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Business Strategy, Financial Reporting Violations, and Audit Pricing in an Emerging Market – Evidence from China

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Abstract

We examine whether a firm's business strategy is associated with financial reporting violations and audit fees in an emerging market setting. We follow the typology of Miles and Snow (1978, 2003) that describes a strategy continuum with the innovative 'prospector' strategy and the cost-leadership 'defender' strategy at the two ends. Using data from China, we find that prospectors are associated with more financial reporting violations and higher audit fees than defenders. Specifically, prospectors are positively associated with the occurrence of inadvertent reporting violations. Further analysis reveals that the increase in audit fees for prospectors is not different among firms exposed to different levels of business risk (proxied by ownership structure, auditor size, and leverage). We conjecture that the associations between business strategy and financial reporting violations and audit fees in China are due to firm financial reporting risks arising from accounting complexity.

Keywords: Business Strategy; Financial Reporting Violations; Audit Fees; Accounting Complexity

I. INTRODUCTION

Recent years have witnessed a rise in financial reporting failures, which has tarnished the reputation of business and the auditing profession (Bhaskar, Flower, and Sellers 2019; Platt 2019; Yu 2019). In an attempt to understand the causes of financial reporting failures, extant research explores the effect of corporate governance characteristics on financial reporting violations (e.g., Cassell, Myers, Schmardebeck, and Zhou 2018; Chang, Chen, Cheng, and Chi 2021; Chen, Firth, Gao, and Rui 2006; Deng, Kanagaretnam, and Zhou 2020; Firth, Rui and Wu 2011; Jia, Ding, Li, and Wu 2009; Yang, Chi, and Young 2012). In addition, an emerging stream of literature examines the construct of business strategy as a determinant of a firm's financial reporting quality and audit outcomes (e.g., Bentley, Omer, and Sharp 2013; Bentley-Goode, Newton, and Thompson 2017; Chen, Eshleman, and Soileau 2017). Bentley et al. (2013) operationalizes firm business strategy using the typology developed by Miles and Snow (1978, 2003), and finds that U.S. firms following a prospector business strategy experience more financial reporting irregularities and pay higher audit fees than firms following a defender business strategy. The authors argue that these findings are explained by differences in client business risk that result from firm business strategies. However, they acknowledge that they are not able to explain why prospectors misreport more frequently despite higher audit fees and they call for further research. A subsequent study, Bentley-Goode et al. (2017), finds that a firm's business strategy is a determinant of the firm's effectiveness of internal control over financial reporting. Findings suggest that internal control quality partially mediates the effect of business strategy on financial reporting irregularities, which provides some answers to unresolved questions in Bentley et al. (2013).

In this paper, we examine whether the effect of business strategy on the occurrence of financial reporting irregularities and the level of audit fees documented in prior research exists in an emerging market setting. Furthermore, extending prior research, we conjecture

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that a firm's accounting complexity can explain the association between business strategy and financial reporting outcomes. China is an appropriate setting to examine our research questions because business strategy has far-reaching implications given the increasingly competitive business environment that Chinese organizations operate in and their growing global economic power (Li, Zhang, and Chan 2005; Peng 2003; Pyke, Farley, and Robb 2002; Robb and Xie 2003; Tsamenyi, Sahadev, and Qiao 2011; Wang, Lo, and Yang 2004; Zhao, Sum, Zhang, and Lee 2005; Zhou and Li 2007). However, financial reporting violations by Chinese firms continue to be an issue that is increasingly concerning for regulators and investors globally (Bernstein 2020; Gillis 2020). China is also among the most complex countries for financial compliance and business operations from a finance-management standpoint.[1] Given unique Chinese institutional features, such as low auditor litigation risk and a less-developed financial market (Cull and Xu 2003; Firth, Mo, and Wong 2005; Guan, Su, Wu, and Yang 2016; Ge and Qiu 2007; Lisic, Silveri, Song, and Wang 2015; Lu, Zhu, and Zhang 2012; Sheng and Mendes-Da-Silva 2014; Zou and Xiao 2006), it is an empirical question as to whether the previous findings on the association between business strategy and financial reporting irregularities and audit fees documented in Bentley et al. (2013) in the U.S. will hold in this setting. As such, a study that examines these issues in China is warranted.

We measure business strategy based on the organizational typology of Miles and Snow (1978, 2003). This typology describes three viable business strategies that exist along a continuum: (1) *prospectors*, (2) *analyzers*, and (3) *defenders*.[2] Prospectors, which are innovative and continually searching for new products and markets to enter, are found at one

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[1] According to TMF Group's inaugural Financial Complexity Index 2018, China is the most complex jurisdiction in the world for accounting and tax compliance (https://www.tmf-group.com/fci2018/?utm_source=thirdpartysite&utm_medium=finnp).

[2] The typology in Miles and Snow (1978, 2003) also mentions a fourth business strategy, *reactors,* which is not viable in the long term. Consistent with prior literature (e.g., Bentley et al. 2013; Bentley-Goode et al. 2017; Chen et al. 2017), we do not include this strategy.

end of the continuum. Defenders, which strive for efficiency and focus on maintaining a narrow and stable product focus, are located at the other end. The analyzer business strategy features characteristics of both prospectors and defenders and makes up the middle of the continuum.

Using a sample of Chinese listed companies from 2013 through 2018 with the requisite data, we find that firms that follow a prospector business strategy are associated with a higher propensity and frequency of financial reporting violations, as well as higher audit fees, compared to firms with defender characteristics. In terms of economic significance, the odds of experiencing a financial reporting violation are 0.26 times higher for firms with a *STRATEGY* score at the cut-off for prospectors than for firms with a *STRATEGY* score at the cut-off for defenders, holding all else constant. The audit fee results indicate that, *ceteris paribus*, firms with a *STRATEGY* score at the cut-off for prospectors pay approximately 8.1 percent higher audit fees than firms with a *STRATEGY* score at the cut-off for defenders.

The typology of Miles and Snow (1978, 2003) suggests that prospector firms face greater operating complexity compared to defender firms. The multifaceted operations for prospectors as a result of their broad range of product domains give rise to more complicated economic transactions and involve a wider range of products, processes, and stakeholders. We conjecture that accounting complexity at least partially explains the observed relations because prospectors need to communicate more voluminous and diverse information to prepare their financial reports. This requires broader knowledge and application of relevant accounting standards. In addition, because prospectors emphasize continuous investment and encourage risk-taking, they are more likely than defenders to encounter complex accounting issues involving intangible assets, stock-based compensation, and financing transactions (Datta, Jha, and Kulchania 2020; Raza 2017; PwC 2018). Because accounting complexity

increases financial reporting and audit risk (Hoitash and Hoitash 2018), a prospector business strategy is more likely to be associated with more financial reporting violations and higher audit fees than a defender business strategy.

Consistent with the accounting complexity explanation, we predict that prospector firms are associated with more financial reporting violations than defender firms due to inadvertent mistakes in financial reporting. We classify a financial reporting violation as intentional if it involves fictitious profit, fictitious assets, or misleading statements, and unintentional if it relates to delayed disclosure, a material omission, or mishandling of general accounting. We find that prospector business strategies are positively associated with the likelihood and frequency of unintentional financial reporting violations. In particular, the likelihood and frequency of financial reporting violations due to mishandling of accounting issues are significantly higher for prospectors than for defenders. In contrast, we do not find a significant association between business strategy and the occurrence of overall intentional reporting violations. However, we find some evidence that a prospector business strategy is associated with more frequent intentional violations in the categories of misleading statements and fictitious assets, suggesting that the incentives and opportunities for prospectors to engage in intentional misreporting documented in Bentley et al. (2013) also exist in our emerging market setting. Collectively, our findings suggest that a firm's business strategy is linked to its underlying accounting complexity as well as client risk characteristics documented in Bentley et al. (2013). The evidence indicates that the financial reporting and auditing process for firms following a prospector business strategy is more complex, and as a result, the audit risk and incidents of reporting violations are higher for these firms.

We further investigate whether client business risk suggested by Bentley et al. (2013) provides an alternative explanation to accounting complexity theory for the positive association between business strategy and audit fees in our setting. In cross-sectional

analyses, we find that the positive association between the prospector business strategy and audit fees is similar for firms with different ownership structures (i.e., state-owned vs. non-state-owned), for firms with different levels of leverage, and for firms that engage auditors of different sizes. These findings suggest that the increase in audit fees for prospectors does not depend on a firm's financial risk (captured by firm ownership structure and leverage) or on the auditor's exposure to client business risk (captured by audit firm size). Overall, our results suggest that higher accounting complexity is likely to be the main reason for the positive association between prospector business strategy and financial reporting violations and audit fees.

Our study makes the following contributions. Firstly, we add to the scant literature that examines the effect of business strategy on audit pricing and financial reporting (e.g., Bentley et al. 2013; Bentley-Goode et al. 2017; Chen et al. 2017). Bentley et al. (2013) investigates financial reporting quality, audit fees, and business strategy and finds evidence that business strategy is linked to financial reporting irregularities in the U.S. The authors call for more research to explain the paradoxical finding that prospectors are associated with more financial reporting irregularities despite higher audit fees. Whereas Bentley-Goode et al. (2017) provides evidence related to internal control quality in explaining the findings in Bentley et al. (2013), our study provides new evidence by investigating the accounting complexity explanation for the relation between business strategy and financial misreporting. In addition to the client business risk and internal control risk explanations documented in Bentley et al. (2013) and Bentley-Goode et al. (2017), our evidence suggests that higher accounting complexity for firms following a prospector business strategy explains prospectors' greater propensity to misreport. In addition, our study contributes to the literature that considers business strategy as a determinant of firm-level financial reporting characteristics (e.g., Bentley-Goode et al. 2017). We suggest that business strategy is linked

to a firm's financial reporting risk because of the accounting complexity that comes with pursuing a business strategy type.

Second, we contribute to the literature on audit fees and financial reporting irregularities in China. To the best of our knowledge, our study is the first to consider the Miles and Snow (1978, 2003) business strategy typology in research on audit pricing and financial reporting violations in China. It adds to the line of research examining the causes of financial reporting violations in China (e.g., Chen et al. 2006; Firth et al. 2011; Jia et al. 2009; Yang et al. 2012) by suggesting that a firm's business strategy is an important determinant of financial reporting violations. Because we find that a prospector business strategy is associated with more unintentional reporting violations than a defender business strategy, we suggest that a prospector business strategy gives rise to greater accounting complexity. Additional findings suggest that the tendency for prospector firms to have more reporting violations and higher audit fees is similar for state-owned enterprises (SOEs) and non-SOEs, as well as for firms that engage large or small auditors.

Our findings are informative to regulators, preparers, auditors, and investors. The Chinese regulators have been taking a stricter approach to audit quality, suspending audit firms for audit failures (Gillis 2017; Ministry of Finance 2012). As a result, auditors need to focus on improving audit quality and managing risk (Gillis 2017). An implication from our findings is that regulators should recognize financial reporting complexity for firms using a prospector business strategy in developing policies and guidelines aimed at improving financial reporting quality. Our findings on the role of accounting complexity are important given the growing complexity of business transactions and the increasing demand and scrutiny on financial reporting and audit quality faced by the preparers of financial information globally (ACCA 2009). By identifying that business strategy affects the likelihood of financial reporting violations, the findings in this study should be relevant to

financial reporting and auditing supervisory bodies such as the China Securities Regulatory Commission (CSRC) and to regulators that are interested in promoting higher financial reporting quality globally.

II. BACKGROUND AND LITERATURE REVIEW

Business Strategy

The organizational typology created by Miles and Snow (1978, 2003) is widely used to study business strategy. Prior studies examine the relation between business strategy and the firm's environment (Hambrick 1981), accounting control systems (Simons 1987), occurrence of financial reporting irregularities and audit effort (Bentley et al. 2013), tax planning (Higgins, Omer, and Phillips 2015), strength of internal controls (Bentley-Goode et al. 2017), and audit reporting (Chen et al. 2017). In China, the Miles and Snow (1978, 2003) typology has been used to study market performance (Luo and Park 2001), the *guanxi* network (Park and Luo 2001), and ownership style (Peng, Tan, and Tong 2004).

The organizational typology in Miles and Snow (1978, 2003) is based on how quickly a firm can adapt its product market mix. It describes three viable business strategies. First, *prospectors* are innovative companies that are constantly finding and exploiting new product and market opportunities, characterized by a broad product domain and a budget geared towards research and development (R&D) and marketing. This focus on product and market innovation means that prospectors tend to concentrate on technological flexibility instead of long-term capital investments. However, this reduces efficiency in production and distribution. Because prospectors expand horizontally by identifying new markets and products, their growth may happen sporadically. Finally, control is generally decentralized in order to effectively coordinate diverse operations, which increases complexity and

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coordination costs. Second, *defenders* are firms that focus on the efficiency of their existing operations and on a narrow and stable product market. They spend very little on R&D and marketing and instead, concentrate on developing a limited range of products and services. They also invest heavily in technology to maintain efficiency. Because defenders typically grow by penetrating existing markets, they tend to exhibit low and steady growth rates. Furthermore, their organizational control is usually centralized. Third, *analyzers* are firms in the middle of this strategy continuum. They possess features of both defenders and prospectors.

Miles and Snow (1978, 2003) provides a replicable measure of business strategy because it can be operationalized using publicly available archival data, whereas other typologies require more time-consuming methods such as interviews and surveys (Bentley et al. 2013; Chen et al. 2017). Consistent with Bentley-Goode et al. (2017), Bentley et al. (2013), and Chen et al. (2017), we focus on the two strategies at the ends of the continuum.[3]

Financial Reporting Violations in China

The frequency of financial reporting failures is troubling, especially for investors, because it can adversely affect the company's market value and even its existence (Hogan, Rezaee, Riley, and Velury 2008; Trompeter, Carpenter, Desai, and Jones 2013). In China, the government is heavily involved in detecting and investigating financial fraud (Lisic et al. 2015), where the CSRC is the key regulatory body tasked with monitoring security markets (Chen et al. 2006). The CSRC has been delegated authority under the Securities Law to investigate allegations of financial reporting and securities fraud, such as false disclosures, inflation of profits, and stock market manipulation (Chen, Firth, Gao, and Rui 2005). If the

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[3] The prospector strategy discussed in Miles and Snow (2003, 1978) is similar to product differentiation in Porter (1980), exploration in March (1991), and product leadership in Treacy and Wiersema (1995). The defender strategy in Miles and Snow (2003, 1978) aligns with cost leadership in Porter (1980), exploitation in March (1991), and operation excellence in Treacy and Wiersema (1995) (Bentley et al. 2013; Chen et al. 2017).

CSRC uncovers instances of fraud or financial reporting misstatements, it can issue an enforcement action to sanction the listed company, its management, and its auditor (Chen et al. 2006; Sun, Cahan, and Xu 2016).

Research into financial reporting violations in China identifies several motivations for a firm to participate in deliberate financial misreporting. Firth et al. (2011) shows that Chinese firms are more likely to engage in financial statement falsification if they issue equity, have greater leverage, are located in less developed regions, and are controlled by the central government. Yang et al. (2012) identifies involvement in corporate events such as initial public offerings and rights issues as the main incentive, and finds that firms facing the risk of being delisted are more likely to manage earnings. Sanctions and enforcement actions by the CSRC are common proxies for financial reporting fraud in China. Chen et al. (2006) examines sanctions and enforcement actions to provide evidence on the role of ownership and board characteristics in explaining fraud. Jia et al. (2009) uses these sanctions to show a link between supervisory boards and a firm's punishment for fraud. Although regulatory sanctions are typically studied in prior research, financial reporting irregularities due to inadvertent violations often occur (Firth et al. 2011).[4] Despite this, to date, little documented evidence sheds light on the determinant of misreporting for reasons other than opportunistic incentives in the Chinese setting. Business strategy as a determinant of financial misreporting in China is not yet investigated.

From a finance-management standpoint, China is among the most complex jurisdictions in the world for regulatory compliance and business operations.[5] Unlike most developed countries, China follows a macroeconomic policy with a tradition of reliance on a

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[4] Indeed, a high proportion of regulatory sanctions for financial reporting violations is unrelated to intentional wrongdoing. For example, Firth et al. (2011) notes that approximately 67 percent of financial statement restatements relate to the correction of errors.

[5] See TMF Group's inaugural Financial Complexity Index 2018 (https://www.tmf-group.com/fci2018/?utm_source=thirdpartysite&utm_medium=finnp).

uniform accounting system imported from the former Soviet Union to assist macroeconomic planning (Ding and Su 2008). In response to the needs of its developing capital market and to attract foreign investments, the Chinese standard-setter adopted a new set of Chinese Accounting Standards (CAS) in 2007, which substantially converged with International Financial Reporting Standards (IFRS) (Ding and Su 2008). Although the internationalization of accounting standards is perceived to increase transparency and financial reporting quality (Chamisa 2000; Leuz and Verrecchia 2000; Peng, Tondkar, van der Laan Smith, and Harless 2008), complications can occur because of different institutional arrangements in developing markets (Belkaoui 2004). Depending on the nature of the business, the financial reporting process can involve a number of different government agencies, including the tax bureau, finance bureau, statistics bureau, and the State Administration of Foreign Exchange. Given the complex financial reporting environment and the scant evidence on the determinants of unintentional financial reporting violations in emerging markets such as China, our study on how business strategy affects the occurrence of inadvertent financial misreporting is warranted.

Prior Research on Business Strategy and Financial Reporting

Bentley et al. (2013) examines the effect of business strategy on the occurrence of financial reporting irregularities in the U.S. The authors suggest that the intentions behind financial misreporting explain the difference in the occurrence of financial reporting violations for prospector versus defender firms. They argue that as a result of their innovative nature and continued focus on new opportunities, prospector firms have greater incentives to misreport. These incentives arise because of their sporadic growth patterns, greater need for external financing, higher likelihood of incurring losses, and higher proportion of stock-based compensation. In addition, managers at prospector firms have more opportunities to misreport because of their complex and unstable organizational structure. In contrast,

defender firms are less likely to misreport because they have weaker incentives (steady growth, lower likelihood of incurring losses, and less need for additional financing) and limited opportunities (centralized and controlled organizational structure) to do so. They suggest the intention to engage in misreporting is higher for managers of prospector firms than defender firms because of greater business risk, which explains the different propensity for financial reporting irregularities between the two types of business strategy. However, theoretically and empirically, extant research shows that prospectors perform as well as defenders and analyzers (Avci, Madanoglu, and Okumus 2011; Jennings, Rajaratnam, and Lawrence 2003; Miles and Snow 1978; Smith, Guthrie, and Chen 1989).[6] Because a prospector business strategy implies lower business risk and less incentive to misreport, client business risk may not be the only explanation for the findings in Bentley et al. (2013).[7]

Following Bentley et al. (2013), Bentley-Goode et al. (2017) provides evidence that internal control effectiveness mediates the association between business strategy and financial misreporting and audit fees. Specifically, Bentley-Goode et al. (2017) finds that prospector firms tend to have poorer internal controls over financial reporting compared to defender firms, which partially mediates the association between business strategy and financial misstatements.

Accounting Complexity

Recent studies suggest that accounting complexity is a significant determinant of financial reporting failure and audit risk (Hoitash and Hoitash 2018; Peterson 2012).

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[6] The relation between firm performance and business strategy may be conditional on other factors. For example, Ho, Hsu, and Lee (2021) finds that the relation between external (internal) corporate social responsibility and financial performance is more positive for prospectors (defenders) than for defenders (prospectors).

[7] Bentley et al. (2013) considers financial reporting risk as an alternative explanation but concludes that business strategy primarily represents client business risk. We contend that business strategy determines a firm's underlying financial reporting risk due to accounting complexity, which provides an alternative explanation for the effect of business strategy on misreporting and audit fees. Although Bentley et al. (2013) discusses aspects of organizational complexity such as high management turnover and decentralized control at prospector firms, it does not explicitly discuss or test business complexity.

Accounting complexity is regarded as the preparation complexity of the financial reports (Hoitash and Hoitash 2018; Peterson 2012). Peterson (2012, 75) defines accounting complexity as "the amount of uncertainty related to the mapping of transactions or potential transactions and standards into the financial statements." This definition refers to the difficulty experienced by preparers in applying relevant accounting standards and communicating the economic substances of transactions and events in their financial reports (SEC 2008). Accounting complexity is a function of the volume and diversity of accounting information that firms need to account for, as well as the complexity of the relevant standards that firms must apply in preparing their financial reports (Bonner 1994; Campbell 1988; Hoitash and Hoitash 2018; Peterson 2012). It is positively associated with the firm's operating complexity because diverse operations complicate the financial reporting process (Hoitash and Hoitash 2018).

III. HYPOTHESIS DEVELOPMENT

Business Strategy and Financial Reporting Violations

Prior research finds that in the U.S., a prospector business strategy is associated with higher odds of financial reporting irregularities, presumably because prospectors have more incentives and opportunities to misreport (Bentley et al. 2013). However, it is unclear whether the same findings will hold for listed companies in China. Bentley et al. (2013) suggests that prospectors' greater need for external financing provides them with an incentive to engage in more financial misreporting. However, compared to the U.S., formal financial institutions in China are less developed (Cull and Xu 2003), and firm access to finance is often affected by factors other than firm performance, including government policies, interpersonal network and trust, and firm political connections (Cull and Xu 2003; Ge and Qiu 2007; Lu, Zhu, and Zhang 2012; Pearce and Robinson 2000; Sheng and Mendes-Da-

Silva 2014; Zou and Xiao 2006). Ge and Qiu (2007) finds that due to difficulty in financing

through formal channels, non-SOEs in China rely on informal lending channels such as trade

credits. Ferrando and Mulier (2013) finds that firms in China use trade credit to manage

growth when access to external funding from credit institutions is limited. To the extent that

difficulty finding financing from formal channels exists, prospectors in China may not be

more incentivized than defenders to engage in financial misreporting.

Another reason for why we may not observe the same finding on the association

between business strategy and financial reporting irregularities as documented in Bentley et

al. (2013) is that regulators in China can impose severe penalties, including criminal

prosecution against individual officers of a company, for financial reporting fraud (Chen et

al. 2005).[8] Due to high potential regulatory costs, managers of prospector firms in China and

the U.S. may not have similar incentives to engage in financial misreporting.

In contrast, there are reasons why prospector firms may have more financial reporting

violations than defender firms in China. Departing from the arguments around client business

risk in Bentley et al. (2013), we conjecture that business strategy could determine the extent

of accounting complexity in a firm. Because prospector firms have a more diverse

organizational structure and focus on a broader range of products, they face more

complicated economic transactions and deal with a greater amount and diversity of

information that must be collected and analyzed to prepare financial reports. In doing so, they

must also use more accounting concepts and apply a wider range of standards and

regulations. Moreover, certain areas of accounting are perceived to be particularly complex

and challenging due to the level of uncertainty and judgment involved. For example, the

reporting of transactions involving intangible assets, stock-based compensation, and

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[8] For example, in 1999, the chairman and general manager of Dongfang Boiler were sentenced to death for
falsifying financial reports (Chen et al. 2005).

additional financing is perceived as highly complex (Cheng, Lu, and Kuo 2016; Raza 2017; PwC 2018; Datta et al. 2020). Because they emphasize risk-taking, prospectors are more likely than defenders to encounter these complex areas of financial reporting. Because accounting complexity increases the occurrence of financial reporting violations (Hoitash and Hoitash 2018; Peterson 2012), prospector business strategies could be associated with more financial reporting irregularities compared to defender business strategies.

Given these tensions, we re-examine the association between business strategy and the likelihood and frequency of financial reporting violations in our emerging market setting. Our null hypothesis is:

H1: Ceteris paribus, the likelihood of financial reporting violations for firms following prospector business strategies is not different than that for firms following defender business strategies.

Prior research shows that financial reporting irregularities may be caused by inadvertent errors stemming from incorrect or inappropriate accounting recognition, or may arise from intentional, fraudulent misstatements (Bartov, Marra, and Momenté 2021). The risk of unintentional financial reporting errors (e.g., incorrect application of accounting standards) increases with the extent of accounting complexity (Chychyla, Leone, and Minutti-Meza 2019; Hoitash and Hoitash 2018; Peterson 2012). If accounting complexity explains the association between financial reporting irregularities and business strategy, prospectors should be associated with more inadvertent financial reporting violations. In contrast, if prospectors aggressively manage earnings as predicted by Bentley et al. (2013), prospectors should be associated with more intentional financial reporting violations.

Business Strategy and Audit Fees

A large body of literature examines audit fees and documents factors that influence the work performed by the auditor and, therefore, affect the price of the audit (Hay, Knechel,

and Wong 2006). One determinant of audit pricing is client business risk because the risk of a client failing exposes the auditor to potential losses (Chi, Lisic, Myers, Pevzner, and Seidel 2019), and poorly performing clients are more likely to misreport (Cao, Myers, and Omer 2012), thereby increasing audit risk. As a result, auditors increase fees to cover more costly audit procedures (Bell, Landsman, and Shackelford 2001) or to charge a risk premium (Houston, Peters, and Pratt 1999). These predictions are supported by empirical evidence documenting that firms with low business risk, as indicated by high profitability and/or low leverage, pay lower audit fees than firms with high business risk (Hay et al. 2006). Consistent with this, Bentley et al. (2013) documents a positive association between prospectors and audit fees in the U.S. The authors suggest that auditors exert greater audit effort on prospector firms because they exhibit more risk characteristics, including a risk-oriented focus and a tendency towards low profitability.

Prior research also finds that client complexity is a determinant of audit pricing (Hay 2013; Hay et al. 2006; Simunic 1980). Client complexity is positively associated with accounting complexity because the more complex operations are, the more difficult it is to reliably communicate economic activities in accounting disclosures (Hoitash and Hoitash 2018). More complex organizations also tend to have more complicated and diverse economic transactions, resulting in a greater amount and diversity of accounting information that the firm must process and compile. Prior research shows that auditor judgment performance declines with increased audit task complexity, which arises from information diversity and information load (Bonner 1994; Campbell 1988). Because financial reporting is a joint product of the firm and its auditor, a client's accounting complexity increases audit complexity, leading to a positive association between measures of accounting complexity and audit fees as documented in prior research (Datta et al. 2020; Habib, Jiang, and Zhou 2015; Hay 2013; Hoitash and Hoitash 2018; Lin and Huang 2017). Because firms following a

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prospector business strategy have more complex organizational structures and maintain a broad product domain, which implies a higher level of accounting complexity compared to firms following a defender strategy, it is possible that prospectors pay higher audit fees than defenders.

We propose an alternative theory to explain the association between strategy and audit fees documented in Bentley et al. (2013). However, whether the same finding holds in China is an empirical question given many differences in the audit market between China and the U.S. First, as opposed to in the U.S. where audit firms tend to have deep pockets, many auditors competing in the Chinese audit market are small to medium in size (Gong, Li, Lin, and Wu 2016). Second, in contrast to the highly litigious U.S. market, auditors in China face low litigation risk because shareholder litigation against auditors is possible only if a regulatory sanction for negligence has been issued against the auditors. Sanctions against auditors are also relatively less common because regulators often charge companies instead of the auditors for financial reporting violations (Firth et al. 2005; Firth, Mo, and Wong 2014).[9] As a result, auditors' exposure to losses from a client being risk-oriented or unprofitable may be limited in China. This could affect the role of assessed client business risk in audit planning and pricing decisions. Moreover, undifferentiated, small-to-medium-sized audit firms may not be price setters given high competition in the Chinese audit market. Therefore, we examine how business strategy relates to audit fees in China and we test the following null hypothesis:

H2: Ceteris paribus, the level of audit fees for firms following prospector business strategies is not different than that for firms following defender business strategies.

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[9] In Firth et al. (2014)'s sample of enforcement actions from 1996 through 2007, only 47 of 699 enforcement releases relate to sanctions against audit firms.

IV. RESEARCH DESIGN

Sample Selection

To construct the *STRATEGY* score measure, we obtain financial statement data from the CSMAR database. The sample selection procedure is reported in Table 1. We first keep all A-share observations with positive sales and assets from 2008 through 2018.[10] We then delete 765 firm-year observations from financial industries (CSRC industry codes J66 – J69) due to the regulated nature of the industry (Gong et al. 2016; Huang, Raghunandan, Huang, and Chiou 2015). Because the construction of the *STRATEGY* score requires data from year *t*-5 through year *t*, we remove observations with missing data (Bentley et al. 2013). Our sample with *STRATEGY* scores consists of 12,058 firm-year observations from 2013 through 2018.

Insert Table 1

To identify the financial reporting violations, we use data on sanctions issued by the supervisory bodies (including the CSRC, Shenzhen Stock Exchange, Shanghai Stock Exchange, Ministry of Finance, among others) compiled by the CSMAR database. After merging with the dataset with *STRATEGY* scores and deleting observations with missing values, our financial reporting violation sample consists of 11,642 firm-year observations and our audit fee sample consists of 11,691 firm-year observations from 2013 through 2018.

Measuring Business Strategy

We follow Bentley-Goode et al. (2017), Bentley et al. (2013), and Chen et al. (2017) and proxy for the business strategy of a company using the discrete *STRATEGY* score constructed based on Miles and Snow (1978, 2003). Our measure consists of three ratios designed to incorporate different dimensions of business strategy: (1) the one-year percentage change in total sales to capture historical growth patterns, (2) the ratio of selling, general and

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[10] We collect data from 2008 onwards because listed firms in China report following accounting standards that substantially converge with IFRS since 2008 (ACCA 2013).

administrative expense-to-sales to capture marketing efforts, and (3) net property, plant and equipment-to-total assets to capture capital intensity.[11] Higher *STRATEGY* scores will correspond to firms that follow the prospector strategy, whereas lower *STRATEGY* scores will correspond to firms that follow defender strategies.

Consistent with prior literature, we compute all three variables using a rolling average over the previous four years and the current year (Bentley et al. 2013; Bentley-Goode et al. 2017; Higgins et al. 2015). Next, we rank quintiles within each industry-year using a score of 5 for observations in the highest quintile and 1 for observations in the lowest quintile. The only exception is the capital intensity measure where this process is reversed such that the highest score represents the lowest quintile. We then sum the quintile scores across the three variables to arrive at the *STRATEGY* composite score for each firm-year. The highest possible score a firm can receive is 15 and the lowest is 3. We define prospectors as firms with a *STRATEGY* score between 12 and 15, inclusive, and defenders as those with a *STRATEGY* score between 3 and 6, inclusive. This is similar to the approach used in Bentley et al. (2013).[12]

Financial Reporting Violations

Following Chen, Sun, and Wu (2010), Huang et al. (2015), and Huang, Chang, and Chiou (2016), we estimate the following regression to assess the association between business strategy and financial reporting violation (H1):

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[11] Bentley-Goode et al. (2017), Bentley et al. (2013), and Chen et al. (2017) use six ratios to construct their discrete *STRATEGY* score. They also incorporate the ratio of research and development-to-sales to capture new product development, the ratio of employees-to-sales to capture production efficiency, and the standard deviation of total number of firm employees to capture organizational stability. Due to data availability, we only use the three ratios described above. Although this modified strategy measure may introduce noise in our business strategy measure, the three ratios used to compute our measure capture the key differences between a prospector and a defender business strategy – namely, historical growth or investment opportunities, focus on exploiting new products, and commitment to efficiency (Bentley et al. 2013).

[12] We present our findings using the discrete *STRATEGY* score, consistent with Bentley et al. (2013), Bentley-Goode et al. (2017) and Chen et al. (2017). In untabulated additional tests, we use a dummy variable *PROSPECTOR* (set to 1 if the firm has a *STRATEGY* score between 12 and 15, inclusive, and 0 otherwise) and we find qualitatively similar results.

$$
\begin{aligned}
OCCR\_SANCTION_{i,t} \quad = \quad & \beta_0 + \beta_1\,STRATEGY_{i,t} + \beta_2\,SIZE_{i,t} + \beta_3\,REC_{i,t} + \beta_4 \\
or \qquad\qquad & INV_{i,t} + \beta_5\,TURNOVER_{i,t} + \beta_6\,ROA_{i,t} + \beta_7\,LOSS_{i,t} + \\
FREQ\_SANCTION_{i,t} \quad & \beta_8\,LEV_{i,t} + \beta_9\,QUICK_{i,t} + \beta_{10}\,BIG4_{i,t} + \beta_{11}\,AGE_{i,t} + \\
& \beta_{12}\,GROWTH_{i,t} + \beta_{13}\,BTM_{i,t} + \beta_{14}\,RAISE_{i,t} + \beta_{15} \\
& DAC_{i,t} + \beta_{16}\,AB_{i,t} + \beta_{17}\,AH_{i,t} + \beta_{18}\,EM_{i,t} + \beta_{19}\,ICD_{i,t} \\
& + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_{i,t} \qquad (1)
\end{aligned}
$$

OCCR_SANCTION is an indicator variable equal to 1 if the firm receives a sanction for a financial reporting violation related to the financial year *t*, and 0 otherwise; *FREQ_SANCTION* is the number of sanctions for financial reporting violations related to the financial year *t*. Following Chen et al. (2010), we measure financial reporting violation using the date of occurrence as opposed to the date that the violation was announced. We define a financial reporting violation as one associated with fictitious profit, fictitious assets, misleading statements, delayed disclosure, material omission, or mishandling of general accounting. The dependent variable is either *OCCR_SANCTION* or *FREQ_SANCTION*, which measure the propensity of financial reporting violation or the frequency of financial reporting violations, respectively. We estimate a logistic (Poisson) regression when the dependent variable is *OCCR_SANCTION* (*FREQ_SANCTION*).[13] A positive coefficient on *STRATEGY* suggests a prospector business strategy is associated with a higher probability of financial reporting violations relative to a defender business strategy.

We control for factors that represent incentives or opportunities for financial reporting violations. Prior literature suggests larger firms and firms with high inventory and receivables have greater incentives to engage in financial statement misreporting (Beasley, Carcello, and

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[13] In untabulated additional tests, we find qualitatively similar results if we estimate an ordered logit regression instead of a Poisson regression when the dependent variable is *FREQ_SANCTION*.

Hermanson 1999; Beneish 1997; Summers and Sweeney 1998). Specifically, we use the log of total assets to proxy for firm size (*SIZE*) and the percentage of receivables-to-total assets (*REC*) and the percentage of inventories-to-total assets (*INV*) o measure receivables intensity and inventories intensity, respectively. We expect positive signs on *SIZE, REC,* and *INV.*

Firms facing financial distress have the incentives to commit financial misreporting (Beasley et al. 1999). Consistent with Huang et al. (2016), we control for this incentive using a return on assets variable (*ROA*), a sales turnover variable (*TURNOVER*), and a loss indicator (*LOSS*). Chen et al. (2010) also controls for firms that exhibit signs of earnings management. We include *DAC*, discretionary accruals estimated using the modified Jones (1991) model, as well as an indicator variable, *EM,* to identify these firms. We expect positive coefficients on *DAC*, *EM,* and *LOSS*, and negative coefficients on *ROA* and *TURNOVER*.

Dechow, Sloan, and Sweeney (1996) discusses how the proximity of a firm to its debt covenant constraints and attracting external financing are strong motivations for a firm to manipulate earnings. Our model incorporates control variables for leverage (*LEV*), quick ratio (*QUICK*), and external financing (*RAISE*). We predict a positive coefficient on *RAISE* and *LEV*, and a negative coefficient on *QUICK* (Dechow et al. 1996; Erickson, Hanlon, and Maydew 2006; Huang et al. 2015).

As discussed above, growth could incentivize a firm to misreport. We use the book-to-market ratio (*BTM*) and the percentage change in sales (*GROWTH*) to control for growth opportunities (Lisic et al. 2015). Some evidence suggests that younger firms have more incentives to engage in financial misreporting (Cheng, Wang, and Wei 2015). Therefore, we control for firm age (*AGE*) and predict a negative coefficient.

Eshleman and Guo (2014) presents evidence that audit quality is higher for Big N auditors than for non-Big N auditors and therefore, Big N clients are less likely to issue

restatements. Firth et al. (2005) shows that auditors in China play a significant role in reducing earnings manipulation. Therefore, we include an indicator variable for the presence of a Big 4 firm (*BIG4*) and we expect a negative coefficient.

Chen et al. (2006) finds some support that firms with foreign investors may be less inclined to participate in fraud. To control for the potential influence of different regulations associated with issuing B or H shares to foreign stockholders, we include variables *AB* and *AH* in the model (Huang et al. 2015, 2016). Finally, we include *ICD* to control for the quality of a firm's internal control system because firms with internal control deficiencies may be more likely to make financial misstatements (Bentley et al. 2017; Chang et al. 2021). We include industry and year fixed effects and cluster standard error by firm, following Petersen (2009) and Gow, Ormazabal, and Taylor (2010). All variables are defined in Appendix A.

The Nature of Financial Reporting Violations

To examine whether the association between business strategy and financial reporting violations is due to accounting complexity, we estimate Equation (1) after replacing the dependent variable with variables that indicate inadvertent reporting irregularities (*Unintentional Violation, #Unintentional Violation*) and intentional financial reporting violations (*Intentional Violation, #Intentional Violation*), respectively.[14] We contend that financial misreporting involving fabricated or inflated profits or assets, or the release of information that does not conform to facts, are more likely to indicate an intentional violation, whereas violations from failure to disclose information before a deadline, incomplete disclosure, or mistakes from bookkeeping are more likely to indicate unintentional errors. Specifically, *Intentional Violation* is an indicator variable equal to 1 if a

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[14] Recall that based on the violation information provided for each sanction (specifically, 'violation type'), we define an intentional financial reporting violation as one that involves fictitious profit, fictitious assets or misleading statements, and an unintentional financial reporting violation as one that relates to delayed disclosure, material omission, or mishandling of general accounting.

firm is sanctioned for an intentional financial reporting violation related to financial year *t*,

and 0 otherwise; *#Intentional Violation* is the number of sanctions for intentional financial

reporting violations related to financial year *t*; and *Unintentional Violation* and

#Unintentional Violation are defined similarly so that they capture the propensity and

frequency of unintentional reporting violations.

We also examine how business strategy relates to the occurrence of each violation

type. To do this, we estimate the association between business strategy and an indicator

variable for each misreporting type (*Fictitious profit, Fictitious Assets, Misleading*

Statements, Delayed Disclosure, Material Omission, Mishandling of General Accounting), as

well as a variable that indicates the frequency of each violation type (#*Fictitious profit,*

#Fictitious Assets, #Misleading Statements, #Delayed Disclosure, #Material Omission,

#Mishandling of General Accounting). When analyzing the occurrence of each type of

violation, we use firm-years with no violations as the benchmark group. All variable

definitions are provided in Appendix A.

Audit Fees

To test Hypothesis 2, we estimate the following audit fee model, constructed based on

prior research (Hay et al. 2006; Huang et al. 2015; Simunic 1980; Wang, Wong, and Xia

2008):

$$
\begin{aligned}
LNAF_{i,t} = \; & \gamma_0 + \gamma_1\,STRATEGY_{i,t} + \gamma_2\,SIZE_{i,t} + \gamma_3\,REC_{i,t} + \gamma_4\,INV_{i,t} + \gamma_5\,ROA_{i,t} + \gamma_6 \\
& LEV_{i,t} + \gamma_7\,QUICK_{i,t} + \gamma_8\,LOSS_{i,t} + \gamma_9\,BIG4_{i,t} + \gamma_{10}\,MAO_{i,t} + \gamma_{11}\,AB_{i,t} + \\
& \gamma_{12}\,AH_{i,t} + \gamma_{13}\,SOE_{i,t} + \gamma_{14}\,ICD_{i,t} + Industry\ Fixed\ Effects + Year\ Fixed \\
& Effects + \varepsilon_{i,t}
\end{aligned}
$$

(2)

Our variable of interest is *STRATEGY*. The coefficient γ_1 will be positive if prospector firms

pay higher audit fees than defender firms. Consistent with Simunic (1980), *LNAF* is

measured as the log of audit fees. Hay et al. (2006) conducts a meta-analysis and creates a framework that separates audit fee determinants into *client* attributes*, auditor* attributes*,* and *engagement* attributes. Based on Hay et al. (2006), we include variables related to size, complexity, and risk in the audit fee model to control for *client* attributes. We measure client size using the log of total assets (*SIZE*). Consistent with the audit fee literature set in China (Francis, Reichelt, and Wang 2005; Huang et al. 2015; Wang et al. 2008), we use the percentage of receivables-to-total assets (*REC*) and the percentage of inventories-to-total assets (*INV*) to control for audit complexity. Hay et al. (2006) indicates that *REC* and *INV* are also common proxies used to control for inherent risk associated with auditing these accounts. Additionally, return on assets (*ROA*), a loss indicator (*LOSS*), the ratio of total debt to assets (*LEV*), and the quick ratio (*QUICK*) are included to control for client business risk, which we expect to positively affect auditor business risk.

We expect a positive coefficient on *SIZE* because larger firms pay higher audit fees (e.g., Hay et al. 2006). Hay et al. (2006) suggests the more complex a firm, the higher the expected audit fees. Although studies conducted in China generally find positive coefficients on *REC,* they find negative coefficients on *INV* (Huang et al. 2015, 2016; Wang et al. 2008). Wang et al. (2008) suggests that this is because inventory manipulation is not as common of a method to manage earnings among listed firms in China, and as a result, is associated with less audit risk. Based on this prior research, we predict a positive coefficient on *REC* and a negative coefficient on *INV*. Firms in financial stress are associated with higher audit fees because they pose higher risk to the auditor (Hay et al. 2006). As such, we expect a positive coefficient on *LOSS* and *LEV,* and a negative coefficient on *ROA* and *QUICK* (Gong et al. 2016; Huang et al. 2015, 2016)*.* We include an indicator variable for Big 4 audit firms (*BIG4*), an *auditor* attribute, to control for audit quality (Hay et al. 2006). Huang et al. (2016)

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and Wang, Sewon, and Iqbal (2009) find that Big 4 firms are associated with higher audit fees in China, so we predict a positive coefficient on *BIG4*.

To control for *engagement* attributes, we include an indicator variable for audit opinion type (*MAO*). Higher risk assumed by the auditor or an increase in audit work typically results in higher audit fees (Hay et al. 2006). Consistent with studies conducted in China, we predict a positive coefficient on *MAO* (Francis et al. 2005; Gong et al. 2016; Huang et al. 2016). In addition, we control for the effect of internal control quality on audit fees using *ICD*.

To control for the potential influence of different regulations associated with issuing B or H shares to foreign stockholders, we include the variables *AB* and *AH* in the model (Huang et al. 2015, 2016). We also include *SOE* because prior research finds that state-owned enterprises in China pay lower audit fees (Liu and Subramaniam 2013). All variables are defined in Appendix A.[15]

V. EMPIRICAL RESULTS

Descriptive Statistics

Table 2 reports descriptive statistics for the full sample, and for prospectors and defenders separately. Panel A presents the industry composition for our 12,058 firm-year observations, 2,134 prospector firm-year observations, and 2,233 defender firm-year observations. (Any remaining observations represent firms that follow the analyzer strategy.)

Insert Table 2

Consistent with our expectations and Bentley et al. (2013), we find evidence of all three business strategies in each industry, and relatively similar proportions of prospector and defender firms within each industry. For example, the manufacturing industry, which

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[15] In untabulated additional tests, we find qualitatively similar results if we include audit firm fixed effects in Equations (1) and (2).

represents 59.73% of the full sample, is the largest industry in our sample. Looking at the prospector and defender sub-samples, manufacturing firms remain the largest industry group, making up 65.65% and 64.94% of the totals, respectively.

Panel B displays descriptive statistics for the composite and raw component measures of *STRATEGY*. The mean and median *STRATEGY* score of 9 for firms in the full sample indicates an analyzer business strategy. Prospectors and defenders have significantly different means, at the 5 percent level, for the composite *STRATEGY* score along with the three component measures – *SGA5, REV5,* and *CAP5.* Although the mean and standard deviation for *REV5* may seem unusually large when compared to the other two components, outliers are included in the sample because they represent periods of rapid growth that characterize prospectors. Bentley et al. (2013) finds a similar pattern for the components of *STRATEGY* used.

Panels C and D show descriptive statistics for all variables used in the financial reporting violation model and audit fee model, respectively. Prospectors have a slightly higher average for *OCCR_SANCTION* and *FREQ_SANCTION.* Prospectors are associated with significantly more violations in the categories of misleading statements, delayed disclosure, material omission, and mishandling of general accounting. A slightly higher proportion of prospector firms is also involved in unintentional violations. The frequency of unintentional violations is also higher for prospector firms (significant at the 10% level). In contrast, prospectors and defenders have similar levels of *Intentional Violation* and *#Intentional Violation*. In panel D, the univariate test suggests no difference in audit fees between prospectors and defenders. In terms of the control variables, we find that prospectors are more profitable (*ROA*) and have fewer occurrences of losses (*LOSS*) in our setting. In addition, prospectors have lower leverage (*LEV*). These descriptive statistics suggest that prospectors are not less profitable than other business strategies, consistent with Avci et al.

(2011). Consistent with prior studies, we find that prospectors are more growth-oriented (*BTM, GROWTH*), are younger (*AGE*), have lower sales turnover (*TURNOVER*), and have more financing cash inflows (*RAISE*). Prospectors are also smaller (*SIZE*), have higher levels of inventory and receivables (*REC, INV*), and are more likely to receive a modified audit opinion (*MAO*). The univariate tests also suggest that defenders are more likely to have internal control deficiencies (*ICD*) and be state-owned (*SOE*).

Business Strategy and Financial Misreporting – H1

Table 3 presents the results from multivariate regressions testing for an association between business strategy and the likelihood and frequency of financial reporting violations. Rejecting the null Hypothesis 1, we find that *STRATEGY* is positively associated with *OCCR_SANCTION* (coefficient = 0.038, *p*-value < 0.05) and *FREQ_SANCTION* (coefficient = 0.052, *p*-value < 0.01). These findings suggest that, *ceteris paribus*, firms that follow prospector business strategies are more likely to be sanctioned and are more frequently sanctioned for financial reporting violations than are firms that follow defender business strategies. The coefficient on *OCCR_SANCTION* reveals that the odds of experiencing a financial reporting violation are 0.26 times higher for firms with a *STRATEGY* score at the cut-off for prospectors than for firms with a score at the cut-off for defenders, holding all else constant.[16]

Insert Table 3

In terms of the control variables, we find that smaller (*SIZE*) and risker firms (*LEV*) are more likely to have financial reporting violations. Consistent with our predictions, we also find that less efficient (*TURNOVER*), less profitable (*LOSS, ROA*), and high growth firms (*GROWTH*) are more likely to commit financial reporting violations. The positive

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[16] As defined earlier, the cut-off for prospectors (defenders) is 12 (6). To compute the effect on the odds ratio, we exponentiate the product of the coefficient on *OCCR_SANCTION* and the cut-off difference, minus 1. That is, exp(0.038*6) − 1 = 0.26.

coefficients on *EM* and *DAC* suggest that signs of earnings management are positively associated with the likelihood of financial misreporting. Firms with internal control deficiencies (*ICD*) are also more likely to and more frequently experience financial reporting violations. The pseudo-R-squared values are comparable to those in Bentley et al. (2013) and are reasonably similar to prior literature set in China that examines CSRC sanctions (e.g., Chen et al. 2006; Lisic et al. 2015).

Taken together, despite the observation that prospectors are associated with low-risk indicators such as high profitability (see Table 2), we find that prospectors are associated with a higher likelihood and frequency of financial misreporting. This finding could be explained by the higher accounting complexity faced by prospector firms. Next, we examine this explanation further.

The Nature of Financial Reporting Violations

In developing our hypotheses on the association between business strategy and financial reporting violations, we contend that a firm's business strategy reflects its level of accounting complexity, which suggests that the business strategy construct reflects the firm's financial reporting risk. If accounting complexity explains the positive association between prospector business strategies and financial reporting violations, we expect that prospector firms will experience more frequent inadvertent financial misreporting than defender firms. We report findings on the association between business strategies and different types of financial reporting violations in Table 4.

Insert Table 4

As shown in panel A, columns (2) and (4), *STRATEGY* is positively associated with the likelihood and frequency of unintentional reporting violations (*Unintentional Violation* and *#Unintentional Violation*). When the dependent variable is *Intentional Violation* or *#Intentional Violation*, the coefficient on *STRATEGY* is insignificant, as shown in columns

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(1) and (3).[17] We further investigate differences in the propensity and frequency of the occurrence of each type of reporting violation between firms adopting different business strategies. As reported in panel B, we find that prospector firms are significantly more likely than defender firms to be sanctioned for misleading statements, delayed disclosure, material omission, and mishandling of general accounting, but not for fictitious profit or fictitious assets.[18] In particular, the likelihood of mishandling of general accounting is significantly higher (at the 1 percent level) for firms following a prospector business strategy than a defender business strategy. In panel C, we report the association between business strategy and the frequency of each type of reporting violation. Prospector firms are more frequently sanctioned for violations related to untimely disclosure, incomplete disclosure, and mistakes in bookkeeping. We also find some evidence that prospectors are associated with more sanctions for intentional misreporting in the categories of fictitious assets and misleading statements.

Overall, the findings in Table 4 suggest that higher accounting complexity from adopting a prospector business strategy increases the likelihood and frequency of inadvertent financial misreporting. The accounting complexity theory that we propose is supported by strong evidence that prospectors have a significantly higher propensity of mishandling general accounting. Weaker evidence between the prospector strategy and intentional misreporting suggests that accounting complexity may be a stronger explanation for the link between business strategy and financial reporting violations in China.

Business Strategy and Audit Fees – H2

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[17] We find qualitatively similar results if we benchmark against firm-years without violations (untabulated).
[18] Some observations are dropped automatically when estimating the logistic regression model because certain dummy variables perfectly predict the outcome. We find qualitatively similar results if we estimate the model using ordinary least squares (Czerney, Schmidt, Thompson, and Zhu 2020).

We present multivariate results from estimating the audit fee model in Table 5. As predicted, the coefficient on *STRATEGY* is positive (coefficient = 0.013, *p*-value < 0.01), rejecting the null Hypothesis 2. This suggests that after controlling for client-, auditor- and engagement-characteristics, auditors charge higher audit fees to prospector clients. The coefficients on the control variables are generally consistent with prior literature in China and with our predictions. The coefficient estimate on *STRATEGY* suggests that, *ceteris paribus*, firms at the cutoff for prospectors pay approximately 8.1 percent higher audit fees than do firms at the cutoff for defenders.[19] The mean of *LNAF,* from panel D of Table 2, is 13.73, or roughly CNY 918,044. This suggests that the difference in audit fees paid by otherwise equal firms at the cutoff points for prospectors and defenders is approximately CNY 74,362. The adjusted R-squared value is similar to that reported by Gong et al. (2016) and Huang et al. (2015). The signs of the coefficients on the control variables are consistent with those documented in prior research. Taken together, the results reported in Tables 3 through 5 show that a prospector business strategy is positively associated with the likelihood and frequency of financial reporting violations and with audit fees in China.

Insert Table 5

VI. ADDITIONAL TESTS

We perform several additional untabulated tests to further explore whether audit fees are higher for prospector firms than defender firms because of higher client business risk, as suggested in prior research, or because of higher accounting complexity, as we conjecture.

First, we investigate whether the positive association between the business strategy score measure and audit fees is significantly different for SOEs versus non-SOEs. Prior research suggests that SOEs that follow a prospector business strategy face lower business

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[19] 8.1% is calculated as exp(0.013*6) - 1.

risk (i.e., risk of failing) than do non-SOEs pursuing a similar strategy (Brandt and Li 2003; Chen, Chen, Lobo, and Wang 2010, 2011; Chen, Jiang, Liang, and Wang 2011; Chen, Lee, and Li 2008; Cheng et al. 2015; Faccio, Masulis, and McConnell 2006; Hou and Moore 2010). If client business risk explains the positive association between a prospector business strategy and audit fees, we should observe a less positive association between the business strategy measure and audit fees for SOEs than for non-SOEs. We test this by including an interaction between *STRATEGY* and *SOE* in Equation (2). We do not find a significant coefficient on *STRATEGY_SOE*, suggesting that the increase in audit fees for firms following a prospector business strategy is similar for low business risk clients (SOEs) and higher business risk clients (non-SOEs).

Second, we further explore the client business risk explanation by including an interaction between *STRATEGY* and an indicator variable for large audit firms (*BIG6*) in China.[20] Larger audit firms with deeper pockets and brand name capital are likely to be more concerned with client business risk because the expected costs from a client failure are higher. If prospector firms represent higher client business risk, larger auditors will likely demand higher audit fees for these clients compared to smaller auditors handling the same type of clients due to higher reputational cost. Contrary to this prediction, we do not find a significantly positive coefficient on *STRATEGY_BIG6*. In fact, we find a negative but insignificant coefficient on *STRATEGY_BIG6*. This finding is more consistent with the accounting complexity explanation because larger audit firms are more capable of dealing with complex accounting issues, which could result in fewer audit hours and thus a smaller increase in audit fees for prospector clients compared to smaller auditors handling this type of client.

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[20] Because the Big 4 have limited presence in auditing listed companies in China, we define the large auditor proxy, *BIG6*, as one if a client is audited by the Big 4 or one of the two largest local audit firms, Ruihua and BDO, and zero otherwise (Cahan, Hay, and Li 2021). The results are qualitatively similar if we interact *STRATEGY* with *BIG4* instead of *BIG6* (untabulated).

Finally, we explore whether the association between business strategy and audit fees is different for firms with a relatively higher or lower level of leverage, which proxies for firm financial risk. We interact *STRATEGY* with *HIGHLEV*, an indicator variable equal to one if the firm's leverage ratio is above the sample median, and zero otherwise, and find an insignificant coefficient on *STRATEGY_HIGHLEV*. This suggests that the positive relation between *STRATEGY* and audit fees is similar for clients of high and low financial risk. Overall, these findings provide support for the conjecture that higher accounting complexity instead of higher client business risk is more likely to be the reason for the positive association between audit fees and prospector business strategies in China.

VII. CONCLUSIONS

In this paper, we examine whether the business strategy adopted by a firm is a determinant of the occurrence of financial reporting violations and the level of audit fees in an emerging market setting. Furthermore, to assess our conjecture that the business strategy measure operationalized based on the Miles and Snow (1978, 2003) typology indicates the extent of accounting complexity in a firm, we examine the relation between business strategy and the types of financial misreporting.

Using a sample of firms listed in China from 2013 through 2018, we find that firms with prospector business strategies are associated with more financial reporting violations and higher audit fees, relative to firms that follow defender business strategies. Furthermore, we find that prospector business strategies are associated with more inadvertent financial reporting irregularities, suggesting that a firm's business strategy is linked to its accounting complexity and financial reporting risk. In additional analyses, we find that the positive association between prospector business strategies and audit fees is similar for firms with different ownership structures, levels of leverage, and auditor sizes. These results suggest that client business risk is unlikely to explain the associations between business strategy and

reporting violations/audit fees in our setting. Overall, our findings indicate that the business strategy construct operationalized based on the Miles and Snow (1978, 2003) typology is linked to a firm's financial reporting risk arising from accounting complexity as a result of adopting different business strategies.

Our study contributes to the existing research on business strategy and aspects of financial reporting and auditing (Bentley-Goode et al. 2017), and responds to the call for further evidence in Benley et al. (2013). Our findings suggest that firms following a prospector business strategy and their auditors face more technical financial reporting challenges due to the high accounting complexity arising from the operations of prospector firms. This evidence is potentially important for regulators in designing policies and guidance aimed at mitigating financial reporting failures and improving financial reporting quality for firms exhibiting characteristics of the prospector business strategy. In addition, our findings highlight the importance of considering accounting complexity for preparers and auditors in future research examining business strategy in the context of financial reporting quality and auditing. Collectively, we document the first empirical evidence on the effect of business strategy on financial reporting violations and audit fees in China, and we provide novel findings on a determinant of inadvertent financial reporting violations. Our findings should be useful for various financial reporting regulators and audit practitioners globally, as well as investors and managers with interests in emerging markets.

Our study is subject to some limitations. First, our measure of business strategy is based on three ratios that capture a firm's investment opportunities and historical growth, its focus on exploiting new products and services, and its commitment to technological efficiency (Bentley et al. 2013). Prior studies also measure business strategy using proxies for the extent of the firm's ability to produce and distribute products and services efficiently, its propensity to search for new products, and organizational stability (computed based on the

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number and standard deviation of employees and the R&D expense ratio). Due to data limitations, we use three of these six ratios in computing our strategy measure. Although we find consistent evidence with Bentley et al. (2013) – that prospectors are associated with more financial reporting irregularities and higher audit fees than defenders – we acknowledge that our business strategy measure may contain noise. Second, Pittman and Zhao (2020) finds that firms with tighter covenants are more likely to make financial statement misstatements and auditors charge higher fees to firms with tighter covenants. Although we include variables to control for potential effects of debt financing and debt covenants, we cannot completely rule out this alternative explanation. Future research can use detailed debt covenant information to explore this issue further. Finally, without a well-constructed accounting complexity measure in an emerging market setting, we infer that prospector firms are associated with higher accounting complexity than are defender firms by drawing on the unique features of each type of business strategy as described in the Miles and Snow (1978, 2003) typology. Future research could develop a measure that captures the level of accounting complexity for firms in emerging markets and could empirically examine how accounting complexity mediates the association between business strategies and financial reporting outcomes.

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APPENDIX A: Variable Definitions

Variable	Definition
Business Strategy	
STRATEGY	Discrete measure of business strategy calculated using three measures following Bentley et al. (2013). All three variables are computed over a rolling prior five-year average before being ranked into quintiles within each industry-year – a score of five is given to observations in the highest quintile while those in the lowest quintile are given a score of 1. The only exception is the capital intensity measure where this process is reversed, i.e., the highest (lowest) score is given to lowest (highest) quintile. The quintile scores are then summed across the three variables for each company-year to arrive at the *STRATEGY* composite score. The highest possible score a company could receive is 15 (where they rank in the top quintile across each of the three measures) while the lowest score is 3 (where they rank in the lowest quintile across the three measures).
	The three measures are as follows:
SGA5	A firm's marketing efforts, measured as the ratio of selling, general and administrative expenses to total sales computed over a rolling five-year average from year *t-4* to year *t*;
REV5	Firm growth, measured as the one-year percentage change in total sales computed over a rolling five-year average from year *t-4* to year *t*;
CAP5	Capital intensity of a firm, measured as ratio of net property, plant, and equipment to total assets computed over a rolling five-year average from year *t-4* to year *t*;
Prospectors	Firms that have a *STRATEGY* score between 12 and 15
Defenders	Firms that have a *STRATEGY* score between 3 and 6
Financial Reporting Violation and Audit Fees	
OCCR_SANCTION	Indicator variable equal to 1 if the firm is sanctioned by the CSRC for financial reporting violation for a given financial year, and 0 otherwise
FREQ_SANCTION	Number of sanctions for financial reporting violation received related to a given financial year
LNAF	The natural logarithm of audit fees

Intentional Violation	Indicator variable equal to 1 if the firm is sanctioned for financial reporting violation involving Fictitious Profit, Fictitious Assets or Misleading Statements for a given financial year, and 0 otherwise
#Intentional Violation	Number of sanctions received for financial reporting violation involving Fictitious Profit, Fictitious Assets or Misleading Statements for a given financial year
Unintentional Violation	Indicator variable equal to 1 if the firm is sanctioned for financial reporting violation involving Delayed Disclosure, Material Omission, or Mishandling of General Accounting for a given financial year, and 0 otherwise
#Unintentional Violation	Number of sanctions received for financial reporting violation involving Delayed Disclosure, Material Omission, or Mishandling of General Accounting for a given financial year
Fictitious Profit (#Fictitious Profit)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Fictitious Profit for a given financial year
Fictitious Asset (#Fictitious Asset)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Fictitious Asset for a given financial year
Misleading Statements (#Misleading Statements)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Misleading Statements for a given financial year
Delayed Disclosure (#Delayed Disclosure)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Delayed Disclosure for a given financial year
Material Omission (#Material Omission)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Material Omission for a given financial year
Mishandling of General Accounting (#Mishandling of General Accounting)	Indicator variable equal to 1 if the firm is sanctioned (number of sanctions received) for financial reporting violation involving Mishandling of General Accounting for a given financial year

Control Variables

SIZE	Natural logarithm of total assets
REC	Ratio of receivables to total assets
INV	Ratio of inventories to total assets
TURNOVER	Total revenues divided by total assets

ROA	Ratio of net profit over total assets (return on assets)
LOSS	Indicator variable equal to 1 if net profit is negative, and 0 otherwise
BTM	Total common equity outstanding divided by market capitalization at the end of the fiscal year
LEV	Total liabilities divided by total assets
QUICK	Total current assets less inventories divided by current liabilities
GROWTH	(revenues in year t - revenues in year t-1)/ revenues in year t-1
RAISE	Net cash flows from financing activities divided by total assets
DAC	Discretionary accruals estimated as the residual from the following modified Jones (1991) model for each industry and year: $TAC_t / TA_{t-1} = \beta_1 * 1/ TA_{t-1} + \beta_2 * \Delta REV_t / TA_{t-1} + \beta_3 * PPE_t / TA_{t-1} + \varepsilon$, where *TAC* denotes total accruals, computed as net income before extraordinary items less cash flow from operations, *TA* denotes total assets, *ΔREV* denotes change in revenue, and *PPE* denotes net property, plant, and equipment.
BIG4	Indicator variable equal to 1 if a Big 4 auditor is engaged by the firm, and 0 otherwise
AGE	The number of years a client has been listed
AB	Indicator variable equal to 1 if a firm issues B shares, and 0 otherwise
AH	Indicator variable equal to 1 if a firm issues H shares, and 0 otherwise
EM	Indicator value equal to 1 if a firm falls into any of the following earnings management patterns, and 0 otherwise. As in Chen et al. (2010), a firm is suspected of engaging in earnings management when it meets any of the following criteria: (1) returns on assets between 0.00 and 0.01, (2) reports net loss with returns on assets lower than the median value of the non-positive returns on assets of all the listed companies, and (3) returns on equity marginally above the CSRC's rights offering requirement (0.06 to 0.07);
MAO	Indicator variable that equals 1 if an auditor issues a modified auditing opinion, and 0 otherwise
ICD	Indicator variable that equals 1 if a firm reports an internal control deficiency in a given financial year, and 0 otherwise.
SOE	Indicator variable that equals 1 if a firm is a state-owned enterprise, and 0 otherwise
BIG6	Indicator variable equal to 1 if a firm-year is audited by PwC, Deloitte, KPMG, EY, Ruihua, or BDO (Cahan et al. 2021), and 0 otherwise

HIGHLEV	Indicator variable equal to 1 if a firm-year has above sample median *LEV*, and 0 otherwise

TABLE 1: Sample Selection

Description	Company-years
Panel A: Strategy Composite Score Construction	
CSMAR A share observations with non-missing stock code and year information, 2008 - 2018	28,429
Less Financial Industries (CSRC industry codes J66 – J69)	-765
Less Observations with missing values in *STRATEGY* component variables	-15,606
Total observations with *STRATEGY* composite score (2013 - 2018)	12,058
Panel B: Financial Reporting Violation Sample	
STRATEGY composite score dataset in Panel A	12,058
Less Observations with missing values in control variables	-416
Total observations for financial reporting violation model (2013 – 2018)	11,642
Panel C: Audit Fee Sample	
STRATEGY composite score dataset in Panel A	12,058
Less Observations missing audit fee data or control variables in audit fee model	-367
Total observations for audit fee model (2013 – 2018)	11,691

TABLE 2: Descriptive Statistics

Panel A: Industry Composition

Industry Code	Full sample Freq.	Full sample Percent	Prospectors Freq.	Prospectors Percent	Defenders Freq.	Defenders Percent
A: Agriculture, Forestry, Animal Husbandry, and Fishing	189	1.57	31	1.45	33	1.48
B: Mining	369	3.06	69	3.23	73	3.27
C: Manufacturing	7,202	59.73	1,401	65.65	1,450	64.94
D: Electric, Heat, Gas and Water Production and Supply	467	3.87	91	4.26	91	4.08
E: Construction	311	2.58	35	1.64	37	1.66
F: Wholesale and Retail	763	6.33	76	3.56	84	3.76
G: Transport, Storage and Postal Services	376	3.12	60	2.81	61	2.73
H: Accommodation and Catering	57	0.47	7	0.33	8	0.36
I: Information Transmission, Software, and IT Services	803	6.66	132	6.19	146	6.54
K: Real Estate	706	5.86	99	4.64	95	4.25
L: Leasing and Commercial Services	195	1.62	24	1.12	29	1.3
M: Scientific Research and Technical Services	88	0.73	10	0.47	13	0.58
N: Water Conservancy, Environment and Public Facility	161	1.34	20	0.94	32	1.43
P: Education	28	0.23	8	0.37	8	0.36
Q: Health and Social Work	54	0.45	14	0.66	13	0.58
R: Culture, Sports and Entertainment	171	1.42	31	1.45	31	1.39
S: Diversified Industries	118	0.98	26	1.22	29	1.3
Total	12,058	100	2,134	100	2,233	100

Panel B: Composite and Component *STRATEGY*

	Full sample Mean	S.D.	Q1	Median	Q3	Prospectors Mean	Prospectors Median	Defenders Mean	Defenders Median
STRATEGY	8.99	2.69	7.00	9.00	11.00	**12.95**	**13.00**	**5.04**	**5.00**
SGA5	0.31	6.73	0.09	0.14	0.22	**1.00**	**0.25**	**0.09**	**0.08**
REV5	10.37	492.55	0.04	0.14	0.27	**42.99**	**0.30**	**0.04**	**0.04**
CAP5	0.23	0.16	0.11	0.20	0.33	**0.13**	**0.12**	**0.38**	**0.39**

Panel C: Comparative Descriptive Statistics – Financial Reporting Violation Model

	Full sample					Prospectors		Defenders	
Variable	Mean	S.D.	Q1	Median	Q3	Mean	Median	Mean	Median
OCCR_SANCTION	0.12	0.32	0.00	0.00	0.00	0.13	0.00	0.12	0.00
FREQ_SANCTION	0.17	0.55	0.00	0.00	0.00	**0.20**	**0.00**	**0.16**	**0.00**
Unintentional Violation	0.10	0.30	0.00	0.00	0.00	0.11	0.00	0.10	0.00
Intentional Violation	0.02	0.14	0.00	0.00	0.00	0.02	0.00	0.02	0.00
#Unintentional Violation	0.13	0.47	0.00	0.00	0.00	0.15	0.00	0.13	0.00
#Intentional Violation	0.03	0.23	0.00	0.00	0.00	0.03	0.00	0.03	0.00
Fictitious Profit	0.01	0.10	0.00	0.00	0.00	0.01	0.00	0.01	0.00
Fictitious Assets	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Misleading Statements	0.05	0.21	0.00	0.00	0.00	0.05	0.00	0.05	0.00
Delayed Disclosure	0.09	0.28	0.00	0.00	0.00	0.09	0.00	0.08	0.00
Material Omission	0.06	0.25	0.00	0.00	0.00	0.07	0.00	0.06	0.00
Mishandling of General Accounting	0.02	0.15	0.00	0.00	0.00	**0.03**	**0.00**	**0.02**	**0.00**
#Fictitious Profit	0.02	0.19	0.00	0.00	0.00	0.01	0.00	0.01	0.00
#Fictitious Assets	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#Misleading Statements	0.07	0.35	0.00	0.00	0.00	**0.09**	**0.00**	**0.06**	**0.00**
#Delayed Disclosure	0.12	0.46	0.00	0.00	0.00	**0.14**	**0.00**	**0.11**	**0.00**
#Material Omission	0.08	0.37	0.00	0.00	0.00	**0.10**	**0.00**	**0.08**	**0.00**
#Mishandling of General Accounting	0.03	0.18	0.00	0.00	0.00	**0.04**	**0.00**	**0.02**	**0.00**
STRATEGY	8.97	2.68	7.00	9.00	11.00	**12.93**	**13.00**	**5.04**	**5.00**
SIZE	22.45	1.29	21.59	22.31	23.20	**22.22**	**22.13**	**22.60**	**22.44**
REC	0.11	0.10	0.03	0.08	0.16	**0.13**	**0.11**	**0.08**	**0.05**
INV	0.15	0.15	0.06	0.11	0.19	**0.15**	**0.10**	**0.13**	**0.10**
TURNOVER	0.60	0.45	0.31	0.50	0.75	**0.50**	**0.42**	**0.70**	**0.59**
ROA	0.02	0.08	0.01	0.03	0.05	**0.04**	**0.04**	**0.01**	**0.02**
LOSS	0.13	0.34	0.00	0.00	0.00	**0.09**	**0.00**	**0.19**	**0.00**
LEV	0.84	0.38	0.55	0.83	1.11	**0.75**	**0.70**	**0.90**	**0.89**
QUICK	1.47	1.45	0.64	1.03	1.70	**1.88**	**1.40**	**1.11**	**0.74**
BIG4	0.06	0.24	0.00	0.00	0.00	**0.04**	**0.00**	**0.08**	**0.00**
AGE	13.83	6.00	7.90	14.11	18.93	**12.64**	**10.85**	**14.91**	**15.59**
GROWTH	0.18	0.59	-0.05	0.09	0.25	**0.40**	**0.19**	**0.03**	**0.02**
BTM	0.46	0.33	0.22	0.38	0.60	**0.36**	**0.29**	**0.55**	**0.46**
RAISE	0.01	0.10	-0.04	0.00	0.05	**0.03**	**0.01**	**-0.01**	**-0.02**
DAC	0.00	0.08	-0.04	0.00	0.04	**0.01**	**0.01**	**-0.01**	**-0.01**
EM	0.27	0.44	0.00	0.00	1.00	**0.21**	**0.00**	**0.33**	**0.00**
AB	0.04	0.19	0.00	0.00	0.00	0.03	0.00	0.04	0.00
AH	0.03	0.18	0.00	0.00	0.00	**0.01**	**0.00**	**0.05**	**0.00**
ICD	0.27	0.44	0.00	0.00	1.00	**0.19**	**0.00**	**0.29**	**0.00**

Panel D: Comparative Descriptive Statistics – Audit Fees Model

Variable	Mean	S.D.	Q1	Median	Q3	Mean	Median	Mean	Median
			Full sample			*Prospectors*		*Defenders*	
LNAF	13.73	0.65	13.30	13.59	14.08	13.69	13.59	13.70	13.59
STRATEGY	8.98	2.68	7.00	9.00	11.00	**12.95**	**13.00**	**5.04**	**5.00**
SIZE	22.42	1.27	21.57	22.29	23.18	**22.20**	**22.12**	**22.55**	**22.42**
REC	0.11	0.10	0.03	0.08	0.16	**0.13**	**0.11**	**0.07**	**0.05**
INV	0.15	0.15	0.06	0.11	0.19	**0.15**	**0.10**	**0.13**	**0.10**
ROA	0.02	0.08	0.01	0.03	0.05	**0.04**	**0.04**	**0.01**	**0.02**
LEV	0.84	0.38	0.55	0.83	1.11	**0.75**	**0.71**	**0.90**	**0.89**
QUICK	1.49	1.49	0.64	1.03	1.71	**1.90**	**1.40**	**1.12**	**0.74**
LOSS	0.13	0.34	0.00	0.00	0.00	**0.09**	**0.00**	**0.19**	**0.00**
BIG4	0.06	0.23	0.00	0.00	0.00	**0.03**	**0.00**	**0.06**	**0.00**
MAO	0.05	0.22	0.00	0.00	0.00	**0.07**	**0.00**	**0.05**	**0.00**
AB	0.04	0.19	0.00	0.00	0.00	0.03	0.00	0.04	0.00
AH	0.03	0.16	0.00	0.00	0.00	**0.01**	**0.00**	**0.03**	**0.00**
ICD	0.27	0.44	0.00	0.00	1.00	**0.20**	**0.00**	**0.29**	**0.00**
SOE	0.45	0.50	0.00	0.00	1.00	**0.26**	**0.00**	**0.59**	**1.00**

Panel A reports industry composition based on CSRC industry codes. Panel B reports descriptive statistics for composite and component *STRATEGY* scores. Panel C reports descriptive statistics for all variables used in the financial reporting violations analysis. Panel D reports descriptive statistics for all variables used in the audit fees analysis. All results are shown for the full set of observations and separately for prospectors and defenders (defined as having *STRATEGY* scores between 12 to 15 and 3 to 6, respectively). Bold means are significantly different between prospectors and defenders at the 5 percent level. All variables are defined in Appendix A.

TABLE 3: Business Strategy and Financial Reporting Violations

Variables	(1) OCCR_SANCTION	(2) FREQ_SANCTION
STRATEGY	0.038**	0.052***
	(2.16)	(2.91)
SIZE	-0.203***	-0.194***
	(-4.45)	(-4.44)
REC	-0.505	-0.650
	(-1.11)	(-1.54)
INV	-0.859**	-0.594
	(-2.07)	(-1.34)
TURNOVER	-0.259**	-0.272**
	(-2.31)	(-2.40)
ROA	-1.640***	-0.986**
	(-2.96)	(-2.44)
LOSS	0.532***	0.615***
	(5.12)	(6.17)
LEV	0.705***	0.670***
	(4.50)	(4.63)
QUICK	-0.045	-0.010
	(-1.01)	(-0.23)
BIG4	-0.358	-0.403
	(-1.33)	(-1.61)
AGE	0.007	0.011
	(0.83)	(1.29)
GROWTH	0.162***	0.136***
	(3.44)	(3.12)
BTM	0.083	0.029
	(0.44)	(0.15)
RAISE	0.059	0.034
	(0.16)	(0.10)
DAC	0.948*	0.709
	(1.92)	(1.45)
EM	0.281***	0.259***
	(3.69)	(3.47)
AB	-0.056	-0.132
	(-0.21)	(-0.60)
AH	-0.574	-0.171
	(-1.51)	(-0.31)
ICD	0.503***	0.531***
	(6.37)	(7.11)
Constant	1.639*	1.150
	(1.65)	(1.18)
Industry and Year Fixed Effects	Yes	Yes
Cluster by Firms	Yes	Yes
Observations	11,642	11,642
Pseudo R-squared	0.0717	0.0895

*, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, based on two-tailed tests. Column (1) presents coefficients (z-statistics) from estimating a logistic regression examining the association between *STRATEGY* and the likelihood of financial reporting violation, *OCCR_SANCTION*. Column (2) presents coefficients (z-statistics) from estimating a Poisson regression examining the association between *STRATEGY* and the frequency of financial reporting violation, *FREQ_SANCTION*. All variables are defined in Appendix A.

TABLE 4: Business Strategy and Financial Reporting Violations by Type

Panel A: Sanctions for Intentional vs Unintentional Violation

Variables	(1) *Intentional* *Violation*	(2) *Unintentional* *Violation*	(3) *#Intentional* *Violation*	(4) *#Unintentional* *Violation*
STRATEGY	0.026	0.038**	0.034	0.044**
	(0.59)	(2.21)	(0.67)	(2.44)
SIZE	-0.243**	-0.157***	-0.315**	-0.147***
	(-2.11)	(-3.38)	(-2.48)	(-3.19)
REC	-0.554	-0.715	0.019	-0.623
	(-0.62)	(-1.48)	(0.02)	(-1.30)
INV	-1.292	-0.683*	-0.316	-0.658*
	(-1.39)	(-1.73)	(-0.32)	(-1.65)
TURNOVER	-0.665**	-0.209**	-0.645*	-0.224**
	(-2.20)	(-1.99)	(-1.95)	(-2.15)
ROA	-1.419	-1.148**	-0.275	-0.622
	(-1.54)	(-2.23)	(-0.27)	(-1.39)
LOSS	0.520**	0.473***	0.851***	0.491***
	(2.26)	(4.41)	(2.68)	(4.60)
LEV	0.414	0.631***	0.484	0.642***
	(1.16)	(3.99)	(1.12)	(4.47)
QUICK	-0.100	-0.036	-0.077	-0.003
	(-1.16)	(-0.75)	(-0.87)	(-0.07)
BIG4	0.556	-0.614**	0.458	-0.786**
	(1.30)	(-1.96)	(1.19)	(-2.51)
AGE	0.006	0.016*	0.013	0.022**
	(0.30)	(1.81)	(0.50)	(2.43)
GROWTH	0.234**	0.113**	0.145	0.082*
	(2.40)	(2.28)	(1.21)	(1.76)
BTM	-0.279	-0.167	-0.387	-0.150
	(-0.71)	(-0.79)	(-0.92)	(-0.70)
RAISE	-1.010	0.100	-0.698	0.101
	(-1.18)	(0.27)	(-0.79)	(0.29)
DAC	1.812*	0.038	1.243	0.139
	(1.71)	(0.08)	(1.23)	(0.29)
EM	0.181	0.183**	0.178	0.193**
	(1.11)	(2.26)	(0.98)	(2.36)
AB	-0.074	-0.250	-0.123	-0.232
	(-0.15)	(-0.83)	(-0.25)	(-0.91)
AH	0.216	-0.868**	0.749	-0.265
	(0.32)	(-2.28)	(0.97)	(-0.46)
ICD	0.481***	0.446***	0.367*	0.480***
	(2.97)	(5.45)	(1.71)	(6.53)
Constant	2.009	0.642	2.895	0.085
	(0.89)	(0.64)	(1.06)	(0.08)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Cluster by Firms	Yes	Yes	Yes	Yes
Observations	11,605	11,642	11,642	11,642
Pseudo R-squared	0.0646	0.0686	0.0892	0.0803

*, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, based on two-tailed tests. Columns (1) and (2) present coefficients (*z*-statistics) from estimating logistic regressions examining the association between *STRATEGY* and the likelihood of financial reporting violation involving Fictitious Profit, Fictitious Assets or Misleading Statements (*Intentional Violation*), and involving Delayed Disclosure, Material Omission, or Mishandling of

General Accounting (*Unintentional Violation*), respectively. Columns (3) and (4) report outputs from estimating Poisson regressions examining the association between *STRATEGY* and the frequency of intentional and unintentional financial violations (#*Intentional Violation* and #*Unintentional Violation*, respectively). All variables are defined in Appendix A.

Panel B: Likelihood of Financial Reporting Violation by Violation Type

Variables	(1) Fictitious Profit	(2) Fictitious Assets	(3) Misleading Statements	(4) Delayed Disclosure	(5) Material Omission	(6) Mishandling of General Accounting
STRATEGY	0.074	0.267	0.044*	0.039**	0.044**	0.107***
	(1.19)	(1.29)	(1.69)	(2.04)	(1.96)	(2.84)
SIZE	-0.123	0.046	-0.315***	-0.213***	-0.138**	-0.286***
	(-0.77)	(0.19)	(-4.31)	(-4.05)	(-2.46)	(-3.27)
REC	-0.134	-7.979***	-0.243	-0.795	-0.197	-0.927
	(-0.12)	(-3.02)	(-0.39)	(-1.54)	(-0.34)	(-1.03)
INV	1.147	-1.581	-1.423**	-0.720	-0.924*	-1.138
	(1.07)	(-0.75)	(-2.18)	(-1.60)	(-1.72)	(-1.50)
TURNOVER	-0.286	-1.257	-0.454**	-0.247**	-0.350**	-0.125
	(-0.70)	(-1.29)	(-2.19)	(-2.15)	(-2.15)	(-0.54)
ROA	-2.228	9.442***	-2.405***	-1.245**	-2.813***	-2.227**
	(-1.25)	(3.09)	(-3.16)	(-2.15)	(-4.47)	(-2.07)
LOSS	0.701**	0.554	0.579***	0.507***	0.474***	0.347*
	(2.03)	(0.67)	(3.70)	(4.33)	(3.57)	(1.65)
LEV	0.695	1.665	0.700***	0.741***	0.549***	0.972***
	(1.48)	(1.33)	(2.93)	(4.50)	(2.69)	(3.01)
QUICK	-0.011	-0.367	-0.064	-0.026	-0.034	-0.169
	(-0.07)	(-0.88)	(-1.00)	(-0.54)	(-0.59)	(-1.30)
BIG4	-0.146	1.327	0.043	-0.822***	-0.563	-1.499*
	(-0.18)	(1.11)	(0.12)	(-2.76)	(-1.25)	(-1.69)
AGE	0.013	-0.028	-0.006	0.013	0.004	-0.013
	(0.35)	(-0.60)	(-0.40)	(1.32)	(0.38)	(-0.67)
GROWTH	0.104	-1.347**	0.185***	0.155***	0.114*	0.117
	(0.78)	(-2.36)	(2.68)	(2.99)	(1.89)	(1.36)
BTM	-1.593*	-0.447	0.270	-0.086	0.107	0.784**
	(-1.86)	(-0.37)	(1.02)	(-0.38)	(0.43)	(2.39)
RAISE	0.568	0.068	-0.830	0.045	-0.379	0.471
	(0.57)	(0.04)	(-1.52)	(0.11)	(-0.78)	(0.67)
DAC	1.968	-2.198	2.159***	0.264	1.445**	1.552
	(1.57)	(-0.70)	(2.75)	(0.50)	(2.43)	(1.45)
EM	0.470**	1.557***	0.285**	0.335***	0.100	0.172
	(1.98)	(3.54)	(2.57)	(3.92)	(1.01)	(1.08)
AB	0.172	-	-0.232	-0.171	-0.093	-1.036
	(0.23)	-	(-0.55)	(-0.58)	(-0.24)	(-1.33)
AH	1.225*	-	-0.122	-0.552	-1.066*	0.329

	(1.72)	-	(-0.23)	(-1.21)	(-1.95)	(0.56)
ICD	0.715***	2.045***	0.652***	0.578***	0.446***	0.611***
	(3.00)	(4.79)	(5.31)	(6.49)	(4.39)	(3.51)
Constant	-2.840	-10.788**	3.974***	1.337	0.330	0.434
	(-0.92)	(-2.43)	(2.61)	(1.16)	(0.27)	(0.21)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Cluster by Firms	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,049	6,382	10,803	11,169	10,934	10,506
Pseudo R-squared	0.134	0.239	0.0851	0.0782	0.0651	0.0944

*, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, based on two-tailed tests. This panel presents coefficients (z-statistics) from estimating logistic regressions examining the association between *STRATEGY* and the likelihood of financial reporting violation by violation type. All variables are defined in Appendix A.

Panel C: Frequency of Financial Reporting Violation by Violation Type

Variables	(1) #Fictitious Profit	(2) #Fictitious Assets	(3) #Misleading Statements	(4) #Delayed Disclosure	(5) #Material Omission	(6) #Mishandling of General Accounting
STRATEGY	0.088	0.326*	0.072**	0.052***	0.062**	0.127***
	(1.26)	(1.94)	(2.45)	(2.69)	(2.34)	(3.44)
SIZE	-0.184	-0.044	-0.320***	-0.180***	-0.173***	-0.248***
	(-1.15)	(-0.19)	(-4.57)	(-3.58)	(-3.02)	(-3.06)
REC	-0.151	-8.165***	-0.335	-0.655	-0.733	-1.200
	(-0.13)	(-4.26)	(-0.50)	(-1.29)	(-1.24)	(-1.30)
INV	1.886*	-0.887	-1.300*	-0.713	-1.017*	-1.109
	(1.74)	(-0.52)	(-1.89)	(-1.58)	(-1.77)	(-1.55)
TURNOVER	-0.271	-1.243	-0.436*	-0.268**	-0.293	-0.064
	(-0.61)	(-1.47)	(-1.94)	(-2.10)	(-1.56)	(-0.29)
ROA	-1.109	9.809***	-1.339**	-0.568	-2.193***	-2.182**
	(-0.61)	(2.66)	(-2.30)	(-1.23)	(-4.03)	(-2.33)
LOSS	1.104***	0.767	0.693***	0.580***	0.552***	0.308
	(3.02)	(0.72)	(4.24)	(5.11)	(4.19)	(1.53)
LEV	0.483	2.040*	0.846***	0.703***	0.673***	0.951***
	(0.87)	(1.69)	(3.55)	(4.19)	(3.49)	(3.15)
QUICK	-0.023	-0.276	-0.003	-0.006	0.025	-0.183
	(-0.16)	(-0.86)	(-0.05)	(-0.12)	(0.48)	(-1.46)
BIG4	0.054	1.121	0.110	-0.821**	-0.611	-1.527*
	(0.08)	(1.02)	(0.32)	(-2.57)	(-1.33)	(-1.78)
AGE	-0.001	-0.061	-0.000	0.016*	0.013	-0.011
	(-0.03)	(-0.95)	(-0.02)	(1.74)	(1.05)	(-0.51)
GROWTH	0.035	-1.675**	0.152**	0.111**	0.082	0.119
	(0.28)	(-2.02)	(2.10)	(2.19)	(1.36)	(1.39)
BTM	-1.757**	-0.027	0.191	-0.169	-0.016	0.708**
	(-2.29)	(-0.02)	(0.70)	(-0.74)	(-0.06)	(2.28)
RAISE	0.922	-1.365	-0.983*	0.072	-0.253	0.506
	(0.89)	(-0.57)	(-1.89)	(0.20)	(-0.55)	(0.72)
DAC	1.179	-2.518	1.555**	0.110	1.642**	1.588*
	(0.93)	(-0.75)	(2.27)	(0.20)	(2.49)	(1.65)
EM	0.349	1.257***	0.278**	0.345***	0.111	0.231
	(1.33)	(2.60)	(2.46)	(4.05)	(1.09)	(1.45)
AB	0.477	-16.759***	-0.417	-0.064	-0.273	-1.087
	(0.85)	(-20.08)	(-1.05)	(-0.25)	(-0.78)	(-1.41)
AH	1.435**	-15.548***	0.077	-0.360	-0.438	0.194

	(2.50)	(-19.41)	(0.12)	(-0.79)	(-0.60)	(0.36)
ICD	0.822***	2.346***	0.693***	0.651***	0.568***	0.599***
	(3.07)	(4.95)	(5.43)	(7.73)	(5.95)	(3.50)
Constant	-1.820	-25.789***	3.280**	0.405	0.469	-0.640
	(-0.55)	(-5.34)	(2.18)	(0.36)	(0.36)	(-0.32)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Cluster by Firms	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,393	10,306	10,803	11,169	10,934	10,552
Pseudo R-squared	0.210	0.338	0.104	0.0984	0.0890	0.102

*, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, based on two-tailed tests. This panel presents coefficients (z-statistics) from estimating Poisson regressions examining the association between *STRATEGY* and the frequency of financial reporting violation by violation type. All variables are defined in Appendix A.

TABLE 5: Business Strategy and Audit Fees

Variables	(1) LNAF
STRATEGY	0.013***
	(4.46)
SIZE	0.348***
	(42.27)
REC	0.086
	(1.14)
INV	-0.112*
	(-1.69)
ROA	-0.360***
	(-4.01)
LOSS	0.020
	(1.19)
LEV	0.013
	(0.47)
QUICK	-0.019***
	(-3.27)
BIG4	0.468***
	(10.55)
MAO	0.132***
	(4.99)
AB	0.150***
	(3.71)
AH	0.445***
	(6.77)
ICD	-0.014
	(-0.99)
SOE	-0.173***
	(-9.41)
Constant	5.851***
	(32.39)
Industry and Year Fixed Effects	Yes
Cluster by Firms	Yes
Observations	11,691
Adj. R-squared	0.600

*, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, based on two-tailed tests. This table presents coefficients (*t*-statistics) from ordinary least squares regressions examining the association between *STRATEGY* and audit fees. The dependent variable is the natural logarithm of audit fees. All variables are defined in Appendix A.