxies of earnings quality. Within the context of financial accounting literature, the term earnings quality is employed to indicate reported earnings that are informative about a firm's financial performance with reference to a specific decision-making model (Dechow et al., 2010). However, as Dechow et al. (2010) underline, earnings quality is a joint outcome of the underlying financial performance, the ability of the accounting system to report this performance, and the ability of the empirical proxies to measure it.

Exploring the relationship of strategy with earnings properties enhances our understanding regarding the implications of firm strategic positioning on the earnings generating process, the financial reporting system, and earnings properties. Strategic positioning entails specific firm characteristics that shape the fundamental financial performance which can be considered as the variable *X* in the following definition provided in Dechow et al. (2010):

$$Reported\ Earnings \equiv f(X)$$

Where *X* is a firm's unobservable fundamental financial performance, and the function *f* represents the accounting system that converts the unobservable financial performance into reported earnings. We expect that business strategy is a determinant of *X* but also interacts with *f*, thereby affecting the properties of reported earnings. In several cases, specific business strategy choices are inherently related to specific earnings properties, the process that the financial reporting system measures them, and the proxies used as earnings quality measures. Therefore, failing to incorporate business strategy choices in empirical earnings models may yield spurious results and incorrect inferences.

Dechow et al. (2010) classify earnings quality proxies into three categories, that is, earnings properties, investor responsiveness to earnings, and external indicators of earnings misstatements. In this study, we focus on the first category and examine the relationship of a firm's strategy with four earnings properties that are customarily considered as proxies of earnings quality, namely, earnings management, conditional conservatism, earnings persistence, and earnings smoothness.[10]

[10] Dechow et al (2010) use the term "asymmetric timeliness and timely loss recognition" instead of "conditional conservatism". We use the term "conditional conservatism" because it is by far more frequently used in the extant literature relative to "asymmetric timeliness".

The extant research on the effects of business strategy on various accounting-related topics is still limited. Bentley et al. (2013) document that prospectors exhibit more financial reporting irregularities and higher audit fees. Houqe et al. (2013) find evidence that defenders engage more in earnings management and prospectors are more conservative, but these relationships are significantly affected by the GDP growth rates.[11] It also seems that prospectors have internal control systems of lower quality and are more likely to report material weaknesses (Bentley-Goode et al., 2017). Moreover, Ballas and Demirakos (2018) find that prospectors are positively associated with firm value in the industries of electronics and electrical equipment, pharmaceuticals and biotechnology, and technology hardware and equipment. Finally, Ballas et al. (2022) provide evidence that prospectors exhibit SG&A cost stickiness, whereas defenders exhibit SG&A cost anti-stickiness. Collectively, the extant studies suggest that business strategy is linked to financial reporting attributes and lend support for our research motivation.

We expect that different strategic positionings may have different effects on earnings properties. The implementation of each type of business strategy requires different managerial decisions concerning the operating, investing and financial operations. Moreover, these decisions are often treated differently by the financial reporting system. Thus, a firm's strategy is a determinant of the firm's underlying economic performance and its reporting function, thereby leading to different earnings properties. In the next section, we develop our main hypotheses.

2.2. Hypothesis development

We follow Dechow et al. (2010) and evaluate the effects of business strategy on the earnings quality category that includes earnings properties. Specifically, we examine the effect of business strategy on (i) accrual earnings management, (ii) conditional conservatism, (iii) earnings persistence, and (iv) earnings smoothness.[12] Different types of business strategy, such as prospectors and defenders, may have different implications for these earnings properties as we discuss next. We also include analyzers as the baseline in our analysis, but our discussion mostly focuses on prospectors and defenders as they are the endpoints of the strategy continuum.

2.2.1. Accrual earnings management

Earnings management occurs when managers use their discretion to intentionally mislead stakeholders about the underlying economic performance of the firm or influence contractual outcomes that depend

[11] Houqe et al.'s (2013) study is relevant to ours, because they examine the relationship of business strategy with accrual earnings management and accounting conservatism, but their empirical models differ substantially. More importantly, their explanation for their empirical results relates to *deliberate actions* taken by prospectors and defenders as reaction to investors' expectations. In stark contrast, our hypotheses are based on the inherent implications of strategic positioning for earnings properties.

[12] According to Dechow et al. (2010), the earnings properties category also includes target beating. We do not examine target beating because we lack theoretical arguments that would suggest a fundamentally different trend of prospectors relative to defenders toward target beating.

on reported accounting earnings (Healy, & Wahlen, 1999).[13] A common vehicle of earnings management is the manipulation of accounting accruals (i.e., discretionary accruals) in several areas of financial reporting, such as bad debt expenses, asset useful lives, and deferred taxes. Consequently, a common topic in empirical research is the separation of total accruals into discretionary and non-discretionary components. Empirical studies customarily follow a two-step procedure: first, they estimate discretionary accruals using Jones-type models which regress total accruals on factors that control for the non-discretionary accrual generation process, and second regress discretionary accruals on a variable this is considered as an earnings management stimulus (e.g., Dechow et al., 1995; Jones, 1991; Kasznik, 1999; Kothari et al., 2005).

In our context, we argue that, a priori, strategic positioning itself does not constitute an opportunistic incentive to manage earnings. However, strategic positioning may cause mechanical effects on proxies that are used in empirical models to detect earnings management. Therefore, incorporating business strategy proxies into earnings management models may help filter out nondiscretionary components that would be considered as discretionary otherwise. Specifically, prospectors are still more likely than defenders to exhibit estimated discretionary accruals, even in the absence of an earnings management stimulus.[14] Specifically, prospectors invest intensively to R&D, develop innovative products, penetrate into new markets, and devote a higher level of resources to marketing activities and customer relationships. Although the above activities lie into their normal course of business, empirical models of accruals may raise larger discretionary accruals for prospectors relative to defenders. This is likely for at least two reasons.

First, prospectors' economic growth occurs in spurts, that is, prospectors exhibit sales momentum when their products are new and highly competitive (Bentley et al., 2013). As innovative products mature and are imitated by competitors, operating performance tend to mean revert. Sales momentum and mean reversion yield predictably higher and lower levels of accruals, respectively, which may be inadequately filtered out by commonly used Jones-type accrual models (Kothari et al., 2005). Conversely, defenders focus mostly on operational efficiency and exhibit steady growth which suggests a smoother accrual process.

Second, prospectors' development entails a poor matching between revenues and expenses because of the direct expensing of most internally generated assets. Immediate expensing of assets that will generate economic benefits in the future entails abnormally low accruals in the year that

[13] Earnings management is not always detrimental to stakeholders if managers use their discretion in a non-opportunistic way. Conceptually, opportunistic earnings management (i.e., earnings manipulation) is a subset of the earnings management continuum (Christensen et al., 2022a). In this study, we assume that estimated discretionary accruals are interpreted as an opportunistic means by researchers.

[14] Note that this argument does not contradict the inference in Bentley et al. (2013) that prospectors have greater latitude to manage their earnings *given* an earnings management stimulus. However, one should not expect systematic differences in earnings management measures between the average prospector and the average defender absent an earnings management stimulus.

expenditures take place and abnormally high accruals in the years following. Conversely, defenders' assets consist mostly of tangible assets that are depreciated during their estimated useful lives, thereby mitigating accruals volatility.

Collectively, due to sales momentum and a poor matching between revenues and expenses, prospectors are more likely than defenders to exhibit larger values of estimated discretionary accruals (in absolute terms), even in the absence of specific earnings management stimuli.[15] Therefore, our related hypothesis is stated as follows (in alternative form):

H1: Firms classified as prospectors are more likely to exhibit larger values of estimated discretionary accruals (in absolute terms) than firms classified as defenders.

2.2.2. Conditional conservatism

Conditional conservatism refers to the timelier recognition of contemporaneous economic losses versus economic gains in accounting earnings (Ball, & Shivakumar, 2005). Conditional conservatism is distinct to unconditional conservatism which refers to a news-independent bias toward reporting understated book values. Examples of conditional conservatism include impairment for long-lived assets and the lower of cost or market value accounting for inventory. Examples of unconditional conservatism include the immediate expensing of most internally generated intangible assets and accounting depreciation that exceeds economic depreciation (Ryan, 2006). Conditional conservatism has long been considered as a desirable earnings property that reflects earnings quality (Ball et al., 2000; Barth et al., 2008; Dechow et al., 2010; Garanina & Kim, 2023; Lara et al., 2011, 2020). The reason is that timely loss recognition indicates a higher level of verifiability on the recognition of losses than gains, which in turn, enhances the monitoring of the firm and facilitates efficient contracting (Watts, 2003).

Turning to our research setting, we expect that strategic positioning may have material implications on conditional conservatism but with potentially offsetting effects. On one hand, prospectors are expected to demonstrate a higher level of conditional conservatism than defenders. Prospectors are expected to engage in riskier projects because they continually invest resources in new and innovative technologies to retain their diversified competitive advantage. Increased investing risk suggests a higher likelihood that the present value of the investments becomes lower than their carrying book value,

[15] Although sales momentum and a poor-matching between revenues and expenses have been cited by the past accruals literature (e.g., Dechow et al., 1995; Kothari et al., 2005; McNichols, 2000), implementing a proxy for business strategy in discretionary accruals models provides at least two benefits. First, instead of including a yearly variable, such as current ROA or current R&D expenditures, business strategy captures *long-term* trends. For example, consider a firm that made significant R&D investments in the past that boost current earnings, but R&D investments in the current year are very low. A model that employs current R&D investments will classify much of nondiscretionary accruals as discretionary because it misses the past R&D investments. Conversely, a proxy of strategic positioning likely mitigates this concern. Second, the inclusion of proxies for current R&D investments, sales momentum, and extreme ROA imposes the risk of "throwing the baby out with the bath water", i.e., reducing the power of the test, because some of them may be indicators of discretionary behavior. Conversely, it is hard to say that strategic positioning constitutes an opportunistic behavior because it is a long-term business-related decision.

thereby resulting in more frequent impairment tests and timelier recognition of accounting losses. For example, high-technology products and intangible assets bear a higher operating risk that their inventories may become obsolete and require frequent impairment testing with potential write-downs. Conversely, defenders focus on cost efficiency rather than innovation and specialize in traditional markets and products. As their investments on innovative technologies and products are minimal, they generally bear lower operating risk and they are subject to less frequent impairment testing.

On the other hand, the above expectations may not be borne out empirically. Unconditional conservatism creates a form of accounting slack (i.e. low asset book values) that preempts conditional conservatism and constrains the recognition of asset impairments (Beaver, & Ryan, 2005; Ryan, 2006; Gassen, Fülbier, & Sellhorn, 2006). As aforementioned, prospectors have high levels of R&D and marketing expenditures which are likely to generate future revenues but are expensed in the current year, that is, a manifestation of unconditional conservatism. This suggests that prospectors exhibit a lower book value of assets than defenders with similar level of economic activity as the former have expensed more investments on internally developed intangibles than the latter. Thus, unconditional conservatism creates higher accounting slacks for prospectors suggesting that larger economic losses are required to trigger recognition of impairments. In these respects, prospectors will empirically manifest lower conditional conservatism than defenders.

Collectively, the higher risk of prospector's investments might trigger impairments and write downs more frequently leading to higher conditional conservatism compared to defenders. Conversely, the immediate expense of many internally developed intangible assets may result in a lower level of conditional conservatism. The above arguments suggest that the overall effect of strategy on conditional conservatism is ambiguous. Therefore, we state our research hypothesis in the null form.

H2: Prospectors do not demonstrate different intensity of conditional conservatism than defenders.

2.2.3. Earnings persistence

Earnings persistence refers to the ability of current period's earnings to predict future earnings. Persistence is frequently considered as a desirable earnings property because more persistent earnings provide a superior input to equity valuation models (Dechow et al., 2010). The implications of different strategic orientations on the level of earnings persistence depend on the development of different types of competitive advantages and their corresponding accounting treatment by the financial reporting system.

Turning first to the economic implications of business strategy for earnings persistence, one would expect that prospectors would have more persistent economic earnings. This argument emanates from strategy economics which suggest that firms pursuing a differentiation strategy and create barriers to other firms to imitate their products enjoy more persistent earnings than firms that follow a cost leadership strategy (Dechow et al., 2010; Dranove, Besanko, Shanley, & Schaefer, 2016). In these respects, prospectors' earnings are expected to be more sustainable than defenders.

On the other hand, prospectors' differentiation strategy relies on high R&D expenditures and significant marketing costs. According to GAAPs, these costs are generally expensed immediately[16], even though they are expected to generate revenues in the future. The immediate expense of these costs yields a poor matching with the revenues that they produce in subsequent years. Therefore, the contemporaneous correlation between revenues and expenses is decreased, the volatility of earnings is higher, and their persistence is lower (Dichev & Tang, 2008).

Collectively, the effect of strategy on earnings persistence is ambiguous and no clear expectations can be formed. Therefore, our related hypothesis is stated in the null form.

H3: Prospectors do not demonstrate different intensity of earnings persistence than defenders.

2.2.4. Earnings smoothness

Earnings smoothness refers to reported earnings that present low contemporaneous variance. There is a perennial debate in the literature regarding the desirability of earnings smoothness. To some extent, earnings smoothness is a desirable property of accrual-based accounting which considers cash flows as less informative than earnings about financial performance. Conceptually, accruals help earnings to smooth fluctuations in the timing of cash flows, thereby rendering earnings a better indicator of fundamental performance and future cash flows (Ball & Nikolaev, 2022). In these respects, smoothed earnings may represent a vehicle for managers to reveal private information for good future prospects (Baik et al., 2022; Tucker & Zarowin, 2006). On the other hand, artificial smoothness (i.e., intentional smoothing of earnings by managers) may hide real firm performance and garble accounting information to serve managerial opportunism (Leuz et al., 2003). Empirically, disentangling beneficial from opportunistic smoothing is a daunting task.

Regardless earnings smoothness is a desirable property or not, business strategy may have an inherent impact with prospectors exhibiting less smoothed earnings than defenders. Specifically, prospectors continually seek new and innovative products which entails some periods of extensive research and development costs that are followed by periods with rapid market penetration and growth. This pattern suggests increased earnings variance. Moreover, prospectors are characterized by significant employee fluctuations to support the development of new products and restructured control groups. Intense employee fluctuations around the launch of new products entail material adjustment costs, such as severance payments to dismissed employees and searching and training costs for new employees. In stark contrast, defenders focus on efficiency and stability which suggests lower fluctuations in financial performance. Collectively, the effect of business strategy on earnings smoothness suggests that

[16] In fact, according to International Accounting Standard 38 (IAS38: Intangible Assets), development costs may be capitalized provided that stringent criteria are fulfilled, that is, "after technical and commercial feasibility of the asset for sale or use have been established".

prospectors exhibit less smoothed earnings than defenders. Therefore, our related hypothesis is stated as follows (in alternative form):

H5: Prospectors demonstrate lower earnings smoothness than defenders.

3. Research Design

3.1. Business strategy proxy

Our proxy for business strategy (*STRATEGY*) is the composite measure proposed in Bentley et al. (2013). *STRATEGY* is a summary measure of six variables that capture a firm's strategic positioning. The variable ranges from 6 to 30. In our empirical models, we use two indicator variables; *DEF*, an indicator variable that takes the value 1 for defenders (*STRATEGY* ranges from 6 to 12) and 0 otherwise, and *PROS*, an indicator variable that takes the value 1 for prospectors (*STRATEGY* ranges from 24 to 30). Our base level is the rest of the firms which are considered as analyzers (*STRATEGY* ranges from 13 to 23), but most of our discussion focuses on prospectors and defenders as they are the two opposite edges of the strategic continuum. Consistent with prior research (e.g, Bentley et al., 2013), reactors are not considered in the sample as their strategy is not viable in the long term. For additional details, see Appendix B1.

3.2. Business strategy and earnings management

We examine the relationship of business strategy with accrual earnings management using discretionary accruals from a Jones (1991) model. For additional details, see Appendix B2. Since we do not examine a specific earnings management stimulus and we have no priors to the direction that strategy may affect earnings management (i.e., upward or downward), we use the absolute value of discretionary accruals in our main model. To evaluate the effect of strategic positioning on discretionary accruals, we estimate the following equation with *i* and *t* subscripts representing firm and year, respectively:

$$ABSDACC_{it} = \alpha_0+\alpha_1 PROS_{it}+ \alpha_2 DEF_{it} + a_k CONTROLS_{it-1}+\varepsilon_{it} \quad \text{(Eq. 1)}$$

Where *ABSDACC* is the absolute value of discretionary accruals; *CONTROLS* is a vector of control variables; and *PROS* and *DEF* are defined as previously.

In Eq. (1) the coefficient α_0 indicates the baseline firms in our context, that is, analyzers. We assume that analyzers occupy the middle of the strategic continuum with prospectors and defenders being the two opposite ends. Therefore, the coefficients α_1 and α_2 indicate the incremental effects of prospectors and defenders, respectively. A similar logic applies to the rest equations. According to H1, the coefficient a_1 is expected to be significantly higher than the coefficient a_2.[17]

[17] Note that technically, we should compare the overall effect of prospectors (i.e., $\alpha_0+\alpha_1$) to the overall effect of defenders (i.e., $\alpha_0+\alpha_2$). However, as the a_0 is common for both variables, it is equivalent to compare just the incremental effects.

We follow the extant literature (e.g., Dechow et al., 1995; Francis et al., 2004; Kim et al., 2012; Kothari et al., 2005; McNichols, 2000; Zang, 2012) and include several control variables to mitigate omitted correlated variable concerns. Specifically, the natural logarithm of the market value of equity (*SIZE*) and the market-to-book ratio (*MB*) are used as proxies of firm size and growth opportunities, respectively. We also include the market share of a firm (*MSH*) to capture a firm's market-leader status in industry. To isolate the effects of innate characteristics that prior literature has detected to have an effect on earnings management, we include industry-adjusted ROA (*ADJROA*), R&D intensity (*RDINT*) (Francis et al., 2004), and sales growth (*SALESGR*) in the regressions. We use the long-term debt scaled by total assets (*LEV*) as measure of leverage. We use a modified version of Altman's Z-score (*ZSCORE*) as a proxy for firm's financial health. Further, we include the firm age (*AGE*) to control for different stages of the business, and an audit indicator variable (*BIG4*) for firms that are audited by one of the big 4 audit firms.[18] We also include firm trading cycle (*CYCLE*) because firms with longer cycles have greater flexibility for accrual management as they have larger accrual accounts and a longer period for accruals to reserve. Finally, we include country-, year-, and industry-fixed effects. Detailed definitions are provided in Appendix A.

3.3. Business strategy and conditional conservatism

We rely on Basu's (1997) asymmetric timeliness model to evaluate the effect of strategy on conditional conservatism. Specifically, we estimate the following equation:

$$\begin{aligned} NI_{it}/MVE_{it-1} = {} & \alpha_0 + \alpha_1 DR_{it} + \alpha_2 RET_{it} + \alpha_3 DR_{it} \times RET_{it} + \alpha_4 PROS_{it} + \alpha_5 PROS_{it} \times RET_{it} \\ & + \alpha_6 PROS_{it} \times DR_{it} + \alpha_7 PROS_{it} \times DR_{it} \times RET_{it} + \alpha_8 DEF_{it} + \alpha_9 DEF_{it} \times RET_{it} \\ & + \alpha_{10} DEF_{it} \times DR_{it} + \alpha_{11} DEF_{it} \times DR_{it} \times RET_{it} + \alpha_k CONTROLS_{it} + \alpha_l CONTROLS_{it} \times RET_{it} \\ & + \alpha_m CONTROLS_{it} \times DR_{it} + \alpha_n CONTROLS_{it} \times DR_{it} \times RET_{it} + \varepsilon_{it} \end{aligned} \quad \text{Eq. (2)}$$

Where *NI* is net income; *MVE* is market value of equity at the end of the fiscal year; *RET* is the market-adjusted stock return; *DR* is a dummy variable which equals 1 if *RET* is negative, and 0 otherwise, and *PROS* and *DEF* are defined as previously. *CONTROLS* is a vector of control variables related to conditional conservatism. Following Khan and Watts (2009), we include as control variables the firm's market book ratio (*MB*), firm size (*SIZE*), and leverage (*LEV*). We also include country-, year-, and industry-fixed effects. Detailed definitions are provided in Appendix A.

Compelling empirical evidence supports that α_3 is positive, that is bad news (i.e., negative returns) are incorporated into accounting earnings more timely than good news (Ball & Shivakumar, 2005; Basu, 1997). According to H2, the coefficient a_7 is expected to be insignificantly different to the coefficient a_{11}.

[18] Worldscope backfills the data for the audit firm. Therefore, we exclude *BIG4* and re-estimate our models. Results remain qualitatively similar.

3.4. Business strategy and earnings persistence

Following Francis et al. (2004), we measure our proxy for earnings persistence (*PERS*) as the estimated slope coefficient from a first-order autoregressive model for annual split-adjusted earnings per share (see Appendix B3). To evaluate the effect of business strategy on the intensity of earnings persistence, we estimate the following equation:

$$PERS_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + \alpha_k CONTROLS_{it} + \varepsilon_{it} \quad \text{Eq. (3)}$$

Where *PERS* is our proxy for earnings persistence; *CONTROLS* is a vector of control variables, and *PROS* and *DEF* are defined as previously. *CONTROLS* includes variables that inherently affect earnings persistence. Specifically, we follow Francis et al. (2004) and control for total assets (*TA*), the standard deviation of operating cash flows (*CFOSD*), the standard deviation of sales (*SALESSD*), R&D intensity (*RDINT*), sales growth (*SALESGR*), the length of the firm operating cycle (*OPCYCLE*), a loss in the previous fiscal year (*NEGLNI*), and negative earnings change in the previous fiscal year (*NEGLΔNI*). We also include country-, year-, and industry-fixed effects. Detailed definitions are provided in Appendix A. According to H3, the coefficient a_1 is expected to be insignificantly different to the coefficient a_2.

3.5. Business strategy and earnings smoothness

Following Leuz et al. (2003), we use cash flows variability as the benchmark for unsmoothed earnings and define earnings smoothness as the ratio of income variability to cash flow variability (see Appendix B4). To evaluate the effect of strategy on the intensity of earnings smoothness, we estimate the following equation:

$$SMOOTH_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + \alpha_k CONTROLS_{it} + \varepsilon_{it} \quad \text{Eq. (4)}$$

Where *SMOOTH* is our proxy for earnings smoothness, *CONTROLS* is a vector of control variables, and *PROS* and *DEF* are defined as previously. *CONTROLS* includes variables that inherently affect earnings smoothness. Specifically, we follow Francis et al. (2004) and control for total assets (*TA*), the standard deviation of sales (*SALESSD*), R&D intensity (*RDINT*), sales growth (*SALESGR*), the length of the firm operating cycle (*OPCYCLE*), a loss in the previous fiscal year (*NEGLNI*), and negative earnings change in the previous fiscal year (*NEGLΔNI*).[19] We also include country-, year-, and industry-fixed effects. Detailed definitions are provided in Appendix A. According to H4, the coefficient a_1 is expected to be significantly lower than the coefficient a_2.

[19] We do not include the standard deviation of operating cash flows (*CFOSD*) because it is a component of the *SMOOTH* variable.

4. Empirical results

4.1. Sample and descriptive statistics

Conceptually, we do not expect that fundamental firm characteristics, such as strategic positioning, are affected by country factors or reporting regimes. Therefore, to enhance the external validity of our results, a preferable option is a broad sample from several countries that would facilitate the generalization of our inferences. On the other hand, our variables still rely on accounting figures suggesting that an accounting consistency is necessary to rule out differences in accounting standards as potential explanation of the empirical results. In these respects, we use an international sample including US firms that follow US GAAPs and countries that follow IFRS.[20] Since many European countries adopted IFRS in 2005 for first time, our sample spans the period 2005–2019. However, the strategy proxy requires lagged values for the previous six years (see Appendix B1), thereby leaving us with 2010 as the first year with observations to use. We retrieve our data from the Worldscope database. We exclude utilities and financial sectors (SIC 4900–99 and 6000–999, respectively) as they are highly regulated. We also drop observations with negative sales or assets, and observations with missing SIC codes. Our final sample includes 24 countries[21] but our equations include different variables and, therefore, the number of observations varies across models. We present sample composition and descriptive statistics for the model with the less stringent requirements, that is, Eq. (3). In these respects, our sample includes 3,112 unique firms and 17,264 firm-year observations.

Table 1, Panel A, presents sample breakdown by country. Unsurprisingly, the United States and the United Kingdom provide most observations with Hong Kong and Germany following.[22] Panel B presents sample breakdown by year. Although the frequency of observations varies, they are generally well-dispersed across the sample period.

- Insert Table 1 -

Table 2, Panel A, presents descriptive statistics for our sample. Mean *PROS* (*DEF*) equals 0.075 (0.067) which indicates that 7.5% (6.7%) of our observations are prospectors (defenders). Panel B presents descriptive statistics for prospectors and defenders, separately. Differences in means, medians, and standard deviations are also reported. Differences in means generally support our hypotheses. For example, mean *ABSDACC* is significantly higher for prospectors compared to defenders. Moreover, *PERS* is significantly higher for prospectors suggesting that they are more efficient in sustaining their earnings.

[20] In the robustness test section, we conduct analysis for IFRS countries and US firms, separately.
[21] Other countries that were also considered but finally excluded due to insufficient data are Cyprus, Luxemburg, Malta, Portugal, Slovakia, and Czech Republic.
[22] We refer to Hong Kong as a country for simplicity, although it is a Special Administrative Region of the People's Republic of China.

SMOOTH is significantly lower for prospectors indicating that their earnings are more volatile relative to that of defenders.

- Insert Table 2 -

Table 3 presents pairwise Pearson correlations for the key variables. Consistent with our expectations, *PROS* (*DEF*) exhibits a significantly positive (negative) relationship with *ABSDACC* which indicates a mechanical relationship of business strategy with discretionary accruals. Moreover, *NI/MV* has a stronger correlation with *DR*×*RET*×*PROS* than that with *DR*×*RET*×*DEF* (0.218 and 0.059, respectively). This indicates that net income incorporates bad news more intensively for prospectors than for defenders. Finally, *PERS (SMOOTH)* is positively (negatively) correlated to *PROS* but negatively (positively) correlated to *DEF*. However, since these are bivariate correlations, we proceed with the multivariate analysis.

- Insert Table 3 -

4.2. Multivariate analysis

Table 4 presents multivariate results for earnings management. Turning first to the results for *ABSDACC*, *PROS* loads with a significantly positive coefficient (coef. = 0.0025, t-stat. = 3.05). Conversely, the coefficient of *DEF* is significantly negative (coef. = −0.0024, t-stat. = −3.08). A t-test provided at the bottom of the table indicates that the difference in coefficients of *PROS* and *DEF* is statistically significant (dif. = 0.0049, t-stat. = 4.33). Collectively, prospectors exhibit higher absolute values of estimated discretionary accruals than relative to defenders, consistent with H1. This result may be attributed to prospectors' higher incentives and opportunities for earnings management or to the reporting nature of the accounting system that requires direct expensing of core expenditures in prospect strategies, such as research investments and marketing costs. As our sample firms have no specific earnings management stimuli, our results are supportive of a mechanical relationship.

- Insert Table 4 -

Table 5 presents results relating to conditional conservatism. Consistent with the extant research the coefficient of *DR*×*RET* is significantly positive (coef. = 0.0547, t-stat. = 3.67). This confirms that bad news is incorporated in a timelier manner than good news, that is, a manifestation of conditional conservatism. More important to our study, the coefficient of *PROS*×*DR*×*RET* is positive and statistically significant (coef. = 0.0704, t-stat. = 3.04). This indicates that prospectors exhibit a higher level of conditional conservatism relative to analyzers, consistent with their engagement to assets that are subject to greater uncertainty which boosts impairment testing. Turning to defenders, the coefficient of *DR*×*RET*×*DEF* is also positive, albeit not statistically significant (coef. = 0.0324, t-stat. = 1.15). Moreover, the t-test at the bottom of the table suggests that the difference in the incremental reaction to bad news between prospectors and defenders is not statistically significant, consistent with H2. Therefore,

our empirical results suggest that prospectors are more conditionally conservative to our baseline firms (i.e., analyzers), but we do not find sufficient evidence that they are more conservative than defenders.

- Insert Table 5 -

Table 6 presents empirical results for earnings persistence. The coefficient of *PROS* is positive and statistically significant (coef. = 0.0601, t-stat. = 3.14). However, the coefficient of *DEF* is significantly negative (coef. = −0.0608, t-stat. = −2.62). The difference in their coefficients is statistically significant (dif. = 0.1209, t-stat. = 4.02), contrary to H3. These results indicate that prospectors exhibit more persistent earnings than defenders and support that prospectors' innovation strategy leads to significant competitive advantages and more persistent earnings relative to defenders. Therefore, although accounting standards imply a poorer matching of revenues and expenses for prospectors, they are more efficient in retaining their current level of earnings.

- Insert Table 6 -

Finally, Table 7 presents empirical results for earnings smoothness. The coefficient of *PROS* is negative and statistically significant (coef. = −0.2306, t-stat. = −3.62). However, the coefficient of *DEF* is significantly positive (coef. = 0.0525, t-stat. = 2.94). Their difference is statistically significant (dif. = −0.2832, t-stat. = −4.28) indicating that prospectors' earnings are more volatile relative to defenders' earnings, consistent with H4. This evidence supports that prospectors' strategy which entails significant initial costs when they penetrate into new markets and products and their subsequent prosperity leads to less smoothed earnings relative to defenders' strategy. Therefore, strategic positioning is a business characteristic that fundamentally affects earnings smoothness regardless reporting actions taken by managers.

- Insert Table 7 -

Collectively, our empirical results confirm that strategic positioning is significantly related to earnings properties that are commonly used as measures of accounting quality. We find that prospectors have larger discretionary accruals, higher earnings persistence, and lower earnings smoothness relative to defenders. We also find that prospectors are more conditionally conservative than analyzers, but we do not find sufficient evidence that they are more conditionally conservative than defenders. Our results suggest that business strategy affects firm fundamentals in a manner that yields systematic differences in earnings properties that are commonly used as proxies for earnings quality.

5. Additional analysis and robustness tests

5.1. Real earnings management

In the main analysis, we follow the framework of Dechow et al. (2010) which focuses on accrual earnings management, and we find that business strategy exhibits a mechanical relationship with estimated

discretionary accruals. However, the accounting literature has distinguished between two kinds of earnings management, that is, accrual earnings management and real activities manipulation (e.g., Cohen et al., 2020; Roychowdhury, 2006; Yang et al., 2022; Zang, 2012). In this section, we examine potential mechanical relationships of business strategy with this kind of earnings management.

Real activities manipulation refers to the departure from normal operational practices, such as sales acceleration, overproduction, and reduction of discretionary expenditures (Roychowdhury, 2006). Abnormal operating activity is captured with regressions of operating cash flows, production costs or discretionary expenditures on contemporaneous sales revenues and sales revenues changes (e.g., Cohen et al., 2020; Roychowdhury, 2006; Yang et al., 2022; Zang, 2012). In a similar vein with our main analysis, we argue that different business strategies do not constitute earnings management stimuli but may still cause mechanical effects on variables used in real earnings management models, thereby leading to spurious relationships.[23]

Specifically, a firm may temporarily increase sales by offering price discounts or more lenient credit terms but this leads to lower than normal operating cash flows (Roychowdhury, 2006). Therefore, the empirical research considers abnormally low operating cash flows relative to sales as indicator of real earnings management. However, in our context, a firm classified as prospector is more likely to exhibit lower levels of abnormal cash flow from operations than a firm classified as defender, even without opportunistic incentives. The reason is that the effective implementation of a prospecting strategy has increased demands for financing R&D and marketing activities to support the development and deployment of a diverse product portfolio. These cash outflows are customarily classified as "operating" cash outflows in the Cash Flow Statement, thereby decreasing operating cash flows. Conversely, defenders invest mostly in tangible assets as they focus on a high degree of mechanization. However, the relevant cash outlays are classified as "investing" cash outflows in the Cash Flow Statement, thereby leaving operating cash flows unaffected. The different kind of core investments between the two strategic positionings along with the different classification of the corresponding cash outflows suggest that prospectors would mechanically exhibit lower abnormal operating cash flows relative to defenders.

Overproduction is another vehicle of real earnings management (Roychowdhury, 2006). With a higher level of production volume, fixed production cost is spread over a larger number of units, thereby lowering the per-unit production cost, and the reported cost of goods sold. Therefore, the empirical research considers abnormally high levels of production cost relative to sales as indicator of real earnings management. However, in our context, a firm classified as prospector is more likely to exhibit lower abnormal production cost relative to sales than a firm classified as defender, even without

[23] Related evidence on the effects of competitive strategies on real earnings management metrics is provided in Srivastava (2019). However, our study differs to Srivastava (2019) in at least two ways. First, Srivastava (2019) refers to competitive strategies in general without classifying firms in specific strategic positionings. Second, Srivastava (2019) proposes refined models incorporating firm characteristics, forward revenues, and listing vintage rather than a strategy measure. See also Christensen et al. (2022b) for a further discussion.

opportunistic incentives. This is because abnormal production cost is empirically detected with conditioning production costs to sales and sales changes. Prospectors have higher margins relative to defenders because the former focus on innovative and diversified products whereas the latter focus on narrow product lines. In these respects, empirical models may mechanically find that prospectors have lower abnormal production costs even in the absence of earnings management stimuli.[24]

A final means of real earnings management is the reduction of discretionary expenditures, such as R&D and marketing expenditures (Roychowdhury, 2006), thereby raising abnormally low discretionary expenses relative to sales. Regarding prospectors, the R&D and marketing activities are vital strategic expenditures because they are expected to generate economic value in the future. Conversely, defenders aim at production and financial efficiency, and they have lower expectations than prospectors for future benefits of the discretionary expenses. Therefore, we expect that prospectors will report higher levels of abnormal discretionary expenditures although this is an outcome of their strategy instead of opportunistic incentives.

To evaluate the relationship of business strategy with real earnings management, we estimate the following equation:

$$REM_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + a_k CONTROLS_{it-1} + \varepsilon_{it} \quad \text{(Eq. 5)}$$

Where *REM* is our proxy for real earnings management and the rest variables are defined as previously. We follow prior studies (e.g., Cohen et al., 2020; Cohen et al., 2008; Roychowdhury, 2006; Yang et al., 2022) and employ three measures of real earnings management, that is, abnormal operating cash flows (*ABNCFO*), abnormal production cost (*ABNPROD*), and abnormal discretionary expenses (*ABNDEXP*). Detailed definitions are provided in Appendix A and Appendix B5.

The corresponding results are presented in Table 8. Turning to the results for *ABNCFO*, the coefficient of *PROS* is significantly negative (coef. = −0.0123, t-stat. = −3.44), whereas the coefficient of *DEF* is significantly positive (coef. = 0.0258, t-stat. = 3.11). The t-test provided at the bottom of the table indicates that the difference in coefficients of *PROS* and *DEF* is statistically significant (dif. = −0.0381, t-stat. = −4.22). These results are consistent with prospectors tend to demonstrate lower operating cash flows as they must finance extensive R&D activities and the corresponding cash outlays are typically classified as "operating". On the other hand, defenders' outflows to tangible asset investments are classified as "investing cash outflows", thereby raising a positive coefficient. Therefore, a mechanical relationship spuriously indicates that prospectors engage in higher real earnings management.

[24] To see this, consider a defender and a prospector with equal total revenues, e.g., CU2.0M each and no sales changes for simplicity. Assuming that the defender has a gross profit margin 40% and the prospector has a gross profit margin of 60%, the production cost is CU1,200,000 and CU800,000, respectively (inventory changes are assumed zero for ease of exposition). Without a constant, this would yield an average coefficient of 0.5 and a positive (negative) residual for the defender (prospector).

Empirical results relating to *ABNPROD* illustrate that the coefficient of *PROS* is significantly negative (coef. = −0.0635, t-stat. = −3.05) whereas the coefficient of *DEF* is significantly positive (coef. = 0.0729, t-stat. = 3.98). Again, the t-test provided at the bottom of the table indicates that the difference in coefficients of *PROS* and *DEF* is statistically significant (dif. = −0.1364, t-stat. = −4.92). These results indicate that prospectors (defenders) exhibit significantly lower (higher) abnormal production cost. This makes sense because prospectors have generally higher margins than defenders, and their production cost constitutes a lower proportion of sales revenues. Pooling together prospectors and defenders and imposing a common coefficient yields low residuals for prospectors and high residuals for defenders. Therefore, a business strategy attribute (i.e., different profit margins) spuriously indicates that defenders (prospectors) engage in higher (lower) real earnings management.

Results relating to *ABNDEXP* confirm that abnormal discretionary expenses are higher for prospectors relative to defenders. Specifically, *PROS* (*DEF*) loads with a significantly positive (negative) coefficient (coef. = 0.0807 and −0.0790, for prospectors and defenders, respectively) and the difference in coefficient is statistically significant (dif. = 0.1597, t-stat. = 7.74). This is unsurprising since discretionary expenses are comprised by R&D and SG&A expenses that are core elements of a prospector's strategy. Again, our main inference is that business strategy has direct mechanical implications for commonly used earnings management models.[25]

-Insert Table 8-

5.2. US GAAP and IFRS

We assess potential differences in our results when we estimate our models separately for the US and the rest IFRS countries. This concern is justified by at least two interrelated reasons. First, US GAAP differ to IFRS in several dimensions that could affect our measures of earnings properties. For example, US GAAP require the expense of R&D costs as incurred (ASC 730).[26] Conversely, IFRS stipulate that development costs are capitalized if specific criteria are met (IAS 38). Moreover, IFRS permit intangible asset revaluation to fair value if there is an active market. Under US GAAP, the revaluation of intangible assets is not permitted. Finally, impairment procedures for long-lived assets differ between the two sets; according to IFRS, an impairment loss is recorded if an asset's carrying value (CV) is lower than its recoverable amount, with the latter being the higher amount between the asset's fair value (FV) less costs to sell and value in use. In contrast, US GAAP employ a more stringent two-step impairment model that assesses the asset's CV with its undiscounted expected future operating cash flows (first

[25] Results for *ABNCFO* indicate a spurious higher real earnings management for prospectors whereas results for *ABNPROD* and *ABNDEXP* indicate a spurious higher real earnings management for defenders. This would confound inferences in real earnings management studies. Moreover, some of them tend to focus on abnormal production cost and discretionary expenses (e.g., Gunny, 2010; Zang, 2012). A higher frequency of defenders in their treatment sample would spuriously indicate higher real earnings management.

[26] Some specific capitalization criteria apply for internally developed computer software, direct-response advertising costs, and costs associated with acquiring or renewing insurance contracts.

step), and if the former is higher than the latter, then the CV is compared to the asset's FV (second step). Collectively, the higher latitude allowed by IFRS may have implications for earnings properties such as discretionary accruals, conditional conservatism, earnings persistence, and earnings smoothing.

Second, the US setting has unique institutional characteristics relative to most other countries. Specifically, the US setting is characterized by strong investor protection, high importance of the equity market, low ownership concentration, efficient legal, audit and accounting enforcement, and high level of disclosure (Brown et al., 2014; La Porta et al., 1997, 1998; Leuz et al., 2003). Although, there are other jurisdictions that present similar efficiency in some of the above characteristics, none presents the overall supremacy of the US jurisdiction.[27] The unique institutional characteristics of the US setting have material implications for many of the earnings properties that we examine. In particular, the US firms' earnings exhibit low earnings management (Leuz et al., 2003), significant conditional conservatism (Bushman and Piotroski, 2006), low earnings smoothing (Bhattacharya et al., 2003)[28], and persistent earnings components (Pincus et al., 2007). Collectively, different accounting standards and unique institutional features of the US setting suggest that US observations may be inherently different to rest observations. The dominance of the US observations in our sample raises the concern that omitted correlated variable bias may drive our results.

To test the sensitivity of our results, we estimate our main equations separately for firms that follow US GAAP (US GAAP sample) and firms that follow IFRS (IFRS sample) and compare coefficients.[29] Table 9 presents the corresponding results. For brevity, we report only the key coefficients and their differences across the two samples, but we report results relating to the real earnings management proxies for completeness of the analysis. Although we observe some differences in the coefficients compared to their counterparts in the main analysis, the overall pattern remains similar. For example, the estimated coefficients for the earnings management models have the same sign across the two subsamples. Moreover, although their magnitude and statistical significance exhibit some variation across the two subsamples, these differences are generally not significant.

A notable exception is defenders' incremental reaction to negative economic news in the conditional conservatism model (Panel E); they exhibit a significantly negative coefficient for the US GAAP

[27] See for example the worldwide governance indicators provided by the World Bank, available at: https://info.worldbank.org/governance/wgi/

[28] Except for the low levels of earnings smoothing in the US, Tucker and Zarowin (2006) find that US firms smooth their earnings to improve earnings informativeness instead of garbling.

[29] The customary technique to evaluate two estimated coefficients, that is, $\hat{b}(x_1)$ and $\hat{b}(x_2)$ for two samples is that proposed in Clogg et al. (1995). Specifically, a Wald test of equality rejects the null hypothesis if $\frac{\hat{b}(x_1)-\hat{b}(x_2)}{[\hat{\sigma}^2\{\hat{b}(x_1\}+\hat{\sigma}^2\{\hat{b}(x_2\}]^{1/2}}$ is larger than the appropriate χ_1^2 threshold. However, this test is not appropriate if the two models that yield the above coefficients are estimated in the same sample or in samples that are dependent, so that the estimators are stochastically dependent (and their covariances are non-zero). Stacked regressions mitigate this concern, but they assume that the residual variance is equal between the two samples. Therefore, we use the *suest* command in Stata that tackles these concerns.

sample and a positive but not significant coefficient for the IFRS sample. This inconsistent pattern is probably the cause for the insignificant coefficient that we observe for the full sample in Table 5. A plausible explanation for this difference in the asymmetric response for defenders across the two sample is potential variation in the quality of the returns generating process. Therefore, the aforementioned institutional differences for the US setting may affect the extent to which returns reflect bad news and consequently the relationship with strategic positioning.[30] Nevertheless, rest coefficients present consistent patterns, thereby corroborating the inferences from the main analysis. Collectively, this evidence indicates that differences in the two sets of accounting standards do not materially affect our results.

- Insert Table 9-

5.3. Alternative specifications for the discretionary accrual models

We assess the sensitivity of our results regarding different discretionary accrual model specifications. The Jones model has long been criticized for its effectiveness to distinguish discretionary from non-discretionary accruals (e.g., Christensen et al., 2022a; McNichols & Stubben, 2018). Therefore, several studies have proposed modifications that capture more efficiently the normal accruals generating process and yield more reliable estimates for discretionary accruals. These models are customarily applied in empirical studies that evaluate earnings management stimuli in various contexts.

Consistently, we assess the sensitivity of our results to the following discretionary accrual generating models: a modified Jones model (*ABSMDACC*) proposed in Dechow et al. (1995), a Jones model including ROA as explanatory variable (*ABSRDACC*), and a Jones model with performance matched discretionary accruals (*ABSKDACC*) as suggested in Kothari et al. (2005). Moreover, Chen et al. (2018) argue that using residuals from a first stage model as dependent variable in a second stage model raise biased coefficients and invalid standard errors. Therefore, we include the first-step regressors in the second-step regression.[31] See Appendix B6 for further details.

Corresponding results are reported in Table 10. Unsurprisingly, the magnitude and the statistical significance of the estimated coefficients vary substantially across the models. For example, the coefficient of *PROS* equals 0.0119 (t-stat. = 3.80) when we use performance matched accruals but drops to 0.0027 (t-stat. = 2.09) when we include ROA in the first-stage estimation. This is consistent with Kothary et al. (2005) that these two estimation procedures are not equivalent.

[30] We also find significant differences in the coefficients of *DR×RET* and *LEV×DR×RET* across the two samples (results not tabulated for brevity). Specifically, the coefficients of *DR×RET* and *LEV×DR×RET* are higher and more significant for the US sample. This is consistent with the return generating process being more informative in the US setting.

[31] Chen et al.'s (2018) main suggestion is to include the second-stage regressors in the first step, thereby estimating a single-step regression. This is not feasible in our research context as we use the absolute value of the residuals. Therefore, we control for the effects of the fist-step regressors by including them in the second stage (see Chen et al., 2018, p.783; Lam et al., 2023).

Nevertheless, the coefficients of *PROS* and *DEF* exhibit a consistent pattern across all models regarding their sign. Specifically, *PROS* loads with a positive coefficient, whereas *DEF* loads with a negative coefficient. Moreover, the estimated coefficients are statistically significant, although the level of significance oscillates. Finally, including the first-stage regressors in the second stage has no material effects on the coefficients of *PROS* and *DEF*. Collectively, the overall tenor of our prior inferences remains unchanged.

- Insert Table 10 -

5.4. Small positive earnings and small positive earnings changes

Prior literature provides evidence that managers exercise accrual management and real activities manipulation to meet or beat earnings benchmarks, such as avoid reporting losses and negative earnings changes (e.g., Burgstahler & Dichev, 1997; Gunny, 2010; Roychowdhury, 2006). Moreover, Bentley et al. (2013) find that prospectors have greater latitude to manipulate their earnings and present financial reporting irregularities given that there are earnings management incentives. In these respects, prospectors' increased tendency to manipulate their earnings may constitute an omitted correlated variable that could bias our results.[32] Therefore, we estimate our earnings management models including *SMALLNI*, an indicator variable that takes the value 1 for small positive earnings and 0 otherwise, and *SMALL*Δ*NI*, an indicator variable that takes the value 1 for small positive earnings changes and 0 otherwise.

Table 11 presents relevant results. We present results for both accrual and real earnings management for completeness of the analysis.[33] Consistent with prior literature (e.g., Gunny, 2010; Roychowdhury, 2006) *SMALLNI* and *SMALL*Δ*NI* load with significant coefficients across almost all models. Regarding real earnings management, estimated signs are also consistent with theory and extant evidence. For example, when we employ *ABNPROD* as dependent variable, both variables load with positive coefficients which indicates that small positive earnings and small positive earnings changes are related with increased production cost. More importantly, including these variables in our models has little effect on the coefficients of *PROS* and *DEF*, thereby retaining our main inferences.

- Insert Table 11–

5.5. Cost stickiness effects

Cost stickiness refers to an asymmetric response of cost increases versus cost decreases due to deliberate managerial decisions to retain unused resources (Banker & Byzalov, 2014).[34] Cost stickiness may have an effect on our results for prospector's conditional conservatism intensity. This is because cost

[32] Note, however, that if prospectors exercise real earning manipulation to increase their earnings, they should exhibit a *positive* relationship with abnormal production costs and a *negative* relationship with abnormal discretionary expenses. This is contrary to our previously documented results.
[33] For accrual earnings management, we use the *absolute* value of discretionary accruals. Therefore, we have no clear expectations whether *SMALLNI* and *SMALL*Δ*NI* induce any bias to our results.
[34] For a recent review in the cost stickiness literature, see Ibrahim et al. (2022).

stickiness manifests when sales decline, which usually entails negative economic news about the reporting entity. This causes a positive correlation between cost stickiness and conditional conservatism, thereby triggering a confounding upward bias of cost stickiness on conditional conservatism estimates (Banker et al., 2016).

Moreover, cost stickiness intensity may be different for prospectors relative to defenders. Customary cost types that are found to be sticky are the SGA expenses that include executives' salaries, directors' fees & remuneration, delivery expenses, etc. They also include research and development cost that are expensed. These cost types are particularly significant to prospectors as they constitute a core attribute of their strategy to create competitive advantages but are less important to defenders. Consistently, Ballas et al. (2022) find that prospectors manifest a stickier behavior to these costs compared to defenders. Therefore, cost stickiness may drive the significance of the coefficient of prospectors in Eq. (3).

To assess the validity of our main results, we follow Banker et al. (2016) and incorporate the sticky cost model in the conditional conservatism model. To fix ideas, we include as additional variables the sales change scaled by the lagged market value of equity ($\Delta SALES_{it}/MVE_{it-1}$), an indicator variable that takes the value 1 if sales decreased from the prior to the current fiscal years (DS_{it}), and their interaction ($DS_{it} \times \Delta SALES_{it}/MVE_{it-1}$).

Table 12 presents relevant results. For brevity we tabulate results that relate to main variables, although the control variables are still included in the model. According to the reported results, the coefficient of $DS \times \Delta SALES/MVE$ is significantly positive (coef. = 0.0190, t-stat. = 2.82), consistent with the cost stickiness phenomenon. Moreover, the coefficient of $PROS \times DS \times \Delta SALES/MVE$ is significantly positive, whereas the coefficient of $DEF \times DS \times \Delta SALES/MVE$ is significantly negative. These results suggest that the cost stickiness effect is more pronounced to prospectors compared to defenders. However, the coefficient of $PROS \times DR \times RET$ remains significantly positive, although its magnitude and its statistical significance are lower than their counterpart in the main analysis. The coefficient of $DEF \times DR \times RET$ is still not significant. Overall, our main inferences remain relatively unchanged.

- Insert Table 12 –

5.6. Managerial ability and earnings persistence

We evaluate the sensitivity of our earnings persistence results regarding managerial ability. Specifically, we test whether the higher persistence of earnings reported for prospectors may be attributed to more able managers instead of the strategic positioning itself. Indeed, Demerjian et al. (2013) provide evidence that higher managerial ability is related with higher earnings persistence consistent with more skilled managers to demonstrate a superior ability to evaluate investment opportunities and manage the firm's operations more efficiently. Moreover, empirical results in Bertrand and Schoar (2003) indicate that strategic choices are related to specific managerial characteristics. Therefore, as prospectors have

to tackle with riskier projects and focus on innovation, they may be more willing than defenders to hire and pay more able managers who, in turn, enhance the earnings persistence of the firm. If this argument holds, our previously documented relationship between earnings persistence and strategy may be spurious.

To address this concern, we follow Demerjian et al. (2012) and first estimate a firm-related efficiency score (*EFFICIENCY*) with data envelopment analysis (DEA). Then, we regress *EFFICIENCY* on firm-related efficiency drivers and the residuals are our estimate for managerial ability (*MGRABL*) (see Appendix B7). Finally, we include *MGRABL* as additional control variable in Eq. (4) and re-estimate the model.

Table 13 presents relevant results. Panel A presents descriptive statistics for *EFFCICIENCY* and *MGRABL* for the total sample and for prospectors and defenders, separately. As expected, the data requirements for the *EFFICIENCY* and the *MGRABL* variables have decreased the number of our observations significantly. Moreover, mean *EFFICIENCY* is higher for defenders (0.339) relative to its counterpart for prospectors (0.278) and the difference is statistically significant. This is consistent with theoretical expectations that defenders use their resources more efficient that prospectors. Similarly, mean *MGRABL* is higher for defenders than prospectors. This indicates that the managers of defenders are of higher quality than those of prospectors. This is contrary to our expectation that prospectors would hire more skilled managers as their operations and their investment projects are more challenging.[35]

Nevertheless, results in Panel B indicate that managerial ability has little effect on our previous inferences. Although the coefficient on *MGRABL* loads with a positive sign, it is not statistically significant (coef. = 0.0198, t-stat. = 0.41). Moreover, the signs and the magnitude of the rest coefficients remain qualitatively similar to the results reported in our main analysis. Collectively, we find little evidence that managerial ability has an effect on our earnings persistence model, and our previous inferences remain unchanged.

- Insert Table 13 –

6. Summary and conclusions

This study provides evidence that business strategy affects specific earnings properties that are frequently considered as attributes of earnings quality. Business strategy represents an important determinant of a firm's fundamental decisions. The implementation of different strategic positionings requires a firm to shape different configurations for the operating, investing and financial activities, which have a significant effect on the firm's underlying earnings performance and interacts with the

[35] Note that the validity of *MGRABL* as a proxy of managerial ability depends on both the effectiveness of the DEA model to measure firm efficiency and that of the second-stage model to purge out the firm-related efficiency drivers.

earnings reporting function. Consequently, we expect that business strategy is related with several earnings properties.

Following prior literature (e.g., Ballas et al., 2022; Bentley et al., 2013), we classify firms into three strategic positionings, that is, firms that focus on continuous innovation (prospectors), firms that focus on operating efficiency (defenders) and firms with a hybrid strategy (analyzers). Prospectors and defenders represent the two opposite edges of the strategic continuum, and analyzers occupy the middle points. Our empirical results indicate that different strategic positionings have inherent implications for several earnings properties. Specifically, firms positioned as prospectors (defenders) mechanically exhibit higher (lower) absolute values of estimated discretionary accruals. We also find some evidence that prospectors are more conditionally conservative than analyzers, but we do not find similar evidence for defenders, although robustness tests indicate a material difference in the US setting. Finally, prospectors (defenders) have more (less) sustainable earnings and exhibit lower (higher) earnings smoothness.

Additional analysis indicates that business strategy has mechanical implications for real earnings management proxies as well. Moreover, our main inferences are not sensitive to the financial reporting regime (i.e., IFRS versus US GAAP), with conditional conservatism being an exception. Finally, our results are robust to alternative specifications of discretionary accrual generating models, the existence of opportunistic incentives for positive earnings and positive earnings changes, and cost-stickiness or managerial ability effects.

Our study contributes to the literature by illuminating the effects of business strategy on earnings properties that are customarily used as earnings quality measures. Relevant inferences are likely valuable for practitioners as they are related to several inputs used in the financial analysis and valuation process. Moreover, they are likely advantageous for academic research. They indicate that business strategy should be incorporated in earnings quality measures as an additional explanatory factor.

Appendix A: Variable definitions

Continuous variables:		
Variable	Description	Relevant Source
ABNCFO	The level of abnormal cash flows from operations	See Appendix B2.
ABNDEXP	The level of abnormal discretionary expenses	See Appendix B2.
ABNPROD	The level of abnormal production cost. Production cost is the sum of cost of goods sold and the change in inventories	See Appendix B2.
ABSDACC	The absolute value of discretionary accruals estimated with a Jones model.	See Appendix B1.
ABSMDACC	The absolute value of discretionary accruals estimated with a modified Jones model.	See Appendix B5.
ABSRDACC	The absolute value of discretionary accruals estimated with a Jones model including ROA.	See Appendix B5.
ABSKDACC	The absolute value of performance-matched discretionary accruals.	See Appendix B5.
ACC	The level of accruals.	Worldscope data item # WC01551 Worldscope data item # WC04860
ACPA	The level of accounts payable.	Worldscope data item # WC03040
ACRE	The level of accounts receivable.	Worldscope data item # WC02051
ADJROA	The industry adjusted ROA, calculated as ROA less the median ROA of the particular industry-year.	Worldscope data item # WC08326
AGE	The natural logarithm of 1 plus the number of years that the firm appears in the Thomson Reuters Datastream.	Datastream #History
BSCONC	The ratio of sales revenues of the major product segment to total sales revenues of the firm	Worldscope data item #WC19501 Worldscope data item # WC01001
CAPRD	The capitalized value of R&D expenditures of the previous five years less the corresponding depreciated value. Depreciated value is calculated using an annual depreciation rate of 20%.	Worldscope data item # WC01201
CFO	The level of cash flows from operations.	Worldscope data item # WC04860
CFOSD	The standard deviation of cash flows from operations.	Worldscope data item # WC04860
COGS	The level of cost of goods sold.	Worldscope data item # WC08510
CYCLE	The trading cycle calculated as the sum of the days that inventory is held and accounts receivable are outstanding less the days that accounts payable are outstanding.	Worldscope data item # WC02101 Worldscope data item # WC02051 Worldscope data item # WC03040
DEXP	The level of discretionary expenses. Discretionary expenses are the sum of R&D expenses and SG&A expenses.	Worldscope data item # WC01201 Worldscope data item # WC01101
EFFICIENCY	The efficiency measure of a firm estimated with DEA	See Appendix B6.
ΔINV	The change in inventory.	Worldscope data item # WC02101
$\Delta SALES$	The change in sales.	Worldscope data item # WC01001
EBEX	The level of earnings before extraordinary items divided by the weighted average number of outstanding shares.	Worldscope data item # WC18208
EMP	The number of employees.	Worldscope data item # WC07011
GWL	The goodwill reported on the balance sheet.	Worldscope data item # WC18280
LEV	The long-term debt scaled by total assets	Worldscope data item # WC08221
MB	The market-to-book ratio.	Worldscope data item # WC09704
MSH	The market share calculated as the ratio of firm's sales to total sales of its country-industry-year	Worldscope data item # WC01001
MVE	The market value of equity at the end of the fiscal year.	Worldscope data item # WC08005
NI	The level of net income.	Worldscope data item # WC01551
OINT	The other intangible assets reported on the balance sheet.	Worldscope data item # WC02513
OPCYCLE	The operating cycle calculated as the sum of the days that inventory is held and accounts receivable are outstanding.	Worldscope data item # WC02101 Worldscope data item # WC02051
OPINC	The operating income	Worldscope data item # WC01250
OPLEASE	The discounted present value of the operating lease payments for the next five years at a discount rate of 10%.	Worldscope data item # WC18140
PERS	The estimated value of the slope coefficient $\lambda_{1,i}$ from an autoregressive model of order one (AR1) for annual split-adjusted earnings per share.	See Appendix B3.
PPE	The level of plant, property, and equipment.	Worldscope data item # WC02501
PRICE	The stock price at the end of the fiscal year	Worldscope data item # WC05001
PROD	The level of the production cost. Production cost is the sum of cost of goods sold and the change in inventories	Worldscope data item # WC08510 Worldscope data item # WC18196
RD	The level of R&D expenses.	Worldscope data item # WC01201
RDINT	The R&D expenses scaled by sales revenues.	Worldscope data item # WC01201 Worldscope data item # WC01001

(Continued)

Appendix A: Variable definitions – *Continued*

Continuous variables:		
Variable	Description	Relevant Source
REM	Real earnings management proxy.	See Appendix B2.
RET	The stock return adjusted for the return of a value-weighted market return for the particular country-year.	Datastream #RI
RETEARN	The level of retained earnings.	Worldscope data item # WC03495
ROA	The return on assets.	Worldscope data item # WC08326.
SGA	The level of selling, general and administrative expenses.	Worldscope data item # WC08510
SIZE	The natural logarithm of market value of equity.	Worldscope data item # WC08005
SALES	The level of sales revenues.	Worldscope data item # WC01001
SALESGR	The percentage change in sales revenues from the prior year to the current year.	Worldscope data item # WC01001
SALESSD	The standard deviation of sales revenues	Worldscope data item # WC01001
TA	The level of total assets.	Worldscope data item # WC02999
TL	The level of total liabilities.	Worldscope data item # WC03351
WC	The level of working capital.	Worldscope data item # WC03151
ZSCORE	A modified Altman's Z score, calculated as: *0.3×NI/TA +1.0×SALES/TA + 1.4×RETEARN/TA +1.2×WC/TA + 0.6×(PRICE×WC)/TL*	Worldscope data item # WC01551 Worldscope data item # WC02999 Worldscope data item # WC01001 Worldscope data item # WC03495 Worldscope data item # WC03151. Worldscope data item # WC05001 Worldscope data item # WC03351

Binary variables:	
Variable	Description
BIG4	An indicator variable which equals 1 if the firm *i* at year *t* is audited by a BIG4 auditing firm and 0 otherwise.
DR	An indicator variable which equals 1 if *RET* is negative and 0 otherwise.
DS	An indicator variable which equals 1 if sales revenues decreased in year t and 0 otherwise.
FSALES	An indicator variable which equals 1 if the percentage of foreign sales revenues to total sales revenues (Worldscope data item #08731) is higher than 50% and 0 otherwise.
PROS	An indicator variable which equals 1 if the firm *i* at year t is classified as prospector and 0 otherwise. We rank and classify the firms of our sample as defenders or prospectors using the *STRATEGY* variable which has been calculated using the approach proposed in Bentley et al. (2013). *STRATEGY* ranges from 6 to 30 and is employed to classify firms as: defenders (*STRATEGY* variable = 6–12), analyzers (*STRATEGY* variable = 13–23) and prospectors (*STRATEGY* variable = 24–30). For more details see Appendix B4.
DEF	An indicator variable which equals 1 if the firm *i* at year *t* is classified as prospector and 0 otherwise. We rank and classify the firms of our sample as defenders or prospectors using the *STRATEGY* variable which has been calculated using the approach proposed in Bentley et al. (2013). *STRATEGY* ranges from 6 to 30 and is employed to classify firms as: defenders (*STRATEGY* variable = 6–12), analyzers (*STRATEGY* variable = 13–23) and prospectors (*STRATEGY* variable = 24–30). For more details see Appendix B4.
NEGLNI	An indicator variable which equals 1 in case of a loss in the previous fiscal year and 0 otherwise.
NEGLΔNI	An indicator variable which equals 1 in case of a negative earnings change in the previous fiscal year and 0 otherwise.
POSFCF	An indicator variable which equals 1 in case of non-negative free cash flows and 0 otherwise.
SMALLNI	An indicator variable which equals 1 in case of small positive net income (i.e., net income scaled by total assets is between 0 and 0.01) and 0 otherwise.
SMALLΔNI	An indicator variable which equals 1 in case of small positive net income changes (i.e., net income change scaled by total assets is between 0 and 0.01) and 0 otherwise.

Appendix B: Measurement of earnings quality and strategy proxies

B1. Strategy

A firm's strategic positioning is identified using the financial statement analysis tool proposed by Bentley et al. (2013). Initially, the following six variables (each one representing a different strategic aspect) are calculated:

1. Propensity to search for new products: the ratio of R&D expenditures (*RD*) to sales (*SALES*) computed over a rolling prior five-year average.
2. Efficiency to produce and distribute products and services: the ratio of the number of employees (*EMP*) to sales (*SALES*) computed over a rolling prior five-year average.
3. Historical growth or investment opportunities: one-year percentage change in total sales (*SALES*) computed over a rolling prior five-year average.
4. Focus on exploiting new products and services: the ratio of selling, general and administrative expenses (*SGA*) to sales (*SALES*) computed over a rolling prior five-year average.
5. Commitment to technological efficiency: net property, plant and equipment (*PPE*) scaled by total assets (*TA*) computed over a rolling prior five-year average.
6. Organizational stability: the standard deviation of the total number of employees (*EMP*) computed over a rolling prior five-year average.

Each variable is measured per firm-year and is ranked into quintiles per industry (2-digit SIC) as well as per year. The observations are given a score ranging from 1 (low) to 5 (high) based on the quintile they belong to (except capital intensity which is reverse scored). The individual scores of the six variables are summed per firm-year to compose *STRATEGY*. Therefore, *STRATEGY* ranges from 6 to 30. We follow Bentley et al. (2013) and classify firms as: defenders (*STRATEGY* ranges from 6 to12), analyzers (*STRATEGY* ranges from 13 to 23) and prospectors (*STRATEGY* ranges from 24 to 30).

B2. Discretionary accruals

We employ the residuals from the annual cross-sectional regression of Eq. (B2.1) as proxies of firm *i*'s discretionary accruals. The specification of Eq. (B2.1) relies on the Jones (1991) model.

$$ACC_{it}/TA_{it} = \alpha_0 + \alpha_1(1/TA_{it-1}) + \alpha_2(\Delta SALES_{it}/ TA_{it-1}) + \alpha_3(PPE_{it}/ TA_{it-1}) + \varepsilon_{it} \quad \text{Eq. (B2)}$$

See Appendix A for variable definitions. Eq. (B1) is estimated for each industry-year with at least 6 observations. Industry is based on 2-digit SIC codes. Discretionary accruals (*DACC*) are the residuals of the above equation. We employ their absolute value (*ABSDACC*) as dependent variable in our accrual earnings management models.

B3. Earnings persistence

Following prior research (Ali & Zarowin, 1992; e.g., Francis et al., 2004; Lev, 1983), we define our measure for earnings persistence as the estimated value of the slope coefficient λ_{1i} from a first-order autoregressive model for annual split-adjusted earnings per share:

$$EBEX_{it} = \lambda_0 + \lambda_{1i} EBEX_{it-1} + \varepsilon_{it} \text{ Eq.} \quad \text{(B3)}$$

For each firm year, Eq. (B3) is estimated using maximum likelihood estimation and a rolling four-year window. Values of λ_{1i} close to 1 imply highly persistent earnings, while values of λ_{1i} close to 0 imply highly transitory earnings.

B4. Earnings smoothness

Following prior research (e.g., Leuz et al., 2003; Francis et al., 2004) we define our measure for earnings smoothness (*SMOOTH*) as the estimated the ratio of firm i's standard deviation of operating income (*OPERINC*) divided by beginning total assets (*TA*), to its standard deviation of cash flows from operations (*CFO*) divided by beginning total assets (*TA*), multiplied by minus 1:

$$SMOOTH_{it} = -1 \times [\sigma(OPERINC_{it}/TA_{it-1}) / \sigma(CFO_{it}/TA_{it-1})] \quad \text{(B4)}$$

Standard deviations are calculated over rolling 5-year windows. Larger values of *SMOOTH* indicate higher earnings smoothness.

B5. Real activities manipulation

We follow prior research (e.g., Cohen et al., 2020; Cohen & Zarowin, 2010; Roychowdhury, 2006; Zang, 2012) to estimate our proxies for real earnings management (*REM*). Specifically, we estimate the following equation to yield abnormal operating cash flows:

$$CFO_{it}/TA_{it-1} = \alpha_0 + \alpha_1(1/TA_{it-1}) + \alpha_2(SALES_{it}/TA_{it-1}) + \alpha_3(\Delta SALES_{it}/TA_{it-1}) + \varepsilon_{it} \quad \text{Eq. (B5.1)}$$

See Appendix A for variable definitions. Eq. (B5.1) is estimated for each industry-year with at least 6 observations. Industry is based on 2-digit SIC codes. Abnormal operating cash flows (*ABNCFO*) are the residuals of the above equation.

Further, we estimate Eq. (B5.2) to yield abnormal production cost:

$$PROD_{it}/TA_{it-1} = \alpha_0 + \alpha_1(1/TA_{it-1}) + \alpha_2(SALES_{it}/TA_{it-1}) + \alpha_3(\Delta SALES_{it}/TA_{it-1}) + \alpha_4(\Delta SALES_{it-1}/TA_{it-1}) + \varepsilon_{it} \quad \text{Eq. (B5.2)}$$

See Appendix A for variable definitions. Eq. (B5.2) is estimated for each industry-year with at least 6 observations. Industry is based on 2-digit SIC codes. Abnormal production cost (*ABNPROD*) is the residuals of the above equation.

Finally, we estimate Eq. (B5.3) to yield abnormal discretionary expenses:

$$DEXP_{it}/TA_{it-1} = \alpha_0 + \alpha_1(1/TA_{it-1}) + \alpha_2(SALES_{it-1}/TA_{it-1}) + \varepsilon_{it} \quad \text{Eq. (B5.3)}$$

See Appendix A for variable definitions. Eq. (B5.3) is estimated for each industry-year with at least 6 observations. Industry is based on 2-digit SIC codes. Abnormal operating discretionary expenses (*ABNDEXP*) are the residuals of the above equation.

B6. Alternative discretionary accruals model specifications

We test the sensitivity of our results for discretionary accruals using the following alterative specifications:

1. A modified Jones model. Following Dechow et al. (1995) the first stage is estimated as:
$$ACC_{it} = \alpha_{0jt} + \alpha_{1jt}(1/TA_{it-1}) + \alpha_{2jt}(\Delta SALES_{it} - \Delta AR_{it}) + a_{3jt}PPE_{it} + \varepsilon_{it} \quad \text{(B6.1)}$$
2. A Jones model including ROA. Following Kothari et al. (2005) the first stage is estimated as:
$$ACC_{it} = \alpha_{0jt} + \alpha_{1jt}(1/TA_{it-1}) + \alpha_{2jt}\Delta SALES_{it} + a_{3jt}PPE_{it} + a_{4jt}ROA_{it} + \varepsilon_{it} \quad \text{(B6.2)}$$
3. Performance-matched discretionary accruals. Following Kothari et al. (2005), each firm-year observation is matched with the same two-digit SIC code and year with the closest ROA. Performance-matched discretionary accruals are Jones discretionary accruals minus the matched firm's discretionary accruals.
4. Including the regressors from the first step estimation in the second step estimation. Following Chen at al. (2018), we respecify Eq. (1) as follows:
$$ABSDACC_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + \alpha_3(1/TA_{it-1}) + \alpha_4 \Delta SALES_{it} + a_5 PPE_{it} + a_k CONTROLS_{it-1} + \varepsilon_{it} \quad \text{(B6.3)}$$

See Appendix A for variable definitions. All equations are estimated for each industry-year with at least 6 observations. Industry is based on 2-digit SIC codes.

B7. Managerial ability

We follow Demerjian et al. (2012) to estimate or measure of managerial ability (*MGRABL*). First, we employ data envelopment analysis (DEA) to estimate firm efficiency. DEA is a nonlinear optimization program that calculates the relative efficiency (θ) for each decision-making unit (DMU) reflecting the efficient use of several inputs to achieve an output. Consistent with Demerjian et al. (2012), we consider firms as DMUs and use DEA to solve the following optimization problem by industry:

$$\max_{v}\theta = \frac{SALES}{v_1 COGS + v_2 SGA + v_3 PPE + v_4 OPLEASE + v_5 CAPRD + v_6 GWL + v_7 OINT} \quad \text{(B7.1)}$$

Where, *OPLEASE* is capitalized operating lease payments for the next 5 years, *CAPRD* is the capitalized R&D expenditures of the past 5 years, *GWL* is goodwill reported on the balance sheet, *OINT* is

other intangible assets reported on the balance sheet, and the rest variables are defined as previously.[36] For all asset-related variables we use the beginning-of-year balances. Detailed definitions are provided in Appendix A.

The optimization procedure yields optimal weights, *v*, for each DMU's inputs given the output. The efficiency measure that DEA yields, θ (*EFFICIENCY*), ranges from 0 to 1, with DMUs that have a value of 1 as being the most efficient, thereby forming the efficient frontier. Firms with θ lower that 1 are less efficient and should reduce their inputs or increase their output to achieve efficiency.

As a second step, *EFFICIENCY* is regressed on firm-specific characteristics to purge it from firm-related efficiency drivers. Specifically, we estimate the following Tobit regression model by industry:

$$EFFICIENCY_{it} = \alpha_0 + \alpha_1 ln(TA)_{it} + \alpha_2 MSH_{it} + \alpha_3 POSFCF_{it} + \alpha_4 AGE_{it} + \alpha_5 BSCONC_{it} + \alpha_6 FSALES_{it} + Year\ Fixed\ Effects_t + \varepsilon_{it} \quad \text{(B7.2)}$$

Where *MSH* is the percentage of sales revenues of a firm for its country-industry-year, *POSFCF* is an indicator variable which equals 1 if free cash flows are non-negative, *BSCONC* is the ratio of sales revenues of the major product segment to total sales, *FSALES* is an indicator variable which equals 1 if the percentage of foreign sales revenues to total sales revenues is higher than 50%, and the rest variables are defined as previously. Detailed definitions are provided in Appendix A.

[36] SGA item (WC01101) includes research and development expenses (WC01201) and operating leases expenses (WC18140). Therefore, we subtract R&D and operating lease expense for SGA expenses to avoid double-counting.

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Tables

TABLE 1

Sample Composition by Country and Year

Panel A: Country breakdown

Country	Unique firms	Relative frequency	Firm-years	Relative frequency
Austria	24	0.77%	150	0.87%
Australia	27	0.87%	192	1.11%
Belgium	10	0.32%	49	0.28%
Denmark	30	0.96%	209	1.21%
Estonia	2	0.06%	3	0.02%
Finland	50	1.61%	302	1.75%
France	92	2.96%	651	3.77%
Germany	249	8.00%	1,513	8.76%
Greece	37	1.19%	114	0.66%
Hong Kong	305	9.80%	1,544	8.94%
Hungary	3	0.10%	15	0.09%
Ireland	4	0.13%	17	0.10%
Italy	44	1.41%	218	1.26%
Latvia	2	0.06%	12	0.07%
Lithuania	2	0.06%	2	0.01%
Netherlands	32	1.03%	170	0.98%
Norway	26	0.84%	129	0.75%
Poland	11	0.35%	40	0.23%
Slovenia	2	0.06%	12	0.07%
South Africa	20	0.64%	100	0.58%
Spain	14	0.45%	66	0.38%
Sweden	94	3.02%	565	3.27%
United Kingdom	320	10.28%	1,676	9.71%
United States	1,712	55.01%	9,515	55.11%
Total:	3,112	100.00%	17,264	100.00%

(Continued)

TABLE 1 – *Continued*

Panel B: Year breakdown

Year	Unique firms	Relative Frequency
2010	457	14.69%
2011	499	16.03%
2012	355	11.41%
2013	235	7.55%
2014	244	7.84%
2015	218	7.01%
2016	196	6.30%
2017	242	7.78%
2018	287	9.22%
2019	379	12.18%
Total:	3,112	100.00%

Notes: This table presents our sample composition by country (Panel A) and year (Panel B). The full sample comprises a maximum of 14,312 unique firms and 120,205 firm-year observations from 30 countries over the period 2006 – 2019. The maximum number corresponds to the least restrictive specification, that is, Eq. (3). For simplicity, we refer to Hong Kong as a country.

TABLE 2

Descriptive Statistics

Panel A. Total sample

Variable	Obs.	Mean	Median	Std. Dev.	Min	Max
PROS	17,264	0.075	0.000	0.263	0.000	1.000
DEF	17,264	0.067	0.000	0.250	0.000	1.000
ABSDACC	14,668	0.062	0.047	0.050	0.000	0.166
NI/MV	17,264	0.008	0.027	0.078	-0.215	0.099
RET	17,264	-0.030	0.047	0.343	-0.851	0.404
DR	17,264	0.439	0.000	0.496	0.000	1.000
PERS	16,246	0.161	0.087	0.532	-0.606	1.051
SMOOTH	17,264	-1.284	-1.025	1.095	-13.290	0.000
SIZE	17,264	13.622	13.928	1.854	9.286	15.690
MB	17,264	4.613	3.160	3.791	0.350	11.495
ADJROA	17,233	-0.007	0.018	0.121	-0.381	0.129
RDINT	17,264	0.102	0.041	0.153	0.000	0.638
SALESGR	17,264	0.107	0.083	0.209	-0.283	0.652
AGE	17,264	21.884	22.000	8.346	4.000	32.000
MSH	17,264	0.008	0.002	0.012	0.000	0.032
LEV	17,264	0.254	0.233	0.219	0.000	0.697
ZSCORE	17,106	9.493	3.942	15.060	0.652	69.037
CYCLE	15,022	107.525	96.462	77.403	-18.261	265.338
TA	17,264	13.314	13.267	2.131	6.479	17.618
CFOSD	17,235	0.067	0.041	0.093	0.006	1.850
SALESSD	17,264	0.140	0.100	0.140	0.000	1.527
OPCYCLE	15,066	180.272	157.737	93.753	54.897	411.875
NEGLNI	17,264	0.275	0.000	0.447	0.000	1.000
NEGLΔNI	17,264	0.417	0.000	0.493	0.000	1.000

(Continued)

TABLE 2 – *Continued*

Panel B. Prospectors vs. Defenders

	Prospectors				Defenders				Differences		
Variable	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Dif. in Means	Dif. in Medians	Dif. in Std
ABSDACC	1,117	0.078	0.063	0.058	931	0.059	0.046	0.047	0.018***	0.016***	0.011***
NI/MVE	1,295	-0.055	-0.024	0.099	1,154	0.023	0.042	0.078	-0.077***	-0.066***	0.021***
RET	1,295	-0.138	-0.039	0.424	1,154	-0.023	0.046	0.328	-0.114***	-0.085***	0.096***
DR	1,295	0.540	1.000	0.499	1,154	0.445	0.000	0.497	0.094***	1.000***	0.001***
PERS	1,222	0.205	0.160	0.544	1,085	0.088	0.012	0.499	0.117***	0.148***	0.045***
SMOOTH	1,292	-1.610	-1.210	1.592	1,145	-1.175	-0.952	0.989	-0.435***	-0.258***	0.603***
SIZE	1,294	13.244	13.412	1.931	1,154	13.161	13.222	1.806	0.083	0.190	0.125**
MB	1,295	5.638	4.324	4.122	1,154	3.679	2.399	3.275	1.959***	1.925***	0.847***
ADJROA	1,292	-0.133	-0.089	0.182	1,153	0.021	0.029	0.088	-0.154***	-0.118***	0.094***
RDINT	1,295	0.295	0.201	0.254	1,154	0.019	0.010	0.039	0.275***	0.191***	0.215***
SALESGR	1,295	0.219	0.200	0.313	1,154	0.051	0.038	0.169	0.168***	0.162***	0.144***
AGE	1,295	18.139	18.000	8.437	1,154	23.128	24.000	8.281	-4.989***	-6.000***	0.155***
MSH	1,295	0.006	0.000	0.011	1,154	0.007	0.001	0.011	-0.001***	-0.001***	0.000***
LEV	1,295	0.205	0.118	0.228	1,154	0.306	0.304	0.229	-0.101***	-0.186***	-0.001***
ZSCORE	1,291	15.797	5.533	21.659	1,139	5.371	3.183	8.853	10.427***	2.349***	12.806***
CYCLE	938	103.823	89.232	89.952	1,056	88.591	78.124	64.702	15.232***	11.107***	25.250***
TA	1,295	12.424	12.353	2.188	1,154	13.224	13.142	1.943	-0.800***	-0.789***	0.245***
CFOSD	1,292	0.153	0.087	0.188	1,145	0.049	0.039	0.040	0.104***	0.049***	0.148***
SALESSD	1,295	0.165	0.130	0.147	1,154	0.158	0.110	0.173	0.007	0.019	-0.026***
OPCYCLE	940	208.123	167.667	114.137	1,064	141.008	127.175	72.868	67.114***	40.491***	41.269***
NEGLNI	1,295	0.595	1.000	0.491	1,154	0.209	0.000	0.407	0.386***	1.000***	0.085***
NEGLΔNI	1,295	0.485	0.000	0.500	1,154	0.438	0.000	0.496	0.047**	0.000**	0.004***

Notes: This table presents descriptive statistics for the variables used in the main analysis. Panel A presents descriptive statistics for the pooled sample. Panel B presents descriptive statistics for Prospectors and Defenders, separately. Differences in means, medians, and standard deviations are evaluated with t-tests, Wilcoxon tests, and F-tests, respectively. See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 3

Correlation Matrix

	1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*
1. PROS	1.000									
2. DEF	-0.076***	1.000								
3. ABSDACC	0.090***	-0.014***	1.000							
4. NI/MVE	-0.228***	0.050***	-0.205***	1.000						
5. RET	-0.090***	0.005	-0.067***	0.337***	1.000					
6. DR×RET	-0.113***	0.012***	-0.112***	0.366***	0.933***	1.000				
7. DR×RET×PROS	-0.592***	0.045***	-0.102***	0.218***	0.314***	0.350***	1.000			
8. DR×RET×DEF	0.037***	-0.479***	-0.001	0.059***	0.199***	0.211***	-0.022***	1.000		
9. PERS	0.024***	-0.037***	0.019***	0.015***	0.031***	0.023***	-0.004	0.016**	1.000	
10. SMOOTH	-0.084***	0.027***	-0.039***	0.049***	0.020***	0.024***	0.050***	-0.015**	-0.035***	1.000

Notes: This table presents pairwise Pearson correlations for the key variables used in the main analysis. See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 4

Business Strategy and Accrual Earnings Management

Dependent variable:	*ABSDACC*	
	Coef.	t-stat.
Intercept	0.1258	3.08***
PROS	0.0025	3.05***
DEF	-0.0024	-3.08***
SIZE	-0.0028	-5.88***
MB	0.0015	7.74***
ADJROA	-0.0215	-3.07***
RDINT	-0.0052	-0.75
SALESGR	0.0090	3.52***
AGE	-0.0043	-3.15***
MSH	-0.0855	-1.51
LEV	-0.0081	-2.69***
ZSCORE	0.0002	3.36***
CYCLE	0.0002	0.31
BIG4	-0.0021	-1.43
Country fixed effects?	YES	
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2:	19.37%	
Observations:	11,872	
t-test of the difference *PROS* − *DEF*	Difference	t-stat.
	0.0049	4.33***

Notes: This table presents multivariate results for the effect of strategic orientation on earnings management based on Eq. (1):

$ABSDACC_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + a_k CONTROLS_{it-1} + \varepsilon_{it}$

See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 5

Business Strategy and Conditional Conservatism

Dependent variable:	*NI/MVE*	
	Coef.	t-stat.
Intercept	-0.1652	-8.25***
DR	0.0002	0.02
RET	0.1532	3.51***
DR×RET	0.0547	3.67***
PROS	-0.0401	-4.87***
PROS×RET	-0.0802	-2.47**
PROS×DR	-0.0103	-1.12
PROS×DR×RET	0.0704	3.04***
DEF	0.0249	5.11***
DEF×RET	-0.0247	-1.02
DEF×DR	-0.0069	-0.98
DEF×DR×RET	0.0324	1.15
MB	0.0000	0.06
MB×RET	-0.0094	-5.86***
MB×DR	-0.0015	-3.24***
MB×DR×RET	0.0118	6.03***
SIZE	0.0097	11.91***
SIZE×RET	-0.0054	-1.69*
SIZE×DR	0.0006	0.63
SIZE×DR×RET	-0.0041	-1.09
LEV	-0.0194	-2.67***
LEV×RET	-0.0502	-1.63
LEV×DR	-0.0011	-0.12
LEV×DR×RET	0.0807	2.31**
Country fixed effects?	YES	
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2:	29.82%	
Observations:	17,264	
t-test of the difference	Difference	t-stat.
PROS×DR×RET − DEF×DR×RET	0.0380	1.04

Notes: This table presents multivariate results for the effect of strategic orientation on conditional conservatism based on Eq. (3):

$$NI_{it}/MVE_{it-1} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 RET_{it} + \alpha_3 DR_{it} \times RET_{it} + \alpha_4 PROS_{it} + \alpha_5 PROS_{it} \times RET_{it} + \alpha_6 PROS_{it} \times DR_{it} + \alpha_7 PROS_{it} \times DR_{it} \times RET_{it} + \alpha_8 DEF_{it} + \alpha_9 DEF_{it} \times RET_{it} + \alpha_{10} DEF_{it} \times DR_{it} + \alpha_{11} DEF_{it} \times DR_{it} \times RET_{it} + \alpha_k CONTROLS_{it} + \alpha_l CONTROLS_{it} \times RET_{it} + \alpha_m CONTROLS \times DR_{it} + \alpha_n CONTROLS \times DR_{it} \times RET_{it} + \varepsilon_{it}$$

See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 6

Business Strategy and Earnings Persistence

Dependent variable:	*PERS*	
	Coef.	t-stat.
Intercept	0.4366	3.61***
PROS	0.0601	3.14***
DEF	-0.0608	-2.62***
TA	-0.0001	-0.02
CFOSD	0.2216	2.89***
SALESSD	-0.1465	-3.34***
RDINT	-0.0252	-0.42
SALESGR	0.1141	4.62***
OPCYCLE	0.0000	-0.31
NEGLNI	-0.0540	-4.37***
NEGLDNI	-0.1648	-17.06***
Country fixed effects?	YES	
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2:	6.26%	
Observations:	15,798	
t-test of the difference *PROS* − *DEF*	Difference	t-stat.
	0.1209	4.02***

Notes: This table presents multivariate results for the effect of strategic orientation on earnings persistence based on Eq. (4):
$PERS_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + \alpha_k CONTROLS_{it} + \varepsilon_{it}$
See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 7

Business Strategy and Earnings Smoothness

Dependent variable:	*SMOOTH*	
	Coef.	t-stat.
Intercept	0.3244	1.07
PROS	-0.2306	-3.62***
DEF	0.0525	2.94***
TA	-0.0273	-3.62***
SALESSD	-0.2147	-1.99**
RDINT	-0.1756	-1.39
SALESGR	-0.0423	-0.82
OPCYCLE	-0.0001	-1.31
NEGLNI	-0.0507	-1.71*
NEGLDNI	-0.0439	-2.6***
Country fixed effects?	YES	1.07
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2:	5.92%	
Observations:	16,871	
t-test of the difference *PROS* − *DEF*	Difference	t-stat.
	-0.2832	-4.28***

Notes: This table presents multivariate results for the effect of strategic orientation on earnings persistence based on Eq. (5):
$SMOOTH_{it} = \alpha_0 + \alpha_1 PROS_{it} + \alpha_2 DEF_{it} + \alpha_k CONTROLS_{it} + \varepsilon_{it}$
See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 8

Business Strategy and Real Earnings Management

Dependent variable:	*ABNCFO*		*ABNPROD*		*ABNDEXP*	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	0.1869	0.89	-0.4793	-4.28***	-0.2322	-0.75
PROS	-0.0123	-3.44***	-0.0635	-3.05***	0.0807	4.36***
DEF	0.0258	3.11***	0.0729	3.98***	-0.079	-8.64***
SIZE	0.016	3.28***	0.0095	2.43**	-0.002	2.24**
MB	0.0031	3.69***	-0.0158	-10.36***	0.0189	4.43***
ADJROA	0.7504	8.18***	-0.3743	-6.69***	-0.4792	-2.62***
RDINT	0.2079	1.77*	-0.1057	-1.72*	0.6219	3.14***
SALESGR	0.0168	0.51	0.0444	1.71*	0.2565	2.85***
AGE	-0.0036	-2.27**	0.007	0.73	0.0009	0.04
MSH	-0.794	-1.97**	1.1678	2.84***	-0.7644	-3.89***
LEV	-0.0153	-3.53***	0.075	3.02***	-0.2173	-2.94***
ZSCORE	-0.0006	-2.07**	-0.0012	-3.12***	0.0014	2.11**
CYCLE	0.0082	3.26***	-0.0086	-1.51	-0.0498	-3.61***
BIG4	-0.0105	-0.8	-0.0132	-1.06	0.0118	0.42
Country fixed effects?	YES		YES		YES	
Year fixed effects?	YES		YES		YES	
Industry fixed effects?	YES		YES		YES	
Adj. R^2:	23.14%		22.19%		23.98%	
Observations:	15,130		15,140		14,991	
t-test of the difference	Difference	t-stat.	Difference	t-stat.	Difference	t-stat.
PROS − DEF	-0.0381	-4.22***	-0.1364	-4.92***	0.1597	7.74***

Notes: This table presents multivariate results for the effect of strategic orientation on earnings management based on Eq.

$REM_{it} = \alpha_0+\alpha_1 PROS_{it}+ \alpha_2 DEF_{it} + a_k CONTROLS_{it-1}+\varepsilon_{it}$

See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 9

Stacked Regressions with US GAAP and IFRS firm-year observations

Panel A: Discretionary accruals

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	0.0023	2.46**	0.0024	2.95***	0.01
DEF	-0.0090	-3.75***	-0.0050	-2.78***	1.78
Observations		12,875			

Panel B: Abnormal CFO

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	-0.0230	-2.76***	-0.0360	-3.10***	0.83
DEF	0.0220	2.59***	0.0147	3***	0.52
Observations		15,130			

Panel C: Abnormal production cost

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	-0.0350	-2.85***	-0.0425	-3.21***	0.17
DEF	0.0940	8.55***	0.1053	9.79***	0.54
Observations		15,140			

Panel D: Abnormal discretionary expenses

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	0.0896	4.45***	0.1261	5.95***	1.56
DEF	-0.1177	-7.92***	-0.1411	-7.98***	1.03
Observations		14,991			

Panel E: Conditional conservatism

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS×DR×RET	0.0910	3.02***	0.0581	3.10***	0.86
DEF×DR×RET	-0.0809	-2.46**	0.0604	1.62	8.08***
Observations		17,264			

Panel F: Earnings persistence

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	0.0678	3.02***	0.0819	2.90***	0.15
DEF	-0.0581	-2.84***	-0.0628	-2.39**	0.02
Observations		15,798			

Panel G: Earnings smoothness

	US GAAP		IFRS		
	Coef.	z-stat.	Coef.	z-stat.	χ^2-test of difference
PROS	-0.3984	-4.37***	-0.3086	-4.24***	0.59
DEF	0.0683	2.53**	0.0632	2.11**	0.02
Observations		15,798			

Notes: This table presents results for stacked regressions with US GAAP and IFRS firm-year observations with robust standards errors clustered by firm. χ^2 tests for difference in estimated coefficients.
See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 10

Alterative Specifications for the Discretionary Accrual Models

Dependent variable:	*ABSMDACC*		*ABSRDACC*		*ABSKDACC*		*ABSDACC*	
	Coef.	t-stat.	Coef.	t-stat	Coef.	t-stat.	Coef.	t-stat.
Intercept	0.0777	7.91***	0.1252	3.18***	0.1157	5.67***	0.1149	2.81***
PROS	0.0021	2.94***	0.0027	2.09**	0.0119	3.80***	0.0032	2.33**
DEF	-0.0017	2.96***	-0.0017	2.38**	-0.0017	3.62***	-0.0017	-2.36**
SIZE	-0.0032	-6.94***	-0.0028	-5.92***	-0.0068	-9.31***	77.2871	5.28***
MB	0.0013	6.96***	0.0015	7.61***	0.0008	3.04***	0.0106	3.39***
ADJROA	-0.0350	-5.52***	-0.0239	-3.30***	-0.0505	-4.89***	-0.0002	-3.76***
RDINT	0.0388	5.50***	-0.0052	-0.74	0.0301	2.93***	-0.0022	-4.58***
SALESGR	0.0081	3.26***	0.0101	3.89***	0.0144	4.03***	0.0013	6.62***
AGE	-0.0058	-4.33***	-0.0054	-4.05***	-0.0049	-2.46**	-0.0175	-2.49**
MSH	-0.0812	-3.44***	-0.1036	-1.80*	0.0517	0.69	-0.0052	-0.75
LEV	-0.0077	-2.59***	-0.0086	-2.88***	-0.0165	-3.92***	0.0074	2.95***
ZSCORE	0.0002	3.84***	0.0002	3.08***	0.0000	0.33	-0.0042	-3.12***
CYCLE	-0.0004	-0.55	0.0004	0.59	0.0005	0.51	-0.0966	-1.69*
BIG4	0.0003	0.18	-0.0023	-1.55	-0.0009	-0.41	-0.0080	-2.65***
1/TA							0.0001	2.83***
Δ*SALES/TA*							0.0003	0.47
PPE/TA							-0.0017	-1.18
Country fixed effects?	YES		YES		YES		YES	
Year fixed effects?	YES		YES		YES		YES	
Industry fixed effects?	YES		YES		YES		YES	
Adj. R^2	18.53%		19.52%		25.94%		20.03%	
Observations	12,875		12,856		11,130		12,875	
t-test of the difference	Difference	t-stat.	Difference	t-stat.	Difference	t-stat.	Difference	t-stat.
PROS − DEF	0.0038	4.15***	0.0044	2.99***	0.0136	4.30***	0.0048	3.16***

Notes: This table presents results for alternative specifications for the discretionary accruals models. Specifically, it presents results for discretionary accruals estimated with a modified Jones model (*ABSMDACC*), discretionary accruals estimated with a Jones model including ROA (*ABSRDACC*), and performance-matched discretionary accruals (*ABSKDACC*) and discretionary accruals estimated with a Jones model (*ABSDACC*) including the explanatory variables from the first-stage regression as control variables.

See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 11

Earnings Management Models Including Small Positive Earnings and Small Positive Earnings Changes

Dependent variable:	*ABSDACC*		*ABNCFO*		*ABNPROD*		*ABNDEXP*	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	0.1256	3.06***	-0.0429	-0.47	-0.1194	-1.06	-0.0128	-0.22
PROS	0.0026	3.08***	-0.0019	-2.26**	-0.0361	-3.93***	0.0687	4.92***
DEF	-0.0023	-3.01***	0.0234	3.06***	0.0955	12.17***	-0.0799	-7.23***
SIZE	-0.0027	-5.76***	0.0172	11.18***	0.0015	0.71	-0.0111	-3.49***
MB	0.0015	7.60***	0.0019	3.29***	-0.0109	-12.91***	0.0134	10.69***
ADJROA	-0.0212	-3.03***	0.4349	18.25***	-0.2635	-9.44***	-0.2241	-5.13***
RDINT	-0.0057	-0.83	0.0338	1.35	-0.1958	-6.60***	0.4736	9.63***
SALESGR	0.0090	3.54***	-0.0134	-1.58	0.0394	4.97***	0.0306	2.15**
AGE	-0.0042	-3.11***	-0.0063	-1.50	0.0052	0.91	-0.0028	-0.37
MSH	-0.0826	-1.45	-0.7021	-4.36***	0.7766	2.98***	-1.1005	-3.00***
LEV	-0.0077	-2.55**	-0.0278	-2.97***	0.0656	5.03***	-0.1217	-6.49***
ZSCORE	0.0002	3.32***	-0.0002	-1.34	-0.0008	-3.64***	0.0005	1.62
CYCLE	0.0002	0.31	0.0144	6.45***	-0.0157	-4.78***	-0.0191	-4.34***
BIG4	-0.0021	-1.43	0.0001	0.03	-0.0014	-0.20	0.0115	1.18
SMALL_NI	-0.0043	-2.15**	-0.0172	-2.64***	0.0135	2.03**	0.0001	0.00
SMALL_ΔNI	-0.0037	-3.57***	0.0037	1.01	-0.0005	-0.13	-0.0086	-1.34
Country fixed effects?	YES		YES		YES		YES	
Year fixed effects?	YES		YES		YES		YES	
Industry fixed effects?	YES		YES		YES		YES	
Adj. R^2	19.47%		29.76%		21.22%		27.23%	
Observations	12,875		15,130		15,394		14,991	
t-test of the difference	Difference	t-stat.	Difference	t-stat.	Difference	t-stat.	Difference	t-stat.
PROS − DEF	0.0049	4.30***	-0.0253	-3.29***	-0.1316	-10.89***	0.1486	8.34***

Notes: This table presents results for earnings management models including small positive earnings and small positive earnings changes as additional control variables. See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 12

Cost Stickiness Effects on Conditional Conservatism

Dependent variable:	*NI/MVE*	
	Coef.	t-stat.
Intercept	-0.1532	-7.83***
DR	0.0058	0.44
RET	0.1266	3.01***
DR×RET	0.0406	3.82***
PROS	-0.0365	-4.30***
PROS×RET	-0.0777	-2.47**
PROS×DR	-0.0112	-1.23
PROS×DR×RET	0.0670	2.99***
DEF	0.0299	5.76***
DEF×RET	-0.0191	-0.82
DEF×DR	-0.0072	-1.06
DEF×DR×RET	0.0246	0.92
DS	-0.0028	-1.51
ΔSALES/MVE	0.0784	7.54***
DS×ΔSALES/MVE	0.0190	2.82***
PROS×ΔSALES/MVE	-0.0351	-0.75
PROS×DS	0.2107	6.91***
PROS×DS×ΔSALES/MVE	0.0389	2.33**
DEF×ΔSALES/MVE	-0.0416	-1.45
DEF×DS	0.0047	0.74
DEF×DS×ΔSALES/MVE	-0.0227	-2.02**
Control Variables?	YES	
Country fixed effects?	YES	
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2	34.60%	
Observations	17,264	
t-test of the difference	Difference	t-stat.
PROS×DR×RET − DEF×DR×RET	0.0424	1.21

Notes: This table presents multivariate results for the effect of strategic orientation on conditional conservatism incorporating also cost-stickiness effects:

$$NI_{it}/MVE_{it-1} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 RET_{it} + \alpha_3 DR_{it}\times RET_{it} + \alpha_4 PROS_{it} + \alpha_5 PROS_{it}\times RET_{it} + \alpha_6 PROS_{it}\times DR_{it} + \alpha_7 PROS_{it}\times DR_{it}\times RET_{it} + \alpha_8 DEF_{it} + \alpha_9 DEF_{it}\times RET_{it} + \alpha_{10} DEF_{it}\times DR_{it} + \alpha_{11} DEF_{it}\times DR_{it}\times RET_{it} + a_{12} DS_{it} + \alpha_{13}\Delta SALES_{it}/MVE_{it-1} + a_{14} DS_{it}\times\Delta SALES_{it}/MVE_{it-1} + a_{15} PROS_{it}\times \Delta SALES/MVE_{it} + \alpha_{16} PROS_{it}\times DS_{it} + \alpha_{17} PROS_{it}\times DS_{it}\times\Delta SALESit/MVE_{it-1} + a_{18} DEF_{it}\times\Delta SALES/MVE_{it} + \alpha_{19} DEF_{it}\times DS_{it} + \alpha_{20} DEF_{it}\times DS_{it}\times \Delta SALESit/MVE_{it-1} + \alpha_k CONTROLS_{it} + \alpha_l CONTROLS_{it}\times RET_{it} + \alpha_m CONTROLS_{it}\times DR_{it} + \alpha_n CONTROLS_{it}\times DR_{it} \times RET_{it} + \varepsilon_{it}$$

See Appendix A for variable definitions. ***, **, * represent significance at 1%, 5%, 10%, respectively.

TABLE 13

Managerial Ability Effects on Earnings Persistence

Panel A. Descriptive statistics relating to efficiency and managerial ability

Variable	Obs.	Mean	Median	Std. Dev.
Total Sample				
EFFICIENCY	9,580	0.311	0.187	0.329
MGRABL	9,288	0.000	-0.060	0.281
Prospectors				
EFFICIENCY	620	0.278	0.117	0.322
MGRABL	608	-0.016	-0.103	0.291
Defenders				
EFFICIENCY	647	0.339	0.266	0.321
MGRABL	621	0.010	-0.016	0.284
Differences				
EFFICIENCY		-0.061***	-0.149***	0.001
MGRABL		-0.026***	-0.087***	0.007

Panel B. Business strategy and earnings persistence including managerial ability

Dependent variable:	*EARNPERS*	
	Coef.	t-stat.
Intercept	-0.2974	-1.87*
PROS	0.0659	2.32**
DEF	-0.0550	-2.91***
TA	0.0062	1.41
CFOSD	0.2052	2.55**
SALESSD	-0.1474	-2.83***
RDINT	0.0612	0.82
SALESGR	0.1352	4.09***
OPCYCLE	0.0000	-0.27
NEGLNI	-0.0449	-2.75***
NEGLDNI	-0.1630	-13.18***
MGRABL	0.0198	0.41
Country fixed effects?	YES	
Year fixed effects?	YES	
Industry fixed effects?	YES	
Adj. R^2	6.82%	
Observations	9,288	
t-test of the difference *PROS* − *DEF*	Difference	t-stat.
	0.1210	3.54***

Notes: This table presents descriptive statistics and multivariate results relating to managerial ability. Panel A presents descriptive statistics for the efficiency scores (*EFFICIENCY*) estimated with Data Envelopment Analysis and managerial ability (*MGRABL*) which is the residual of efficiency scores regressed on firm-related efficiency drivers. See Appendix B6. Descriptive statistics are also presented for prospectors and defenders, separately. Panel B presents multivariate results for the effect of managerial ability on earnings persistence.