University of Southampton

Faculty of Social Science

Southampton Business School

Three Essays on Related-Party Transactions

by

Yufeng Xie

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Abstract

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This thesis explores transactions between related-parties by reviewing the vast literature in this area. It also examines individual auditors' narcissism, one of the key psychological attributes in monitoring these activities, and how the accumulated experiences and workload of an engagement audit team can affect clients decision to engage in opportunistic related-party transactions. Specifically, this thesis comprises three distinctive but related studies.

The first study employs a systematic approach of literature review and focuses on 171 articles published in the fields of accounting, economic, finance, and ethics in the period from 1985 to 2020. This study synthesises and analyses previous literature (i.e., both theoretical and empirical findings) on related-party transactions (RPTs) and develops an agenda for future research in the field. The objectives are to help academics and practitioners identify the underlying intentions of insiders engaging in RPTs, recognise corporate governance factors and institutional mechanisms that predict or determine the occurrence of RPTs, understand the impact of RPTs on accounting performance, stock market performance, and other corporate outcomes. Ultimately, we aim to provide agenda for future research in this field.

The second study examines the effect of auditor narcissism on firm's incentive to engage in abnormal related-party sales. Using hand-collected data for Chinese listed firms from 2012 to 2020, this study finds that a narcissistic review auditor facilitates more abnormal related-party sales while a narcissistic engagement auditor reduces abnormal related-party sales used during benchmark beating. In addition, findings show that this impact of narcissistic auditor on abnormal related-party sales is more pronounced in private-controlled firms. This study also examines the impact of auditor narcissism on other types of RPTs that are normally subject to opportunism including related-party lending, related-party guarantees, and total amount of abnormal RPTs. Results show that our prior inference holds. Finally, the impact of engagement auditor narcissism on abnormal related-party sales during benchmark beating sustains when we address the potential endogeneity issues.

The third study investigates on the influence of audit team busyness on client's engagement in opportunistic activities. In particular, this study identifies a specific context, Chinese firms in business groups, in which the agency problem becomes more severe. Findings show that client firms audited by busy audit teams engage in less tunneling activities, while this effect diminishes if the firm is in a big business group. This indicates that while busy audit teams play an effective role in restraining client firms from tunneling through intercorporate loans, this monitoring function disappears when facing more challenging clients including those in a big business group. To identify different circumstances where busy audit teams influence the occurrence of opportunistic RPTs contingently, this study also considers team attention, team knowledge, and team independence as moderators of this relationship.

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Research Thesis: Declaration of Authorship

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Title of thesis: Three Essays on Related-Party Transactions

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: Date:

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Chapter 1 Thesis Introduction

1.1 Introduction

This thesis explores transactions between related-parties by reviewing the vast literature in this area. It also examines individual auditors' narcissism, one of the key psychological attributes in monitoring these activities and how the accumulated experiences and workload of an engagement audit team can affect clients decision to engage in opportunistic related-party transactions.

Related-party transactions (RPTs) refer to transactions occurring between a company and its related-entities. According to Statement of Financial Accounting Standards No. 5, related-parties encompass subsidiaries, associates, principal owners, shareholders, directors, officers or their families, and trusts for the benefit of employees. The frequency and significant size of transactions between related-parties have put the RPTs phenomenon under the spotlight. For example, the median level of RPTs in Chinese firms from 1998 to 2008 is almost ten percent of total assets (Fisman & Wang, 2010). More recent data show that the average RPTs acccounting for 28.20 percent of total assets during the period from 2014 to 2016 (Hope et al., 2023).[1] In France, 70.83 percent of companies on the Paris Stock Exchange during 2002 to 2005 have disclosed at least one RPT, and 29.17 percent have declared ten or more transactions with related-parties (Nekhili & Cherif, 2011). In US, Standard & Poor's (S&P) 1500 firms reported $1,112,000 of RPTs on average for each firm-year during 2007 to 2013 (Hope et al., 2019).

A series of high-profile accounting scandals involving Enron, Parmalat, and Kangsai Group have drawn significant attention from policymakers and academics on the associated risks with RPTs. In 2000, the Chinese Securities Regulatory Commission (CSRC) announced three regulations aiming at restraining opportunistic activities to protect minority shareholders. These enforcements reinforced the regulation of loan guarantees and asset transfers to related-parties and ensure the voting rights of minority shareholders at firms' annual shareholder meeting. In 2006, the Securities and Exchange Commission (SEC) required public firms to disclose their governance policies on RPTs. This reduced the information asymmetry between investors and firms and helped outsiders to recognise and assess the potential risks arising from RPTs (Hope & Lu, 2020).

These anecdotes bring to the fore pervasive questions that have intrigued theorists and empiricists regarding the impact of RPTs and how internal governance mechanisms and external institutional environments can regulate

[1] In Appendix B.2 Table B2.2, we present data showing that the percentages of various type of RPTs as a proportion of total assets in Chinese firms ranged from 0.80 percent to 16.20 percent during the period from 2012 to 2020.

opportunistic RPTs. However, there is a scarcity of literature review articles that aim to summarise existing research findings and offer directions to encourage further research in the field of RPTs. Thus, in the first study, we present a comprehensive literature review of existing research on transactions involving related-parties. We synthesise both theoretical and empirical findings and provide insights into potential avenues for future research.

Moreover, while regulators have emphasised the importance of auditors in identifying, assessing, and disclosing such transactions, there is still uncertainty regarding how we can inform and guide audit firms and regulators to effectively prevent insiders from exploiting RPTs and improve the transparency of disclosures related to RPTs.

In the fieldwork, auditors request information from managers and obtain understanding and clarification of businesses and specific evidence for documentation and evaluation (Bennett & Hatfield, 2013). The period of this process can last for weeks and sometimes months depending on the size and complexity of the client firms. This means that individual auditors with diverse personality traits can act differently within this process of interacting with clients during evidence collection and material evaluations. Thus, we emphasise the need to expand existing research beyond basic demographic information about individual auditors (e.g., age, gender, education, and tenure) to intrinsic factors (e.g., narcissism) that can significantly influence their decision-making processes (C. Y. Chen et al., 2008; Nekhili et al., 2021). Therefore, in the second study, we uncover the relationship between auditor narcissism and clients opportunistic RPTs.

As an information-processing work, an audit is conducted by an engagement team usually consists of a junior auditor and a senior auditor. Typically, the senior auditor is responsible for forming the judgement based on audit evidence prepared by the junior auditor (Bamber, 1983). This means that although they are individuals with different position and role, the operating mechanism of auditing highlights the necessity to draw on audit team as a collective unit when evaluating their behaviours and work performance. As articulated by Rich et al. (1997), auditors who work as group-assisted individuals gain accuracy and self-assurance by engaging in collaborative information sharing and collective decision-making as a team. Accordingly, in the third study, we further explore the field of auditing by underscoring how busy audit teams are, in monitoring and regulating clients' opportunistic behaviours.

1.2 Thesis Background and Motivations

1.2.1 Study One: Related-Party Transactions: A Systematic Review of Corporate Governance, Institutional Environment and Organisational Outcomes Literature

A broad body of literature has emerged to document that RPTs have been used for manipulative and opportunistic purposes (Fang et al., 2018; Kohlbeck & Mayhew, 2010). The exploitation of RPTs is often correlated with an increased risk of financial misstatements and is at the expense of the interests of minority

shareholders' and outside investors (Kohlbeck & Mayhew, 2017). A cluster of research highlights that controlling shareholders have incentives to grant loans to affiliated entities where they possess a higher proportion of cash flow rights. This behaviour can detrimentally affect the benefits of minority shareholders, as these loans are often issued at below-market interest rates. Typically, these loans exhibit a higher likelihood of default, thereby facilitating the transfer of wealth from the listed firms to entities owned by the controlling shareholders (Jiang et al., 2010). Another stream of studies posits that executives are inclined to exploit related-party sales as a substitute means of traditional accrual management for earnings manipulation. For instance, controllers pay a price that is higher than the standard market rate to purchase goods and services from the listed firms to help the firm meets earnings target (Fisman & Wang, 2010). On occasion, managers fabricate false transactions or shift income via sales with related-parties, with the intention to prop up earnings (Jiang et al., 2010).

In 2006, CSRC and Public Company Accounting Oversight Board (PCAOB) had undertaken significant efforts to enhance the accounting and auditing standards regarding RPTs. SEC also announced new disclosure policies to improve the transparency of RPT-related disclosures and to protect the interests of minority shareholders. The significance and relevance of RPTs have markedly developed in the past two decades, both in academic research and practical application (Kohlbeck & Mayhew, 2017; Ryngaert & Thomas, 2012). The rapid accumulation of empirical and theoretical evidence within this field highlights the necessity to consolidate the current body of knowledge on this widespread phenomenon. This study therefore aims to identify existing research gaps and provide guidance for future investigations in this field.

The motivation of this systematic review is twofold. First, despite the growing amount of academic literature relating to RPTs in accounting, finance, and economics, several important questions need to be addressed: (i) What are the underlying intentions of RPTs? (ii) How RPTs affect corporate accounting performance, stock market performance, and other potential organisational outcomes. (iii) What factors may impede or facilitate insiders' incentives to engage in opportunistic or beneficial RPTs. Second, our review is motivated by the demand for systematic literature reviews (SLRs) in the field of accounting (Massaro et al., 2016), and the limitations of existing traditional literature review articles on RPTs (Gordon et al., 2007; El-Helaly, 2018).

1.2.2 Study Two: Does Narcissistic Auditor Mitigate or Exacerbate Opportunistic Activities? Evidence from Chinese State-Owned Enterprises

The prevalence of high-profile financial scandals involving related-party transactions has prompted an extensive investigation into their two-edged economic effects (Berkman et al., 2009; I. J. Chen, 2014; Huyghebaert & Wang, 2012; Jiang et al., 2010). On the one hand, the agency theory posits that RPTs exacerbate conflicts of interest, as controlling shareholders expropriate resources and wealth of minority shareholders via these transactions (Cheung et al., 2006; Lo et al., 2010). On the other hand, the efficient contract theory contend that

RPTs are inherently efficient, given that the familiarity and trust between related-parties facilitate communication, mitigate hold-up issues, and reduce the transaction costs (Balsam et al., 2017; Fisman & Wang, 2010; Hope et al., 2019; Ryngaert & Thomas, 2012). Despite the potential positives, empirical evidence has predominantly underscored the negative implications of RPTs.

Another strand of research has focused on exploring internal and external mechanisms in regulating the detrimental consequences of RPTs (Balsam et al., 2017; Usman et al., 2021). Although a limited number of studies have focused on the relationship between audit firm size and RPTs (Bennouri et al., 2015; Kohlbeck & Mayhew, 2017), there is a notable lack of literature addressing the diverse attributes of external auditors that significantly influence their behaviour and activities when auditing RPTs. Consequently, this study aims to address this gap by examining how certain attributes of external auditors affect client firms' intentions to engage in opportunistic RPTs. Since existing literature on individual auditors has mostly drawn upon attributes from an economic dimension including auditor expertise (Chin et al., 2014), auditor education (L. Li et al., 2017), and auditor tenure (C. Y. Chen et al., 2008), this paper seeks to integrate psychological attributes of auditors to extend extant understanding in the field of auditing research.

In psychology, narcissism is one of the crucial personalities that has attracted greater attention. A narcissism personality is defined as a combination of entitlement, grandiosity, attention seeking, an unrealistically inflated self-view, a need for that self-view to be continuously reinforced through self-regulation, and a general lack of regard for others (American Psychiatric Association, 2013). Building on the multifaceted nature of narcissism, existing research engages in a debate about the role of narcissism as either a constructive or destructive trait in personality contexts (Amernic & Craig, 2010). On the one hand, narcissistic auditors, characterised by arrogance, lack of empathy, and obstinacy, may hinder comprehensive information acquisition and adequate support from colleagues (Nevicka et al., 2016). This, combined with their tendency to overate their abilities and underrate risks in financial reporting, can diminish their efficacy in regulating opportunistic RPTs (Lakey et al., 2008). On the other hand, the intense desire of narcissistic auditors to preserve their reputations and achieve superior performance may enhance their self-regulation and diligence in work (Farwell & Wohlwend-Lloyd, 1998). In this vein, narcissistic auditors can function efficiently in scrutinising and preventing the exploitation of RPTs for opportunistic purposes.

1.2.3 Study Three: Does Audit Team Busyness Affect Opportunistic Activities? Evidence from Group-Affiliated Firms in China

In audit practices, tasks are primarily conducted by engagement teams consisting of multiple members (Cameran et al., 2018; Rich et al., 1997). Despite this, there exists a significant gap in research specifically addressing the dynamics and functioning of these audit teams as integrated units. Distinct from individual auditors or audit firms, audit teams exhibit a unique capability to synergise not only the human resources from

their respective firms but also concurrently incorporating auditors of varied specializations and levels of experience (Cahan et al., 2022). Therefore, the characteristics of the engagement team, when considered as a cohesive unit, provide a more accurate representation of how these diverse skills and dynamics among team members collectively contribute to the overall audit outcomes.

Recently, one particular concern that has emerged in the auditing literature and has received notable attention from the PCAOB is the concept auditor busyness (Hurley, 2017). This issue arises when auditors take on too many clients, potentially compromising their capacity to dedicate the necessary effort and time for each client (Lai et al., 2018). Existing literature presents divergent perspectives on the impact of auditor busyness on audit performance. According to the limited attention theory, an increase in the number of clients in an auditor's portfolio inversely affects the level of attention and effort the auditor can devote to each client, potentially leading to a diminished quality of audit services (Lai et al., 2018).

Contrarily, several studies posit that auditors with a substantial client base, or 'busy auditors', deliver higher quality audits than their less busy auditors. This is first explained by the directorship theory, as proposed by Fama & Jensen (1983), who suggests that an individual's multiple directorships are indicative of greater competence. In a similar vein, DeAngelo (1981) argues that the size of an auditor's client portfolio signals the extent of their experience and expertise. Additionally, the economic dependence theory proposes that a larger client portfolio diminishes the economic reliance on a single client, thereby reducing the likelihood of compromising audit independence for client retention (Choi et al., 2010). Hence, auditors with larger client portfolios are often associated with enhanced audit competence and higher independence, ultimately contributing to higher audit service quality.

The current body of research concerning the impact of auditor busyness yields conflicting results. Consequently, this study aims to provide further empirical evidence to augment the existing literature and deepen our understanding on the effects of auditor busyness. Numerous scholars have explored the concept of auditor busyness in various geographical contexts, including the United States (López & Peters, 2012), Australia (Goodwin et al., 2016), China (Gul et al., 2017), and Malaysia (Lai et al., 2018). These studies predominantly examine the relationship between auditor busyness and audit quality, particularly through outcome indicators such as the level of discretionary accruals, the likelihood of misstatements, and the audit opinions. However, there is a notable research gap in understanding the broader implications of auditor busyness, especially concerning the potential for clients' engagement in opportunistic activities. Inadequately regulating these activities can raise audit risks, cause financial misstatements, and, in worst situations, result in accounting scandals (Kohlbeck & Mayhew, 2017).

Anecdotal evidence from several financial scandals in recent decades has highlighted the critical need for both academics and practitioners to focus on the manipulative activities of insiders. This study endeavours to investigate the effects of auditor busyness, particularly in a more challenging scenario of auditing client firms' opportunistic behaviours. Specifically, while the complexity of the audit tasks runs over the attention and efforts

an audit team can afford (i.e., identifying and assessing insiders' opportunistic incentives), we aim to provide insights while mitigating the potential of audit teams intentionally managing their workload or client portfolio (Goodwin et al., 2016; Libby & Tan, 1994). In this vein, the focus is to explain the relationship between auditor busyness and the efficacy in detecting and addressing clients' opportunistic activities.

1.2.4 Institutional Background – RPTs and Auditing Profession in China

This thesis focuses on Chinese listed companies in particular for several reasons. First, the special treatment (ST) policy and policy on the new share issuance impose two types of risks to firms listed on Chinese stock market: the risk of being delisted if the firm reports a negative return on equity (ROE) for two consecutive years and the risk of losing right to issue new shares when average ROE in the past three years is less than 10%. These however would cause controlling shareholders to lose a substantial portion from the private benefits of control (Peng et al., 2011). Therefore, to reduce or eliminate such cost, controlling shareholders in Chinese listed firms are strongly incentivised to prop up the listed firm to reach the ROE thresholds (Jian & Wong, 2010).

Second, the concentrated ownership is quite prevalent in Chinese listed firms which results in a high level of tunneling through RPTs in China. The largest shareholders control nearly 38.07% of the firm's shareholding, this percentage is even higher if the firm is controlled by the government (Table 3.2 Panel C). In this context, it is more difficult for minority shareholders to protect their own interest against expropriation from the controller. In accordance with this, a large body of literature provides empirical evidence suggesting that the higher ownership held by the largest shareholder, the higher the possibility controlling shareholder tunnel from the minority shareholders via RPTs (Cheung et al., 2009; Lo et al., 2010).

Third, since 1997, Chinese Accounting Standards for Business Enterprises—Disclosure of Related Parties impose mandatory disclosure requirement for listed firms to report details of RPTs in the notes to the financial statements. This encompasses the type of the transaction, the amount of the transaction, the name of the related party. This unique data availability in Chinese market offers an opportunity for us to examine earnings manipulations via related-party sales and tunneling via loans and guarantees to related parties. Taken together, the unique institutional characteristics of Chinese Stock Market and relevant policies construct a natural context to examine questions in regard of RPTs.

Furthermore, given the distinct cultural and instituional environments, the audit market and practices in China significantly differ from those in Western countries (Nolder & Riley, 2014). Considering China's escalating influence in the global economy, this thesis offers unique and valuable insights into auditor behaviours within this context. Compared to Western markets, the audit market in China is characterised by lower concentration and increased competitiveness, resulting in heightened competition among audit firms for clients. Therefore, Chinese auditors have higher likelihood to compromise their independence and the quality of their audits to retain important client firms (Chan et al., 2006; Huang et al., 2016).

In China's underdeveloped legal infrastructure, investors face significant challenges in initiating legal actions against auditors, thereby reducing the litigation risk for Chinese auditors (Chan et al., 2012; Jiang et al., 2015). Initially, the Ministry of Finance (MOF) in 1999 introduced guidelines for identifying and auditing RPTs (MOF, 1999). These guidelines were superseded by Auditing Standard No. 1323, which offered a broader definition and more stringent disclosure requirements following a series of financial scandals in 2006. Subsequently, Chinese regulators have revised auditing standards to enhance the efficacy of RPTs audits and diminish the potential for RPTs to lead to material misstatements in financial statements. Conclusively, these conditions make China an exemplary context for investigating the influence of auditors in monitoring RPTs.

1.3 Research Questions and Objectives

Given the significance of RPTs both in academia and in practice contexts, the core aim of this thesis is to comprehensively synthesise extant literature on RPTs and provide empirical evidence on the impact of psychological attributes of individual auditors and busyness of an engagement audit team on regulating RPTs. In pursuit of this overarching aim, specific research questions and objectives have been formulated, each of which is addressed through a separate study within this thesis.

The first study employs a SLR approach, encompassing a comprehensive synthesis of previous literature (i.e., both theoretical and empirical findings) on RPTs and develops an agenda for future research in the field. This study addresses three important questions within the exisiting literature: First, what are the underlying motivations driving RPTs? Second, what factors may either impede or facilitate the occurrence and impact of RPTs? Third, what are the implications of RPTs concerning accounting performance, stock market performance, and other organisational outcomes. The objectives are to help academics and practitioners identify the underlying intentions of insiders engaging in RPTs, recognise corporate governance factors and institutional mechanisms that predict or determine the occurrence of RPTs, understand the impact of RPTs on accounting performance, stock market performance, and other corporate outcomes. Ultimately, we aim to provide agenda for future research in this field.

To fill in the gap as identified in the first study, the second study aims to answers the following research questions: whether individual auditors' narcissism personality influence client's incentives to engage in opportunistic RPTs? This study also explores the potential moderating effect of government involvement on the aforementioned relationship, specifically focusing on the context of China. In order to grasp the intention of insiders manipulating earnings through abnormal related-party sales, this study identify a situation where insiders are strongly incentivised for propping up earnings to beat the benchmark. In addition, considering the substantial political and economic influence of government on audit procedures in State Owned Enterprises (SOEs), this study further examines the role of government involvement in moderating the effects of narcissistic auditors on opportunistic RPTs.

To broaden the scope from individual auditors to auditors functioning as a cohesive engagement team, the third study aims to address the following research question: what is the impact of audit team busyness on the occurrence of opportunistic RPTs? This study delves into how the group-affiliated nature of the firm may influence the role of audit team busyness. Study three turns focus to the collaboration of members within an audit engagement team. The objective of this study is to investigate the impact of audit team busyness on the propensity of client firms to engage in opportunistic activities. Additionally, we establish a context where agency problem is exacerbated within firms that are part of a business group in China. To identify different circumstances where busy audit teams influence the occurrence of opportunistic RPTs contingently, we consider team attention, team knowledge, and team independence as moderators of this relationship.

1.4 Thesis Philosophy, Approach and Method

The research philosophy is perceived to be the foundation that informs the choice of methodology, strategy, and techniques employed in the collection and analysis of data. A reliable research philosophy consists of a sequence of coherent and rigorous beliefs and assumptions (Morgan, 2019). In general, three categories of assumptions are commonly applied in distinguishing among different philosophies: ontology, epistemology and axiology.

Firstly, from an ontological perspective, the research subject of this thesis is the transactions occurred between related-parties within the corporate context. Scholarly literature extensively posits that related-party transactions have detrimental effects on corporations, with particular adverse impacts on minority shareholders and external investors (Black et al., 2015; Fang et al., 2018; Wong et al., 2015). Conversely, a segment of the literature illuminates the potential benefits of RPTs, arguing that in emerging economies, these transactions provide affiliated firms with essential internal capital and labor resources (Balsam et al., 2017; Hope et al., 2019; Ryngaert & Thomas, 2012). This perspective suggests that, under certain conditions, RPTs serve a positive role in corporate development and resource allocation. In the corporate world, RPTs occur globally and exist irrespective of scholarly perceptions and interpretations. Researchers engage with empirical data extracted from the real-world and extrapolate findings from a specific sample to a broader context. From an ontological standpoint, our investigation into RPTs aligns with a positivism philosophy, acknowledging the existence of a singular, objective reality.

Second, epistemology concerns with human knowledge including the nature and scope of knowledge, the rationality and justifications of beliefs. In this thesis, we assume that objective facts yield the most reliable scientific evidence. In line with the positivism paradigm, we focus on observable and measurable phenomena, specifically related-party transactions, with the aim of deriving empirically supported generalisable principles that may facilitate understanding and application of knowledge in this field (Crotty, 1998).

Third, another branch of philosophy, the axiology, emphasises how researchers' own value execute impacts on the research process. From an axiologically perspective, positivist research requires researchers to be detached

from the research, as objective and neutral as possible. This thesis comprises of three independent papers: one review paper and two empirical papers. The first study employs a predefined seven-step procedure to guide the review (1) defining the research questions, (2) conducting database searches, (3) screening and selecting literature, (4) constructing an analytical framework, (5) extracting data and evidence, (6) performing analysis and synthesising the results, (7) identifying gaps and providing suggestions for future research. The transparency and reproducibility of the review process are pivotal in ensuring the objectivity of the systematic review, which aligns with the fundamental principles of the positivism paradigm underpinning this study.

Axiologically in accordance with positivists, the second and third study in this thesis employ a rigorous, empirically-based scientific method to collect materials and data in a manner that minimises human interpretation and bias. In particular, the second and third study intend to adopt a deductive approach. These two studies start with assumptions derived from existing theoretical frameworks in previous literature encompassing agency theory, personality theory (e.g., narcissism), limited attention theory, and economic dependence theory. We employed quantitative data collection methods to measure specific concepts of interest in the second and third studies. To verify our predefined theoretical assumptions, statistical analyses were conducted within the Chinese context, comprising sample of state-owned enterprises and business groups for two studies respectively.

In the context of China's concentrated ownership structure and comparatively weaker investor protections, there is an increased propensity for insiders to manipulate RPTs for self-serving objectives at the cost of minority shareholders or outsiders. In the second study, we therefore include a preliminary sample encompasses 1,709 A-share companies publicly listed on the Shanghai Stock Exchange. We collect auditors' signature from annual audit reports and use the size of signature as a scale for auditor narcissism (Chou et al., 2021; Church et al., 2020). Building on the model from Jian & Wong (2010) and Fang et al. (2017), we distinguish between normal and abnormal components of related-party sales by regressing the amount of related-party sales on firms size, leverage, market-to-book ratio by each industry and year. The residual from this regression is subsequently utilised to estimate abnormal related-party sales (*ABMSale*). Additionally, we employ a model from Jian & Wong (2010) to capture firm's benchmark beating behaviours via abnormal related-party sales. In this model, we interact auditor narcissism with *Incentive* which denotes the period when a firm's Return on Equity (ROE) approaches the threshold of triggering delisting or rights for share issuance. Furthermore, prior studies reveal a higher prevalence of expropriations by controlling shareholders in State Owned Enterprises (SOEs) compared to private entities (Jian & Wong, 2010). Given that the audit processes in SOEs are often influenced by significant political and economic factors, the independence of narcissistic auditors in these firms might be criticised (Chan et al., 2006; Fang et al., 2018). We therefore partition the sample into SOEs and private firms to examine the influence of auditor narcissism on opportunistic RPTs within these distinct corporation types.

In the third study, the main variable of interest is the audit team busyness, as proxied by the total number of clients audited by an audit team within a fiscal year. To assess the client firm's opportunistic activities, this

study employs two measures: abnormal related-party sales, constructed by Jian & Wong (2010), and intercorporate loans, formulated by Jiang et al. (2010). These proxies serve to quantify the extent of potentially self-serving behaviours exhibited by client firms. To examine the varying impacts of audit team busyness based on group structure of client firms, we differentiate between firms that are part of a business group and those that are not. Further, we also partition sample into small and large business group firms. This allows for an analysis of how the size and complexity of a client firm's group structure might influence the effects of audit team busyness on opportunistic activities.

In comparison to quantitative methodologies, scholars employing qualitative approaches typically contribute to the development of theoretical or conceptual frameworks in the field. This method however is generally perceived as non-independent from the subjects of investigation. Besides, there is a growing trend in business research to adopt mixed methods research designs, which combines qualitative and quantitative data collection and analysis (Saunders et al., 2009). Even though, given our adherence to a positivist philosophical stance, as well as constrains related to time and access to potential participants, our research is inclined towards utilising secondary data sources and employing quantitative archival research strategies.

1.5 Thesis Findings

This section summarises the main findings of the three studies included in the thesis. This thesis presents profound findings on extant research regarding RPTs, how psychological attributes of individual auditors regulate the engagement of opportunistic RPTs, and the association between audit team busyness and the occurrence of clients manipulate through RPTs.

The first study conducted a systematic review of existing literature on RPTs and found that research on this topic commenced in the year 2006. Subsequently, there were two periods of increased academic attention to issues related to RPTs: one spanning from 2007 to 2010 and another occurring from 2018 to 2020. Among the corpus of 171 articles included in this review, approximately 128 of them were dedicated to the examination of RPTs in the context of Asian countries. Notably, roughly 75 studies exclusively employed data samples sourced from mainland China. Additionally, the findings gathered from this review show that a significant amount of research has heavily relied on regression analysis and data derived from databases such as the China Securities Market and Accounting Research (CSMAR), TS 2000 database by the Korea Listed Companies Association (KLCA) and OSIRIS. In contrast, a smaller number of studies, specifically 20 out of 171, adopted qualitative methods (Chong & Dean, 1985; Sherman & Young, 2001), or a mix of qualitative and quantitative approaches (Firth et al., 2019; K. Li et al., 2020; Shaub & Lawrence, 1996; Zhang et al., 2020) in their research.

In light of the contentious discussion on RPTs, this review bridges the existing knowledge gap by offering a comprehensive summary of the various theoretical perspective, on the outcomes and governance mechanisms associated with RPTs. The findings of this review study indicate that, when it comes to research on related-

party transactions, the agency theory, efficient contract theory, and transaction cost theory are commonly applied to interpret the motivations of RPTs. However, there are other theoretical perspectives have been used occasionally, which we classify into four dimensions: economic theories, organisational theories, governance theories, and sociology theories. We therefore urge researchers to incorporate emerging theories such as the contingent theory, social capital theory, and internal market theory to reinforce their arguments and assumptions regarding the consequences and management of RPTs.

A substantial body of literature has been dedicated to investigating governance attributes at both the board and firm levels that can either exacerbate or mitigate opportunistic RPTs. Within this context, the review study shows that particular emphasis has been placed on factors such as board independence, ownership structures, and political affiliations. Additionally, there are emerging topics within this field of study that deserve attention. These include the impact of audit committees, the influence of professionals, director compensation and financial determinants, although relatively fewer studies have delved into these aspects. In contrast to the extensive examination of the role of internal corporate governance, there has been relatively less attention given to studying the broader institutional or national factors that affect the occurrence of RPTs. Although some research has focused primarily on understanding how regulatory enforcement impacts the scrutinisation of RPTs. There are fewer studies have explored cross-national differences such as economic, cultural, or political systems, which could potentially influence the insiders' incentives to engage in RPTs. Further, the majority studies placed emphasis on the effect of RPTs on firm's stock market performance and audit risk, another strand of research also seeks to uncover accounting performance and firm risk influenced by RPTs. However, organisational outcomes concerned with strategical decision-making are emerging topics that draw the attention in recent years and need further exploration in future research.

In the second study, while we find that narcissistic engagement auditors have no significant impact on abnormal related-party sales, narcissistic review auditors exacerbate the occurrence of abnormal related-party sales. This effect is particularly pronounced in private firms than in SOEs. In order to provide sharp analysis, we investigate in a setting characterised by a high probability of engaging in *ABMSale* for benchmark beating. The findings show that although review auditor narcissism does not significantly constrain *ABMSale* used for benchmark beating, engagement auditor narcissism appears to deter clients' exploitation of *ABMSale* for benchmark beating. While we split the full sample based on ownership, review auditor narcissism continues to facilitate *ABMSale* for benchmark beating in private firms. Conversely, engagement auditor narcissism discourages client firms from exploiting *ABMSale* for the earnings propping up in private firms.

In additional analyses, we discover that important clients intensify the influence of narcissistic review auditors in facilitating *ABMSale* to achieve earnings benchmark in full sample, SOEs, and private firms. This finding aligns with existing literature indicating a heightened economic dependence of auditors on key clients, potentially compromising audit quality. In addition to related-party sales, this study also examines the impact

narcissistic auditor on loans and guarantees to related-parties. Results are consistent with the primary analysis, underscoring the important role of narcissistic engagement auditors in curtaining opportunistic RPTs.

The primary findings of the third study show that while busy audit teams do not significantly influence client firm's incentive to engage in abnormal related-party sales, they do appear to mitigate expropriation in the form of related-party loans. Additional analysis reveals that the impact of busy audit teams in reducing intercorporate loans is effective in group, non-group, and small business group firms. However, this effect does not extend to large business group firms. These results suggest that the influence of busy audit teams in curbing opportunistic behaviours is less pronounced in circumstances where insiders manipulate earnings via related-party sales and in the context of large business group consisting of more than five members. Therefore, although busy audit teams are generally efficient in regulating opportunistic activities, their efficacy diminishes in more challenging audit tasks or with client firms that have complex group structure.

In further analyses, we find that the impact of busy audit teams on clients' opportunistic behaviours is significantly strengthened under two conditions: firstly, when clients are economically important to the audit team, and secondly, when the audit team possesses industry-specific expertise. In contrast, the efficacy of a busy audit team in curbing opportunistic activities is notably reduced when the team is characterised by limited experience or a lower degree of independence. These findings emphasise the need to draw on audit team attributes and their effectiveness in managing client firms' opportunistic activities.

1.6 Structure of the Thesis

The remainder of the thesis is organised as follows. Chapter 2 conducts a systematic literature review on related-party transactions from the aspect of corporate governance, institutional environment, and corporate performance. Chapter 3 explores the role of narcissistic auditors on monitoring opportunistic RPTs and emphasises the function of government involvement in moderating this relationship. In Chapter 4, we examine how the busyness of audit teams affects the inclination of clients to engage in opportunistic RPTs. We also identify context-specific factors within the audit team including team attention, team knowledge, and team independence that can moderate this relationship. Chapter 5 concludes the thesis.

Chapter 2 Related-Party Transactions: A Systematic Review of Corporate Governance, Institutional Environment and Corporate Performance Literature

Abstract

This study presents a comprehensive systematic literature review (SLR) of existing research on related-party transactions (RPTs). The review includes 171 articles published in the fields of accounting, finance, economic, and ethics in the period from 1985 to 2020. We synthesise and analyse prior works on RPTs both theoretically (i.e., economic, organisational, governance, and sociology) and empirically (i.e., board, firm, institutional antecedents and various corporate outcomes of RPTs). The results show that most studies have emphasised the conflict of interest underlying RPTs, while limited studies have drawn on alternative implications including the efficient transaction theory, contingency theory, and other potential incentives behind RPTs. Existing research also suffers from several methodological constrains such as disproportionate focus of research in Asian than other regions, reliability of archival data concerning management's incentive to manipulate, employ solely traditional measurement of RPTs despite advanced approaches have provided. We also find few studies examine beyond conventional attributes of internal and external governance mechanism and explore potential non-economic (e.g., operational or strategical) outcomes of RPTs. The findings of our review will be of interest to academics, standard-setters, managers, and practitioners.

Keywords: Systematic literature review; Related-party transactions; Corporate governance; Institutional environment; Corporate performance

2.1 Introduction

2.1.1 Background

In the accounting and governance field, related-party transactions (RPTs) are defined differently across various regulations, the world's first comprehensive professional pronouncement on RPTs is from Statement of Auditing Standards No. 6 (Institute of Certified Public Accountants Auditing Standards Executive Committee, 1975) by the American Institute of Certified Public Accountants (AICPA). Thereafter, two main definitions that mostly used for RPTs in academia are from Financial Accounting Standards Board (FASB) and International

Accounting Standards (IAS) respectively (Bava & Di Trana, 2016): In Statement of Financial Accounting Standards No. 57 (FAS No. 57), RPTs are defined as transactions between a company and its related-entities (e.g., subsidiaries, trusts for the benefit of employees, principal owners, directors and officers or their families, and affiliates), example transactions are sales, purchases, services, borrowing, lending and guarantees (FASB57, 1982). Another definition given by IAS, which is also the most influential and widespread definition for RPTs, stated that "A related-party transaction is a transfer of resources, services or obligations between related-parties, regardless of whether a price is charged", and "A related-party is a person or entity that is related to the entity that is preparing its financial statements (referred to as 'reporting entity')" (IAS29, 2009). Our understanding on what is RPTs has established over the past decades, further issues concerning RPTs began to receive considerable attention from a large group of stakeholders such as academics and practitioners.

In academia, a wide range of literature has grown up to explore the knowledge of RPTs, for instance, one strand of literature has emphasised that RPTs is deemed as one of the convenient tools used by controlling shareholders to extract minority shareholders' wealth for private benefits, referred to as "tunneling" or "expropriation" (Cheung et al., 2006; Jian & Wong, 2010; Jiang et al., 2010; Peng et al., 2011). Similarly, another strand of studies has attempted to explore the association between RPTs and earnings management, however results on the association between RPTs and discretional accruals are mixed so far. For instance, while Jian & Wong (2010) showed related-party sales are accompanied with a decrease in discretionary accruals, Hwang et al., (2013) found related-party sales triggered an increase in discretionary accruals. Examining the same relation, El-Helaly et al., (2018) articulated that they did not find any relation between RPTs and accrual-based earnings management, but found RPTs can be used as a substitute for real earnings management. Generally speaking, RPTs are proved to be associated with manipulation and opportunistic behaviours which might increase the risk of misstatements (Kohlbeck & Mayhew, 2010; Fang et al., 2018). Accordingly, numerous empirical studies have identified the detrimental effects of RPTs to firms and to investors, these evidence highlights the importance and urgency of future research on RPTs particularly for research on exploring the nature, antecedents of RPTs hence to help practitioners better detect or predict the appearance of abusive RPTs.

In practice, RPTs are quite common, a sequence of high-profile financial scandals involved RPTs (Enron in U.S., Parmalat in Europe, Kangsai Group in Asia), as well as the frequency and significant size of RPTs have put itself under the spotlight from various market participants (i.e., investors, auditors, and regulators).[2] Owing to the high concentrated ownership and weak investor protection in emerging economies, the opportunistic RPTs have been concentrated in Asian countries (Cheung et al., 2006; Jian & Wong, 2010; Black et al., 2015; Lin & Yeh, 2020) and then extended to countries over the world such as Europe (Bennouri et al., 2015; Bava &

[2] In a sample of Chinese listed firms from 1998 to 2008, Fisman & Wang (2010) showed that the median level of RPTs is almost ten percent of total assets. Nekhili & Cherif (2011) report that 70.83 percent of 85 companies listed on the Paris Stock Exchange in the period of 2002-2005 disclosed at least one RPTs while 29.17 percent even declared ten or more transactions with related parties. Hope et al. (2019) show that the average dollar value of RPTs is $1,112,000 of S&P 1500 firms.

Di Trana, 2016; El-Helaly et al., 2018), North America (Balsam et al., 2017; Chen et al., 2020), South America (Cesário et al., 2020), Australia (Gallery et al., 2008; Bhuiyan & Roudaki, 2018) and Africa (Sellami & Borgi, 2020). Regulators, policy makers and corporations have made considerable efforts to not only toughen the existing accounting and auditing standards for RPTs, but also explore potential monitoring mechanisms (e.g., corporate governance system) to enhance the transparency of RPTs. For example, both the FASB and the Securities and Exchange Commission (SEC) required detailed disclosure of material RPTs in annual reports and proxy statements. In an attempt to facilitate investors' assessment regard the potential risks generated from RPTs, in 2006, the SEC imposed new requirements for disclosure of the governance policies and procedures regarding RPTs (SEC, 2006). Apart from the interest from regulators, concerning the high risk of material misstatement and the potential litigation and reputations damage arising from RPTs, auditors also pay crucial attention to the issue of RPTs (Bennouri et al., 2015; El-Helaly et al., 2018; Fang et al., 2018; Cesário et al., 2020). In addition to the high audit risk, AICPA (2001) also highlights the difficulties for auditors to identify related-entities and transactions in a condition that such disclosure information are provided by management who are possibly engaged in RPTs. Consequently, either from the academic perspective or from the practical perspective, the importance of RPTs has experienced a dramatic increase over the past twenty years.

2.1.2 Motivations

Concerning the popularity of RPTs among scholars and practitioners, a substantial amount of empirical and theoretical evidence has emerged at a rapid pace, there is therefore a strong need to aggregate the existing knowledge of this widespread phenomenon, to identify gaps existed in previous research and to offer suggestions to future researchers in this topic. Our motivation to undertake a systematic analysis is twofold.

On one hand, motivated by the growing amount of academic literature investigating various issues pertaining to RPTs in the accounting, finance and economic discipline, there are, however, several important questions that need to be synthesised:

First, how do we interpret the underlying motivation of RPTs? This is a complex and difficult question because findings regard this seems to be equivocal to date, different context settings and various types of transactions or related-parties may all contribute to the perplexing results. This is important because the intention of RPTs (i.e., opportunistic vs beneficial) will directly affect investors' judgements about firms' future performance. In addition, this also represents a crucial issue that might lead regulators and standard setters revise the existing RPTs' related disclosure requirements. Accordingly, it is important to synthesise and reconcile previous findings on RPTs' motivation and also identify opportunities for future research. *Second*, what factors may impede (facilitate) insiders' incentives to engage in opportunistic (beneficial) RPTs. Identifying these determinants is important as it will offer an encouraging message that opportunistic (beneficial) RPTs can be mitigated (facilitated) if certain factors are properly considered. This could help both investors to better assess the underlying performance and regulators to revise or introduce new rules. *Third*, what are the consequences

of RPTs in terms of accounting performance, stock market performance, and other organisational outcomes. Overall, this paper summarises and syntheses existing papers from a variety of themes associated with RPTs utilising different research settings, methods and designs. We aim to map out a comprehensive framework for RPTs, in this case, put future researchers in the best position to identify and develop potential avenues of research on RPTs. Indeed, it is only when we have performed an extensive and systematic review of research on RPTs in its entirely, so that we can offer valid and reliable solutions to the problems or challenges that have encountered and provide recommendations to future research.

On the other hand, our review is motivated by a relative dearth of systematic literature reviews (SLRs) in accounting (Massaro et al., 2016). While systematic reviews have been widely adopted in other disciplines (e.g., medical science, psychology, economic), little is found in accounting studies. Massaro et al. (2016) articulated that the application of SLRs in accounting can make a conceptual contribution by developing knowledge and open up new avenues for research on specific topic. Although there are two papers provided traditional literature reviews on RPTs (Gordon et al., 2007; El-Helaly, 2018), the weaknesses in these two articles are noticeable while comparing to the present review:

First, existing two LITERATURE REVIEW articles only cover a relatively small set of past studies (around 80 articles), and they neglect to evaluate the quality of included articles. The absence of other potential RPTs studies and the ignorance of the quality of studies included might reduce the reliability and validity of their conclusions and implications. *Second*, given that both Gordon et al. (2007) and El-Helaly (2018) summarised RPTs literature from an auditing and governance perspective, their review are constrained by their research focus. Specifically, Gordon et al. (2007) only cover literature on auditing RPTs without considering other aspects around RPTs such as determinants and effects of RPTs and their results are based on studies published before 2006 while there has been an enormous amount of articles afterwards. Similarly, although El-Helaly (2018) had a broader focus than Gordon et al. (2007), they reviewed all corporate governance factors generally, this could be a problem since internal and external governance factors could be different, more importantly, considering the potential opportunistic incentive behind RPTs, some factors (e.g., ownership concentration) might be more essential and should be studied separately from other governance factors. Additionally, other crucial determinants of RPTs are not considered in the two prior literature review such as government involvement and institutional features (e.g., economic environment, regulatory or legal environment, and political system). Besides, regard the effects of RPTs, El-Helaly (2018) focus on studies limited to firm valuation, firm performance and audit risk while other emerging effects that might be of interest such as strategical decision outcomes. *Third*, both the two literature reviews only concentrated on two predominant theories (i.e., agency theory and efficient transaction theory) in explaining RPTs, however, there are other theories have been applied in the literature which complement existed understanding on motives and impacts of RPTs. *Fourth*, the two review articles, especially the one from Gordon et al. (2007) ignored to account for important methodological information (method, location, sample, period, measurement) while interpreting results from each study. Arguably, this limitation could constrain the degree of insights that they can provide

while evaluating and critiquing results in past studies, as well as impede the development of methodological and research design issues for future research into RPTs. In summary, given that the growing body of RPTs literature has been accumulated over two decades as well as existing literature reviews appear to suffer from apparent limitations, this SLR is strongly motivated by the urgent need to take the first step to present a balanced synthesis of academic insights and practical viewpoints in this field, enable to unveil major research trends for future development.

2.1.3 Contributions

This review aims to contribute to the extant knowledge on RPTs by not only addressing the weaknesses of past literature reviews as discussed in Section 2.1.2 , but also exploring additional themes of interest as well as offering a more comprehensive perception to enlighten practitioners and academics and encourage research around RPTs to take steps forward. Precisely, we achieved this aim in several ways:

First, to the best of our knowledge, this paper contributes to the RPTs literature as it presents the first systematic review in the field to cover such a comprehensive synthesis of extant RPTs knowledge. The review employs a comprehensive method in searching, selecting, and synthesising previous literature on RPTs. In this regard, this SLR utilises one of the largest datasets consisting of 171 studies (twice as much as that of in prior two reviews) after systematically searching, screening and selecting, this large dataset could reduce potential bias arise from a relatively small portion of sample articles. Besides, this paper performed a quality assessment while selecting sample articles based on the most acceptable ranking standard from 2018 Academic Journal Guide by Charted Association of Business School (2018 AJG), this assessment to some extent guarantees the average quality of included studies.

Second, as extant literature on RPTs has amassed over a 20-year period, however, without a clear extensive framework as a foundation to perform a more rigorous and sturdy research, this review contributes by offering a theoretical framework for understanding how internal and external governance factors determine the occurrence of RPTs and how RPTs affect firm value, accounting performance, strategical decision making and audit risks. It not only covers all aspects that have been presented in the two literature review articles but also sheds light on additional subjects that are not detected previously. For instance, apart from the two preliminary theories applied in previous studies in explaining the motives of RPTs, by reviewing the most up-to-date resources, we identified an emerging theory: the contingency theory. Instead of considering RPTs as either harmful or beneficial, contingency theory proposed that the nature of RPTs needs to be investigated under the consideration of institutional environment. More importantly, apart from the three main theories employed to interpret the motives underlying RPTs, we identify additional theories in terms of governance, economic, sociology and organisational. By incorporating the additional theory, this paper provides the opportunity to help future scholars understand the nature of RPTs on the basis of a more diverse and sophisticated theoretical underpinning. Moreover, this review presents a significantly broad overview of numerous factors (categorised

into three groups: board characteristics, firm characteristic and institutional environment) that might influence the magnitude of RPTs. Rather than analysing all governance factors in general, we dived into each factor individually in order to distinguish the potential different impact from each governance determinant. Moreover, we discover antecedents that are not reviewed in prior two LR articles such as political connection, ownership characteristics (i.e., family, foreign or managerial), professionals, political and cultural environment. Concerning the effects of RPTs, in addition to corporate performance, we find RPTs are crucial in terms of influencing firm's strategy decision making. Given this, our review seeks to establish a comprehensive theoretical foundation that will motivate future researchers to study RPTs from a more thorough perspective, thereafter, make constructive and significant contributions within RPTs.

Third, this review contributes to the RPTs literature by collecting valuable methodological data in each included article. For instance, we record how the researcher calculate RPTs, these matters because previous literature has controversial argument regard the measurement of RPTs. Tareq et al. (2017) proposed that using dollar values of RPTs possibly mixing normal business purposed RPTs with potential harmful opportunistic RPTs. Also, Ryngaert & Thomas (2012) stated dummy variable is more advisable, as dollar values is ambiguous and do not consider firm characteristics. Accordingly, the measurement the author utilised to proxy for RPTs is valuable information to take into account while summarising and analysing prior findings. In addition, we also take into consideration the type of the transactions (i.e., sales and purchases of goods and services, asset transactions, loans and guarantees), the identity of related-parties (i.e., political connected, CEO, largest or second largest shareholders) and how they categorise RPTs (i.e., expropriate or beneficial, cash or non-cash, loan or non-loan) during the process, this largely enhance the quality of our analysis and enrich the interpretation we could offer. By collecting the period the research was conducted, we are able to consider certain regulation's impact on results from each study, for instance, 2005 China Share Structure Reform, 2005 mandatory adoption of International Financial Reporting Standards (IFRS), the 2006 SEC RPTs disclosure changes, 2010 Italian Regulatory Body for the Italian Stock Exchange. Further, while extant research on RPTs is largely conducted in an Asian economy, apart from these, we also include approximately 40 articles from other economy settings such as US, Italy, Africa, Brazil, Australia, France. This complements prior Asian country research and provide a more complete insight in reviewing past research on RPTs. Apart from those information relevant to RPTs, we also collect other research design information such as sample characteristics/size, sample composition, methodology adopted, published journals and ranking that are commonly employed by prior SLR articles (Yang et al., 2019; Tsalavoutas et al., 2020). Collectively, this research design information is necessary since they could be the potential reason that may explain the divergence results among studies investigate the same theme/relationship. Because of the close correlation of RPTs with institutional context, information such as the location of the research, and the period research conducted could make a dramatic change to the empirical results. By recording methodological information, we attempt to untangle existing controversial findings from a more comprehensive perspective and to identify potential flaws in previous research.

This review is structured as follows: Section 2.2 describes the methodology adopted in the review process; Section 2.3 , Section 2.4 , and Section 2.5 2.6 2.7 present the descriptive, theoretical, and empirical findings; Section 2.8 identifies limitations in past research and offer recommendations for future research; Section 2.9 concludes this review.

2.2 Methodology

2.2.1 SLR Approach Stages

A SLR adopts a scientific, transparent, and replicable methodology to search, select and analyse papers included, thereby are proved to be more rigorous and persuadable than conventional narrative reviews (Nguyen et al., 2020). At first, we established that there has been no systematic review on RPTs when the data collection commenced. To fill this void, we apply an SLR approach conducted in seven sequential steps as presented in Figure 2.1 and discuss in detail below (Alhossini et al., 2020; Tsalavoutas et al., 2020).

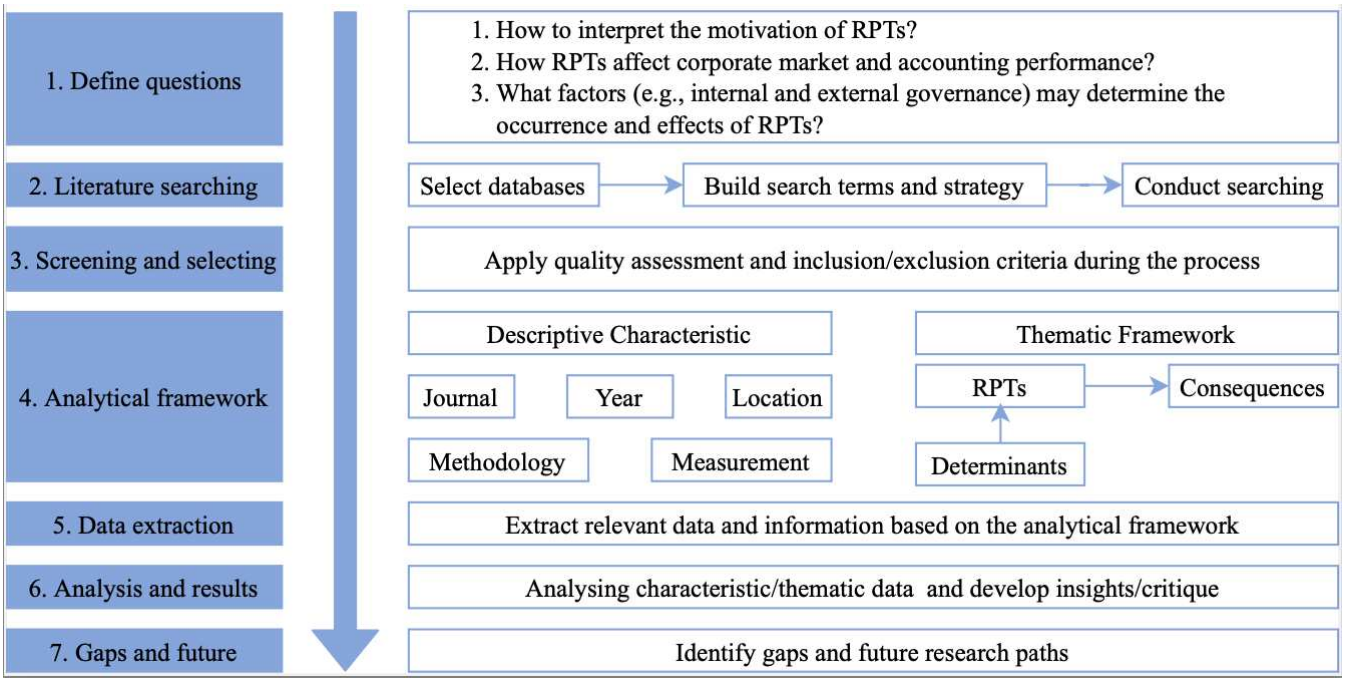

Figure 2.1 SLR Approach Stages, adapted from Pickering & Byrne (2014)

2.2.2 Literature searching

After identifying our motivation and research questions as in the introduction, the next stage relates to the literature searching which followed 3 steps: select databases, build search terms and strategy for each database, and run the main searching. First step, following Nguyen et al. (2020), we select databases on the basis of four

criteria as in Table 2.1 below: type, coverage, peer-reviewed and access. Regard types of databases, we will mainly use Abstracting & Indexing databases (A&I) which contains both discipline specific databases and multi-disciplinary databases. We will not use any publishers' databases (e.g., ScienceDirect, SpringerLink and Wiley Online Library) since those databases are limited to publications from a particular publisher, thus are not suitable for literature searching in a SLR. Specifically, we comprise two business discipline specific databases for narrow and targeted searching results and two multi-disciplinary databases to avoid missing any relevant articles that might published in journals outside business and economic subject. We include both Business Source Complete (BSC) and EconLit because many full-text business and economic journals are unique to the EconLit which will be a complement to BSC database. In addition, we choose two multi-disciplinary databases because 46% journals in Scopus are not covered by Web of Science (WoS). By combining multiple databases, we expect to conduct a comprehensive systematic literature searching.

Table 2.1 Database selection

Database	Platform	Type	Coverage	Peer-reviewed	Access
Business Source Complete	EBSCO	Discipline Specific	Covers 1,621 active, full-text, and non-open access journals	Yes	Yes
EconLit	EBSCO	Discipline Specific	Covers 390 active full-text and non-open access journals, many of them are unique and will be a complement to BSC database.	Yes	Yes
Web of Science	Clarivate Analytics	Multi-disciplinary	Contains over 21,100 peer-reviewed, high-quality scholarly journals.	Yes	Yes
Scopus	Elsevier	Multi-disciplinary	Contains more than 24,600 active titles of journals, books, articles in press, 23,500 of which are peer-reviewed journals.	Yes	Yes

The second step was to build a pool of search terms and develop search strategy for each of the four databases identified as above. Given that our primary focus was to provide a review of literature on "related-party transactions", relevant studies had to discuss issues around various transactions between types of related-parties, we decide to build search terms for "related-party" (Concept A) and "transactions" (Concept B) separately as showed in Appendix A.1. We then use a proximity operator (e.g., Near/n, W/n, WITHIN "n", Nn) to combine Concept A and Concept B in order to target articles that mention Concept A and Concept B within 3 words distance, for example, "sales to related-parties" or "purchases from related-parties". Apart from that, we use a Boolean operator "OR" to add "inter corporate loan*", "inter-corporate loan*", "connected transaction*" into the whole pool of search terms.

Next step, we use the strategy present in Appendix A.1 to search for articles included in this review. The search was conducted in four databases: Business Source Complete, EconLit, Web of Science, and Scopus till December 31, 2020. We retained all articles that the search terms appear in any of the following fields: titles, abstracts, or keywords, which yields a total of 3,709 articles as a start of the screening and selecting process.

2.2.3 Screening and Selecting

The stage of screening and selecting (See Figure 2.2) started with a quality assessment. We excluded articles published in journals that are not indexed in the 2018 AJG and not in the fields of ACCOUNT, ECON, FINANCE or ETHICS-CSR-MAN, which excluded 3,033 articles. After the quality assessment, we use EndNote to remove duplicates and use Rayyan for screening abstracts and full-text.[3] During the screening process, we eliminated studies that met one or more of the following conditions: (1) Do not examine RPTs neither theoretically nor empirically; (2) RPTs is only used as a control variable; (3) Articles that are editorial, discussion pieces or literature review type; (4) Published after December 31, 2020 (5) Language is not English; (6) Full-text is not available. The eligibility criteria above ensure that the studies included are directly relevant to the review interest RPTs, which resulted in a final sample of 171 articles for inclusion.

[3] Rayyan is a platform designed for systematic reviews especially in the initial screening and selection stages (Ouzzani et al., 2016).

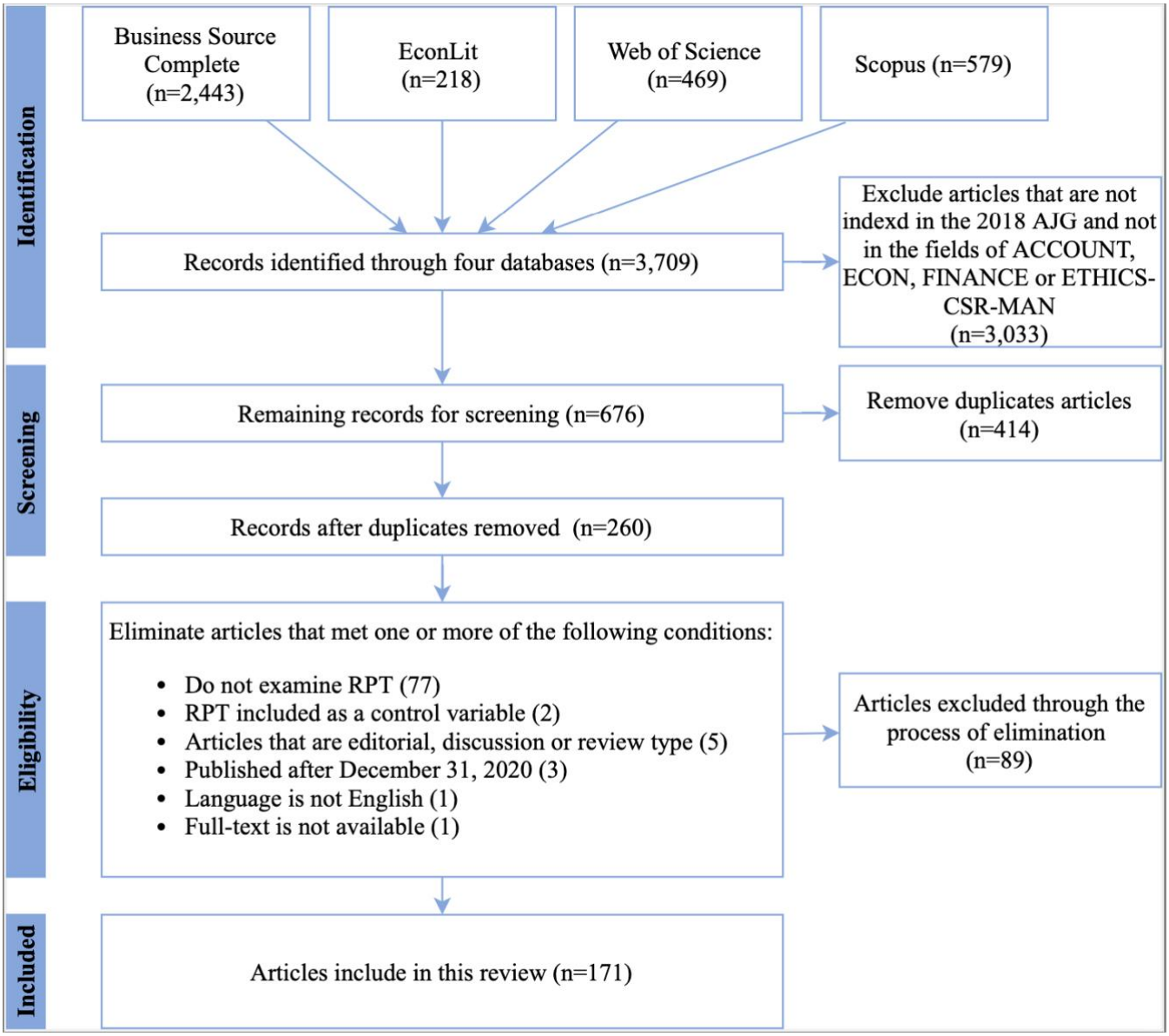

Figure 2.2 PRISMA Flow Diagram, adapted from Moher et al. (2009)

2.2.4 Analytical Framework

As a start of the fourth stage of the SLR approach, we use a sample of the included 171 articles to develop a preliminary analytical framework, our analysis is based on this framework including descriptive analysis (e.g., journals, year of publication, location, methodology and measures) and thematic analysis. As shown in Appendix A.2, the thematic analysis contains five key aspects: Related-party transactions, Board-level determinants, Firm-level determinants, Institutional environment, and Consequences of RPTs.

Thereafter, data extraction and analysis are conducted using a qualitative software NVivo (version 1.4) according to the descriptive and thematic framework constructed in above section. Results from descriptive, theoretical, and empirical perspectives are presented in following chapters.

2.3 Characteristics of reviewed studies

2.3.1 Journal field and ranking

First, as Figure 2.3 shows, the distribution of the sampled articles by field indicates that the majority of studies are published in the accounting field (44%, 75/171) followed by the finance field (34%, 58/171), with a few published in the ETHICS-CSR-MAN filed (12%, 20/171) and the economic field (11%, 18/171). In terms of journals covered, the top six journals that publish the highest number of studies included in this SLR are Pacific-Basin Finance Journal (10 articles), Journal of Corporate Finance (7 articles), International Journal of Accounting & Information Management (7 articles), Journal of Accounting and Public Policy (6 articles), Journal of Banking and Finance (5 articles), and Journal of Business Ethics (5 articles). Regarding the quality assessment, we followed the 2018 AJG index and ranked covered journals into 5 levels (1, 2, 3, 4, 4*). The majority are published in 2-star journals (48%, 82/171) followed by 3-star journals (26%, 45/171), with a few published in 1-star (12%, 21/171), 4-star (10%, 17/171) and 4 asterisk-star (4%, 6/171) journals.

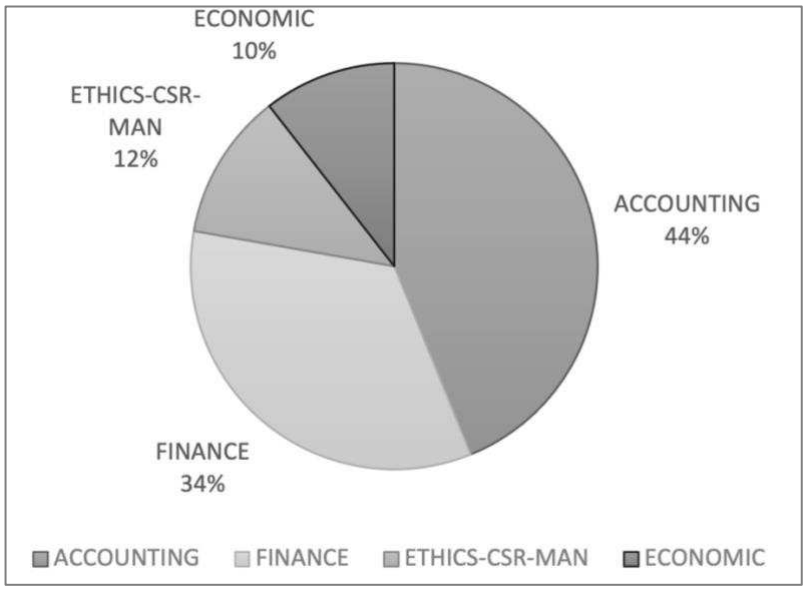

Figure 2.3 Percentage of articles included in this review by journal subject field

2.3.2 Year of studies

Second, as Figure 2.4 shows, research around RPTs commenced from 2006, afterwards, there has been two significant increases in articles that investigate issues surrounding RPTs during 2007 to 2010 and 2018 to 2020. As observed, since 2000, standard setters introduced several regulations that aim to scrutinise firms' involvement of RPTs practice such as 2002 Sarbanes-Oxley Act's prohibition of new executives loans, 2005 the adoption of International Financial Reporting Standards (IFRS) (particular the IAS 24), 2006 SEC

regulations on RPTs disclosure, 2006 CSRC regulations prohibiting loans guarantees and asset transfers among related-parties, and 2010 Italian regulation rules concerning transparency of RPTs. This stream of regulations is encouraged by the high frequency of accounting fraud involving RPTs in the early 2000s. Therefore, academics are motivated to discover and address the problems surrounding RPTs in the past two decades. In addition, it can be generally accepted that the 2008 financial crisis has stimulated a substantial interest among investigators exploring RPTs. This leads to a growth of studies from 3 studies to 10 studies during 2008 to 2010. From 2018 to 2020, due to the expanded influence from RPTs, more and more scholars have been involved in researching around RPTs (from 13 studies to 31 studies). It can argue that RPTs might attract more and more attention in the future, therefore further stresses the importance of this review.

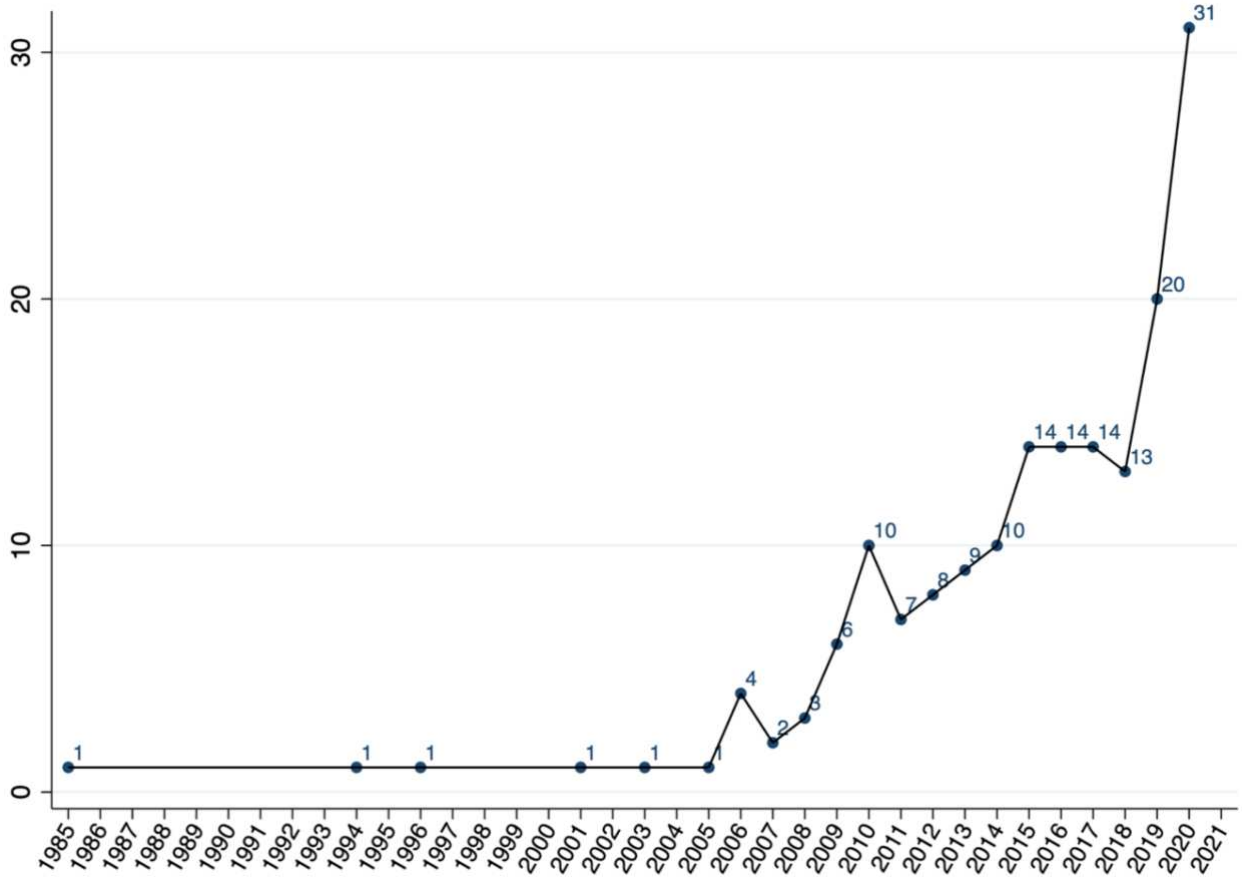

Figure 2.4 Number of studies by year

2.3.3 Region of studies

Third, as shown in Table 2.2, a large majority of studies undertake research based on samples from a single country (92%, 158/171) while only 6 articles (Petutschnig (2015); Lau & Wong (2019); Downs et al. (2016); Rahmat et al. (2020); Juliarto et al. (2013); Chong & Dean (1985)) employ a cross-country research around RPTs. More importantly, within 128 of 171 (75%) included studies focusing on Asian countries, 75 (44%) articles use sample from mainland China. This is as expected since data on RPTs is more accessible in Asian

countries than other areas in the world. While RPTs has been publicly disclosed in China since 1997, data in other regions such as North America, Europe and Oceania require researchers to collect them manually. Additionally, considering these countries are characterised by concentrated ownership structure and poor investor protection in the market, RPTs is found to be more common hence attract more attention in weak institutional enforcement regions.

Table 2.2 Number of studies by region

Region	Total	No. of Studies	Region	Total	No. of Studies
Single region	**158**				
Africa	2		Europe	13	
			France		2
Asia	128		Greece		2
East Asia	107		Italy		8
Mainland China		75	Spain		1
Hong Kong		4			
Korea		11	Oceania	3	
Taiwan		17	Australia		2
South Asia	18		New Zealand		1
Bangladesh		2			
India		5	North America	10	
Indonesia		5	Canada		1
Malaysia		6	Jamaica		1
Western Asia	3		US		8
Jordan		1			
United Arab Emirates		2	South America	2	
			Brazil		2
Cross-regions	**6**				
Not Applicable	**7**				
Total	**171**				

2.3.4 Methodology of studies

Fourth, the data presented in Table 2.3 reveal that most of the included studies adopted a quantitative research method (88%, 151/171). A large number of them rely heavily on regression analysis and archival data from databases such as China Securities Market and Accounting Research (CSMAR), TS 2000 database by the Korea Listed Companies Association (KLCA) and OSIRIS. There are less studies (12%, 20/171) used a qualitative method (Chong & Dean, 1985; Walker & Robinson, 1994; Sherman & Young, 2001; Watkins, 2003) or mixed method (Shaub & Lawrence, 1996); Firth et al., 2019; Kong et al. 2020; Li et al., 2020) in their research.

Table 2.3 Number of studies by methodology

Methodology	No. of Studies
Mixed	11
Qualitative	9
Quantitative	151

Total	171

2.3.5 Measurements of RPTs

Fifth, extant studies use various measures to examine firms' RPTs activities, and these measures are constructed slightly different from each other. One of the most widely used measures of RPTs is the ratio of the amount/value of RPTs to the total assets (Yeh et al., 2009; Hwang & Kim, 2016; Xu et al., 2016; Wang et al., 2019). This measure captures the intensity of overall RPTs activities and control the variance of the size of the firm. Another commonly used RPTs measure is a dummy variable that indicate the existence of RPTs (Berkman et al., 2009; Peng et al., 2011; Bauer et al., 2020). This measure is more acceptable than the prior one since the amount of RPTs can hardly differentiate RPTs used for normal business purposes or RPTs for expropriations. Other studies construct abnormal RPTs by taking the residuals of an ordinary least squares (OLS) model that containing normal aspects of RPTs including industry, leverage, and size (Jian & Wong, 2010; Lo & Wong, 2011; Wang & Lin, 2017; El-Helaly et al., 2018). Likewise, Tareq et al. (2017) construct a model that regress total RPTs on three control and ownership structure related variables and firm size.[4] They then use the expression consists of these three variables to capture RPTs for opportunistic purposes. Rather than focusing on the number of RPTs, other studies develop new techniques to detect opportunistic RPTs. One group of studies detect opportunistic RPTs using the stock return around the announcement of RPTs (Xiao & Zhao, 2014; Wang et al., 2015). Interestingly, a stream of studies evaluate RPTs using the disclose content related to RPTs (Cheung, Jing, et al., 2009; Lei & Song, 2011; Shan, 2019), some construct a score ranking variable for the level of RPT-related disclosure (Shan & Taylor, 2008; Elkelish, 2017b; Sellami & Borgi, 2020). Other studies particularly focusing on related-party sales and purchases make use of the transfer prices to capture controlling shareholders' incentives to extract wealth from minorities through related-party sales and purchases (Cheung et al., 2009; Lo, 2010a; Fisman & Wang, 2015; Downs et al., 2016).

2.3.6 Research streams on RPTs over time

Sixth, according to the analytical structure, we classify research streams into three major groups involving RPTs, its antecedents, and its consequences. As in Figure 2.5, except from one study evaluating FASB 57 and IAS 24 published in 1985 and the other studying on auditor professional scepticism using RPTs as one of the predictors, the earliest cluster of articles focusing on RPTs initiated from 2006. Early research started from underlining the significance of RPTs related to opportunistic activities such as tunneling and earnings management. From 2006 to 2008, researchers seek to find out factors that exacerbate or restrain the occurrence of RPTs encompassing

[4] Three control and ownership related variables include the level of control of majority shareholders, percentage of cash flow right of controlling shareholders, and interactional term between control and cash flow right of controlling shareholders.

mostly conventional governance elements such as board determinants (i.e., independent director, CEO duality, board size, and audit committee) and firm determinants (i.e., concentrated and government ownership, audit quality, firm size, financial determinants). In the same period, consequences of RPTs covering stock market performance, strategical outcomes (e.g., choice of ownership regime) and audit risk have also been investigated. During 2009 to 2014, more firm level antecedents are documented such as other characteristics of ownership, economic and political environment. Consequences of RPTs have been extended to cover other potential firm and audit risks such as leverage, financial distress, tax avoidance, and accounting performance. From 2015 to 2020, social/business ties and internal control weakness are taken into account with respect to determinants of RPTs. Financial statement comparability, financial misstatements, financial fraud, cost of capital, audit fees, and audit delay are explored concerned with consequences of RPTs. With board-level of characteristics being temporarily disregarded during 2009 to 2014, the recent study (i.e., interlocking directors) redraws the interest of board antecedents published in 2017.

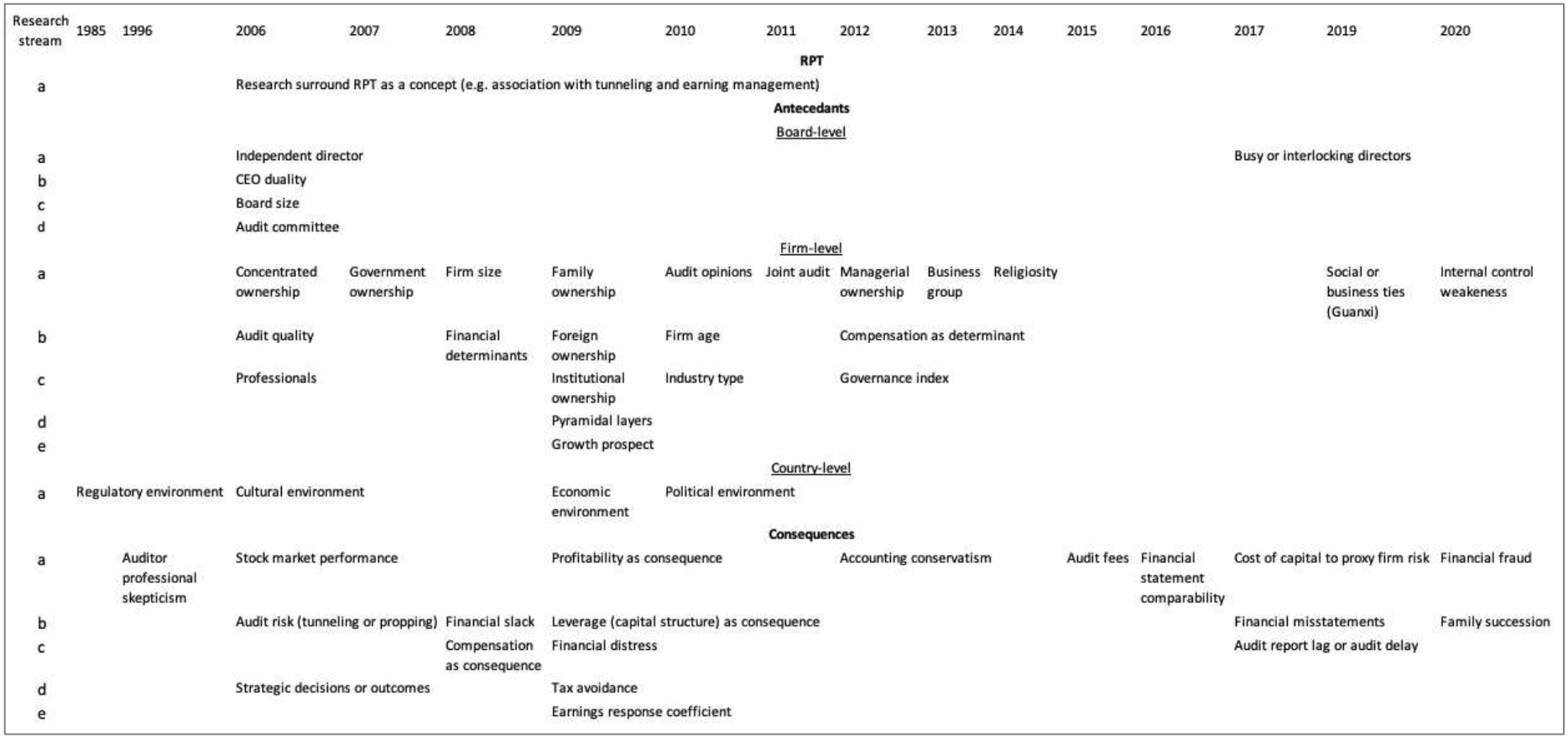

Figure 2.5 Development of research themes on RPTs over time

Note: The figure presents a visual representation of the evolution of different research themes in RPTs research. The year in which a theme started is represented by the placement of the initial words of each theme.

2.4 Theoretical perspectives on RPTs

With agency theory, efficient contract theory, and transaction cost theory being prevalently applied in RPT-related empirical work, other theoretical perspectives emerged in included articles are identified in this review. We categories these theories into four dimensions: economic theories, organisational theories, governance theories, and sociology theories and explicate how these theories are concerned with RPTs as below.

2.4.1 Economic Theories

First, *efficient contract theorists* believe that in a strong-form efficient market, contract exists only if it is efficient due to survivorship bias (Lyons et al., 1996). In line with this, many scholars assume that RPTs are harmless and even useful concerning it can fulfil economic demands of a firm (Fang et al., 2018). Specifically, with the familiarity and trust among other parties, contracts with related-parties (RP) can reduce costs and uncertainty arising from information asymmetry, hence facilitate collaboration of activities and information communication (Downs et al., 2016). Therefore, contrary to the conflict of interest theory, efficient contract theory perceives RPTs as efficient transactions that consistent with shareholders' interest and can be value enhancing (Ryngaert & Thomas, 2012; Balsam et al., 2017; Hope et al., 2019).

Second, *transaction cost theory* illustrates that emerging economics characterised by opaque information environment, lack of fair competition and obstruct with contract enforcement thus increase the costs of arm's length transactions. Comparably, transactions among related-parties can be beneficial concerning the reduced transaction costs (Yeh et al., 2009; Black et al., 2015; Marchini et al., 2018), decreased information asymmetry (Bava et al., 2017; Wang et al., 2019) and enhanced operational efficiency (Zhang & Huang, 2013; Utama & Utama, 2014a; Agnihotri & Bhattacharya, 2019) (Williamson, 1985; Chen et al., 2009). That is, transactions that are relationship-based are expected to compensate the external market imperfections with built mutual trust, deeper reciprocal knowledge (Yeh et al., 2012) and reduction of hold-up problems and better resources allocation (Coase, 1937; Pizzo, 2013). From this perspective, RPTs are viewed as efficient business exchanges used to minimise the cost of transactions (Marchini et al., 2019; Cappellieri, 2020).

Third, internal market theory holds the view that affiliated firms derive benefits from business group through the construction of an effective internal capital and labor market (Leff, 1978). In support with this, Cai et al. (2016) find that companies that are affiliated with a business group have more RPTs (indicates more sufficient internal capital) than companies that are not affiliated firms of a business group. Further, Khanna & Palepu (2000) find that affiliated firms outperform than unaffiliated firms by engaging in activities within the group (i.e., RPTs). This can be attributed to the efficient managerial and capital resources allocation, implicit mutual agreements and trust, and the high-level information transparency within internal market (Chen, 2006). Lin & Yeh (2020) also show that group-affiliated firms engaging in substantial RPTs within the internal market benefit

from less likelihood of under-investment. Yeh et al. (2012) find that firms with increased capital expenditure, net working capital and decreased operating cash flows participate in less related-party lending whereas more related-party borrowing. Taken together, many studies prove that RPTs are utilised as internal capital that complement the insufficient external resources and inefficiency in external market.

2.4.2 Governance Theories

First, a majority of studies interpret RPTs using the *agency theory* which is also the dominant theory applied in the literature (69/171). The key argument implies that RPTs reflects two types of agency conflicts: First is the principal-agent conflict arising from managers use it for earnings management that do not align with shareholder' interest (Yuan et al., 2007; Jian & Wong, 2010; Jiang et al., 2010; Lo et al., 2010a). Second is the principal-principal conflict arising from controlling shareholder exploit it to conduct opportunistic activities (i.e., tunneling) at the expense of the interest of minority shareholders (Cheung et al., 2006; Wong et al., 2015; Black et al., 2015; Fang et al., 2018).

Many studies explore factors that exacerbate this agency problems (manifested in greater RPTs) such as compensation (Balsam et al., 2017; Hope et al., 2019), low corporate accessibility (Firth et al., 2019) and even number of directors (He & Luo, 2018). Conversely, other studies identify determinants that expect to mitigate the conflict of interest and curb opportunistic RPTs such as the SEC's RPTS disclosure policy (Balsam et al., 2017; Hope & Lu, 2020), non-state-owned multiple large shareholder entry (Lin et al., 2020), independent directors (Lo & Wong, 2011; Shan, 2019) and media disclosure tone (Shan, 2019).

In addition, several studies indicate that solutions (the governance mechanisms) for conventional managerial agency problems might be inadequate in dealing with the conflicts between majority and minority shareholders particularly for emerging economies with concentrated ownership structure (Berkman et al., 2009; Huyghebaert & Wang, 2012). Consistent with this, identifying tunneling via RPTs reflects ethical conflicts between controlling and minority shareholder rather than traditional agency conflicts, Du (2014) show that firms with intensive religiosity are less prone to engaging unethical tunneling activities (i.e. RPTs).

A number of other studies investigate the consequences of the agency conflict arising from large shareholders appropriate wealth from minority shareholders such as high cash holdings (Xu et al., 2016), high likelihood in suffering financial distress and being deregistered (Ryngaert & Thomas, 2012), reduced profitability, shareholder wealth and firm value (ex-post RPTs in Ryngaert & Thomas, 2012; related-party guarantees in Berkman, Cole and Fu, 2009; simple RPTs in Kohlbeck and Mayhew, 2010) and destructive M&A performance (Boateng, Bi and Brahma, 2017). [5]

[5] Ex-post RPTs are transactions initiated after a counterparty becomes a related-party. Simple transactions include loans, guarantees, borrowings, consulting, legal services and leases.

Several studies go deeper discover potential channels through which controlling shareholder (or managers) use RPTs to extract benefits from minority investors (or shareholders) such as divert cash savings from tax planning to themselves (via related-party loans) instead of return them back to shareholders (Bauer et al., 2020), large shareholders enjoy benefits from corporate philanthropy at the expense of minority shareholders (Oh et al., 2018).

Second, under the *stakeholder theory*, in addition to shareholders, any individual or group that have direct financial transactions with a firm (i.e., suppliers, creditors, customers, government, local authority) are expected to influence corporate behaviours and performance (Donaldson & Preston, 1995). For instance, Juliarto et al. (2013) find impact of business environment on the amount of RPTs and Wen & Philomena (2006) find cultural environment impact firm's disclosure of RPTs. Moreover, stakeholder theory asserts that the goal of the firm is to benefit all stakeholders (Hasnas et al., 1998). Therefore, it expects corporate governance mechanism to be effective in protecting interests of stakeholders and constraining opportunistic RPTs (Wasan et al., 2020).

Third, an emerging theory that is commonly used in interpreting the motives behind RPTs is the *contingency theory*. This theory integrates both the agency theory indicating RPTs as detrimental transactions and contract theory indicating RPTs as efficient transactions (Pizzo, 2013). From a contingency perspective, studies articulate that the economic implications of RPTs, either value-destroying or value-enhancing, needed to be studied under the premise of the governance mechanism (Marchini et al., 2018) and institutional environment (Carlo, 2014; Bava & Di Trana, 2016, 2017).

2.4.3 Sociology Theories

First, *social capital theory* defined social capital as the aggregate of the real and potential resources imbedded in, accessed through, and originated from the network of connections held by an individual or social unit (Nahapiet & Ghoshal, 2009). Two types of social capital has been classified by Adler & Kwon (2002): the first concerns one's connection with external actors known as a "bridge" forms of social capital, and the second indicates the relations between individuals or groups within a collectivity called the "bond" forms of social capital. Particularly in an emerging economies, related-party transactions are regarded as firms' bonding social capital which can reduce transaction costs, facilitate cooperation, support with internal resources and offer discounted/favorable prices (Tsoodle et al., 2006; Cao et al., 2016). Many studies use RPTs as a proxy for firm's social capital and find it benefits the firm in terms of increasing firm's value (Doong et al., 2011) and being more incline to ethical financing choices (Abd Majid et al., 2020). However, from an opposite perspective, sometimes these transactions with related-parties might benefit the overall business group at the expense of investors outside the group (e.g., reduced post-IPO performance in Cao et al. (2016).

Second, *resource dependence theorists* state that human capital (i.e., directors' knowledge and skills) and relational capital (i.e., networks and communication) are vita resources that can influence firm's performance

(Juliarto et al., 2013). Accordingly, Juliarto et al. (2013) proposed that regions possessing more relational capital (proxy by the freedom to trade internationally index) are considered to establish a more competitive business environment. Under such an intensive pressure, firms are reluctant to breach corporate governance norms and standards which may result in punishments by outside investors (e.g., discounted value) and resources providers (e.g., suppliers and labour). Specifically, they assumed less amount of tunneling via RPTs in regions with competitive business environment. Even though, they failed to find supportive results.

Third, drawing on *institutional theory*, various institutions in society, such as the regulatory institution and the legal system, provide exogenous forces that require firms to be in conformity with particular rational behaviour norms (DiMaggio & Powell, 1983; DiMaggio & Powell, 1991). In addition, they state that firm-level characteristics and country-level factors can affect the strength of institutional enforcements including international accounting standards (i.e., the disclosure requirement of RPTs) (DiMaggio & Powell, 1983; DiMaggio & Powell, 1991).

Consistent with this, Elkelish (2017b) find that a highly competitive product market diminishes firm's incentive to comply with RPT-related disclosure policy. In contrast, other studies find positive influence of regulatory institutions. Specifically, Juliarto et al. (2013) identify that in an efficient regulatory business environment, firms become less motivated to engage in risky activities such as expropriations to avoid attracting extra political and regulatory attentions. Similarly, Huang (2016) show that the 2008 enterprise tax reform dramatically increased the level of RPT-related disclosure in Chinese firms.

Some scholars further claim that institutional theory seems to be more appropriate in explaining expropriations than traditional agency theory which emphasises the internal governance system (Huyghebaert & Wang, 2012). For instance, Huang (2016) show that the magnitude of tunneling in China attributes to a few institutional characteristics such as concentrated ownership structure, lax corporate governance, weak financial institutions and weak legal environment.

Interestingly, based on the institutional theory, other studies propose different interpretations regard the role of outside directors. They illustrate that the requirement of outside directors might not results in a better governance quality but represents as a consequence of the process that in order to make organisations more similar (DiMaggio & Powell, 1983). In this vein, Oh et al. (2018) assume that the role of outside directors in curbing RPTs is stronger when the number of outside directors exceeds the regulation requirement.

2.5 Determinants of RPTs

A broad body of literature has been interested in uncovering either board-level or firm-level of governance characteristics that might exacerbate or restrain opportunistic RPTs. Among which, board independence, ownership characteristics, and political connection caught enormous attention. Audit committee, professionals,

director compensation, and financial determinants are perceived as emerging themes that fewer studies have investigated on. Comparing to the impact of corporate governance, studies take a macro-level view on looking at institutional or national environment that influence the occurrence of RPTs are relatively less. The majority investigate how regulatory enforcement influence the practice of RPTs and investors responses accordingly. Fewer studies seek to explore other cross-national differences including economic, cultural, and political system that might influence insiders' incentives to engage in RPTs.

2.5.1 Board characteristics as determinants of RPTs

2.5.1.1 Independent directors

Empirical studies inform that the separation of ownership and control generates an agency problem between managers and shareholders. In this circumstance, independent directors on board represent a monitoring role in ensuring managers work in the best interests of shareholders (Fama & Jensen, 1983). Numerous studies show that the presence of independent directors leads to decreases of RPTs in North America (Balsam et al., 2017), Jordan (Abdullatif et al., 2019), and enhancement of disclosure of voluntary RPTs in China (Hu et al., 2012; Shan, 2019; Wu & Li, 2015).[6] Board independence therefore serve as an efficient governance mechanism to mitigate the exploitation of RPTs. Even though, other studies find less impact of independent directors on RPTs. Specifically, Cheung et al. (2006) and Cheung, Jing, et al. (2009) both use samples from Hong Kong find no significant difference of the proportions of independent directors between firms with or without RPTs. Studies from China (Huyghebaert & Wang, 2012), United Arab Emirate (UAE) (Elkelish, 2017), and Korea (Doo & Yoon, 2020) all report no significant influence of independent directors on the magnitude of RPTs. They clarify that with independent directors appointed by controlling shareholders, the role of independent directors to restrain controllers from appropriate minority investors is then diminished. Even so, other studies also propose that the impact of board independence on RPTs replies on certain firms' attributes including political connection (Huyghebaert & Wang, 2019, 2012; Wang, 2015), firms' fundamental uncertainty (Wu & Li, 2015), and director compensation (Hu et al., 2012).

Besides studies concentrate on the amount of RPTs, there has been ongoing interest in examining the impact of independent directors on prices of RPTs and market reactions to the announcement of RPTs. Two studies focus on the price of RPTs but find controversial results (Cheung, Jing, et al., 2009; Lo et al., 2010). While Cheung, Jing, et al. (2009) show no effect of independent directors on the price of RPTs, Lo et al. (2010) find the more independent directors the lower of the price of RPTs. Reasons for the controversial results might be twofold:

[6] Balsam et al. (2017) developed three dependent variables representing the probability of RPTs: (1) firm reports at least one RPT (2) firm reports at least one CEO RPT (3) firm reports at least one outside director RPT.

First, the proportion of independent directors on board is higher in mainland China in Lo et al. (2010) (34.5%) than that of in Hong Kong in Cheung, Jing, et al. (2009) (29%).[7] Therefore, the larger proportion partly explain why the monitoring effect of independent directors is more pronounced in mainland China but not in Hong Kong. *Second*, it might attribute to their different choices of the type of the transaction, asset transactions in Cheung, Jing, et al. (2009) whereas sales of goods/services in Lo et al. (2010). With regard to the impact of independent directors on the market reactions of RPTs, while Cheung et al. (2006) find no significant results in Hong Kong, Wong et al. (2015) reveal a positive relation between independent directors and market values of firms with RPTs in China. Taken together, although a few find no relation between the two, board independence and RPTs is largely proved to be negative correlated underlining a monitoring role of independent directors on opportunistic RPTs.

2.5.1.2 Board size

A larger board has access to a greater number of specialists, insights, and criticism which offer a wider information environment for decision-making (Coles et al., 2008). On the other hand, an oversized boards suffers from team coordination and processing problems, which, in turn, may outweigh the benefits of having a larger group of members on board to draw on (Jensen, 1993; Klein, 2002). Most included articles around RPTs find evidence consistent with the later argument that smaller boards are perceived to be more efficient in deterring opportunistic RPTs than larger boards. For example, Balsam et al. (2017) and Abdullatif et al. (2019) find large boards result in a higher engagement of RPTs of firms in US (2001-2012) and Jordan (2011-2017). Similarly, in Elkelish (2017) 's investigation of RPT disclosure index, they find that firms with small boards have better level of RPT-related disclosure. This supports with the notion that smaller board provide firms with more efficient and transparent information environment. However, other studies suggest no impact of board size on RPTs (Cheung et al., 2006; Huyghebaert & Wang, 2019, 2012). This finding is similar to that in board independence where both Cheung et al. (2006) and Huyghebaert & Wang (2012) find insignificant influence of board independence and board size on RPTs. Taken together, with a few exceptions, evidence indicates that a smaller board works effectively to restrain firms from involving RPTs.

2.5.1.3 CEO duality

Duality position is perceived as a threat to the monitoring role of board of directors, as it aggravates the concentrated decision-making power of the Chief Executive Officer (CEO) including the appointment of the directors (Jensen, 1993). In turn, a separation of CEO and Board Chair is linked with an enhanced board performance and a stronger internal control mechanism. In this vein, scholars contend CEO duality can stimulate

[7] CSRC published a guideline requiring one-third of the directors should be independent directors in 2001.

expropriations by means of RPTs. In support with above theory, CEO duality is found to be associated with greater amount of cross-border-RPTs in China, a decrease of outside directors' RPTs whereas an increase of CEO RPTs in US (Balsam et al., 2017; Hu et al., 2012).[8] It shows that CEO, while serves in duality roles, can hinder outside directors from engaging RPTs but take the advantage to involve in RPTs themselves.

Nevertheless, more articles in our sample recognise no relation between CEO duality and RPTs encompassing amount of RPTs, prices of RPTs, stock return subsequent to RPTs, and disclosure of RPT-related content (Cheung, Jing, et al., 2009; Cheung et al., 2006; ElKelish, 2017; Gallery et al., 2008; Lo et al., 2010). Surprisingly, in Jordan, Abdullatif et al. (2019) find CEO duality results in a reduction of RPTs. They attribute this to the power of controlling shareholders that will undermine the power of the CEO in Jordanian companies. Taken together, these findings reveal that CEO duality is neither an accelerator to the occurrence of RPTs nor a mean of curbing insiders from RPTs. Importantly, the relation between CEO duality and RPTs varies among transactions with different related-parties and countries with different institutional characteristics.

2.5.1.4 Audit committee

Audit committee is another essential component to the governance of RPTs, concerning that every transaction with related-parties (RPs) requires an approval from the audit committee before its implementation. Unfortunately, studies in various regions including Hong Kong (Cheung et al., 2006), Korea (Doo & Yoon, 2020), and Australia (Gallery et al., 2008) consistently find no impact of the establishment of audit committee on the amount of RPTs. However, two studies examining the price of RPTs present contrary results. Different from Lo et al. (2010), Cheung, Jing, et al. (2009) discover that listed firms with audit committees purchase assets from RPs with lower prices and receive higher prices in divestments from RPs. Stated differently, an audit committee help restrain expropriations through price manipulations in RPTs.

Noticeably, other studies delve into the link between quality of audit committees and RPTs. Although Mnif Sellami & Borgi Fendri (2017) find no impact of the size and number of meetings of audit committee on RPT-related disclosure, both Mnif Sellami & Borgi Fendri (2017) and Doo & Yoon (2020) verify that independent audit committee members encourage more RPT-related disclosure and constrain tax-induced RPTs in South Africa and Korea, respectively. Financial experts on audit committee also enhance internal governance competence, thus reduce price manipulations via RPTs (Lo et al., 2010) and maintain RPT-related disclosure transparency (Mnif Sellami & Borgi Fendri, 2017; Rahmat et al., 2019). Briefly, in contrast with the presence of audit committee, independent directors and financial experts on audit committee play efficient role in scrutinise opportunistic RPTs.

[8] Cross-border-RPTs are transactions occurs between a domestic enterprise and its related firms abroad. It is measured by the logarithm of the annual transaction value.

2.5.1.5 Professionals

Focusing on accounting and financial experts on board, Doo & Yoon (2020) show that experts on board reduce RPTs used for tax purposes and this effect becomes more pronounced in firms with concentrated ownership. Likewise, Cheung, Jing, et al. (2009) also show that listed firms with analyst following transact with RPs in favourable prices. These suggest that professionals in firm help constrain opportunistic RPTs. Report from financial advisors might be a sign of the firm's disclosure environment transparency. Concerning this, Cheung, Qi, et al. (2009) and Cheung et al. (2006) find that value-destroying RPTs are associated with an absence of financial advisor report, while value-enhancing RPTs are accompanied with voluntary financial advisor "fairness" reports in firm.[9] Nevertheless, Cheung et al. (2006) find no influence of the reputation of financial advisor and analyst following on RPTs' subsequent stock return. In a similar vein, presuming China's two-tier board system represent an improved corporate disclosure environment, Shan (2019) only find independent directors but not professional supervisors being efficient in encouraging RPT-related voluntary disclosure.

In general, the mixing results in the effect of board characteristics on RPTs conclude that, corporate board cannot be the only internal control mechanism to alleviate the agency problem between majority and minority shareholders. Besides, given shareholders have the right to appoint and remove directors, it becomes more challenging for board of directors to monitor opportunistic RPTs conducted by controlling shareholders.

2.5.2 Firm characteristics as determinants of RPTs

2.5.2.1 Ownership characteristics

2.5.2.1.1 Ownership concentration

Two alternative arguments explain how ownership concentration influence RPTs. One argues that the prevalence of ownership resolves free-rider in management monitoring, hence managers work in the best interest of the firm (La Porta et al., 1998). For instance, Bansal & Thenmozhi (2020) show that concentrated ownership motivates beneficial RPTs such as cash and loan receipts from RPs. They did not find firms with concentrated ownership are incentivised for opportunistic RPTs such as asset sales and acquisitions to and from RPs. Others state that, concentrated ownership however exacerbates principal-principal conflicts, which lead to expropriation of minority shareholder's value (Young et al., 2008). In support with this, several studies find

[9] RPTs being value-destroying or value-enhancing is differentiated based on the sign of subsequent cumulative abnormal return.

concentrated ownership enlarge opportunistic RPTs including sales and purchases of goods/services to and from RPs (Abdullatif et al., 2019; Berkman et al., 2009; Hu et al., 2012; Lo et al., 2010).

Other work focusses on RPT-related disclosure and prices of RPTs also document mixed results. For example, in Indonesia, Utama & Utama (2014) find higher concentrated ownership reduce the likelihood of firm disclosing non-operating RPTs-related content. This reveals that concentrated ownership provide opportunities for controlling shareholders to tunnel through non-operating RPTs, hence, they are reluctant to expose those material. Surprisingly, in UAE, Elkelish (2017) discover a concentrated ownership structure help enhance the transparency of RPT-related disclosure, though this only occurred in financial sector who are under severe scrutinisation of the central bank. Similarly, when both centre on the price of RPTs, Lo et al. (2010) find no impact of ownership concentration on price of sales to RPs, Cheung, Jing, et al. (2009) show lower prices paid in asset acquisition from RPs when firms in a concentrated ownership structure. It reveals that largest shareholder might derive benefits from RPs by paying less in asset acquisitions, while not in sales to RPs.

Using unique research designs, several studies investigate this relation in specific event settings. In accordance with Yuan et al. (2007) who find an inverted U-shape in this relation, J. Chen et al. (2017) discover an N-shape (i.e., incline-decline-incline) between controlling ownership (captured by transfer of control rights) and RPTs. Multiple large shareholder entry is found to decrease RPTs when newly entered are non-state investors (C. Chen et al., 2019). Target on firms encountering high tax burdens, Doo & Yoon (2020) indicate that concentrated ownership induces RPTs used for tax-motivated income shifting. On the whole, employing different measures and settings around RPTs, the link between concentrated ownership and RPTs is unresolved. Future research interested in this relationship may consider the identity of the controlling shareholders (e.g., founder, manger, state or non-state). Besides, research investigating ownership concentration and the valuation impact of RPTs is in demand.

2.5.2.1.2 Foreign ownership

Foreign equity ownership is viewed as an effective governance mechanism that can mitigate corporate information asymmetry therefore reduce conflict of interest between shareholders. In accordance with this notion, Kong et al. (2020) suggest that foreign institutional ownership improve corporate governance through a reduction of RPTs. Even though, Elkelish (2017b) only find the increase of foreign investors enhance RPT-related disclosure of non-financial firms but not for financial firms. They attribute this to the stringent regulations and scrutinisation by the UAE central bank. Comparably, using sample from China, Shan (2019) show that foreign ownership via the qualified foreign institutional investors programs significantly improve voluntary RPT-related disclosure which reinforce the governance role of foreign investors.

Further, other work investigates the incremental effect of foreign shareholdings on the relationship between RPTs and its antecedent or consequence. For example, Agnihotri & Bhattacharya (2019) discover that Indian

firms with foreign shareholders experience weaker adverse impacts from RPTs on internationalisation. Two research emphasis on the influence of China's 2008 tax reform on RPTs. Focusing on related-party loan guarantees, Huang (2016) find a lower level of increased related-party loan guarantees in foreign-invested firms compared with domestic firms after the 2008 enterprise income tax reform. They illustrate that this is because the increased tax rate on foreign-invested firms induces an increased borrowing which to some extent increase firms' credit risk therefore reduce foreign-invested firms' ability to issue loan guarantees to related-parties. More recently, focusing on related-party loans, Huang (2019) show that there is a higher level of decreased intercorporate loans in foreign-invested firms than domestic firms after this tax reform. They therefore interpret that foreign investor execute a supervision role on Chinese listed firms engaging expropriations. Interestingly, focusing on RPTs and firms' philanthropy decision, Oh et al. (2018) reveal that foreign shareholders aggregate the negative relations between RPTs and firm's philanthropy expenditures. This is explained that when internal shareholders are highly independent (high level of foreign investors), they value less on the relationships with external investors therefore perceive philanthropy as useless investment.

2.5.2.1.3 Family, institutional and managerial ownership

Included articles investigate family ownership and RPTs using sample from different contexts. In Hong Kong, while examining the impact of the proportion of family ownership on transfer prices, Cheung et al. (2009) fail to find price differences among assets acquisitions with related-parties and with unrelated parties in firms with family ownership. Investigating in a cross-country setting, Juliarto et al. (2013) find insignificant results as Cheung et al. (2009) and they attribute it to the prevailing conditions of family ownership in Southeast Asian[10] firms. Nevertheless, using sample from India, Agnihotri & Bhattacharya (2019) find positive results. The authors show that the concentration of family ownership exacerbate the decrease of internationalisation caused by RPTs. The distinct differences in these two studies indicate that family ownership plays a key role in India in influencing firms' strategical decision in terms of internationalisation.

Several studies pay particular attention to institutional ownership and provide different evidence. Berkman et al. (2009) find state non-corporate controlling shareholders have less incentives to provide related-party guarantees to the listed firms than state corporate controlling shareholders. This is because that it is difficult for non-corporate bureaucrats to transfer wealth through related-party guarantees as cash flow to taxpayers rather than these state-connected non-corporate controlling shareholders. Contrarily, Lo & Wong (2011) find that firms with large fraction of institutional investors are less likely to be sanctioned by CSRC for non-compliance of mandatory disclosure of RPTs which emphasise the monitoring role of institutional investors on maintaining transparent information environment. Grouping firms based on the level of intercorporate loans, G. Jiang et al. (2010) find institutional ownership are highest in firms with the least level of intercorporate loans. It indicates

[10] Including Indonesia, Malaysia, Singapore, Thailand and Philippines.

that institutional investors perceive these intercorporate loans to be detrimental to firm's performance therefore are reluctant to invest in these firms.

Literature on managerial ownership show two opposite views. On one side, managerial ownership is sometimes considered as an efficient internal governance mechanism that help align managers' interests with shareholders' interests, in turn, reduce managers' incentives in obtain benefits at the expense of shareholders. Besides, to attract and satisfy outside investors, managers with more shareholdings are more motivated in constraining opportunistic RPTs (Jensen & Meckling, 1976). For instance, using sample from Chinese companies, two studies find different results. Hu et al. (2012) claim they do not find significant relation between the percentage of equity held by executives and the magnitude of cross-border RPTs. Nevertheless, while focusing particularly in state-owned Chinese firms, Huyghebaert & Wang (2019) verify that higher proportion of managerial ownership effectively constrain value distribution activities via RPTs. On the other side, other scholars state that as the ownership rights held by managers increase, their interests or intentions become more match with the large shareholders hence the conflict of interests and information asymmetry among insiders and outsiders aggregate (Morck et al., 1988). In a cross-country context, Juliarto et al. (2013) find empirical evidence supporting that higher degree of managerial ownership can be a bad sign of internal governance manifests in a larger scale of expropriation via RPTs. Concentrating on ownership held by the Chairman or CEO of the firm, Zheng et al. (2014) find similar results that the existence of large ownership held by the management impair the firms' performance through an increased level of related-party loans.

2.5.2.2 Firm size

Two dominant arguments explain the association between firm size and RPTs. On one hand, the first argument claims that controlling shareholder have higher likelihood to expropriate larger firms due to the larger value to tunnel than smaller firms (Berkman et al., 2009). Using different kinds of RPTs: guarantees in Berkman et al., (2009), sales and loans in Jian & Wong (2010), multiple types in Berkman et al., (2010), Balsam et al., (2017), Kohlbeck & Mayhew (2010) and not classified in Chen et al., (2017). These studies consistently find that larger firms have more incentives to conduct RPTs than smaller firms.

On the other hand, the second argument claims that, with well-established internal governance mechanisms and more intensive monitoring from outside stakeholders (e.g., regulators, public, media and civil society), large firms may have less opportunities to engage in RPTs. For instance, using sample from China, G. Jiang et al., (2010) find smaller firms rather than larger firms are more likely to issue loans to related-parties. Using sample from US, Ryngaert & Thomas (2012) also find higher level of RPTs in small firms than in large firms, they attribute this to that RPTs always fall within a typical dollar range therefore makes them relatively larger as divided by total assets in small firms than in large firms. Further, assuming larger firms have better external monitoring, in Australia, Gallery et al., (2008) find that large firm size could restrain the occurrence of RPTs (i.e., cash payments and loans). Thereafter, in a more advanced analysis, Cheung, Jing, et al. (2009) find firms

conduct beneficial RPTs (e.g., direct cash assistance or loans from related-parties and transactions with non-listed subsidiaries) are larger in size, while firms conduct opportunistic RPTs (e.g., asset sales and acquisitions, asset swaps, trades of goods and services and cash assistance or loans to related-parties) are smaller in size. Similarly, Utama & Utama (2014b) also find that large firms tend to conduct RPTs for efficient purposes while small firms are likely to conduct RPTs for opportunistic purposes. Specifically, they identify the motivation by testing the relation between RPTs size and RPTs disclosure. They find positive association (between RPTs size and RPTs disclosure) in larger firms indicating large firms conduct RPTs for beneficial purposes therefore they are satisfied with disclosing detail content regard RPTs.

2.5.2.3 Audit quality

Extant articles focusing on audit quality and RPTs report a negative relation, three interpretations are found in the literature.

First, most of reviewed studies interpret the negative relation as that, big audit firms reflect higher audit quality and better external governance, and this good governance can curb the incentive to expropriation via RPTs. For example, evidence from China (Cheung, Jing, et al., 2009), France (Bennouri et al., 2015) and New Zealand (Bhuiyan & Roudaki, 2018) consistently show that big audit firms are effectively in restricting the practice of RPTs. In an advanced research design, Cheung et al., (2006) and Fang et al. (2017) find that firms audited by big audit firms experienced positive abnormal return during the announcement of RPTs, implying the market also recognise the monitoring role of external auditors. Except from the benefit (improved firms' value) triggered by external auditors, Fang et al. (2017) emphasise the sacrifice of appointing big audit firms, that is, paying higher audit fees and encountering more intensive restriction on diversionary activities (i.e., related-party sales and intercorporate loans). Therefore, one can argue that the governance role of external auditors on firms' RPTs practice can be twofold (benefit with an expense). Additionally, other work investigates the impact of audit quality on the extent of firms' RPTs-related disclosure. In particular, Elkelish (2017b) reveal that audit quality can enhance RPT-related narrative disclosure in terms of reporting the nature of the related-party relationship or terms and conditions of the transactions. However, Utama & Utama (2014b) find no impact of audit quality on the disclosure level of RPT. Notably, they also find no relation for other governance factors such as ownership structure and industry regulation. As such, it seems that their inclusion of a corporate governance practice variable might strongly moderate or absorb the mitigating effect of the other governance factors including audit quality. More recently, another study provide evidence on how external auditor influence firms decision or strategy in performing opportunistic activities. Examining a substituted association between RPTs and real earnings management, El-Helaly et al., (2018) suggest that this substitution effect turn to be insignificant while the firm is a client of one of the Big 4 audit firms. In other words, under the inspection of external auditors, firms resort to achieve opportunistic behaviours through real earnings manipulation as well as RPTs.

Second, the accounting uncertainty hypothesis clarify that the reporting and subjective detection process of RPTs accumulate the uncertainty of this practice, in this case, auditors have the chance to cooperate with their clients (negotiate the definition and disclosure of abnormal RPTs) to reduce the number of reported RPTs. Bennouri et al., (2015) provide evidence that after the adoption of IAS 24 (which mitigate the accounting uncertainty), the negative association between audit quality and RPTs disappear.

The third interpretation stands on behalf of the client firm, they articulate that firms with more RPTs are reluctant to engage with a big audit firm which can impose more intensive restriction on opportunistic activities. For example, in Indonesia, Habib et al., (2017) document that the practice of RPTs can prevent the firm from appointing a Big 4 auditor. In addition to this, Fang et al. (2017) also emphasise that big audit firms are linked with higher audit fees which can discourage listed firms from hiring external auditors from big audit firms.

Contrary to the above evidence concerning big audit firms in constraining RPTs, other studies find either no relation or positive relation and they contribute this result to certain firm-level or country-level factors. For example, in Australia, Gallery et al., (2008) document no relation between audit quality and RPTs, this can attribute to the relative smaller firm size in their sample (using "commitments test entities"[11]). Due to the average smaller firm size within the sample, only less than half of their sample firms are audited by Big 4 auditors, this possibly diminish the impact of audit quality on reducing RPTs. In another case, Abdullatif et al., (2019) find big audit firms induce more RPTs within the firm. They attribute this to the weak quality of all audit firms in Jordan as well as the majority client firms are commonly coupled with closely held governance system (i.e., high ownership concentration) which further moderate the external monitoring function and lead to higher level of expropriations.

Taken together, institutional environment such as audit market as well as firm size (which can influence the choice of external auditors) can largely determine the association between external auditors and RPTs. Therefore, research that exploring this relationship in cross-country settings or applying a comparison approach between large and small firms may contribute to both the RPTs and external auditor literature.

2.5.2.4 Political Connection

Two contradictory views dominant in extant literature regarding political connection. On one side, scholars suggest that the involvement of government in listed firms could alleviate agency problems by improving information transparency. With respect to RPTs, political connected controlling shareholders are less likely to engage in RPTs and are more likely to voluntary disclose RPTs in order to minimize investors' negative perceptions of these opportunistic activities (Yuan et al., 2007; Lo & Wong, 2011). For example, Haveman et

[11] "Commitments test entities" refer to firms that are distinguished by the Australian Securities Exchange listing requirements and associated additional quarterly cash flow reporting requirement.

al. (2017) build a political embeddedness[12] dummy variable to indicate the political connection of the listed firms in each year. They conclude that political embeddedness has a negative impact on related-party loans and a positive impact on access to bank loans. This is because that being political embedded help the listed firms to obtain financial resources from the bank and defend themselves against pressures from large shareholders to issue related-party loans.

On the other side, most scholars propose that government involvement may exacerbate RPTs within the listed firms. With privileged access to private information, political connected controlling shareholders are well-positioned to engage in more RPTs and hence are less motivated to maintain a transparent information environment (i.e., the extent of voluntary disclosure of RPTs) (Shan, 2019). In support with this, Jian & Wong (2010) find that state-controlled firms are more likely to use related-party sales for propping (via inflated operating profits). Given the larger number of related-party sales in state-controlled firms than non-state-controlled firms, state-controlled firms have more opportunities to hide their earnings manipulations in normal related-party sales.

Interestingly, several studies go further exploring the implications of RPTs conducted by state-owned firms (Peng et al., 2011; Huyghebaert & Wang, 2012, 2019). Specifically, they reveal that state-owned RPTs firms have more incentives or are more effective than non-state owned RPTs firms in terms of propping in poor financial condition or tunnelling in sound financial condition. This is proved by a much higher (lower) market value in state-owned RPTs firms in poor financial condition (sound financial condition) than that of non-state owned RPTs firms. Briefly, these reinforce the power of state controlling shareholders on either helping listed firms during financial difficulty or grabbing from them during financial wealthy.

Other studies examine the moderating role of political connection on RPTs and other corporate or institutional factors. For example, Berkman et al., (2010) find that regulations aiming to protect minority shareholders from expropriation are effective in constraining the detrimental value effect of RPTs in private-controlled firms but not state-controlled firms. This is because, due to the weak legal system in China, investors became doubtful of the efficacy of regulations on monitoring state-controlled firms. Recently, Huyghebaert & Wang (2019) find that the monitoring role of internal corporate governance mechanism (e.g., ownership concentration, managerial ownership, independent directors and board size) in curbing RPTs became stronger in state-controlled firms, indicating the weaker protection of minority shareholders in state-owned firms. Notably, Berkman et al., (2009) find state-owned entity with a large proportion of private non-controlling shareholder have less incentives to issue related-party guarantees. This highlights the role of private non-controlling shareholders in obstructing state related controlling shareholders from engaging opportunistic activities.

[12] Political embeddedness equals to one in years when an executive or director served as a bureaucrat ranked as a chief officer or a deputy at division (chu) level, department (ju) level or ministry (bu) level.

2.5.2.5 Compensation

Some scholars have drawn attention to the associations between compensation and RPTs. Concerning RPTs reflects agency problems within the firm, board of directors are commonly viewed as one of the governance mechanisms aiming to alleviate the conflict of interests and protect shareholders' interests. One strand of literature identifies the role of compensation in explaining directors' motivation in efficient monitoring. Even though, overcompensating to some extent impede directors' independence in turn damage the efficacy of their governance function. In line with this, Hope et al., (2019) show that RPTs are significantly driven by directors' excessive compensation within firms in US. Focusing on outside directors' compensation in China, Hu et al. (2012) claim that block shareholders are motivated to attract outside directors using high level of compensation and in turn transfer wealth to themselves via RPTs. Accordingly, they show that a high degree of outside directors' compensation enlarges the magnitude of cross-border RPTs. Surprisingly, adopting an extensive research design concerning comparison between different related-parties (i.e., CEO and outside director), comparison before and after the 2006 SEC RPTs disclosure regulation and examination from both directions (compensation as a determinant and as an effect), Balsam et al., (2017) find different results. The authors note that outside director RPTs are consistently positively associated with CEO compensation in pre-2006 period and are not significantly associated with CEO compensation in post-2006 period. This suggests that RPTs are perceived as a sign of weak governance in pre-2006. Outside directors who engage in RPTs are less independent and more subjective therefore are more incline to accept excessive CEO compensation. Conversely, in the post-2006 period, RPTs are less likely to be exploited for expropriations and are more likely to be used for normal business or for efficient contracts purposes. In this case, RPTs do not relate to compensation after 2006.

2.5.2.6 Other corporate determinants

A stream of studies tends to discover other attributes of firms that are likely to indicate the engagement of RPTs such as financial determinants and information or reporting relevant determinants.

The prospect theory posits that firms prefer to manage earnings instead of reporting losses (Skinner & Sloan, 2002), therefore many scholars assume firms with lower profitability tend to be more motivated to manage earnings and transfer wealth via RPTs. Consistent with this, studies in different context show similar results. In Australia, Gallery et al., (2008) find negative effects of firm profitability on cash payments and loans to related-parties. In Italy, Bava & Di Trana (2017) find related-party revenues increased in response to a decrease in firm profitability, indicating that loss companies (proxied by return on investment) are likely to turn to related-parties for revenues to save them from encountering risks (e.g., reporting loss, delisting and lose share issuance rights). In US, Balsam et al., (2017) find that the motivations of loss firms engaging RPTs decreased following the 2006 SEC disclosure requirements, this emphasises the role of regulations on alleviating the issue of loss firms exploiting RPTs. In India, Bansal & Thenmozhi (2020) strengthen the crucial role of profitability in determining

the relationship between concentrated founder ownership and RPTs, they find firms with concentrated ownership are more likely to engage in RPTs when firms are in a profit loss.

Focusing on leverage as antecedent of RPTs, literature show contrary findings. On one side, considering both leverage and loan RPTs reflect firms' financial capacity, scholars propose that firms that are capable to be highly levered are able to issuing more loans to related-parties (Fisman & Wang, 2010; Liu & Tian, 2012; Abdullatif et al., 2019). On the opposite side, Du et al., (2013) find that the lower the leverage ratio the higher the occurrence of RPTs. From the perspective of the firm, highly levered firms are more reluctant to provide related-party loan guarantees in an effort to take charge of the cost of capital. Alternatively, on behalf of shareholders, large shareholders are more incline to expropriate low levered firms, given low leverage always indicates a healthier financial condition coupled with abundant resources.

2.6 Institutional environment as determinant of RPTs

2.6.1.1 Regulatory enforcement

The regulatory enforcements aiming to protect minority shareholders and scrutinise opportunistic RPTs construct another topical theme in RPTs literature. Existing studies have investigated regulatory impacts in various contexts, such as China (Berkman et al., 2010; Liu & Tian, 2012; Li et al., 2020; Bauer et al., 2020), Taiwan (Hwang et al., 2013), Korea (Black et al., 2015), and US (Hope & Lu, 2020). During the period from 2000 to 2006, China Securities Regulatory Commission (CSRC) issued three regulations to resolve tunnelling in the form of RPTs. Announced in 2000, the first regulation largely increased minority shareholders' voting rights at annual meetings and prohibited beneficiaries parties from voting on RPTs. Afterwards, in 2006, to protect minority shareholder from expropriations, CSRC further introduced two rules to monitor RPTs: One rule prohibits provisions of guarantees to controlling shareholders. The other rule requires all assets diverted by controlling shareholders to be returned by 2006 and imposes disclosure requirements of asset transfers by controlling shareholders.

Not surprisingly, since then, a cluster of researchers attempt to examine the efficacy of these regulations by CSRC. In brief, from the analysed studies, results show that these regulations can disproportionately scrutinising tunneling via RPTs. For instance, Berkman et al., (2010) find that the voting rights regulation reduce RPTs and enhance the market value of firms with RPTs. However, they did not find any impact of the other two regulations that forbid guarantees and assets transfers with controlling shareholders. They attribute this to the range of the regulations, while the latter two regulations only focus on one type of transactions (guarantees and asset transfers respectively), the first regulation is adapted to all types of RPTs. Nevertheless, this clarification was straightly rejected by evidence provided by Li et al. (2020). Likewise, comparing two different regulations enforced by CSRC in 2006, they recognise that the regulation on asset diversion effectively reduce the occurrence of RPTs,

whereas the regulation that standardises loan guarantees without specific guidelines and restrictions fails to curb tunneling via guarantees to related-parties. They explain the distinct effects by the different enforcement cost, in particular, tracking asset diversions (using other receivables in the balance sheet) is much easier than identifying a specific guarantor in a loan contract that normally include many parties (Li et al., 2020).

Unlike the above regulations particularly for scrutinising RPTs, another regulatory intervention is documented to be consistently beneficial to corporations and other market participants. In 2005, the Chinese government commenced a Share Structure Reform (split-share) requiring all firms to be fully tradable after the event. This reform has attracted significant attentions from the market and academics, including scholars interested in RPTs practices. For the reason that the old split-share structure brings conflict of interest between controlling shareholder (non-tradable shares) and minority shareholders (tradable shares), this provides potential incentives for the controllers to expropriate listed firms to the detriment of minorities. Hence, this Share Structure Reform is expected to alleviate this conflict of interest and thus reduce opportunistic activities. In accordance with this conjecture, prior studies evaluating the impact of the 2005 Share Structure Reform consistently find improved firms' value and firm performance among firms with RPTs after the split-share reform (Zhu & Zhu, 2012).

Focusing on the disclosure regulation by Taiwan's government[13], Hwang et al., (2013) also find arguable results. They find that this regulation enactment is only effective in restricting earnings management through RPTs in non-high-tech firms but not in high-tech firms. This is because that high tech firms are typically capital intensive and adopt more sophisticated strategies during operations than non-high-tech firms. Thus, these firms have more incentives to seek for other channels (e.g., RPTs) to meet their capital requirement. In addition, in order to not violate the imposed investment ceilings, high tech firms are highly likely to hide these RPTs than non-high-tech firms. Accordingly, the regulation actions regard RPTs might become less forceful concerning high-tech firms. Overall, this implies that studies investigating the effectiveness of regulatory enforcement are expected to take accounts of certain industry characteristics as well as reactions firms may undertake to mitigate the impact of the regulations. In Taiwan, Lin et al. (2020) observe a large decline of RPTs after the regulation change regard the consolidated reporting entities (i.e., from an ownership-based consolidation approach to a control-based approach). Particularly, firms involved in RPTs tend to hide their subsidiaries under the ownership-based approach, whereas the adoption of control-based approach effectively constrains RPTs and refrains firms from concealing their subsidiaries in the consolidated report.

Noticeably, several studies uncover the influences of tax reform on the practice of RPTs. In Korea, the 2012 tax law introduces gift taxes on controlling shareholders of firms obtaining profits through excessive related-party sales. Based on this, Chung et al., (2019) find firms that are liable for gift taxes engage in less opportunistic RPTs to reduce the excessive tax burdens of controlling shareholders. In China, the 2008 tax reform converges

[13] At the end of 2000, Taiwan's government announced a regulation that requires Taiwanese companies to disclose their business activities (i.e., investment, sales, purchases and property transactions) with Chinese entities through related parties.

the tax rates for both domestic and foreign-invested firms to 25 % to curb firm's incentive for tax-motivated income shifting. Surprisingly, Huang (2016) show that this tax reform reduces practices of tax motivated tunneling but induce tunneling through alternative methods, i.e., related-parties loan guarantees concerning firms' motives of expropriations remain unchanged. Comparably, Huang (2019) find decreased intercorporate loans particularly for foreign-invested firms after the 2008 China's enterprises tax reform and find increased stock market value of firms that disclose more tunneling activities before the reform. Taken together, tax reform that aims to mitigate conflict of interest is found to be effective in curbing one type of expropriation behaviours (i.e., intercorporate loans) while inducing alternative channels that used for tunneling (i.e., loan guarantees).

Similarly, research conducted in other contexts also recognise the benefits stemming from regulations. In Korea, Black et al. (2015) undertook research based on the 1999 Korean Governance reforms regard the requirements for outside directors and committees in large firms (assets > 2 trillion won). Their evidence indicates that chaebol firms[14] with higher risk of expropriation benefit more from this reform than chaebol firms with lower risk of expropriation in terms of market adjusted returns. Indicating investors believe these reforms can reduce tunneling and protect minority shareholders. In US, Hope & Lu (2020) investigate the impact of 2006 Securities and Exchange Commissions (SEC) regulation concerning RPTs governance disclosure[15]. They demonstrate that the RPTs governance disclosure significantly constrain opportunistic RPTs and reduce associated firms' risks (proxied by implied cost of capital and Tobin's Q). This implies that governance transparency plays an important role in preventing controlling shareholders from expropriating minority shareholders and is valuable to firms' long-term performance reflect on the lower risks.

In addition to evaluate the efficacy of these regulations, several of the sampled studies extend the analysis to figure out what types of firms are benefited the most following these events. This cluster of findings indicates that firms with weak corporate governance, firms experience more expropriations and firms are less connected to the government (Berkman et al., 2010; Black et al., 2015) yield much higher market valuations than the other firms. For example, Berkman et al., (2010) interpret that investors were doubted that these regulations are able to scrutinise firms with strong government connections, therefore their evidence show that firms with direct ties to the government did not benefit from these regulation (without increased firm value). Briefly, these findings highlight the impact of weak corporate governance and political connection on mitigating the effectiveness of regulations on restraining RPTs.

Collectively, although the majority studies verify the efficacy of regulations, other researchers were sceptical about the value of the regulatory effects on curbing opportunistic RPTs. Besides, explanations toward the

[14] Due the data availability regard ownership in related firms (part of the expropriation index), this test is limited to firms in the chaebol group where such data are obtainable.

[15] This RPTs governance disclosure contains three parts: *first*, whether or not there is a written policy regard RPTs governance; *second*, whether or not there is a formal committee to review and approve RPTs; third, the extent of the RPTs governance disclosure (long or short).

ineffectiveness of regulations appear to be diversified including some are contradictory with each other. Therefore, research that unravels the underlying reasons explaining the ineffectiveness of regulations can provide informative and practical implications for standard setters and market participants. Further, except from focusing on the direct impact of regulations on RPTs and related firms' value and performance, future research exploring how corporations and stakeholders might react or respond to these regulations (i.e., alternative paths to achieve tunneling, strategical decision outcomes) can be attractive and provide insightful implications to the development of regulatory intervention on opportunistic behaviours.

2.6.1.2 Economic environment

Most scholars demonstrate that a developed market acts as a powerful external governance mechanism to some extent alleviate information asymmetries between the firm and external investors (Huyghebaert & Wang, 2012). With easier access to firms' information in a developed market, more efficient scrutinisation can be imposed on the listed firms to restrain controlling shareholder from impairing minority shareholders' interest for private benefits through expropriations. Not surprisingly, a great number of studies thereafter present results regard the effect of regional economic factors - namely financial crisis (Chen, 2014; Kim et al., 2015; Downs et al., 2016), product market competition (Juliarto et al., 2013; Chung et al., 2019), stock market development (Jian & Wong, 2010; Jiang et al., 2010), investor protection (Rahmat et al., 2020) and cross-listed on foreign countries (Nekhili & Cherif, 2011) - on firm's RPTs activities.

Considering massive changes following the 2008 financial crisis, several studies are interested in discovering whether this may exercise certain effects on firm's practice of RPTs. In an effort to overcome new challenges embedded in the financial crisis, it is likely that companies may rely more on transaction with related-parties to support their business operations. In accord with this, Chen (2014) and Downs et al. (2016) consistently find a positive association between the 2008 crisis and the level of related-party purchases in Asian firms (i.e., in Taiwan, Hong Kong, Malaysia and Singapore). Additionally, while using related-party loans, Chen (2014) find an inverse relationship between the financial crisis and loans to related-parties particularly for firms suffering more on equity price or experiencing severe financial constraint. They therefore interpret that managers and board member in these firms tend to conceal their poor performance and obtain resources and support from related-parties through related-party purchases. Under these circumstances, these firms therefore are not financially able to issue loans to their related-parties. Comparably, in the context of 1997-1998 Asian financial crisis and pay particular attention to Korea firms within business groups, Kim et al., (2015) document a marginal reduction of RPTs within business groups following the crisis. They indicate that corporate governance and independence of firms within business groups have slightly enhanced due to the regulatory changes subsequent to the crisis.

Another strand of research seeks to linking economic environment with RPTs from the aspect of market competitiveness but find contrasting results. For example, Chung et al., (2019) find that competitive product

market strengthens the adverse effect of gift tax on detrimental RPTs. This therefore confirm the importance of a competitive market working as an effective external governance mechanism can discipline the practice of detrimental RPTs. However, other studies do not find similar results. More precisely, Juliarto et al. (2013) fail to find more competitive business environment can curb tunneling via RPTs. The authors explain that focusing on five countries in Asian, the institutional environments in most of the Southeast Asian countries are relatively weak thereby effective institutional governance mechanisms are absent in this context. Similarly, Elkelish (2017b) find less RPTs-related disclosure in firms with high market competition. They attribute this to the concern that most firms in competitive markets are reluctant to offer additional disclosure as this would provide proprietary information to their competitors in the meantime.

A rich stream of studies investigates exogenous impact of market development on firms' decision in trading with related-parties. Focusing on Chinese companies, Jian & Wong (2010), Jiang et al., (2010) and Huyghebaert & Wang (2012) find coincidental results. In particular, Jian & Wong (2010) find that a poor developed market exacerbates the magnitude of related-party sales used for propping. Utilising market capitalisation as a proxy for market development, Jiang et al., (2010) and Huyghebaert & Wang (2012) also show that there is a reduction of RPTs in firms located in region with a more developed stock market. Focusing attention on distinct motivations of related-party loans and investments within commercial banking, Tennant & Tracey (2013) show evidence that related-party loans increase in long-term instable macroeconomic whereas related-party investments increase in a more stringent macroeconomic environment. It indicates that concerning not all RPTs are triggered by the same purpose, related-party loans in financial institutions are more likely to be motivated by opportunistic incentives while related-party investments in financial institutions are likely to be inspired by efficient transactions motives. In a more recent study adopting a cross-country approach, Rahmat et al., (2020) find that manipulative earnings managements via RPTs are more severe in regions with poor investor protection (i.e., Malaysia and Thailand) than in regions with good investor protection (i.e., Singapore and Hong Kong). Focusing on auditor opinions and restatements, Fang et al. (2018) find an inverse relationship between provincial market development and RPT-related restatement. Stated differently, there are a smaller amount of RPT-related restatement in a more developed market which affirm the efficacy of market influences on curbing opportunistic activities.

Other studies pay attention to the influence of cross-listing, they assert that by listing in another country, the firm is subject to additional obligations and is under supervision of a larger pool of investors and analysts therefore may perform better in terms of more transparent information disclosure as well as less RPTs for expropriations (Nekhili & Cherif, 2011). Nevertheless, in France, Nekhili & Cherif (2011) only find a positive association between cross-listing on US market and the amount of transactions with subsidiaries and affiliated companies. Therefore, they criticise cross-listing as an effective mechanism for restricting tunneling via RPTs. Evidence from Cheung, Jing, et al. (2009) show that propped up firms tend to have a higher likelihood of being cross-listed compared to firms involve tunneling which to some extent support the prior argument that cross-

listing can exert certain impacts on firms' decisions in engaging RPTs (i.e., for tunneling or for propping purposes).

2.6.1.3 Political and cultural environment

Instead of concentrating on regulatory and economic institution, another group of studies seek to explore the effects of political environment on firm's decisions concerning RPTs. Focusing on regional government involvement proxied by provincial unemployment rate and Fiscal Surplus[16], Jian & Wong (2010) find reduced RPTs when government intervention at a high level though it is statistically insignificant. Similarly, based on the government quality model[17] by Kaufmann et al., (2009), Sellami & Borgi (2020) find no relation between government quality and the level of compliance with IAS 24 Related Party Disclosures in eight African countries. Noteworthy, emphasising the dominant role of state-owned firms in Chinese market, Haveman et al. (2017) construct labor and capital market developments based on the proportion of workforce and fixed-asset investments in Chinese non-state-owned firms. The authors show that more developed market (i.e., the market is less dominated by state-owned firms) aggregates the negative impact from political embeddedness on related-party loans. In other words, it implies that in a more developed market, listed firms will face higher pressure in employing RPTs hence to some extent mitigate misconduct behaviours. Comparably, Xu et al. (2016) show that during a political uncertainty[18] period, firms are inclined to hide cash via related-party acquisitions. While the political environment becomes stable, firms move the cash back through related-party sales.

Other studies are interested in how different societal or cultural environment influence the practice of RPTs in corporations. Social trustworthiness exerts an important role in affecting firm's incentive to participate misconduct activities such as RPTs. Focusing on fraudulent companies in China, Wei et al., (2020) find a significant lower level of tunneling (via RPTs) in companies that operate in a high social trust province. [19] Paying attention to the economic reform and open-door policy in China, Wen & Philomena (2006) posit that this dramatic societal and corporate cultural changes will influence companies' disclosure transparency in terms of the level of RPTs-related voluntary disclosure content. However, due to the small sample size (one-year), they find few companies voluntarily disclose RPTs-related content in the year 2003. Future studies could extend the sample period to discover the impact of cultural changes on RPTs-related disclosure.

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[16] Fiscal Surplus is the difference between provincial financial revenue and expenses, divided by provincial GDP.

[17] Government quality is constructed based on six aspects: rule of law, regulatory quality, political stability and absence of violence. terrorism, government effectiveness, voice and accountability and control for corruption.

[18] Political uncertainty equals to one when the firms' headquarters located in a city experiences a government official turnover (e.g., a new mayor or community party secretary is appointed).

[19] An index of trustworthiness for each province, which is taken from the nationwide survey conducted by the "Chinese Enterprises Survey System" in 2000, to proxy for the level of social trust in the province where the company is headquartered.

Additionally, the corruption culture in a country has been recognised to significantly influence organisational and individual business activities, in this regard, two studies attempt to relation it to RPTs. Focusing on information transparency, Sellami & Borgi (2020) report that the more corrupt the country the lower level of compliance with the IAS 24 Related Party Disclosures. Investigating the motives behind RPTs within financial institutions, Tennant & Tracey (2013) find that a highly corrupted environment induces larger scale of related-party loans whereas a low degree of corruption attracts larger amount of related-party investments. In this regard, it suggests that related-party loans are highly motivated for expropriations especially in a corrupted environment while related-party investments are used for efficient purposes as they increased with an enhanced culture environment (i.e., less corruption).

2.7 Consequences of RPTs

The majority studies placed emphasis on the effect of RPTs on firm's stock market performance and audit risk, another strand of research also seek to uncover accounting performance and firm risk influenced by RPTs. However, organisational outcomes concerned with strategical decision-making are emerging topics that draw the attention in recent years and need further exploration in future research.

2.7.1 Stock Market Performance

A large number of research has been focusing on exploring the effects of opportunistic RPTs on firms' value and firms' performance, the majority essentially fall into one of the two categories: firm stock market performance and firm accounting or financial performance. In general, studies in this group apply a variety of proxies to estimate the relation between RPTs and firm value and performance, such as stock return, market-to-book ratio, Tobin's Q and profitability. With regard to abnormal RPTs, literature provide several alternative measurements: the number of RPTs, the amount (value) of RPTs, transfer price difference, disclosure level of RPTs, several studies use the market return at the announcement of RPTs. In addition, existing studies also employ variety of methods to investigate the value effects of RPTs, including difference in difference comparison between transaction with related or unrelated parties, decompose RPTs based on types of transactions. Other studies go further adopt subsample regression, interaction variable or event study approach to discover how internal and external governance factors determine this relationship.

Prior studies examining the impact of RPTs on firms' stock return find mixed results according to various types of RPTs. Studies focusing on loan and guarantees among related-parties consistently find a lower market return (Berkman et al., 2009; Jiang et al., 2010; Fisman & Wang, 2010). For instance, Fisman & Wang (2010) find non-loan RPTs are associated with a higher operating and market performance (ROA/ROE and Tobin's Q). They illustrate this as within the business group, loan guarantees to related-parties can be detrimental to the

listed firms by paying defaulted debt, whereas firms always benefit from non-loan RPTs owning the favourable price and reduced cost of these transactions with related-parties.

Evidence regards assets transactions (e.g., sales, acquisitions and asset swaps) show controversial results. One group of studies find firms engage in asset transactions with related-parties suffer from lower market value than firms do not engage in this type of RPTs (Cheung, Qi, et al., 2009; Lei & Song, 2011; Mingli et al., 2020). However, other work shows that the valuation impact of asset transactions among related-parties depends on firms' governance quality and the type of related-entities. For instance, Downs et al. (2016) reveal that the value enhancement effects of related real estate acquisitions attribute to a joint effect of the related nature and firm characteristics or governance factors (i.e., leverage[20] and sponsor ownership[21]). That is, in real estate investment trusts (REITs), related-party asset acquisitions can increase firms' value in the condition of a higher financial constraint and higher ownership from the sponsors[22]. In another case, Yang (2017) show that real estate transactions among listed firms and controlling individuals result in a loss in value, whereas transactions among listed firms and affiliated companies do not reduce the firm value.

Focusing on sales and purchases among related-parties, Wong et al., (2015) and Black et al. (2015) find firms with related-party sales and purchases earn positive market reactions. However, this value-enhancing effect is weak and not steady. While Black et al. (2015) reveal that this beneficial effect of RPTs is minor, Wong et al., (2015) further emphasise that the positive valuation effect can be offset in firms with poor corporate governance such as high percentage of controlling shareholders from parent companies, high percentage of government connected controlling shareholders or high tax incentives among managers.

Other studies find related-party sales and purchases to be value-destructive, whereas this effect can be varied by firms' characteristics and institutional factors. For instance, Huyghebaert & Wang (2012) find related-party sales and purchases can be value-destructive (proxy by market-to-book ratio) only to private-controlled firms, whereas related-party sales and purchases in state-owned firms do not trigger a reduced market value. In a similar vein, Zhu & Zhu (2012) show that related-party sales and purchases are detrimental to firms' market value (proxy by Tobin's Q), whereas this reduction effect decrease after China' share structure reform. Surprisingly, some studies find different results between related-party sales and related-party purchases. Chen et al. (2019) reveal that purchases from related-parties increase firms' value while sales to related-parties decrease firms' value

Nevertheless, Lo & Wong (2016) critique about the impact of related-party sales on firms' value. They compare the effect of total sales and related-party sales on abnormal return and show that there is no significant difference

[20] Firm leverage as a proxy for financial constraint.

[21] Sponsor ownership as a proxy for acquisition pipeline or interest alignment.

[22] The sponsor is typically a participant in the real estate industry, for example but not limited to: (1) an owner of properties, (2) a property developer, (3) a fund manager, or (4) an operating business with an investment in property.

between the two in terms of explaining firms' value. In other words, the disclosure of related-party sales does not provide incremental value-relevant information beyond the disclosure of total sales. In this regard, rather than using the disclosure of the number of related-party sales, Lo & Wong (2016) investigate whether the disclosure of related-party sales transfer pricing methods affect market reacts (abnormal return). They observe that the higher the percentage of related-party sales use a market-based transfer pricing method[23], the higher the market performance of the listed firms. That is to say, investors and other stakeholders consider related-party sales that adopt a cost-based transfer pricing method[24] are more likely result in opportunistic behaviours, therefore respond with a lower abnormal return. Conclusively, the disclosure of transfer pricing methods is proved to be an efficient tool to detect manipulative activities. Future research can explore other aspects of RPTs disclosure content (e.g., the reason or business purpose behind RPT; the approval procedure and responsible parties) to provide valuable information for investors and the public to evaluate the economic implications of RPTs in listed firms. Besides, Lo & Wong (2016) emphasise as their research is based on pre-tax effects of related-party sales, future scholars can go further to study the effect of transfer pricing methods disclosure on taxation policies.

Interestingly, other studies investigate the valuation impact of RPTs by categorising RPTs into two groups. For example, using samples from mainland China and Hong Kong respectively, Cheung et al., (2006) and Cheung, Jing, et al. (2009) find firms with RPTs that are likely to result in expropriations[25] experience significant reduction of their firm value (cumulative abnormal return in Cheung et al., (2006); industry adjusted market-to-book ratio in Cheung, Jing, et al. (2009). In contrast, firms with RPTs that are unlikely to result in expropriation[26] and firms conduct arm's length transactions[27] do not lose significant market value over the announcement and the post-announcement period. Thereafter, Berkman et al., (2010) extend Cheung et al., (2006)'s research and divide firms conducting expropriation RPTs into high-EXPROP[28]firms and low-EXPROP firms[29]. They show that high-EXPROP firms yield lower firm value than low-EXPROP firms. Although they employ a slightly different categorisation, in general, they draw the same conclusion that expropriation RPTs are value destroying while non-expropriation RPTs are value enhancing to the firm.

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[23] Market-based transfer pricing method benchmarked to market data.

[24] Cost-based transfer pricing method is based on internally determined cost data.

[25] Expropriation RPTs: (i) acquisitions of assets from related parties (ii) sales of assets to related parties (iii) asset swaps (iv) trade of goods or services (v) direct cash payments, loans or provision of loan guarantees to its controlling shareholder

[26] Non-expropriation RPTs: (vi) direct cash payments, loans or loan guarantees provided by the related-party to the listed company (which can be viewed as cash receipts by the listed company) (vii) transactions between the listed company and its non-listed majority-controlled subsidiaries.

[27] An arm's length transaction (or transactions among unrelated parties) refers to a business deal in which buyers and sellers act independently without one party influencing the other.

[28] High-EXPROP firms are those in the highest EXPROP tercile.

[29] Low-EXPROP firms are those in the lowest EXPROP tercile.

Comparably, classifying RPTs into simple RPTs[30] and complex RPTs[31], Kohlbeck & Mayhew (2010) find that US firms disclosing RPTs experienced negative value effect as measured by Tobin's Q. Interestingly, firms conduct simple RPTs have significantly lower Tobin's Q whereas complex RPTs indicates no significant correlation with firm value. Two reasons might explain this: *First*, this can be attributed to the relative smaller sample size of complex RPTs (59 percent) comparing to simple RPTs (81 percent) therefore limits the statistical power of the association between complex RPTs and market value. *Second*, with respect to the classification of RPTs, complex RPTs covers transactions (e.g., sales and purchases) with arguable value implications in other studies thereby results in a lack of correlation between complex RPTs and firms' value.

Unlike the majority studying on material RPTs that are disclosable, Lei & Song (2011) evaluate the impact of RPTs on firms' stock market performance by dividing them into immaterial (or pure) RPTs and material (or disclosable) RPTs[32]. Notably, while material RPTs require a circular to be distributed and independent shareholder approval, immaterial RPTs do not need approval from independent shareholders and are exempt from reporting requirements. They find evidence showing that disclosable RPTs are accompanied with positive market return while immaterial RPTs yield negative market reactions. It argues that owning to the stringent disclosure requirement, investors response positively to RPTs that require approval from independent shareholders, but for RPTs that are exempt from disclosure, investors are likely to perceive those immaterial RPTs as signals of expropriations and manipulations.

2.7.2 Profitability

Studies examining firms' profitability provide two statements on the impact of RPTs. On one side, it argues that opportunistic RPTs, reflecting a conflict of interest among controllers and outside investors, are detrimental to firm's future performance. In line with this, many studies focusing on various types of RPTs consistently find a negative impact on firms' profitability, including related-party loans (Jiang et al., 2010; Chen, 2014; Mahtani, 2019), loan guarantees (Berkman et al., 2009), sales and purchases (Huyghebaert & Wang, 2012; Black et al., 2015). Other studies also observe a negative relation between profitability and RPTs but did not clearly indicate the direction of this relationship (Kohlbeck & Mayhew, 2010; Ryngaert & Thomas, 2012). On the other side, studies report a positive influence of RPTs on firms profitability illustrate that firms exploit RPTs particularly

[30] Simple transactions include loans, guarantees, borrowings, consulting, legal services and leases.

[31] Complex transactions include related business, unrelated business, overhead, and stock transactions.

[32] A material (disclosable) transaction is defined as "transactions by a listed issuer where any percentage is 5% or more but less than 25%." An immaterial (De minimis) transaction is defined as "percentage ratios <0.1%; or <2.5% and total consideration <1 million HKD." Transactions lie between immaterial and material transactions (percentage ratios <2.5%, or <25%, and total consideration <10 million HKD) are required to be reported to the Exchange and announced in a press release as soon as the terms of agreement are finalised, and later on are reported in a subsequent annual report.

operating RPTs to shift incomes and boost earnings (Mahtani, 2019; Doo & Yoon, 2020). In any case, both regard RPTs as harmful to the future of the organisation.

2.7.3 Capital structure

A number of articles offer evidence on RPTs and firms' leverage, but findings are controversial. For example, Berkman et al., (2009) find firms with provision of guarantees to related-parties result in a higher leverage ratio. Encompassing both opportunistic and beneficial RPTs, Cheung, Jing, et al. (2009) and Berkman et al., (2010) show that regardless the nature of RPTs (expropriation or beneficial), all firms taken part in RPTs are highly levered than other firms. On the contrary, other studies find RPTs (i.e., asset transactions in Downs et al. (2016); related-party sales in Jian & Wong (2010)) as a cause of firms' low leverage ratio. This is because that the lower transaction cost between related-parties can save the company from high level of debts in their capital structure thereby result in a lower debt to equity ratio (Downs et al., 2016).

2.7.4 Audit risk

2.7.4.1 Earnings management

Motivations driving controlling shareholders to employ RPTs for earnings management might be categorised into three aspects. *First*, according to the prospect theory, instead of reporting losses, firms are more likely to manage earnings while experiencing financial distress (Skinner & Sloan, 2002). Hence, in addition to traditional strategy (e.g., accruals management), it is possible that earnings manipulation can be achieved through propping from related-parties. *Second*, based on the rule of rights issues[33] in China, in order to keep the firms' listing condition and rights of share issuance, controllers are more incline to inflate earnings via RPTs to meet the targets (Jian & Wong, 2010; Lo & Wong, 2011). *Third*, managers may manipulate earnings through RPTs in order to increase their own compensation or bonus (Lo & Wong, 2011). In this regard, a large group of studies draw attention to exploring RPTs and earnings management.

For instance, in Asia, several studies find evidence that related-party sales are used as a tool for earnings management and they offer various interpretations regard the process or method of this practice (Yuan et al., 2007; Jian & Wong, 2010; Aharony et al., 2010; Lo et al., 2010a; Lin et al., 2020). For example, Jian & Wong (2010) claim that firms might achieve earnings manipulation by shifting upcoming related-party sales to the present year. In the meanwhile, Lo et al., (2010a) articulate that firms may also manage earnings by taking

[33] According to Article 157 of China's Company Law, if a listed company sustains losses for three consecutive years, it will be temporarily delisted by the CSRC and subjected to "particular transfer" and other transfer constrains.

advantage of the transfer prices in related-party sales which is a more permanent method than managing the time of the transactions. Furthermore, Jian & Wong (2010) and Lin et al. (2020) show that earnings management can be executed through both cash-based and accrual-based related-party sales in order to avoid excessive accruals which are easily detected by auditors. In addition, Jian & Wong (2010) and Aharony et al., (2010) find that there is a higher level of related-party lending following sales among related-parties. This again emphasises that firms employing related-party sales to manage earnings thereafter transfer money back to the controllers via related-party lending.

Interested in whether managing earnings via related-party sales might influence firms' other kinds of earnings management tools, Jian & Wong (2010) find that related-party sales used as a substitute of discretional accrual earnings management given the two hold an adverse relation with each other. Nevertheless, other studies find different results. For example, in Greece, El-Helaly (2016) and El-Helaly et al., (2018) find that RPTs have no correlation with accrual earnings management. Moreover, El-Helaly et al., (2018) and Lin et al. (2020) find that RPTs serves as a substitute for real earnings management rather than accrual earnings management. In Italy, Marchini et al., (2018) also critique the result in Jian & Wong (2010), they find that related-party sales is positively related to abnormal accruals indicating firms' are incline to use related-party sales to conduct accrual earnings management. Apart from focusing on sales among related-parties, Mindzak & Zeng (2018) also investigate whether loans to related-parties may affect firms' earnings manipulation strategy. Using firms within business groups in Canada, they find that sales and purchases among affiliated firms result in a higher level of earnings management (both in accruals and in real activities), whereas loans to related-parties reduce real earnings manipulations.

Furthermore, other studies find the association between RPTs and earnings management varies based on the quality of governance mechanism and institutional environment. For example, Lo et al., (2010a) find that corporate governance factors (e.g., independent director, CEO duality and financial experts) are helpful with respect to mitigate earnings manipulations in the form of RPTs. Additionally, El-Helaly et al., (2018) find that under the supervision of big audit firms, firms are less likely to utilise RPTs as a substitute for real earnings management. Marchini et al., (2018) also point out that good corporate governance quality (i.e., board of directors and CEO) can mitigate earnings manipulation via related-party sales. In a cross-country context, Rahmat et al., (2020) find that firms located in a good investor protection region (i.e., Singapore and Hong Kong) experience less reduction in earnings quality when engaging RPTs than firms located in poor investor protection region (i.e., Malaysia and Thailand).

Another stream of studies tend to explore the detrimental impact of managing earnings via RPTs, for instance, Lo & Wong (2011) find that firms engage in earnings manipulations (proxied by the amount of abnormal RPTs)

are less likely to make voluntary disclosures of transfer pricing policies.[34] Moreover, Chen et al., (2011) find that the increased pre-IPO performance stemming from RPTs and accruals management end with a drop of operating performance as well as a discounted market value after the IPO. In sum, above studies highlight the negative consequences of managing earnings through RPTs such as a less transparent disclosure environment and decreased firms' value and performance.

Collectively, most studies prove that RPTs is likely to be used as a vehicle to achieve earnings management, however, the relations between RPTs and real or accrual earnings management are still inconsistent among various countries. This might be attributable to the influence of corporate governance mechanism on firms' decisions in entering opportunistic activities. Alternatively, owning to the unique institutional background in different countries, evidence in different contexts may not be comparable or generalisable. In this regard, future studies considering whether governance factors and institutional characteristics influence the relation between RPTs and real or accrual earnings management may contribute to relevant literature. Besides, as extant papers mainly focus on related-party sales, future research may consider exploring other types of RPTs and evaluating firms' decision on performing earnings management through RPTs.

2.7.4.2 Tax avoidance

Two contrary arguments exist within the implication of tax avoidance: the tax saving effects and the agency cost effects (Desai & Dharmapala, 2006). From the principal-principal agency perspective, many studies propose that tax avoidance triggers resources diversion activities which benefit dominant shareholders at the expense of minority shareholders. In this regard, a stream of studies seeks to investigate the relationship between tax planning incentives and RPTs in order to identify the underlying motivation and implications of these tax motivated activities.

Comparing the ratio of asset transfers' prices to earnings before interest and taxes (EBIT) between related-parties and arms' length parties, Cheung, Qi, et al. (2009) claim that these RPTs are used for transferring resources from minorities to controllers rather than for tax avoidance purposes. Nevertheless, more studies show opposite evidences (Chan et al., 2016; Bauer et al., 2020; Qu et al., 2020; Doo & Yoon, 2020). Generally, they argue that especially in the period tax rate increased or decreased, firms are more incline to use RPTs as a tool for tax planning (Wong et al., 2015). This is because those managers use tax management as an excuse to justify RPTs that used for opportunistic purposes such as expropriation and earnings management. Consistent with this, Wong et al., (2015) find RPTS firm's valuation is much lower when there is a tax rate change, indicating the negative impact of these opportunistic RPTs.

[34] Abnormal RPTs is a residual in a model established by Jian & Wong (2010) that regressed all RPTs on normal components of RPTs such as industry, firm size, leverage and growth.

In further analyses, several studies find tax motivated RPTs are more pronounced in firms with less than 40 percent local government ownership (Qu et al., 2020), in firms lacking of cash resources and in period with poor investor protection (Chan et al., 2016). Contrarily, other studies attempt to examine internal governance factors that can deter tax motivated RPTs. For instance, Doo & Yoon (2020) report that financial experts are essential in constraining RPTs in firms suffering with high tax burdens while outside directors and audit committees fail to mitigate tax-motivated RPTs. Adopting an advanced design, Bauer et al. (2020) seek to identify paths through which tax aggressiveness facilitate diversionary activities (i.e., intercorporate loans). They identify two mediating paths: cash tax savings (measured by abnormal cash flows) and financial reporting opacity (measured by abnormal accruals). More importantly, they show that controlling shareholders are inclined to exploit related-party loans for tunneling only if they are able to cover the tunneling activities under the mask of financial opacity or tax savings.

2.7.4.3 Other audit risk

Other audit risks that have been studied associated with RPTs include audit fees, audit opinions, financial misstatements, financial reporting comparability, fraud and audit delay.

Two arguments domain in the audit fees literature: From auditors' perspective, facing higher risks arising from RPTs, audit firms require higher audit fees for firms engaging RPTs as a compensation. From clients' perspective, firms engaging substantial RPTs are inclined to hire poor quality auditors who demand less audit fees and impose lax audit scrutiny (Kohlbeck & Mayhew, 2017). Based on these two contradictory arguments, studies focusing on audit fees of firms with RPTs show inconsistent results. For example, while Kohlbeck & Mayhew (2017) find lower audit fees for US firms with RPTs, Al-Dhamari et al. (2018) report higher audit fees in Malaysian firms with related-party sales and purchases. In China, comparing types of RPTs, Habib et al., (2015) show that audit fees are lower for firms engaging related-party sales and purchases but higher for firms engaging intercorporate loans, guarantees and capital transfers. In addition, Brockman et al. (2019) also discover a moderating role of RPTs in strengthening the positive association between external auditors' connection with Issuance Examination Committee[35] and audit fees. Furthermore, other studies identify moderators between the relation of RPTs and audit fees such as firms' restatement risk (Kohlbeck & Mayhew, 2017), product-market competitiveness (Habib et al., 2015) and internal audit units effectiveness (Al-Dhamari et al., 2018).[36]

[35] The Issuance Examination Committee represents a group of market experts who have the legal responsibility to screen all Initial Public Offering and Seasoned Equity Offering applications and then provide the China Securities Regulatory Commission with their approval or rejection recommendation.

[36] Malaysian Code of Corporate Governance requires all listed firms to have an independent internal audit unit that reports directly to the audit committee.

Instead of focusing on audit fees, limited studies allege that the audit risks associated with RPTs also reflect on a higher probability of receiving audit opinion modifications and a higher likelihood of future financial misstatements (Jiang et al., 2010; Kohlbeck & Mayhew, 2017; Fang et al., 2018). Particularly, Kohlbeck & Mayhew (2017) reveal that tone RPTs[37] acts as a powerful antecedent of high risk of material misstatements given that firms with these types of RPTs also pay high audit fees to external auditors. Nonetheless, while Jiang et al., (2010) do not find reduced intercorporate loans after receiving qualified audit opinions, Fang et al. (2018) prove the role of audit opinion modifications in predicting future RPT-related financial misstatement. In other words, audit opinion is effective in detecting potential risk arising from RPTs but may not be efficient in deterring tunneling activities.

Interestingly, referring to the financial statement comparability constructed by Franco et al., (2011), one study provide evidence that RPTs reduce the comparability of accounting information among firms listed on the Korean stock market. This offers valuable information to investors and standard setters to consider identify or evaluate RPTs through the financial reporting comparability of the listed firms. In another study, Wei et al., (2020) show that firms with fraudulent financial statements engage in more tunneling through intercorporate loans than other firms. They illustrate that these firms intend to mask their tunneling behaviours by fraudulent activities due to the low penalties for fraudulent financial statements comparing to the negative impacts of tunneling.

Regarding audit delay, while Kohlbeck & Mayhew (2017) show weak evidence on RPTs increasing audit report lag, Habib & Muhammadi (2018) find noticeable results using political connected firms in Indonesia. They show that firms engaging RPTs (either sales or loans) have a longer audit report lag than firms without RPTs. This highlights the additional efforts and risks for external auditors to detect and assess RPTs activities in client firms.

2.7.5 Financial distress

The majority of studies investigate RPTs and financial distress (or called "special treated"[38]) find RPTs acts as an antecedent of firms' financial distress. For instance, Ryngaert & Thomas (2012) find ex-post RPTs (RPTs occur after the counterparty became a related-entities) are more likely to result in financial distress and deregister from securities than ex-ante RPTs. Similarly, using intercorporate loans in public firms in China during 1996-2004, Jiang et al., (2010) show that the more intercorporate loans, the higher probability of firms being special treated. Consistent with Ryngaert & Thomas (2012) and Jiang et al., (2010), Peng et al., (2011)

[37] Tone RPTs are those involving director, officer or major shareholder (DOS) loans, borrowing, guarantees, DOS and Investee consulting, legal and investment services, unrelated business activities, DOS overhead reimbursement and stock transactions.

[38] "Special treated" refer to loss profits in two (three) consecutive years.

also find a positive association between financial distress and RPTs but in an opposite direction. They show that when listed firms are in financial distress (in the period the firm is special treated), controlling shareholders are likely to prop up the firms via RPTs which then yield positive market reactions from the investors. Conversely, when listed firms are in sound financial condition (in the period the firm obtain rights to issue new shares), controlling shareholder are likely to tunneling the firms via RPTs which then yield negative market reaction.

Nevertheless, noticing that newly debt guarantees to the benefit of the parent firms and loans to controlling shareholders have been prohibited from 2001 and 2003 respectively, Huyghebaert & Wang (2012) criticise using intercorporate loans as a proxy for tunneling after 2003. They therefore conduct similar research but instead using sales and purchases with related-entities. They do not find firms with related-party sales or purchases have higher likelihood of being in financial difficulty, this is inconsistent with prior findings indicating the negative implications of tunneling activities. Huyghebaert & Wang (2012) attribute this result to the intensive competition of listing quota during 2001-2005, once the company is closer to the "special treated", they are less motivated to engage in opportunistic behaviours. This interpretation can be criticised, from another perspective, the more the company near the line of being "special treated", the more likely they will exploit opportunistic activities to manage earning and away from being delisted.

In all, existed findings with respect to how RPTs might affect the probability of being special treated remain controversial, future research addressing this issue are expected to encompass and compare types of RPTs (loans and non-loans) and take into consideration the economic and regulatory environment that might influence this relationship.

2.7.6 Strategical outcomes

Instead of concentrating on firm's financial performance, another stream of articles seeks to explore the impact of RPTs on firm's strategical decision makings. Scholars have identified how frequency that RPTs are being employed in manipulating earnings. In this regard, Yeh et al., (2012) conjecture that in a purpose of boosting earnings before issuing seasoned equity, there will be a higher degree of RPTs in the pre-seasoned equity issuance period. As a result, they only find a weak association between RPTs and subsequent seasoned equity issuance. Comparably, focusing on the possibility of obtaining an approval of seasoned equity offerings (SEOs), Brockman et al. (2019) emphasise that RPTs aggregates the positive relation between guanxi-based relationships and the chance of receiving an approval of SEOs.[39] The authors illustrate that firms with high level of RPTs are deemed to be associated with problematic governance system therefore benefit the most from guanxi relationships while applying for the SEOs.

[39] A firm is guanxi related when a partner of its audit or law firm serves as an Issuance Examination Committee member during the SEOs application period.

Several articles attempting to examine the influence of RPTs on firm's strategical decisions such as privatisation, internationalisation, corporate philanthropy and auditor choice. For instance, Du et al., (2013) document an increased amount of expropriations through RPTs before the year listed firms going privatisation. They therefore demonstrate that going private represents as an outcome of firm's poor corporate governance and serious agency problems indicated by the substantial RPTs. Using sample from Indian manufacturing companies, Agnihotri & Bhattacharya (2019) show that the more RPTs in a firms the less possibility the firm will go internationalisation. They argue that RPTs indicating poor governance quality makes access to international markets more challenging. In Korea, Oh et al. (2018) show that the level of firms' philanthropy decreases with an increase of related-party sales. Based on the attention-based theory, they demonstrate that the more RPTs within a firm the more corporate decision makers' attention focusing on internal market rather than external market, in turn, reduce the likelihood that the firm engage in philanthropy. Rather than emphasising the monitoring role of audit firms, from the client firms' perspective, Habib et al., (2017) demonstrate that in political connected firms, firms with significant RPTs are more incentivised appoint less reputable auditors. This is because that firms engaging in substantial opportunistic activities are less likely to engage with Big 4 auditors who have higher probability identify and expose their unethical and misconduct behaviours such as RPTs.

Some studies recognise the level of RPTs affects institutional decision makings. For example, Li & Yamada (2015) provide evidences that Chinese government are more incline to control firms that engage more related-party sales, indicating that government have strong incentives to engage in RPTs to prop up or to generate profits. Focusing on bank industry in Taiwan, Lee et al. (2020) present research investigating how lending firms' RPTs relate to banks' non-performing loan ratio. The authors observe a higher level of RPTs in lending firms, results in a higher non-performing loans ratio in the bank industry. That is, from the bank's standpoint, it is essential to evaluate lending firm's corporate governance quality (e.g., the level of RPTs) before making financial decisions. Another study finds the occurrence of RPTs can impact director-level decision making such as the voluntary resignation decision (Yeh et al., 2007). The authors suggest that independent directors realise the expropriation behaviours associated with RPTs and they lack the ability and power to support them to resist against controlling shareholders therefore yield to resignation.

Two studies emphasise the efficient implications of RPTs. For example, Abd Majid et al., (2020) provide empirical evidences that related-party borrowings perceived as firm's social capital increase the likelihood of choosing ethical debt financing in Malaysian companies. Another study from Chen (2006) find that firm's involvement in RPTs affect its choice in large-block ownership structure. They show that firms engage in substantial RPTs are under stronger mutual monitoring from related-parties, in turn, they rely less on concentrated ownership to alleviate agency problems. Further, they find that the number of related-parties exerts an adverse effect on the relation between RPTs and large-block ownership structure. This is explained that the mutual monitoring mechanism is stronger within a small group of related-parties. Therefore, firms with more related-parties are more likely to rely on the governance function from concentrated ownership.

2.8 Discussion and Future Directions

In this review, we systematically analysed four streams of research on related-party transactions. *First*, early researchers attempt to uncover the motives and implications of RPTs. *Second*, they have sought to investigate on corporate governance antecedents that might either exacerbate or attenuate opportunistic RPTs. *Third*, another strand of research aims to discover the impact of institutional environment such as economic, regulatory, political, and cultural context on RPTs. *Fourth*, a substantial group of research has been conducted to explore the consequences of RPTs covering stock market performance, accounting performance, firm and audit risks, and other strategical outcomes.

2.8.1 Theoretical Gaps

Most studies focusing on RPTs apply the agency theory (or called conflict of interest) in interpreting the underlying motivation of firms involving RPTs, whereas less evidence has been provided to explore the bright side of RPTs (e.g., used for normal business purposes or for efficient contracting motives). Indeed, policy makers face a dilemma regard curbing or encouraging RPTs. Therefore, highlighting the negative implications of RPTs while neglecting the positive side can be misleading to other market participants. In this vein, research aiming to discover beneficial RPTs (i.e., both characteristics of the transactions and positive implications of the practice) may provide stakeholders with a more comprehensive understanding of RPTs and help policy makers as well as investors to detect either beneficial or opportunistic RPTs thereby impose relevant regulations accordingly. Similar to the opportunistic RPTs, the underlying purposes, interpretations and theories explaining beneficial RPTs deserve more attention. For instance, what are the consequences of RPTs when observing from a social capital perspective. Especially in contexts that are highly relationship-based, RPTs are likely to be perceived as firms' social capital which can provide with alternative financing options during a financial distress and help enhance internal resource allocation or operating efficiency (Tsoodle et al., 2006; Doong et al., 2011; Abd Majid et al., 2020). Besides, whether RPTs motivated for propping listed firms are purely harmless, alternatively, they are one of the processes to achieve future expropriations (Tareq et al., 2017).

Within the analysed articles, the emerging contingency theory has found to be less emphasised in the literature. Although some studies have found contingency factors such as corporate governance (Cheung et al., 2010; Wong et al., 2015) and regulatory enforcement (Berkman et al., 2010; Liu & Tian, 2012; Huang et al., 2019) moderate the negative effect of RPTs on firm performance, they do not explicitly use the contingency theory in interpreting their findings. Thereby research that exploring governance factors, organisational settings, and institutional environments within the RPTs context are suggested to apply this contingency theory in strengthen their arguments. Furthermore, since this theory is recently proposed in the context of RPTs, it can be helpful if future research think about whether other contingency factors such as economic environment (Downs et al.,

2016), firms' financial condition (Kohlbeck & Mayhew, 2010; Bansal & Thenmozhi, 2020) or business strategy or culture may become crucial while explaining the implications of RPTs.

Further, with respect to the motives behind RPTs, extant studies limit to two perceptions: one is for controlling shareholders to tunnel resources from the minority shareholders; the other is for listed firms manage earnings through transactions with related-parties. However, the practice of RPTs can be encouraged by other purposes. *First*, RPTs can be motivated by tax purposes (Chung et al., 2019). Related-parties have a higher likelihood to shift profits (via related-party sales) to listed firms that enjoy a low marginal tax rate (Lo et al., 2010b). That is, listed firms and their related-parties may engage in RPTs in order to lower the total tax payments within the group. *Second*, RPTs can be motivated by gaining benefits in the capital market. Particularly, insiders can obtain private benefits from buying stocks in a lower price (when firms disclose substantial RPTs) and selling in a higher price (when firms disclose less RPTs). *Third*, RPTs can possibly be encouraged by certain social purposes such as build social network with related-entities or interact with the state for accessing scarce resources. Overall, our understanding regards the motives of RPTs is less extensive, research seeking for other potential causes (e.g., tax reduction and insider incentives) of RPTs can enrich the knowledge in this field.

In Section 2.4 , we place emphasis on theories that caught great attention, however, there are other theoretical foundations that would be constructive to the interpretation of RPTs-related research. For example, the prospect theory may be applied to illustrate the incentives of managers motivation in earnings manipulation while reluctant to report losses (Bansal & Thenmozhi, 2020; Yeh et al., 2012). Similarly, positive accounting theory, threshold theory, and entrenchment theory which have been largely applied in earnings management research may be utilised to interpret the opportunistic incentive of managers abusing related-party sales for earnings propping up (Dechow et al., 2010).

2.8.2 Methodological Gaps

Findings on the location of the research reveal important sample weakness in the literature. The disproportionate focus of research using Chinese samples can possibly reduce the generalisability of these findings. Specifically, due to the weak institutional environment especially the poor investor protection within emerging economies (e.g., Malaysia, Thailand and China), controllers have higher incentives to engage in RPTs and investors have less support to protect them from suffering expropriations. However, this might not be the case within a well-developed economy (e.g., Singapore) where strong enforcements have imposed to regulate opportunistic activities and alleviate conflict of interest between controlling and minority shareholders (Rahmat et al., 2020). Concerning the importance of institutional environment to the magnitude and implications of RPTs, it can be useful to conduct research on RPTs based on a cross-country context thereby provides valuable information regard how RPTs varies according to different institutional settings (e.g., different investor protection across countries) and whether results on one country can be generalisable to another. Moreover, due to the distinct cultural environment, government policies, and legal restrictions between Mainland China and Oversea China

(e.g., Hong Kong and Taiwan), research developed to compare samples from Mainland and Oversea China can offer valuable evidence to this field. For example, considering Mainland China relies heavily on business ties and government ties than Oversea China (Luo et al., 2012), whether companies listed in Mainland China have higher incentives to undertake RPTs than companies listed in Oversea China? Besides, rare studies have been conducted to reveal why some RPT-related regulation is introduced in some regions and not others, utilising cross-counties sample to explore cross-national differences in explaining the efficacy of RPT-related regulation and effects of RPTs.

According to the results shown in Table 2.3, most of studies use archival data and employ a quantitative research method. This can lead to biased evidence in present literature concerning RPTs. As is known, data of RPTs is provided by the managers who can possibly have strong incentives to conceal or distort these data to avoid negative influence of disclosing this type of information (Institute of Certified Public Accountants, 2001). This not only increases the difficulty of obtaining the real amount of RPTs but also impede the reliability and validity of research that used this type of data. Further, concerning data of RPTs are not mandatory required for disclosure in some regions (e.g., Malaysia; US; New Zealand), researchers can only obtain data manually from annual reports (Bennouri et al., 2015; Al-Dhamari et al., 2018; Bhuiyan & Roudaki, 2018) or proxy statements (Balsam et al., 2017) which are time consuming. Insufficient data therefore lead to relative small sample size in many previous research (e.g., 120 firms in Al-Dhamari et al. (2018); 66 firms in Bhuiyan & Roudaki (2018), 122 firms in Elkelish (2017b); 106 firms in Chen et al. (2019)). Moreover, even in countries with accessible data (e.g., China, Italy, India, French, Korea), the quality is variable. For example, whether firms publicly disclose (market) prices for the transactions (Black et al., 2015; Balsam, Gifford & Puthenpurackal, 2017), what are the identity of involved related-parties, what are the nature and purposes behind the transactions, whether firms report the terms/procedure of RPTs (Bennouri et al., 2015). These contents are indispensable in terms of providing information beyond the number/amount of transactions when evaluating the motives and the implications underlying RPTs. Accordingly, future research can adopt a qualitative or mixed method and obtain data using other approaches such as interviews, observations or surveys. For instance, to obtain an in-depth understanding of RPTs practice, researchers can gather useful information/data from the behaviours, personalities and experiences of participants during interviews or observations. Additionally, as mentioned previously, in order to enrich the theoretical underpinning surrounding RPTs practice as well as deepen our understanding regard the motives behind opportunistic and beneficial RPTs, research that apply a mixed method encompassing both quantitative and qualitative data analysis may make significant contributions in this field.

Alternatively, since most of the research is based on single country setting, attempting to apply a meta-analysis in RPTs and firm performance or corporate governance and RPTs can offer insightful information to this field. In particular, meta-analysis can help control certain factors that may influence the vigorous of the results such as the size of the sample or contextual differences. As noted, there is a lack of studies exploring channels/mechanism through which RPTs may affect corporate performance. In this regard, future researchers may consider undertake path analysis to address this question.

With regard to the classification of RPTs, some categorise it based on the types of the transactions including sales and purchases (Chen & Gupta, 2011; Li & Yamada, 2015; Bava & Di Trana, 2017; Cho & Lim, 2018; Brockman et al., 2019; Bauer et al., 2020), asset sales and acquisitions (Tsoodle et al., 2006; Chen et al., 2009; Peng et al., 2011; Utama & Utama, 2014b; Cai et al., 2016; Downs et al., 2016; Bansal & Thenmozhi, 2020), loans and guarantees (Chauhan et al., 2016; Fang et al., 2017; He & Luo, 2018; Agnihotri & Bhattacharya, 2019; Abd Majid et al., 2020). Other studies reply on the identify of related-parties involved such as CEO or outside directors (Balsam et al., 2017), subsidiaries or affiliated firms (Bennouri et al., 2015), within or outside the business group (Carlo, 2014). Importantly, several studies categorise RPTs based on its value implications: opportunistic or beneficial. However, as extant findings are not consistent regarding the impact of different types of RPTs, identification of opportunistic and beneficial nature of RPTs becomes an unsolved problem. Thus, future research is expected to discover novel approaches or investigate from different angles to offer insightful solutions that can help academics and practitioners categorise and evaluate RPTs.

Concerning advanced research design that aim to go deeper exploring the implications of RPTs, previous studies were immersed in separately examining how opportunistic RPTs can harm corporate performance and how efficient RPTs can be beneficial to the operation of the firm. Nevertheless, it seems to be neglected that within one corporation, both two kinds of RPTs can be coexisted. In this regard, it can be interested if scholars undertake research that make comparisons between efficient and inefficient RPTs. Specifically, one can develop research that compares the frequency or the impact of two types of RPTs. For example, Goshen (2003) claim that the frequency of efficient and inefficient self-dealing transactions determine the choice of suitable strategy (i.e., the majority-of-the-minority vote and the fairness test) aim to protect investors.[40] Besides, further research can look at whether the harmful effects of opportunistic RPTs on firms' value and performance exceed the value of efficient RPTs bring to the firm. Owing to the complex nature of RPTs, such research can provide more practical advice comparing suggesting regulators to completely prohibit RPTs or with no intervening actions imposed. Particularly, this helps standard setters and investors to make decisions that can balance the trade-off between detrimental and efficient implications of RPTs.

2.8.3 Empirical Gaps

2.8.3.1 Corporate Governance and RPTs

Current studies have drawn substantial attention on some basic or classical attributes of corporate governance mechanism (e.g., board independence, CEO duality, board size, audit quality), however, other board

[40] The majority-of-the-minority vote prevents any transaction from proceeding without the minority group's consent. The fairness test ensures that the minority receives adequate compensation in objective market-value terms.

characteristics concerning governance quality deserve investigation in the future. For instance, as has been verified the importance of female directors on board, how gender diversity performs a monitoring role on restraining abusive RPTs, whether female directors highlight the bright side of RPTs in terms of improving corporate resource allocation and reducing operating expenses (Usman et al., 2021), how different leadership styles of men and women in the top management team influence firms' decision on engaging RPTs (Nekhili et al., 2021), whether the monitoring versus advisory role of female directors make differences with regard to curbing opportunistic RPTs (Zalata et al., 2019). Other director characteristics such as tenure, education and professional knowledge, managers' incentives (of disclose bad news) (Bao et al., 2019), shareholders' investment horizons (Fu et al., 2020) received little attention in the past literature.

With regard to firm-level characteristics that may induce the occurrence of opportunistic RPTs, previous findings draw essentially on concentrated ownership, firm size and audit quality, however, more aspects can take into consideration such as firms' culture and strategy/vision, firms' nationality and religiosity (Du, 2014), degree of internationalisation, industry differences (Hwang et al., 2013) . In addition to big audit firms, other external firm-level governance mechanism such as media scrutiny is overlooked previously (Shan, 2019). Further, although firms' political ties have been studied previously, whether other forms of social connections (e.g., business ties) that may relate to the occurrence or implications of RPTs are still unresolved. Business ties refer to the extent to which a company's executives or managers have good relationships with other market participants such as buyers, suppliers, competitors or other collaborators (Peng & Luo, 2000; Sheng et al., 2011). As business ties have been recognised as valuable resources to improve corporate performance and development, whether business ties may exacerbate or alleviate the negative impacts of RPTs on firm performance can be a novel topic to discover (Wang et al., 2019). In addition, as both social ties (i.e., business and political ties) and RPTs are in some degree reflect firms' social capital, whether these two facilitate or substitute each other may offer informative inferences regard the motives of RPTs (i.e., used for tunneling minority shareholders or used as social capital to improve firms' operation). In addition, since business ties are built among peers (horizontally) whereas political ties are built among authorities and subordinates (vertically), whether these two types of networks contribute to firms' decision on RPTs as well as RPTs impacts on performance differently can be a promising avenue for future research.

Owing to the strong influence of government involvement on firms' decisions to engage RPTs, existing papers have drawn considerable attention on the effect of state ownership on RPTs. However, there are other attributes that can reflect political connection and political institution have not been identified in the literature. For instance, the unemployment rate (Jian & Wong, 2010), the location of a firm's headquarters (whether is in the capital city) may influence its connection with the state. Managers that are closely connected (friendship or family) with politicians. Executives, directors, auditors or other individuals in the firm that are formerly or currently subject to the government. In addition, firms' donations aimed to support a politician or proceed government reforms or policies (Preuss & Königsgruber, 2020). Research aiming to apply different proxies for political connections can provide valuable evidence in RPTs literature.

Previous studies concentrate on the monitoring role of board of directors, whereas the advisory role of directors may considerably moderate the efficiency of firms' governance system. For example, as in Section 2.5.1.1 , a cluster of studies found no evidence of board independence in curbing RPTs (Cheung et al., 2006; Cheung, Qi, et al., 2009; Huyghebaert & Wang, 2012; Elkelish, 2017a; Doo & Yoon, 2020). While considering the advisory function of the board (Adams & Ferreira, 2007), one can clarify that overly independent boards may have adverse consequences in corporate governance (i.e., managers become reluctant to provide sensitive information when under the supervision of an intensive board). In this respect, even if the board is highly independent, lacking information provided by managers or CEOs, directors on board become less effective in participating decision-making process including the approval of RPTs. Furthermore, whether the separation of the monitoring and advisory role of the board may enhance corporate governance and reduce the frequency of opportunistic RPTs can also be one of the questions to answer in the future. Although Shan (2019) has provided evidence that there is no impact of the two-tier board system (separate monitor and advisory role of board) on the voluntary disclosure of RPTs in China, future research that conduct in another contextual setting or adopt different approaches are expected to shed more lights on this argument.

Extant research has contributed widely on how corporate governance determines RPTs and how governance may moderate the negative effects of RPTs, however, it is possible that firms can make use of the implications of these governance mechanisms to confuse outsiders. For example, whether corporations intentionally signal positive sign of their governance system (e.g., more independent directors on board, high corporate social responsibility or other good news disclosure) (Cheng & Kin, 2006) in order to hide their manipulative or opportunistic behaviours including RPTs.

Furthermore, a broad body of studies have centred on internal governance, research targeting on how external actors (e.g., auditors) might discipline managers and dominant owners from appropriating outsiders and minority investors is deficient. Prior literature on RPTs has largely focused on the impact of audit firms (Gallery et al., 2008; Bennouri et al., 2015; Bhuiyan & Roudaki, 2018), while less is known on the role of individual auditor behaviours on monitoring RPTs. The interactions between the engagement auditor and the financial officer can take up a large part of the auditing process (Mauritz et al., 2021). Therefore, future research focus on potential outcomes attributed to individual level of auditors can enlighten our knowledge regard external auditing of RPTs from a different angle.

2.8.3.2 Institutional Environment and RPTs

Concerning regulatory and law system, three aspects future researcher can take into consideration. *First*, while extant articles focusing mainly on regulations that directly restrict RPTs or regulations that aim to strengthen corporate governance mechanisms, little is known about other kinds of regulations might affect RPTs. For instance, whether China's anti-corruption campaign and the actions of the Central Commission for Discipline Inspection (CCDI) in 2013 influence the disclosure of RPTs? What is the effect of the deregulation of dual audit

system on the magnitude of RPTs (Jin et al., 2018; Zhang, 2020; Zhang et al., 2021)? *Second*, apart from focusing on the establishment of regulations on RPTs, future research can emphasise the importance of the enforcement process on the effectiveness of the regulations on constraining opportunistic RPTs. This is because, with an inefficiency enforcement institution (reflected by unlawful or unethical corporate behaviours or fail to impose punishment), firms might find it challenging or more expensive to follow normal law/regulation thereby offset the monitoring role of regulations (on restraining opportunistic RPTs). *Third*, previous studies paid much attention on the bright side of regulations on RPTs but neglect the dark side of these regulatory enforcement. As has been noted in the past studies that regulations can also induce firms' opportunistic activities such as earnings management (Healy & Wahlen, 1999). That is, in an institution with over forceful regulatory enactments, firms can become more stimulated to grab private benefits via less observable activities such as RPTs and have stronger incentives to conceal or avoid disclose these behaviours. Research examining the effectiveness of regulations and RPTs can take consideration of this as one of the explanations. *Fourth*, since a large stream of studies have paid attention to the effects of RPT-related regulations and conclude with varied results, future researchers might look into factors especially in national level and unique institutional contexts that might shape the introduction of RPT-related regulations in different regions and its influences on the occurrence of opportunistic RPTs and organisational outcomes (Rubio-Marín, 2012).[41]

With regulatory environment caught the most attention previously, we know little about how economic, political, and cultural institutional environments influence the practice of RPTs. For instance, recently, the economic crisis triggered by the Covid-19 pandemic might offer a unique context for future researchers to investigate the effect of economic environment on RPTs.

2.8.3.3 RPTs and Organisational Outcomes

A large number of studies have been focusing on identifying RPTs' effects on firms' economic performance (i.e., financial-based or market-based) whereas less studies contribute to the non-economic or operational performance (i.e., competitive-based, social-based, or strategic-based). In particular, owing to the opportunistic perception behind RPTs practices, it could be possible that firms involved in opportunistic RPTs are inclined to participate in other unlawful or unethical behaviours (Baixauli-Soler & Sanchez-Marin, 2015). In this regard, future studies may consider uncovering the non-economic influence of RPTs such as corporate social responsibility, firm reputation (Lange et al., 2010), sustainability development (i.e., economics, ecology, and social justice) (Keeble et al., 2003), or firms' long-term performance such as strategic perforance, competitiveness, business growth or a well-thought-out strategy (Bertrand, 2010; Nguyen et al., 2020; Sinclear

[41] For example, Li et al. (2020) reveal that the differences on the effects of two RPT-related regulations (i.e., one rule on asset diversion and the otther on loan guaranttees) can be attributed to that keeping track of asset diversion is much easier than verifying a guarantor in a loan contract. Future studies therefore may consider investigating on determinants of RPT-related regulations, so that to advance the introduction and enforcement of RPT-related regulations.

& Martin, 2021). In another perspective, future research can identify whether RPTs practice determines firms' strategic decision-making such as tax planning strategy (Bauer et al., 2020), outsourcing, privatisation (Du et al., 2013), ethical financing (Abd Majid et al., 2020), internationalisation (Agnihotri & Bhattacharya, 2019), cross-listing, growth- or profit- oriented strategy, voluntary adoption of high-quality financial reporting standards, or the choice of accounting policies. Moreover, paying attention to the strategic aspects of the firms engaging RPTs can be useful for academics and practitioners to detect the underlying motivations of RPTs. For example, whether firm with sound strategical management or performance is less likely to conduct opportunistic RPTs and more incline to engage in beneficial RPTs?

In addition, rather than simply examining the consequences of RPTs, it would be advisable to look at the mechanisms through which that RPTs influence firms' performance and market reactions. For instance, whether RPTs change corporate culture, management practice or firms' operation and strategy making, thereby influence corporate financial performance and firms' value (Pollanen et al., 2017). Besides, further interpretation or justification of findings on outcomes of RPTs can offer useful insights in this area. For example, while most studies focusing on whether the market responses with positive or negative stock return to the disclosure of RPTs, less scholars identify the potential temporal lag existed within the impacts of RPTs. Specifically, in addition to test the short-term (less than 1 year or 2-3 years) reactions from the capital market as well as the corporate financial performance, future researchers are expected to investigate whether RPTs have different implications to firms' long-term performance (Zhou & Park, 2020).

2.9 Implications

Our review of the vast literature on RPTs offers practical implications. First, the consequences of RPTs have implications for investors and auditors on reviewing and assessing these transactions. Previous instances of fraud have arisen from a lack of attention and diligence dedicated to these transactions, leading to audit failure and financial losses for investors (Atanasov et al., 2014). This review study enlighten auditors and investors about the potential various mechanisms through which these transactions could be manipulated for deceptive purposes, thereby raising awareness to protect their interests.

Second, the consistent body of evidence indicating that RPTs are frequently exploited for tunneling and propping activities underscores the necessity of investigating mechanisms to curtail these transactions. The evidence of significant moderators reviewed in this study therefore provides valuable insights into how minority investors can focus their efforts on governance mechanisms to mitigate the incidence of opportunistic RPTs. In particular, it is noteworthy to emphasise the importance of having independent directors, audit committees, and experts on the board to facilitate the meticulous examination and evaluation of these transactions. Additional considerations should also extend to companies characterised by concentrated ownership or political

connections, as these entities may possess greater incentives for expropriating outside investors and minority stakeholders.

Third, the findings derived from this comprehensive review convey a vital message to policymakers, urging them to exercise increased vigilance over the disclosure and regulation of RPTs. The failures of shareholders efforts to challenge tunneling and expropriations (e.g., Coke's tunneling from Bottling and Biglari Holdings' dilutive share offering) in courts underscore the imperative nature of our review. It emphasises the need for policymakers to enforce regulations that protect the interests of minority shareholders and enhance the transparency of RPT-related disclosures and governance (Atanasov et al., 2014). Our in-depth review of the effects of RPTs can provide valuable insights to policymakers by revealing gaps in existing policies that insiders may exploit for expropriation.

2.10 Conclusion

In this review paper, we collect evidence from 171 studies that examine RPTs and published in over 80 journals indexed in the 2018 AJG. Included articles mainly focus on the impact of RPTs on corporate performance and how corporate governance and institutional environment determine the occurrence and implications of RPTs. Results on these areas are ambiguous, with some indicating detrimental effect of RPTs on firm's value others find positive valuation impact of RPTs. Similarly, some studies highlight the role of corporate and institutional governance factors on curbing opportunistic RPTs whereas others find them to be inefficient. Thereafter, we provide recommendations on how future research can theoretically and empirically fill in the gaps and contribute to the development of our knowledge on RPTs. Additionally, we also emphasise several important methodological issues (i.e., location, data, method and research design) that future studies might take into account for more robust investigation around RPTs.

As is the case with every study, this review is also subject to several weaknesses. *First*, our data collection ends in December 2020 whereas more articles will publish after that date. As is known that an increased number of research have begun to focus on RPTs since 2018 (as shown in Figure 2.3), it will attract more and more attention among academics in the coming years. Therefore, future research can expand current study to analyse articles that released after 2021. *Second*, in an effort to ensure the reliability of provided evidence, we undertook a quality assessment which exclude 3033 (as shown in Figure 2.2) articles that are not published in the AJG in fields: ACCOUNT, ECON, FINANCE or ETHICS-CSR-MAN. Similar research could be conducted by applying other Journal index such as the Australian Business Deans Council Journal Quality list (ABDC) to bridge the gaps within this review. *Third*, present paper only analyses articles printed in English language, with adequate language skills and accessible sources, a SLR of RPTs conducted for articles in non-English language can complement current research. Particularly, due to the large proportion of studies focusing on Chinese companies (as shown in Table 2.2), a review of RPTs papers published in Chinese language may provide more

insights and evidence into current findings. Nevertheless, the authors consciously adopted a systematic approach to review the most up-to-date research on RPTs and followed all required steps (Figure 2.1) in performing a valid and reliable SLR. We therefore claim that, based on the available sources and appropriate knowledge and skills, this paper has been attempted to provide the most extensive, in-depth and rigorous systematic review in the field of RPTs.

Chapter 3 Do Narcissistic Auditors Mitigate or Exacerbate Opportunistic Related-Party Transactions?

Abstract

Using hand-collected data from Chinese listed firms between 2000 and 2020, this paper examines how narcissistic auditors affect firms' intentions to engage in abnormal related-party sales. We find that a narcissistic review auditor induces more abnormal related-party sales, while a narcissistic engagement auditor reduces abnormal related-party sales used during benchmark beating. Specifically, this monitoring role of narcissistic engagement auditors in mitigating abnormal related-party sales is particularly effective in private firms, where auditors face less political and economic pressure compared to SOEs. In additional analysis consistent with predictions, we find that the impact of a narcissistic review auditor in facilitating abnormal related-party sales during benchmark beating is particularly pronounced in clients that are economically important to the auditor. Finally, the effect of engagement auditor narcissism on abnormal related-party sales and benchmark beating persists when we employ the generalized method of moments, propensity score matching, and difference-in-differences approach to mitigate endogeneity concerns.

Keywords: Related-party transactions; earnings management; auditor personality; narcissism; state-owned-enterprises

3.1 Introduction

This paper examines whether auditor's narcissism influences opportunistic related-party transactions (RPTs).[42] RPTs are deemed to be one of the most common channels through which firms manipulate earnings and controlling shareholders siphon company resources from minority investors (Berkman et al., 2009; Jian & Wong, 2010). Indeed, existing empirical studies provide substantial evidence that firms utilise RPTs opportunistically to expropriate wealth to the disadvantage of minority shareholders and

[42] Related-party transactions can be defined as transactions between a listed company and its related-entities (i.e., subsidiaries, principal owners, directors and officers or their families). There are various types of such transactions, including sales, purchases, services, borrowing, lending, and guarantees (International Accounting Standards, 2009).

to beat predetermined market and industry benchmarks (Aharony et al., 2010; Berkman et al., 2010; Fang et al., 2018; Jiang et al., 2010; Jian & Wong, 2010; Peng et al., 2011; Firth et al., 2019).

Not only academic scholars but also policymakers and regulators have paid substantial attention to opportunistic RPTs and imposing stringent instructions on RPT-related disclosure. For instance, the Financial Accounting Standards Board (FASB) requires public firms to report material RPTs in their annual reports and proxy statements. In 2006, the Securities and Exchange Commission (SEC) toughened the governance policies and procedures around reviewing and approving transactions with related-parties. During 2000-2006, the China Securities Regulatory Commission (CSRC) also announced new regulations aimed at restraining RPTs and increasing minority investors' voting rights in annual meetings.[43]

The opportunistic use of RPTs highlights an important research question on whether external auditors are an effective mechanism to discipline managers and dominant owners from appropriating company wealth to the disadvantage of outsiders and minority investors. Arguably, RPTs represent one of the most serious challenges faced by external auditors (Gordon et al., 2007) for several reasons. First, RPTs encompass a wide variety of related-parties and types of transactions that might substantially increase required auditors' effort and might require much time to detect opportunism, for instance. Second, auditing RPTs requires more information from managers who are more likely to conceal crucial RPT information from external auditors, as they attempt to reduce the probability of receiving qualified auditor opinions. Consequently, auditors may not be able to obtain sufficient information from involved parties to ascertain whether these transactions are genuine rather than opportunistically aimed at resource expropriation (Fang et al., 2018).

Despite these inherent challenges, regulators in both the US and China have taken action and revised auditing standards to strengthen the effectiveness of auditing RPTs and mitigate RPTs' capacity to result in material misstatements in financial statements. However, findings from the first study (i.e., an SLR) of this thesis reveal that existing empirical evidence regarding the efficacy of auditors in mitigating opportunistic RPT practices is limited, and this limited evidence focuses to a great extent on audit firm size, providing inconsistent conclusions. While Cheung et al. (2009), Bennouri et al. (2015), and Bhuiyan & Roudaki (2018) report that big audit firms mitigate RPTs, Gallery et al. (2008) find no relation between big audit firms and the magnitude of RPTs. Notably existing studies predominantly focus, so far, on the size of the audit firm rather than the audit partners who are entirely and directly responsible for conducting audit procedures. Furthermore, Gul et al. (2013) suggest that a partner's

[43] Announced in 2000, the first regulation largely increased minority shareholders' voting rights at annual meetings and prohibited beneficiaries' parties from voting on RPTs. Afterwards, in 2006, to protect minority shareholders from expropriation, the CSRC further introduced two rules to monitor RPTs: one prohibits provisions of guarantees to controlling shareholders; the other requires all assets diverted by controlling shareholders to be returned by 2006 and imposes disclosure requirements of asset transfers by controlling shareholders.

observable attributes only explain 3% of individual partner decisions and therefore we aim to contribute to the current debate by delving into one of the unobservable attributes that implicitly influence audit partners' decision-making and auditing activity, namely narcissism (Akers et al., 2014).

We argue that narcissistic auditors represent a double-edged sword to the audit of opportunistic RPTs. On one hand, a narcissistic auditor manifests a dominant and self-confident personality, and tends to hold on their ground insistently in maintaining their responsibility to perform unprejudiced evaluation of material misstatements while refraining from cooperating with important clients to hide opportunism from outsiders (Chou et al., 2021). Given that narcissists are less likely to be misled by others' beliefs and information, narcissistic auditors, expected to maintain their professional scepticism, are less likely to be deceived by fraudulent evidence provided by managers (Byrne & Worthy, 2013; Hobson et al., 2020). Accordingly, narcissistic auditors are more likely to mitigate opportunistic RPTs. On the other hand, narcissistic auditors exhibiting arrogance, exaggerated self-perception, and a sense of superiority are also likely to undervalue others' opinions, therein impeding themselves from obtaining adequate information to make rational decisions (Nevicka et al., 2011). Overestimating their competence might lead to lax discipline and less effort in their audit work, which may result in lower levels of audit quality, thus weaker governance of opportunistic RPTs.

Therefore, it remains unclear ex-ante whether narcissistic auditors in fact mitigate RPTs. To investigate this question, we focus on the sale of commodities to related-parties in Chinese companies for several reasons. First, related-party sales typically take a considerable proportion of firms' total assets, which cannot be overlooked. Second, while early studies consider sales to related-parties as normal business transactions that may enhance cooperation and efficiency within groups (Fisman & Wang, 2010), others suggest that firms are incentivised to exploit related-party sales for earnings manipulation (Fang et al., 2018). Third, the special treatment and new share issuance policies in China stimulate the incentives of insiders exploiting sales to related-parties to retain listing status and acquire rights for share issuance (Jian & Wong, 2010). Fourth, the concentrated ownership is pervasive among Chinese listed firms, leading to a high level of tunneling via RPTs in China. This phenomennon is compounded by weak investor protection, rendering it challenging for minority shareholders to protect their interest against potential expropriation by insiders (Cheung et al., 2009; Lo et al., 2010). Accordingly, related-party sales in Chinese companies present an ideal context for detecting insiders' manipulative activities. However, as further analysis, we focus on other types of related-party transactions. In addition, given the limited research spotlighting the role of individual auditors, we investigate narcissism among junior and senior auditors (engagement and review auditors) individually.

Using a sample of 1,498 Chinese companies listed on the Shanghai Stock Exchange (SSE), our baseline model shows that only narcissistic review auditors facilitate abnormal related-party sales. In order to sharpen our analysis, we identify settings where clients have a higher tendency to abuse abnormal

related-party sales for non-operating intentions. These include the period when firms' return on equity is close to the threshold for being delisted from the stock exchange or qualified for share issuance.[44] Interestingly, consistent with our hypothesis, our evidence suggests that while review auditor narcissism facilitates abnormal related-party sales, engagement auditor narcissism plays a key role in constraining abnormal related-party sales in periods when managers are more likely to utilise them for opportunistic motives.

Furthermore, we split our sample into state owned and private enterprises and, interestingly, our findings show that narcissistic review and engagement auditors' exhibit heterogeneous behaviour towards abnormal related-party sales, especially in private enterprises. In essence, we find that narcissistic review auditors allow abnormal related-party sales in private firms while narcissistic engagement auditors still play a key role in constraining opportunistic related-party sales. The distinct differences between review and engagement auditor narcissism highlight the need to consider the role of the individuals while investigating narcissism. Our findings are sustained after conducting a battery of robustness tests and addressing potential endogeneity issues, using the generalized method of moments, propensity score matching, and difference-in-differences approach.

This paper makes important contributions to the existing literature. First, unlike prior RPT studies focusing on the economic lens of monitoring attributes, such as independence, ownership structure, gender, or reputation (Bennouri et al., 2015; Wang, 2015; Bansal & Thenmozhi, 2020; Usman et al., 2021), we focus on one of the psychological attributes of one of the key external monitoring players, namely auditor narcissism. This, indeed, adds to the cluster of research seeking to contribute to the scrutinization of opportunistic RPTs and other mechanisms to protect minority investors. Specifically, our findings emphasise how audit partner personality can be taken into consideration when seeking to scrutinize opportunistic activity in the form of RPTs.

Second, unlike existing audit studies (Chou et al., 2021; Nekhili et al., 2021), we pay careful consideration to the rank of audit partner within the audit team and differentiate between engagement and review audit partner. Our findings suggest that the influence of the narcissism personality trait on auditor behaviour is heterogeneous. Specifically, narcissism adversely influences review auditors' behaviour as they rise in the ranks as compared with engagement auditors who are inherently motivated to spend substantial effort to enhance audit quality to build their reputation in the audit marketplace and enjoy promotions to more senior levels. This highlights the importance of taking into consideration the position of individuals when investigating narcissism.

[44] Chinese securities regulators have set bright-line rules to regulate firms' listing status. A firm must report at least 0% ROE to maintain its listing status and 6% ROE to be qualified for new shares issuance (Jian & Wong, 2010). Accordingly, *Incentive* is an indicator which equals 1 when ROE is between 0%-2% or 6%-8%, suggesting that around this period the firm is strongly incentivised to inflate earnings to meet the benchmark.

Third, in accordance with suggestion from Brunzel (2020) that contextual factors are important to narcissism. Our paper discovers the determinant role of government in shaping the relationship between auditor narcissism and RPTs. We shed lights on how identity of the counterpart (i.e., government) who collaborate with the narcissist to be essential to the consequences (i.e., RPTs). We find government involvement to be a determinate factor to the impact of auditor narcissism on opportunistic RPTs.

Fourth, regarding operationalisation of signature size, one may doubt simply using rectangle to measure the size. The size could potentially be affected by the selection of shape (i.e., rectangle, circle, triangle) due to the variance of signatures. To this concern, we balance out this weakness by incorporating an alternative operationalisation of signature size (i.e., convex hull) in computing the size of auditor signatures (Mailhos et al., 2016).

The remainder of this study is organised as follows. Section 3.2 reviews the prior literature and develops the hypotheses. Section 3.3 describes the sample selection and research design. The empirical results are reported in Section 3.4 , followed by Section 3.5 which presents additional analysis and Section 3.6 which reports robustness tests. Finally, Section 3.7 concludes the paper.

3.2 Literature Review and Hypotheses Development

3.2.1 Related-Party Transactions

A string of high-profile financial scandals involving RPTs has spawned a vast body of research in this field. This uncovers the economic consequences of RPTs, including firms' stock market performance (Berkman et al., 2009; Jiang et al., 2010), corporate accounting performance (profitability) (Huyghebaert & Wang, 2012; Chen, 2014), and audit risk (Kohlbeck & Mayhew, 2017; Fang et al., 2018). Generally, interpretations of RPTs are twofold: in accordance with agency theory, some scholars consider RPTs as an agency conflict arising from managers exploiting it for opportunistic earnings management and controllers transferring wealth for private benefit at the expense of minority shareholders' interests (Cheung et al., 2006; Lo et al., 2010). Conversely, drawing on the efficient contract theory and the transaction cost theory, other academics articulate that many contracts exist only if they are efficient due to survivorship bias (Lyons, 1996). They argue that the familiarity and trust among related-parties can facilitate the communication, reduce hold-up problems, enhance the efficiency, and lower the costs of these transactions (Fisman & Wang, 2010; Ryngaert & Thomas, 2012; Black et al., 2015; Balsam et al., 2017; Hope et al., 2019). Nevertheless, evidence in support of the detriment RPTs is more prevalent than this. It seems that investors and other minority shareholders would be at risk of being misled by opportunistic RPT practices, which certainly illuminates the role of external mechanism in mitigating or facilitating such practices (Kushwaha & Dixit, 2021).

Prior research demonstrates that RPTs represent a challenging audit topic for external auditors and they are one of the key drivers of audit deficiency and failure (Beasley et al., 2001; Louwers et al., 2008). As a response, a series of regulations now require external auditors to closely scrutinize and challenge opportunistic RPTs. For instance, in 2008, the International Auditing and Assurance Standards Board (IAASB) revised and redrafted auditing standards on RPTs emphasising auditor responsibility to obtain evidence on RPTs, making sure that RPTs are appropriately identified, accounted for, and disclosed (IAASB, 2009). The Public Company Accounting Oversight Board (PCAOB) also imposed new auditing standards in relation to RPTs as a response to the sequence of auditor failures associated with RPTs such as Enron in the US, Parmalat in Europe, and Kangsai Group in Asia (Bennouri et al., 2015; Fang et al., 2018). The new standard heightened the obligations of auditing RPTs, including the auditor's response to misstatement involving RPTs, an understanding of related-parties and their transactions with the client, emphasis on both accountancy and transparency of RPTs, and communications with internal audit committees. In China, the first set of instructions (MOF, 1999) on identifying and auditing RPTs was thereafter replaced by Auditing Standard No. 1323, with a broader definition and enhanced requirements for disclosure of RPTs, after a sequence of scandals in 2006. Taken together, the role of external auditors in scrutinizing the practice of RPTs has been highlighted by policy makers and regulatory change across the world.

Despite the regulatory concern over RPTs, there is sparse research on the role of auditors in mitigating opportunistic RPTs, indeed with mixed results. While Kohlbeck & Mayhew (2017) note that auditors have no power to influence their clients' decisions to engage in RPTs, Bennouri et al. (2015) hold that external auditors can play a key role in mitigating such practices. For instance, managers might expect external auditors to challenge them and request more information on RPTs, which might reduce managers' ex-ante incentive to engage in opportunistic RPTs. On the other hand, Mayhew et al. (2001) observed that managers can control the extent of RPT information disclosed to external auditors so they might conceal key parts of it to avoid the detrimental effect of reporting problematic RPTs. Nonetheless, it remains an open research question whether external auditors can mitigate opportunistic RPTs, and only a small number of studies have investigated whether external auditors restricting RPT opportunism (Bennouri et al., 2015; Cheung et al., 2021; Fang et al., 2017; El-Helaly et al., 2018). Notably, since audit procedures and auditor independence are unobservable, limited auditing and RPTs studies have developed a proxy for audit quality based on appearance, so a few existing studies pay much attention to audit firm size, and there is little evidence on the unobservable attributes of audit partners that might shape their behaviours and activities on auditing RPTs.

In essence, regulators in several countries require detailed disclosure on audit partners, implying that audit quality might vary across partners within the same audit firm (Public Company Accounting Oversight Board, 2013). Emerging empirical studies exploit these regulations and instead of focusing on the audit firm, they have started to focus on audit partners. They demonstrate that, relative to

conventional proxies of audit quality, the attributes of audit partners also shape audit quality (Gul et al., 2013; Robert Knechel et al., 2015). Nevertheless, to the best of our knowledge there is less evidence on the role of individual auditors in mitigating opportunistic RPTs. The interactions between the engagement auditor and executives can take up a large part of the auditing process (Mauritz et al., 2021) so one might argue that the audit partner has a role to play in curtailing managers' ex-ante incentives to engage in opportunistic RPTs.

Furthermore, the existing literature on individual auditors has predominantly focused on the economic lens of auditor attributes, such as partner tenure (Chen et al., 2008), availability (Lo et al., 2022), expertise (Chin et al., 2014), and education (Li et al., 2017). While these economic lenses are important and relevant, they neglect the psychological lens playing a key role in shaping auditors' professional judgement (Nelson, 2006). In essence, Gul et al. (2013) suggest that an individual partner's attributes, including age, gender, and education, only explain 3% of their fixed effects. In other words, auditor behaviours, that these conventional attributes fail to explain, can be attributed to partners' unobservable psychological attributes (Bazerman et al., 2006). Focusing on the psychological perspective can potentially bridge the gap in the extant knowledge on personality-based auditor variations and its impact on auditing performance and organisational outcomes. Accordingly, we aim to extend the prior understanding of RPTs by focusing on the psychological attributes of audit partners, namely auditor narcissism.

3.2.2 Audit Partner Narcissism

According to the American Psychiatric Association (2013), a narcissistic personality is defined as a combination of entitlement, grandiosity, attention seeking, an unrealistically inflated self-view, a need for that self-view to be continuously reinforced through self-regulation, and a general lack of regard for others. Building on these multiple dimensions within the concept, the extant literature presents a debate about whether narcissism is a constructive or destructive aspect of personality (Amernic & Craig, 2010). On the one hand, the narcissistic auditor can be destructive for several reasons. They are characterised by arrogance, demand for admiration, deficit of empathy, and stubbornness. These characteristics might impede them from gathering comprehensive information and adequate support from other members in the audit team (Nevicka et al., 2016). This therefore weakens the function of external auditors acting as a "watchdog" to deter clients from financial misconduct through effective monitoring and inspections. Furthermore, the inflated self-view of a narcissist in an auditor might lead to overestimating their competence and thus curtailing efforts with their audit work, which may result in a looser external governance environment of listed firms. Finally, narcissists have been recognized to underestimate risks in various contexts, such as gambling (Lakey et al., 2008), financial investment decisions (Foster et al., 2009), and assessment of financial fraud (Johnson et al., 2021). Accordingly, narcissistic auditors may

underestimate clients' intentions in seeking expropriation through abnormal related-party sales, which in turn would result in a higher magnitude of abnormal related-party sales in client firms. Consistent with this view, Johnson et al. (2021) also report that narcissistic auditors exhibit lower levels of risk assessment ability or professional scepticism. Church et al. (2020) show that a narcissistic review auditor lengthens the process of auditor-client negotiation and is associated with audit delay.

On the other hand, narcissistic individuals consider themselves as competent and intelligent executants, often needing to maintain their reputations among their peers, hence they have greater desire to produce outstanding outcomes than others do (Farwell & Wohlwend-Lloyd, 1998). In particular, narcissism manifests in exaggerated self-perception and the need for such a self-image to be reaffirmed by peers (Judge et al., 2006; O'Reilly et al., 2014; Lee et al., 2022). Therefore, narcissists typically strive for constant improvement through self-regulation to earn admiration and reinforce their "specialness" (Maccoby, 2000; American Psychiatric Association, 2013; Brunzel, 2020). However, audit failures can damage an audit partner's reputation, so narcissistic auditors have a strong tendency to refrain from problematic RPTs that may lead to accounting fraud and often impose more stringent auditing (He et al., 2016). In this vein, they can protect their reputation and self-esteem, and continuously gain praise and respect from followers. Further, narcissistic auditors are associated with having an assertive personality and are more likely to hold their positions firmly rather than bending their opinions to satisfy major clients (Maccoby, 2000; Chou et al., 2021). As such, they are likely to possess higher levels of independence while confronting opportunistic client managers and are more likely to stand their ground to protect the interests of minority shareholders and comply strictly with auditing standards to pursue their professional objectives instead of surrendering to the pressure or threat of losing important clients (Chou et al., 2021).

Another channel, through which narcissistic auditors add value, is that narcissists, projecting superiority onto themselves and low regard on others, are less likely to be misled in decision-making (Farwell & Wohlwend-Lloyd, 1998). Narcissists have been shown to perform better than non-narcissists when misleading information is presented (Byrne & Worthy, 2013). Given that managers have strong intentions to hide opportunistic RPTs from external auditors, narcissism may thus serve as an advantageous attribute to help maintain their professional scepticism and reduce the likelihood of being deceived by opportunistic managers (Byrne & Worthy, 2013; Hobson et al., 2020; Sun et al., 2022). Indeed, Church et al. (2020) show that firms audited by a narcissistic review auditor have lower levels of discretionary accruals.

Taken together, we predict that narcissistic auditors play an important role in client firms' engagement in opportunistic RPTs. We propose that:

H1: Auditor narcissism has an impact on client firms' engagement in abnormal related-party sales.

Nevertheless, audit is conducted by teams with review and engagement audit partners. While Lennox et al. (2020) emphasise the role of review audit partners in audit quality, given their financial connections to the audit firm through their ownership of equity, other studies demonstrate that the engagement audit partner is crucial to the audit performance (Cahan et al., 2022). Unlike review audit partners who mainly observe and supervise, engagement audit partners typically take charge of the fieldwork and actively participate in the major phases of the audit engagement (Huang et al., 2021; Lo et al., 2022).

Prior studies on auditor narcissism also provide contrasting findings of the impact of narcissistic review and engagement partners. Chou et al. (2021) find a positive relationship between engagement partner narcissism and audit quality, whereas Church et al. (2020) show that engagement partner narcissism has negligible effects, while also suggesting that review partner narcissism diminishes discretionary accruals. Given the distinct roles and contrasting outcomes in the literature, this study is prompted to examine narcissism among both review and engagement partners individually.

Review partners typically undertake a supervisory role, observing and guiding the activities carried out by engagement partners (Church et al., 2020). It is noteworthy that leaders exhibiting narcissistic traits are inclined to undervalue others' perspectives and are less receptive to dissenting viewpoints from team members (Maccoby, 2000; Mowchan et al., 2022). Consequently, a narcissistic senior not only impedes the exchange of information within the audit team but also hampers the cultivation of auditor scepticism and the critical evaluation of potential risks (Nevicka et al., 2011). We therefore propose the following hypothesis:

H1a: Review partner narcissism exacerbates client firms' engagement in abnormal related-party sales.

In contrast, in the hierarchical framework of audit firms, junior auditors (engagement partners), exhibit a greater incentive to pursue higher quality of auditing, with aspirations of promotions to higher positions such as review partner or manager (Abdolmohammadi, 1999; Westermann et al., 2015). Thus, we posit the following hypothesis:

H1b: Engagement partner narcissism mitigates client firms' engagement in abnormal related-party sales.

3.2.3 The Importance of Government Involvement

Narcissism, being a multidirectional personality, has an impact that might change in different contexts and circumstances (Cragun et al., 2019). Therefore, we also attempt to investigate whether government involvement influences the relationship between auditor narcissism and RPTs. One of the unique features in Chinese listed firms is the concentrated government ownership, and prior research suggests

that expropriations from minority shareholders is more likely to occur in state-controlled than private firms. For instance, Jian & Wong (2010) find that state-owned companies are more likely to exploit abnormal related-party sales for the purposes of "propping up" compared to privately owned companies. Other studies also reveal that State Owned Enterprises (SOEs) have a greater intention to withhold negative news from outsiders and manipulate them, at the expense of minority shareholders (Qian et al., 2010; Piotroski et al., 2015). However, the audit process in SOEs is subjected to strong political and economic influences so auditors are prone to investing in relationship building with government-controlled clients, as a protection for their long-term business (Chan et al., 2006; Cohen & Leventis, 2013; Fang et al., 2018). Furthermore, government owners have both the motives and the ability to access and control a firm's accounting and financial data without relying on publicly disclosed information. This reduces their demands for independent auditors and weakens the effect of external auditing on SOEs (Chan et al., 2006; Berkman et al., 2010; Fang et al., 2018). Based on the above argument, we argue that the effect of auditor narcissism on firms' engagement in opportunistic RPTs is more pronounced in private firms than SOEs and we therefore propose that:

H2: The impact of auditor narcissism on abnormal related-party sales is more pronounced in private firms than in SOEs.

3.2.4 The Impact of Auditor Narcissism on Benchmark Beating via Abnormal Related-Party Sales

To sharpen our research through advanced identification, we establish situations when the clients have the highest tendency to exploit abnormal related-party sales for non-operating purposes. The special treatment (ST) policy and policy on new share issuance impose two types of risks to firms listed on the Chinese stock market: the risk of being delisted if the firm reports a negative return on equity (ROE) for two consecutive years and the risk of losing the right to issue new shares when average ROE in the past three years is less than 10%. These would cause controlling shareholders to lose a substantial portion of their private benefits from control (Peng et al., 2011). Thus, to minimise such cost, controlling shareholders in Chinese listed firms are strongly incentivised to prop up the listed firm to reach the ROE thresholds. Evidence found by Jian & Wong (2010) implies that such Chinese controlling shareholders are engaged in propping up earnings by exploiting sales to related-parties, particularly when firms' ROE are close to the threshold for being delisted or losing the right to issue. That is, if auditors' narcissism has an impact on RPTs, their impact would be more pronounced when firms have high tendency to meet ROE threshold. We therefore propose that:

H3: The impact of auditor narcissism on abnormal related-party sales is more pronounced in firms with high tendency to meet ROE threshold.

3.3 Research Design

3.3.1 Sample Selection

Our initial sample includes 1,709 Chinese main-board A-share companies listed on the SSE.[45] From the initial sample, we eliminate (i) 87 firms in the financial industry due to the distinct nature of their business and regulatory requirements, and (ii) 66 firms with missing audit reports on the CNINFO website. Following these procedures, the remaining sample includes 1,556 firms with available audit reports on the CNINFO website (as reported in Table 3.1 Panel A).

We, then, download annual audit reports with hand-written signatures for each firm-year observation.[46] This yields 9,171 annual audit reports gathered from 1,556 listed firms for signature collection. Annual audit reports that satisfy any one of our exclusion criteria are eliminated in the process.[47] Ultimately, there are 8,160 out of 9,171 audit reports covering 1,498 unique firms from 2012 to 2020 comprising the final sample for analysis.[48]

While the maximum sample size contains 8,160 firm-year observations, the sample shrinks when we focus on one type of RPT (e.g., sales, lending, or guarantees).[49] Specifically, 2,817 firm-year observations are available for the *ABMSale* analysis, 2,483 firm-year observations for the benchmark

[45] We exclude 55 B-share firms, one Chinese Depositary Receipt (CDR) firm, and 328 SciTech firms from the initial sample. The B-share market has distinct features compared to the A-share market, in terms of currency, trading requirements, and tax policies (Yang et al., 2019). A CDR represents a pool of foreign equity that is traded on Chinese exchanges. SciTech firms are listed on the SSE Science and Technology Innovation Board. These firms are excluded due to the varying regulations and reporting standards of both CDR and SciTech firms compared to the main board A-share companies.

[46] Note that we focus on the original version of the audit report in that firm-year rather than a later year updated audit report. This is because some of the updated audit reports were signed by different auditors in later years. We doubted using the updated version where auditors are not the same as those who engaged with the client firm in the relevant year. Through reviewing around 86 updated versions of audit reports, we found that some were duplicates of the original versions, some were signed by the same auditors as in the original version, and only six of the updated versions had signatures from different auditors. We therefore replaced those with their corresponding original audit reports to ensure that the signatures were from the auditors actually engaged in the audit process in the same year as the audit report.

[47] The criteria are described in Appendix B.7 Supplement A: Exclusion Criteria for Audit Reports.

[48] Audit reports including hand-written signatures are available since 2012. As the signature collection commenced in September 2021, the latest audit reports are therefore available up to 2020.

[49] This is because some firms disclosed zero for the focus RPT type in the firm-year of interest. We report the number of firm-year observations disclosing zero for the focus RPT type in Appendix B.7, explaining why the sample size significantly drops when we narrow down to analysing one transaction type. Further, we report the regression analysis using a dummy variable from each type of transaction in Appendix B.4 to take into account the RPT types disclosing zero. Since our focus is primarily on related-party sales, we find the result is similar to that in the ratio of the type of RPT analysis in Appendix B.3, showing a positive relationship between the engagement auditor narcissism and related-party sales in the full sample and SOEs, respectively.

beating analysis, 1,664 firm-year observations for the *Lending* analysis, 2,550 firm-year observations for the *GuaranteeTo* analysis, and 4,652 firm-year observations for the *ABMRPT* analysis.

Table 3.1 Sample Descriptive

Panel A: Sample Selection Procedure

Sample Selection Procedure	Firms	Observations
Initial Sample from Shanghai Stock Exchange	1,709	
- Financial firms	87	
- No audit reports	66	
Sample for collecting audit reports	1,556	9,171
Audit reports meet one of the three exclusion conditions are eliminated:		
- Signed by three auditors		390
- Signature is hard to see, not clear, or illegible		313
- Report is not standard A4 size or edge is not clear		308
Final sample for analysis	1,498	8,160

Panel B: Sample Distribution by Industry

CSRC Industry Classification	Freq.	Percent	Cum.
Accommodation and catering	3	0.20	0.20
Agriculture, forestry, animal husbandry and fishery	15	1.00	1.20
Construction	46	3.07	4.27
Culture, sports and entertainment	28	1.87	6.14
Diversified industries	8	0.53	6.68
Education	4	0.27	6.94
Electric power, heat, gas and water production and supply	72	4.81	11.75
Health and social work	3	0.20	11.95
Information transmission, software and information technology services	66	4.41	16.36
Leasing and commercial service	19	1.27	17.62
Manufacturing	911	60.81	78.44
Mining	48	3.20	81.64
Real estate	61	4.07	85.71
Scientific research and technical service	19	1.27	86.98
Transport, storage and postal service	73	4.87	91.86
Water conservancy, environment and public facility management	23	1.54	93.39
Wholesale and retail industry	99	6.61	100.00
Total	1498	100.00	

Panel A describes the sample selection procedures. Panel B presents the sample distribution by industry based on 2012 CSRC industry classification, and firms' industry is archived in the CSMAR database.

3.3.2 Data of Auditor Narcissism

3.3.2.1 Narcissism proxy

Numerous studies evaluate narcissism based on individuals' handwritten signatures (Judd et al., 2015; Aktas et al., 2016; Ham et al., 2017; Church et al., 2020; Chou et al., 2021). Using an experimental approach, Ham et al. (2017) testify the relation between individual narcissism and the size of their

signatures.[50] Evidence suggests that the larger the signature size, the more the individual is narcissistic. The rationale is that a larger signature exhibits the grandiosity of an individual as per the nature of a narcissist (Cragun et al., 2019). In this study, we utilise the signature size as a scale for narcissism for two reasons. The first is for data accessibility as it is mandatory for auditors to sign their clients' annual audit reports.[51] The second is that auditors provide the same attestation for the same purpose using the same form with the same structure that does not substantially constrain the space available for the signature; therefore, auditors' signatures are comparable among auditors, across clients, and over time (Ham et al., 2017; Chou et al., 2021).

3.3.2.2 Operationalisation of Signature Size

The prevalent method of measuring handwritten signature size is by drawing a rectangle around the signature with each side of the rectangle touching the most extreme endpoint of the signature (Ham et al., 2017; Ham et al., 2018). To ensure results are robust, we also follow Mailhos, Buunk and Cabana (2016) by drawing a convex hull area around the boundary as an alternative operationalisation of signature size. To minimize human errors and maintain consistency, we perform the drawing and measuring process using ImageJ and Matlab, as shown in Figures 5.3 and 5.4 in Appendix B.8. In the process of size calculation, we observe that measurement in pixel^2 may be jeopardised from bias due to the different resolutions of digital images (as presented in Figure 5.5 in Appendix B.8). This can be solved when image size calibration (a set scale) is implemented (Dwi et al., 2012; Pride et al., 2020). To set the scale, we use the standard A4 paper as the reference object of known size. Specifically, the scale is equal to the physical size of an A4 paper (210×297 mm = 62370 mm^2) divided by the size of the report shown in pixel^2. The physical size of a signature equals the size of the signature in the digital image (pixel^2) multiplied by the scale (mm^2/pixel^2). By applying the scale, we expect to control for the size variances due to different resolutions for each report page.

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[50] According to laboratory findings from Ham et al. (2017), while signature size is validated as an indicator of narcissism, it does not serve as a proxy for overconfidence. As such, it is less likely that an auditor's signature symbolises overconfidence instead of narcissism. Nonetheless, given the extensive research on overconfidence among CEOs and CFOs (Li & Tang, 2017; Qiao et al., 2023), it is suggested that future researchers delve into examining overconfidence in the auditing profession.

[51] Audit reports in China are required to be signed by both the review auditor (above) and the engagement auditor (below). We will then measure and record these signatures from the two auditors separately (Lennox et al., 2014; Church et al., 2020). Listed firms' annual audit reports are publicly available on the CNINFO website, which is a listed company information disclosure platform designated by the China Securities Regulatory Commission (CSRC).

3.3.2.3 Finalise the Signature Size Variable to Measure Auditor Narcissism

To finalise the signature size variable as a proxy for narcissism, the following steps are taken. First, to control for the different name lengths auditors have, we divide the signature size by the number of characters in that auditor's name, to yield an area-per-character size for each signature (Ham et al., 2017; Church et al., 2020; Chou et al., 2021).[52] Second, for each individual auditor, we take the average size of all the signatures of the same auditor across the full sample period from 2012 to 2020 (Chou et al., 2021). This is because narcissism as a personal characteristic is claimed to remain stable across time, so we need to place more emphasis on the differences among individuals rather than differences in the same individual across time (Raskin & Terry, 1988).[53] Finally, we use the natural logarithm of the average signature size per character as the proxy of individual auditor narcissism.

3.3.3 Empirical Model

Following Jian & Wong (2010) and Fang et al. (2017), we distinguish between the normal and abnormal components of related-party sales by regressing the amount of related-party sales on firm size (*FirmSize*), leverage (*Leverage*), market-to-book ratio (*MTB*) by each industry and year. We then take the residual term of this regression to estimate abnormal related-party sales (*ABMSale*). The residual from this model is expected to estimate the proportion of related-party sales that is more likely incentivised by non-operating purposes (namely opportunistic intentions). Hence, the following model is estimated to test H1:

$$ABMSale_{it} = \alpha + \beta_1 LRevAudNar_{it} + \beta_2 LEngagAudNar_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (1)$$

[52] Instead of using auditors' names as archived in CSMAR Audit Research Database, we hand-collect auditor names directly from audit reports, due to data inconsistency. Through a comparison, Figure 5.6 in Appendix B.8 shows that 92.03% of the names archived in the database are consistent with the name signed on the audit reports, 6.91% of the two auditor names are archived inconsistently in the database, 1.05% names in the database are completely different from the one signed on the audit reports. Although only minor differences exist, examining two auditors separately ensures that each auditor's name is correct and consistent with that signed on the audit report.

[53] We provide evidence for this. As shown in Table 3.10, the differences of either the mean or median signature size of both review and engagement auditors are mostly insignificant across high and low RPT clients. In addition, our results still hold when we replace our main narcissism variable (average signature size of an auditor across clients and over time) with the raw signature size of an auditor (varying across clients and over time) in Appendix B.5 Table B5.1.

To investigate the influence of government involvement in the relation between auditor narcissism and opportunistic RPTs (H2), we separate our sample into state-controlled and private firms, based on the nature of the largest shareholder of the firm.

Further, we employ the model from Jian & Wong (2010) to capture a firm's benchmark beating behaviours via abnormal related-party sales. In this model, we add *Incentive* to indicate the period when a firm's ROE is close to the threshold of delisting or share issuance. We then add *LRevAudNar*, *LEngagAudNar* and their interactions with *Incentive* as independent variables to the regression model to examine the effect of auditor narcissism on *ABMSale* during the period where the firm is most incentivised for earnings manipulation. Thus, the following model is constructed to test H3:

$$ABMSale_{it} = \alpha + \beta_1 Incentive_{it} + \beta_2 LRevAudNar_{it} + \beta_3 LEngagAudNar_{it} + \beta_4 Incentive_{it} * LRevAudNar_{it} + \beta_5 Incentive_{it} * LEngagAudNar_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (2)$$

3.3.4 Control Variables

Following previous research, we consider controlling for potential contributing and mitigating factors that may influence the level of RPTs. Ownership structure acts as one of the most crucial characteristics that help predict tunneling activity in the form of RPTs (Lo et al., 2010; Chen et al., 2017; Bansal & Thenmozhi, 2020). We therefore control for the ownership characteristic of listed firms by including a concentrated ownership control variable, capturing the percentage shareholding of the largest shareholder in one firm year. Additionally, concluding a monitoring role of corporate governance restricts opportunistic RPTs, we also control for other corporate governance elements, namely board size (Balsam et al., 2017), board independence (Wu & Li, 2015) and independent directors on the audit committee (Doo & Yoon, 2020), Big 4 audit firms (Huyghebaert & Wang, 2012), CEO duality, director compensation (Hope et al., 2019), and share held by the state (Berkman et al., 2010). Further, we take into account several financial attributes that have been documented to relate to RPTs, namely firm size (Kohlbeck & Mayhew, 2010), leverage ratio (Berkman et al., 2010), return on assets (ROA) (Jiang et al., 2010) and market to book ratio (MTB) (Berkman et al., 2009). Finally, other CEO characteristics, namely age, tenure, gender, compensation, and director characteristics (female directors and female independent directors), as well as auditor attributes, namely auditor gender diversity, and review and engagement auditor tenure, are added for control in all the analysis (Jiang et al., 2021; Johnson, 2006).

3.4 Main Results

3.4.1 Descriptive Statistics and Correlation Analysis

Table 3.1 Panel B provides the industry distribution of firms listed on the SSE. A summary of descriptive statistics is presented in Table 3.2.[54] In Table 3.2 Panel A, the mean value of *ABMSale* in the full sample, state-controlled, and private firms are 0.008, 0.303, and - 0.204, respectively. In comparison to the average *ABMSale* value of 0.019 reported in Chinese companies between 2003 and 2011 (Fang et al., 2017), there has been a decline in *ABMSale* when comparing the periods before and after 2012. For the full sample, Table 3.2 Panel B shows that the review auditor signature size (9.182, 5.055, 8.853, 4.726) is commonly larger than the engagement auditor signature size (8.955, 4.838, 8.655, 4.539), suggesting that the review auditor narcissism is higher than the engagement auditor narcissism. When comparing auditor narcissism between SOEs and private firms, both review and engagement auditors exhibit higher narcissism when confronting state-controlled clients than private clients. In Panel C, we notice that 99.7% of the full sample has established an audit committee (*AudCom*), so we use the percentage of independent directors on audit committee (*ACIndPerc*) as an alternative proxy for audit committee quality.

The correlation matrix in Table 3.3 indicates that all correlation coefficients remain below the threshold value of 0.7. In unreported results, we find that all the variance inflation factors (VIF) of the variables of interest are well below the critical threshold of 3. We conclude that there is no serious concern of multicollinearity that may affect our results. In addition, while review auditor narcissism (*LRevAudNar*) is positively correlated with *ABMSale*, engagement auditor narcissism (*LEngagAudNar*) is not directly associated with *ABMSale*. These provide preliminary support to the impact of auditor narcissism on opportunistic RPTs.

The correlation matrix reveals positive associations between *BoardSize*, *Concentration*, and *CEOduality* with *ABMSale*. A large board (Balsam et al., 2017), concentrated ownership (Lo et al., 2010), and CEO holding dual positions (Hope & Lu, 2020) are indicative of potential concerns of internal corporate governance, which are associated with a higher likelihood of opportunistic RPTs. Conversely, *CEOfemale* and *Fedirperc* exhibit negative associations with *ABMSale*. The presence of a female CEO and female directors signifies a higher quality of governance mechanism, correlating with a reduced occurrence of opportunistic RPTs (Usman et al., 2021). However, the relationship betwen director compensation (*Avgdircompen*) and RPTs yields different results compared to previous studies

[54] Appendix B.2 Table B2.1 Detailed Summary Descriptive Statistics presents other descriptive statistics including number of observations, mean, standard deviation, mininum, maximum, 25 percentile, 75 percentile, skewness, and kurtosis.

that have reported positive associations. As illustrated in prior research, this variation may be influenced by other underlying governance factors (Hope et al., 2019).

Table 3.2 Descriptive Statistics

Panel A: Abnormal Related-Party Sales Descriptive Statistics

	Full Sample				State-controlled				Private-controlled			
	N	Mean	Median	SD	N	Mean	Median	SD	N	Mean	Median	SD
ABMSale	4121	0.008	0.235	2.538	1723	0.303	0.456	2.305	2398	-0.204	0.010	2.673

Panel B: Signature Size Descriptive Statistics

		Full sample (N = 8,106)			State-controlled (N = 2,531)			Private-controlled (N = 4,383)		
		Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Review	recpixpch1	9.182	9.163	0.463	9.194	9.190	0.476	9.183	9.160	0.455
Auditor	recmmpch1	5.055	5.045	0.435	5.073	5.076	0.439	5.054	5.036	0.431
Narcissism	cvxpixpch1	8.853	8.824	0.439	8.865	8.850	0.453	8.853	8.823	0.430
	cvxmmpch1	**4.726**	**4.709**	**0.410**	**4.745**	**4.732**	**0.416**	**4.724**	**4.707**	**0.404**
Engagement	recpixpch2	8.955	8.944	0.469	8.950	8.951	0.469	8.963	8.953	0.469
Auditor	recmmpch2	4.838	4.827	0.444	4.844	4.849	0.440	4.842	4.827	0.444
Narcissism	cvxpixpch2	8.655	8.658	0.439	8.650	8.668	0.437	8.663	8.658	0.438
	cvxmmpch2	**4.539**	**4.540**	**0.413**	**4.545**	**4.561**	**0.407**	**4.543**	**4.535**	**0.414**

Panel C: Control Variable Descriptive Statistics

	Full sample			State-controlled			Private-controlled		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
FirmSize	22.581	22.402	1.461	23.131	23.080	1.564	22.264	22.160	1.295
Leverage	0.477	0.470	0.213	0.529	0.531	0.202	0.447	0.429	0.213
ROA	0.040	0.034	0.069	0.031	0.028	0.058	0.046	0.040	0.075
MTB	0.004	0.002	0.005	0.003	0.002	0.005	0.004	0.003	0.006
BoardSize	8.764	9.000	1.753	9.193	9.000	1.881	8.517	9.000	1.625
Big4	0.100	0.000	0.301	0.129	0.000	0.335	0.084	0.000	0.277
Concentration	38.072	36.492	15.286	41.500	41.092	15.157	36.096	33.931	15.011
IndDirPerc	0.374	0.364	0.051	0.374	0.364	0.054	0.375	0.364	0.049
AudCom	0.997	1.000	0.058	0.998	1.000	0.044	0.996	1.000	0.064
ACIndPerc	0.682	0.667	0.094	0.690	0.667	0.113	0.677	0.667	0.081
CEOduality	0.783	1.000	0.412	0.907	1.000	0.290	0.711	1.000	0.453
CEOage	50.396	51.000	6.232	50.920	51.000	5.126	50.096	50.000	6.770
CEOfemale	0.054	0.000	0.225	0.037	0.000	0.188	0.063	0.000	0.243
CEOtenure	3.828	3.000	3.263	3.842	3.000	3.098	3.820	3.000	3.356
CEOcompen	12.878	13.345	2.595	12.540	13.237	3.044	13.074	13.411	2.273
Avgdircompen	12.215	12.237	0.805	11.999	12.023	0.754	12.340	12.379	0.807

Fedirperc	0.137	0.111	0.119	0.111	0.100	0.107	0.152	0.125	0.123
Feinddirperc	0.175	0.167	0.199	0.158	0.000	0.189	0.185	0.167	0.204
Audgendiv	0.445	0.000	0.497	0.463	0.000	0.499	0.435	0.000	0.496
RevAudTenure	1.899	2.000	1.102	2.053	2.000	1.188	1.828	2.000	1.043
EngagAudTenure	1.808	1.000	1.048	1.905	2.000	1.116	1.773	1.000	1.008
Incentive	0.257	0.000	0.437	0.281	0.000	0.450	0.244	0.000	0.429
Incentive2	0.280	0.000	0.449	0.310	0.000	0.463	0.263	0.000	0.440
Incentive3	0.234	0.000	0.423	0.251	0.000	0.434	0.224	0.000	0.417
Covid	0.095	0.000	0.293	0.125	0.000	0.331	0.114	0.000	0.318

Panel D: Abnormal Related-Party Sales and State-controlled firms by Year

Year	ABMSale	StateHolder
2012	0.111	0.432
2013	-0.003	0.442
2014	-0.019	0.435
2015	-0.017	0.414
2016	-0.026	0.385
2017	0.032	0.323
2018	-0.021	0.316
2019	-0.011	0.304
2020	0.073	0.387

Panel A reports descriptive statistics for abnormal related-party sales in full sample, state, and private-controlled firms. Panel B reports descriptive information of four signature size proxies for review and engagement audit partners separately. Panel C reports summary statistics for incentive and other governance and firm characteristics control variables in full sample, state, and private controlled firms. Panel D summarises the mean value of abnormal related-party sales each year from 2012 to 2020. In the last column of Panel D, we also report the proportion of firms controlled by the state each year from 2012 to 2020. To alleviate the influence of outliers, we winsorize all non-dummy variables at 1% and 99%. Variables are defined in Appendix B.1.

Table 3.3 Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
(1) ABMSale	1.000																							
(2) RevAudNar	**0.032***	1.000																						
(3) EngagAudNar	**0.021**	0.339*	1.000																					
(4) FirmSize	-0.011	0.088*	0.067*	1.000																				
(5) Leverage	-0.014	0.007	0.004	**0.432***	1.000																			
(6) ROA	0.002	0.041*	0.019	0.013	-0.385*	1.000																		
(7) MTB	-0.006	-0.015	-0.007	-0.399*	0.111*	0.010	1.000																	
(8) BoardSize	0.082*	0.039*	0.015	0.291*	0.124*	-0.024	-0.114*	1.000																
(9) Big4	0.016	0.182*	0.130*	0.396*	0.071*	0.057*	-0.100*	0.091*	1.000															
(10) Concentration	0.087*	0.053*	0.054*	0.280*	-0.024*	0.165*	-0.154*	0.055*	0.177*	1.000														
(11) IndDirPerc	-0.026	-0.017	-0.020	0.042*	0.033*	-0.016	0.038*	**-0.441***	0.044*	0.036*	1.000													
(12) ACIndPerc	0.026	0.045*	0.029*	0.168*	0.046*	0.013	-0.040*	-0.016	0.217*	0.052*	0.110*	1.000												
(13) CEOduality	0.108*	0.037*	0.036*	0.214*	0.159*	-0.073*	-0.065*	0.192*	0.063*	0.045*	-0.091*	0.008	1.000											
(14) CEOage	-0.001	0.017	0.031*	0.143*	-0.002	0.047*	-0.077*	0.089*	0.104*	0.078*	0.005	0.027*	-0.115*	1.000										
(15) CEOfemale	-0.035*	-0.013	-0.023	-0.077*	-0.023	-0.022	0.013	-0.058*	-0.015	-0.009	0.012	0.003	-0.027*	-0.085*	1.000									
(16) CEOtenure	-0.041*	-0.033*	0.002	0.068*	0.038*	-0.005	-0.056*	0.057*	-0.011	-0.110*	-0.012	-0.006	0.023	0.234*	-0.022	1.000								
(17) CEOcompen	-0.049*	-0.021	-0.020	-0.009	-0.056*	0.110*	-0.040*	-0.027*	-0.001	-0.035*	-0.040*	-0.060*	0.027*	0.016	0.032*	0.105*	1.000							
(18) Avgdircompen	-0.134*	0.026*	0.029*	0.209*	-0.030*	0.210*	-0.138*	-0.061*	0.141*	-0.003	-0.001	0.066*	-0.106*	0.039*	0.033*	0.063*	0.372*	1.000						
(19) Fedirperc	-0.062*	-0.053*	-0.037*	-0.230*	-0.107*	0.016	0.078*	-0.135*	-0.091*	-0.079*	0.010	-0.035*	-0.113*	-0.031*	0.253*	-0.014	0.067*	0.048*	1.000					
(20) Feinddirperc	-0.013	-0.045*	-0.030*	-0.141*	-0.051*	-0.007	0.043*	-0.064*	-0.072*	-0.074*	-0.021	-0.039*	-0.032*	0.037*	0.006	0.001	0.013	-0.024*	**0.666***	1.000				
(21) Audgendiv	-0.013	-0.056*	-0.141*	-0.009	-0.025*	0.029*	-0.014	-0.032*	0.017	0.063*	0.007	0.012	0.007	-0.011	0.006	0.006	0.032*	0.027*	0.005	-0.008	1.000			
(22) RevAudTenure	0.005	0.033*	-0.010	0.121*	0.043*	-0.045*	-0.054*	0.010	0.004	-0.051*	0.004	0.042*	0.040*	0.048*	-0.010	0.111*	0.015	0.037*	-0.002	0.005	0.019	1.000		
(23) EngagAudTenure	-0.008	0.002	0.013	0.086*	0.026*	-0.019	-0.042*	-0.009	-0.035*	-0.039*	0.036*	0.025	0.017	0.029*	-0.016	0.092*	0.033*	0.071*	0.001	-0.003	0.032*	**0.429***	1.000	
(24) Covid	0.010	-0.017	-0.034*	0.082*	0.007	-0.028*	-0.029*	-0.019	0.011	-0.025*	0.027*	0.028*	0.003	0.054*	0.009	0.016	0.045*	0.114*	0.028*	0.018	0.011	0.134*	0.119*	1.000

P-values are reported in parentheses, * indicates statistical significance at the 5% level. Variables are defined in Appendix B.1.

3.4.2 The Impact of Auditor Narcissism on Abnormal Related-Party Sales

We report our analysis on H_1, investigating whether auditor narcissism influences *ABMSale*, in Table 3.4. While our results reported under Column (1) show that the coefficient on engagement auditor narcissism (*LEngagAudNar*) is insignificant, the coefficient on review auditor narcissism (*LRevAudNar*) is positive and significant but at 10% in the full sample ($\beta = 0.2903$, $p < 0.10$). This demonstrates that a one-standard-deviation increase in the review auditor narcissism is expected to result in an increase in *ABMSale* of 11.90% (= 0.2903 × 0.410), which supports the destructive dimension of narcissism.

To test H_2, we partition our sample into state-controlled and private firms, and re-estimate our analysis for both samples separately, with the results reported under Column (3) of Table 3.4 suggest that our results are more pronounced in private firms than state owned firms (the coefficient on narcissism in private firms is 0.4993 and its p is < 0.05). This means that a one-standard-deviation increase in review auditor narcissism (*LRevAudNar)* is expected to lead to an increase of 20.77% in *ABMSale* (= 0.4993 × 0.404) in private firms. This corroborates the argument that the impact of auditor narcissism on opportunistic RPTs is more pronounced in private firms than in SOEs due to the authoritative and rigorous approaches of SOEs, which resist influence from external actors.

Table 3.4 Impact of auditor narcissism on *ABMSale*

	Dependent variable: ABMSale		
	Full	State	Private
LRevAudNar	**0.2903***	0.0706	**0.4993****
	(0.089)	(0.778)	**(0.031)**
LEngagAudNar	0.0140	0.3796	-0.2875
	(0.937)	(0.110)	(0.249)
FirmSize	-0.0876	-0.0080	-0.1764
	(0.298)	(0.949)	(0.134)
Leverage	-0.3071	-0.8238	0.1426
	(0.546)	(0.287)	(0.829)
ROA	0.8912	0.3958	1.5794
	(0.425)	(0.804)	(0.288)
MTB	3.6241	-18.1216	16.9377
	(0.820)	(0.532)	(0.422)
BoardSize	0.1347**	0.1227*	0.1226
	(0.014)	(0.073)	(0.159)
Big4	0.3794	0.1091	0.5394
	(0.183)	(0.791)	(0.170)
Concentration	0.0127**	0.0119	0.0145*
	(0.044)	(0.187)	(0.094)
IndDirPerc	0.7099	1.7575	-0.2647
	(0.696)	(0.477)	(0.920)
ACIndPerc	0.7633	0.0730	1.3437
	(0.358)	(0.943)	(0.286)
CEOduality	0.6538***	0.4312	0.6485***
	(0.001)	(0.296)	(0.005)
CEOage	0.0073	0.0062	0.0037
	(0.590)	(0.778)	(0.818)

CEOfemale	-0.0512	0.4346	-0.1270
	(0.908)	(0.526)	(0.803)
CEOtenure	-0.0092	-0.0746**	0.0330
	(0.682)	(0.019)	(0.249)
CEOcompen	-0.0031	-0.0228	0.0239
	(0.876)	(0.296)	(0.462)
Avgdircompen	-0.4942***	-0.1787	-0.6305***
	(0.000)	(0.317)	(0.000)
Fedirperc	-1.4886	0.1543	-2.4262**
	(0.113)	(0.918)	(0.030)
Feinddirperc	0.3864	0.0530	0.6225
	(0.484)	(0.952)	(0.345)
Audgendiv	-0.0497	-0.1872	-0.0128
	(0.698)	(0.324)	(0.940)
RevAudTenure	0.0160	0.0071	0.0379
	(0.726)	(0.914)	(0.558)
EngagAudTenure	-0.0239	-0.1606**	0.0847
	(0.648)	(0.024)	(0.258)
Year and Industry FEs	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes
Adj. R-squared	0.0448	0.0412	0.0589
Obs	2817	1189	1628

LRevAudNar and LEngagAudNar are lagged (t-1) variables since we expect a delay of the impact of auditor narcissism on firm's RPT activities. P-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.4.3 The Impact of Auditor Narcissism on Benchmark Beating via Abnormal Related-Party Sales

In order to provide sharp analysis, we investigate our hypothesis in a setting characterized by a high probability of engaging in *ABMSale* for opportunistic purposes. Therefore, we create a dummy variable (*Incentive)* to capture benchmark beating and we set this variable to 1 when the return on equity is between 0% - 2% or 6% - 8%, and 0 otherwise. The results reported under Column (1) of Table 3.5 show that the coefficient on *Incentive* is significantly positive (β = 0.2879, $p < 0.05$) suggesting that Chinese firms are more likely to engage in opportunistic RPTs in order to beat the benchmark.

In order to test H_3, we interact between auditor narcissism and *Incentive*. Our results under Columns (2) to (6) of Table 3.5 show that while review auditor narcissism does not constrain *ABMSale* to beat the earnings benchmark (β = 0.3862, $p > 0.10$), interestingly, it seems that the engagement auditor narcissism constrains clients from exploiting *ABMSale* to beat the earnings benchmark (β = - 0.7709, $p < 0.05$).[55] This means a one-standard-deviation increase in engagement auditor narcissism decreases by 16.65% (= 0.7709 × 0.216) *ABMSale*

[55] In Table B5.8, when the previous year incentive is employed in this model, engagement auditor narcissism continues to reduce *ABMSale* when firms are identified to be incentivised for benchmark beating in the previous year. This implies engagement auditor narcissism helps to diminish the possibility that clients abuse abnormal related-party sales in either the current year or the following year after it has been identified as incentivised for benchmark beating.

during benchmark beating.[56] Specifically, the presence of a narcissistic engagement auditor reduces by 0.6538 (= 0.1171 - 0.7709) the likelihood firms exploit *ABMSale* during the benchmark beating period. This implies that a narcissistic engagement auditor plays a constructive role in curbing insider opportunism in the form of benchmark beating through abnormal sales.

Table 3.5 Impact of auditor narcissism on benchmark beating via abnormal related-party sales

	Benchmark beating incentive Model					
	Full		State		Private	
	(1)	(2)	(3)	(4)	(5)	(6)
Incentive	**0.2879****	0.1171	0.0958	0.0601	**0.3872****	0.2032
	(0.025)	(0.407)	(0.565)	(0.760)	**(0.036)**	(0.301)
LRevAudNar		0.1611		0.1515		0.2939
		(0.411)		(0.606)		(0.268)
LEngagAudNar		0.2999		0.6573**		0.0406
		(0.170)		(0.025)		(0.893)
Incentive*LRevAudNar		0.3862		-0.3969		**0.9300****
		(0.236)		(0.391)		**(0.035)**
Incentive*LEngagAudNar		**-0.7709****		-0.3373		**-1.1463****
		(0.021)		(0.476)		**(0.010)**
FirmSize		-0.0798		0.0286		-0.1731
		(0.359)		(0.828)		(0.158)
Leverage		-0.3896		-0.8481		0.0891
		(0.461)		(0.286)		(0.898)
ROA		1.0695		0.4744		1.8133
		(0.339)		(0.768)		(0.223)
MTB		4.3097		-17.4794		16.2990
		(0.794)		(0.559)		(0.453)
BoardSize		0.1316**		0.1069		0.1318
		(0.020)		(0.121)		(0.152)
Big4		0.3486		-0.0159		0.4996
		(0.247)		(0.972)		(0.220)
Concentration		0.0133**		0.0108		0.0165*
		(0.040)		(0.247)		(0.061)
IndDirPerc		-0.0813		0.4440		-0.4256
		(0.966)		(0.865)		(0.878)
ACIndPerc		0.6967		0.0235		1.3566
		(0.420)		(0.982)		(0.302)
CEOduality		0.6770***		0.3839		0.7102***
		(0.001)		(0.363)		(0.002)
CEOage		0.0071		0.0031		0.0058
		(0.623)		(0.899)		(0.734)
CEOfemale		-0.1977		0.2125		-0.2095
		(0.648)		(0.740)		(0.678)
CEOtenure		-0.0049		-0.0633*		0.0330
		(0.826)		(0.069)		(0.245)
CEOcompen		0.0012		-0.0130		0.0195
		(0.954)		(0.577)		(0.567)
Avgdircompen		-0.5496***		-0.3287*		-0.6298***
		(0.000)		(0.083)		(0.000)
Fedirperc		-1.3261		0.6163		-2.3690**
		(0.184)		(0.706)		(0.045)
Feinddirperc		0.2793		-0.1729		0.5652
		(0.635)		(0.858)		(0.405)
Audgendiv		-0.0679		-0.2348		0.0120
		(0.617)		(0.251)		(0.946)
RevAudTenure		0.0336		0.0105		0.0713
		(0.494)		(0.881)		(0.307)
EngagAudTenure		-0.0009		-0.1081		0.0685

[56] In untabulated results, we calculate the standard-deviation of *Incentive*LAudNar2* in the full sample (*SD* = 0.216), SOEs (*SD* = 0.226), and private firms (*SD* = 0.209) individually.

		(0.987)		(0.160)		(0.378)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	-0.0011	0.0525	0.0083	0.0392	0.0029	0.0684
Obs	3629	2483	1493	1025	2136	1458

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in this analysis to reduce its correlation with the interaction term. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Finally, we split the full sample based on ownership. While review auditor narcissism continues to facilitate *ABMSale* to beat earnings benchmarks in private firms ($\beta = 0.9300$, $p < 0.05$), engagement auditor narcissism discourages client firms from exploiting *ABMSale* for the same purpose in private firms ($\beta = -1.1463$, $p < 0.05$). In fact, a one-standard-deviation increase of engagement auditor narcissism decreases by 23.96% (= 1.1463 × 0.209) *ABMSale* in private firms during benchmark beating. Specifically, the presence of a narcissistic engagement auditor reduces by 0.9431 (= 0.2032 - 1.1463) the likelihood firms exploit *ABMSale* during benchmark beating periods in private firms. Accordingly, engagement auditor narcissism (*LEngagAudNar*) serves as a deterrent to the abuse of related-party sales for earnings management in private firms while not in SOEs. This further affirms the view that SOEs are associated with more powerful control and capability and are less likely to be shaped by external interventions including auditors. In Table 3.5 Column (5), we find a higher *ABMSale* ($\beta = 0.3872$, $p < 0.05$) when there is incentivisation for benchmark beating in private firms.

In a nutshell, interestingly, we show that the impacts of review auditor narcissism and engagement auditor narcissism on opportunistic RPTs consistently oppose each other throughout most analyses. We suppose this may be attributed to the distinct responsibilities of the two audit partners. Unlike engagement partners who takes charge of the field work, review partners serve as a senior observer to supervise the work implemented by the engagement auditors (Church et al., 2020). Notably, narcissistic leaders are more likely to devalue others' opinions and tend not to tolerate dissent from other members (Maccoby, 2000; Mowchan et al., 2022). Therefore, a narcissistic senior not only tends to hinder information exchange within the audit team but also prevent the development of auditor scepticism and critical assessment of potential risk (Nevicka et al., 2011). A high level of narcissism in the review auditor results in poor external auditing, which leads to a greater extent of abnormal related-party sales and higher likelihood of abnormal sales being used for benchmark beating in client firms. Compared to narcissistic review auditors, narcissistic engagement auditors are typically more motivated to maintain high audit quality, given their desire to establish their reputation early in their careers and be promoted to higher positions within the audit firm (Abdolmohammadi, 1999; Westermann et al., 2015). Accordingly, while narcissistic review auditors facilitate abnormal sales and benchmark beating, we find narcissistic engagement auditors alleviate benchmark beating through abnormal related-party sales.

3.5 Additional Analysis

3.5.1 The Moderating Effect of Client Importance

Numerous studies have emphasised how client importance influences auditors' decision-making and audit behaviours (Chen et al., 2010; Tepalagul & Lin, 2015). The economic bond with a client may moderate the impact of narcissistic auditors on scrutinizing opportunistic RPTs. Client importance is measured by total assets of the focal client divided by the sum of total assets of all clients audited by the same audit partner in that year (Chou et al., 2021). Our results in Table 3.6 show that client importance has no moderating effect on the impact of auditor narcissism on abnormal related-party sales; however, in the period where client firms are highly incentivised for benchmark beating, we find that important clients exacerbate the effect of narcissistic review auditors facilitating *ABMSale* for benchmark beating in the full sample ($\beta = 1.4035$, $p < 0.10$), SOEs ($\beta = 2.2694$, $p < 0.10$), and private firms ($\beta = 1.9401$, $p < 0.10$). Specifically, review auditor client importance aggravates the impact of review auditor narcissism on *ABMSale* during benchmark beating by 0.8124 (= - 0.5911 + 1.4035) in the full sample, 0.1647 (= - 2.1047 + 2.2694) in SOEs, and 1.5341 (= - 0.4060 + 1.9401) in private firms. This corroborates previous literature suggesting that auditors are more economically dependent on important clients, thereby impairing audit quality (Wang et al., 2015). Our results show that client importance exacerbates the impact of narcissistic review auditors on facilitating *ABMSale* during benchmark beating.

Table 3.6 Audit Client Importance and Auditor Narcissism

Panel A: Auditor client importance in *ABMSale* model

	Dependent variable: ABMSale								
	Full			State			Private		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LRevAudNar	0.2932*		0.1874	0.0639		0.1679	0.4889**		0.2134
	(0.086)		(0.580)	(0.798)		(0.781)	(0.033)		(0.609)
LEngagAudNar	0.0130		-0.4445	0.3810		-0.2691	-0.2868		-0.7541
	(0.942)		(0.533)	(0.108)		(0.764)	(0.250)		(0.418)
LRevClientImp		-0.5839***	-0.5695***		-0.4391	-0.4101		-0.7485***	-0.7321***
		(0.001)	(0.002)		(0.142)	(0.175)		(0.001)	(0.002)
LEngagClientImp		0.5405**	0.4965*		0.3835	0.3820		0.6304*	0.5636
		(0.032)	(0.077)		(0.317)	(0.376)		(0.056)	(0.118)
LRevClientImp*LRevAudNar			0.1183			-0.2121			0.4403
			(0.762)			(0.745)			(0.379)
LEngagClientImp*LEngagAudNar			0.4942			0.7395			0.4689
			(0.505)			(0.441)			(0.631)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0454	0.0492	0.0500	0.0369	0.0333	0.0352	0.0584	0.0610	0.0652
Obs	2817	2717	2717	1189	1151	1151	1628	1566	1566

Panel B: Auditor client importance in benchmark beating incentive model

	Benchmark beating incentive Model								
	Full			State			Private		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Incentive	0.2879**	-0.7822	-0.5892	0.0958	-0.5170	-0.4772	0.3872**	-0.8195	-0.5770
	(0.025)	(0.199)	(0.370)	(0.565)	(0.596)	(0.599)	(0.036)	(0.281)	(0.537)
LRevAudNar			0.2905			0.7589			0.3052
			(0.514)			(0.311)			(0.564)
LEngagAudNar			-0.3749			-0.7476			-0.5167
			(0.701)			(0.524)			(0.677)
LRevClientImp		-0.6216***	-0.5881***		-0.6623*	-0.5228		-0.6371**	-0.6223**
		(0.006)	(0.009)		(0.066)	(0.153)		(0.026)	(0.032)
LEngagClientImp		0.3751	0.3279		0.1795	-0.0184		0.5735	0.5312
		(0.222)	(0.393)		(0.719)	(0.976)		(0.143)	(0.253)
Incentive*LRevAudNar			-0.5911			-2.1047*			-0.4060
			(0.380)			(0.091)			(0.606)
Incentive*LEngagAudNar			-1.4945			-1.6205			-0.8048

			(0.345)			(0.463)			(0.723)
Incentive*LRevClientImp		0.1761	0.1375		0.5484	0.2248		-0.1472	-0.1382
		(0.623)	(0.700)		(0.375)	(0.725)		(0.746)	(0.759)
Incentive*LEngagClientImp		0.7973	0.6139		0.0980	0.4050		1.1483	0.8531
		(0.172)	(0.331)		(0.912)	(0.629)		(0.124)	(0.354)
LRevClientImp*LRevAudNar			-0.2313			-0.9145			-0.0051
			(0.647)			(0.257)			(0.993)
LEngagClientImp*LEngagAudNar			0.7329			1.5333			0.5570
			(0.464)			(0.216)			(0.664)
Incentive*LRevAudNar*LRevClientImp			**1.4035***			**2.2694***			**1.9401***
			(0.084)			**(0.096)**			**(0.058)**
Incentive*LEngagAudNar*LEngagClientImp			0.7402			1.2546			-0.2861
			(0.654)			(0.588)			(0.903)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	-0.0011	0.0557	0.0591	0.0083	0.0324	0.0397	0.0029	0.0664	0.0752
Obs	3629	2395	2395	1493	994	994	2136	1401	1401

This table reports the moderating effect of audit client importance on the impact of auditor narcissism on abnormal related-party sales and benchmark beating. We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in this analysis to reduce its correlation with the interaction term. Other control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, and *Audgendiv* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.5.2 Loans, Guarantees, and Abnormal RPT

Importantly, in addition to the opportunistic use of sales to related-parties, a closely related strand of research recognises that controlling shareholders tend to extract wealth from listed firms by issuing loans and guarantees to themselves (Berkman et al., 2010; Kohlbeck & Mayhew, 2017). Therefore, we expect to testify whether narcissistic auditor also influences these loans and guarantees to related-parties.

Our reported results in Table 3.7 are still qualitatively similar to our results reported under the main analysis, albeit being less significant in some cases. This demonstrates that only narcissistic engagement auditors play a key role in mitigating opportunistic RPTs. In particular, Columns (2) and (3) of Table 3.7 show that engagement auditor narcissism alleviates tunnelling activities manifest in the amount of lending to related-parties (*Lending*) in the full sample (β = - 0.0358, $p < 0.10$) and SOEs (β = - 0.0443, $p < 0.10$). Specifically, a one-standard-deviation increase of *LEngagAudNar* results in a 1.48% (= 0.0358 × 0.413) decrease in *Lending* in the full sample and a 1.80% decrease (= 0.0443 × 0.407) in SOEs.

As Berkman et al. (2009) and Fisman & Wang (2010) imply, guarantees issued to related-parties reflect potential transfer of wealth from minority to majority shareholders. In Columns (4) and (6) of Table 3.7, higher engagement auditor narcissism reduces guarantees to related-parties (*GuaranteeTo*) in the full sample (β = - 0.0262, $p < 0.05$) and private firm (β = - 0.0309, $p < 0.10$), though this effect is not significant in SOEs. In fact, a one-standard-deviation increase of *LEngagAudNar* is associated with a 1.08% (= 0.0262 × 0.413) and 1.28% (= 0.0309 × 0.414) decrease in guarantees to related-parties in the full sample and private firms, respectively. Taken together, a narcissistic engagement auditor discourages a firm's intuition in practicing opportunistic activities in the form of transferring assets via "loan-RPT" (related-party lending and guarantees).

Furthermore, numerous studies extend the construction model of *ABMSale* to total abnormal RPTs, meaning computing total abnormal related-party transactions (*ABMRPT*) that encompass all types of RPTs (Lo & Wong, 2011; El-Helaly et al., 2018; Firth et al., 2019; Usman et al., 2021). We follow these studies and evaluate the relation between auditor narcissism and total *ABMRPT* in Columns (7) to (9) of Table 3.7. It suggests that engagement auditor narcissism significantly reduces *ABMRPT* in private firms (β = - 0.2151, $p < 0.05$), which translates to an 8.81% (= 0.2151 × 0.414) decrease of *ABMRPT* when a client is audited by a narcissistic engagement auditor.[57]

[57] Further, we present the descriptive statistics and baseline regression results from applying our research to all other types of RPTs in Appendix B.2 and B.3, and classifications are provided in Appendix B.6.

Table 3.7 Loans, Guarantees, and *ABMRPT*

	Lending			GuaranteeTo			ABMRPT		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full	State	Private	Full	State	Private	Full	State	Private
LRevAudNar	**0.0330****	**0.0441****	0.0230	0.0063	-0.0095	0.0221	0.0328	0.1628	-0.0445
	(0.042)	(0.028)	(0.305)	(0.594)	(0.515)	(0.186)	(0.685)	(0.133)	(0.680)
LEngagAudNar	**-0.0358***	**-0.0443***	-0.0280	**-0.0262****	-0.0104	**-0.0309***	-0.0830	0.1648	**-0.2151****
	(0.061)	**(0.088)**	(0.198)	**(0.045)**	(0.511)	**(0.100)**	(0.300)	(0.147)	**(0.039)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0309	0.0719	0.0378	0.1068	0.1529	0.0959	0.0311	0.0594	0.0523
Obs	1664	814	850	2550	993	1557	4652	1761	2891

This table reports the impact of auditor narcissism on *Lending, GuaranteeTo,* and *ABMRPT* in full sample, state, and private controlled firms. We run OLS regression for *Lending, GuaranteeTo*, and *ABMRPT* and report Adjusted R-squared accordingly. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6 Robustness tests

3.6.1 Audit Firm and Audit Partner Fixed Effects

To further control for potential omitted and correlated variables in addition to client level such as audit firm and audit partner factors, we rerun Models (1) and (2) and include the fixed effects of audit firms and individual audit partners in Table 3.8. As presented, the impact of review auditor narcissism on *ABMSale* and of review and engagement auditor narcissism on benchmark beating are both sustained in audit firm fixed effect model while disappear in audit partner fixed effect model.

Table 3.8 Audit firm and audit partner fixed effect

Panel A: Audit firm and audit partner fixed effect in ABMSale model

	Dependent variable: ABMSale					
	Audit Firm Fixed Effect			Audit Firm and Partner Fixed Effects		
	Full	State	Private	Full	State	Private
LRevAudNar	0.2006	-0.0101	0.3973*	-0.1988	-0.0929	-0.0284
	(0.231)	(0.969)	(0.074)	(0.237)	(0.724)	(0.919)
LEngagAudNar	-0.0610	0.2508	-0.3953	-0.1004	0.2924	-0.4508
	(0.733)	(0.286)	(0.111)	(0.637)	(0.289)	(0.190)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Partner FE	No	No	No	Yes	Yes	Yes
Adj. R-squared	0.0698	0.1033	0.0969	0.6575	0.7308	0.6857
Obs	2817	1188	1627	1659	711	869

Panel B: Audit firm and audit partner fixed effect in benchmark beating incentive model

	Benchmark beating incentive Model					
	Audit Firm Fixed Effect			Audit Firm and Partner Fixed Effects		
	Full	State	Private	Full	State	Private
Incentive	0.0948	0.0078	0.1891	-0.1377	-0.0924	-0.1611
	(0.495)	(0.968)	(0.325)	(0.424)	(0.689)	(0.531)
LRevAudNar	0.0974	0.0208	0.2419	-0.3113	-0.0847	-0.2214
	(0.616)	(0.946)	(0.355)	(0.116)	(0.795)	(0.491)
LEngagAudNar	0.2476	0.5727*	-0.0544	-0.0944	0.2823	-0.2404
	(0.254)	(0.059)	(0.856)	(0.715)	(0.404)	(0.530)
Incentive*LRevAudNar	0.4091	-0.0557	0.8179*	0.5006	0.0822	0.7344
	(0.191)	(0.897)	(0.055)	(0.136)	(0.847)	(0.196)
Incentive*LEngagAudNar	-0.7700**	-0.3933	-1.0304**	-0.1176	0.0399	-0.6745
	(0.018)	(0.376)	(0.016)	(0.759)	(0.933)	(0.220)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Partner FE	No	No	No	Yes	Yes	Yes
Adj. R-squared	0.0795	0.1122	0.1022	0.6874	0.7373	0.7237
Obs	2483	1024	1457	1387	571	756

This table presents the regressions results of controlling for audit firm fixed effect and audit partner fixed effect in *ABMSale* model and benchmark beating model. Note that since there are two audit parters for each firm-year observation, we control for partner fixed effect by assuming that both two partners are the same and each partner serves exactly the same position in that firm-year. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6.2 Addressing Threat of Reverse Causality

In the above analysis, we use the lag of auditor narcissism to conjecture previous year narcissistic auditor engagement with client influence in current year client firm opportunistic activities. Although it seems less likely that reverse causality appears in this circumstance, we still have concern that client firms with higher levels of *ABMSale* may have a tendency to appoint auditors that may or may not exhibit a narcissistic personality. To resolve this concern, we test reverse causality using two approaches.

In the first approach, following Jiraporn & Lee (2018), we restrict the sample to cases where auditors remain constant over time, meaning auditors do not change with the movement of *ABMSale*. In Panel A and B of Table 3.9, we run two regression models in the subsample where the auditor did not change for two consecutive years.[58] Results suggest that narcissistic engagement auditors continue to play a key role in mitigating *ABMSale*, especially when there is a possibility of using them in beating earnings benchmarks.

[58] Auditor maintained unchanged means the auditor who served the client in the previous year also serves them in the present year. We use two rather than three consecutive years because only 8.21% of observations have the same two auditors for three consecutive years while 31.39% of observations have the same two auditors for two consecutive years.

Table 3.9 Reverse causality: audit partner maintains unchange for two consecutive years

Panel A: Audit partner maintains unchange for two consecutive years in ABMSale Model

	Dependent variable: ABMSale (auditor maintain unchange for two consecutive years)					
	Full		State		Private	
	Unchange RevAud	Unchange EngagAud	Unchange RevAud	Unchange EngagAud	Unchange RevAud	Unchange EngagAud
LRevAudNar	0.2907		0.2310		0.4088	
	(0.149)		(0.478)		(0.122)	
LEngagAudNar		-0.1001		0.1997		-0.3317
		(0.662)		(0.581)		(0.261)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0460	0.0323	0.0204	0.0382	0.0613	0.0379
Obs	1833	1680	795	708	1038	972

Panel B: Audit partner maintains unchange for two consecutive years in Benchmark beating incentive Model

	Benchmark beating incentive Model (auditor maintain unchange for two consecutive years)					
	Full		State		Private	
	Unchange RevAud	Unchange EngagAud	Unchange RevAud	Unchange EngagAud	Unchange RevAud	Unchange EngagAud
Incentive	0.1689	0.0514	-0.0498	-0.1640	0.3820*	0.2443
	(0.309)	(0.776)	(0.841)	(0.534)	(0.092)	(0.333)
LRevAudNar	0.2741		0.4496		0.2901	
	(0.244)		(0.247)		(0.339)	
LEngagAudNar		0.1021		0.3803		-0.0972
		(0.714)		(0.369)		(0.788)
Incentive*LRevAudNar	0.1441		-0.5460		0.8944*	
	(0.707)		(0.328)		(0.086)	
Incentive*LEngagAudNar		**-0.7530***		-0.2714		**-1.0547****
		(0.058)		(0.635)		**(0.049)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0518	0.0381	0.0137	0.0381	0.0732	0.0453
Obs	1621	1470	688	600	933	870

Note that we run the reverse causality analysis in line with the main analysis using last year auditor narcissism. In untabulated results, we also use current year auditor narcissism to run the reverse causality, results do not change. We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in the Benchmark beating analysis to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for

brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

In the second approach, following Chou et al. (2021), for each review and engagement auditor, we differentiate firms into those with low *ABMSale* (in the lowest tercile) from those with high *ABMSale* (in the highest tercile). We then compare the signature size on audit reports of low *ABMSale* clients with those of high *ABMSale* clients, with the same review or engagement auditor.[59] As seen in Table 3.10, the differences of mean or median signature size of the same review or engagement auditor between low and high *ABMSale* clients are insignificant. This helps dispel the concern that auditors sign differently in accordance with the level of *ABMSale* in client firms. It further ensures that the impact of auditor narcissism is mostly attributed to differences among different auditors rather than in the same auditor or among clients.[60]

[59] Instead of using the average signature size of the same auditor across years and among clients, this analysis needs to compare the raw signature sizes of the same auditor between high-*ABMSale* clients and low-*ABMSale* clients.

[60] We also apply this reverse causality test to an alternative proxy of RPTs, with results that show the mean and median of signature size of engagement auditors are equal when the dependent variable is *Lending* or *GuaranteeTo*. However, there is a significant difference in signature size of engagement auditors between clients in the highest tercile of *ABMRPT* and lowest tercile of *ABMRPT*.

Table 3.10 Reverse causality: Review and Engagement auditor narcissism partitioned by high and low RPT clients

Panel A: Mean of auditor narcissism partitioned by high and low RPT clients

	ABMSale		ABMRPT		Lending		GuaranteeTo	
Partition	Low	High	Low	High	Low	High	Low	High
Mean RevAudNar	4.7474	4.7067	4.6919	4.6984	4.7425	4.7315	4.7925	4.7710
Test of difference in Mean EngagAudNar	-0.0407		0.0066		-0.0110		-0.0214	
Paired t-test p-values	(0.168)		(0.828)		(0.742)		(0.493)	
Mean EngagAudNar	4.5576	4.5412	4.4612	4.5707	4.5112	4.5527	4.6210	4.6664
Test of difference in Mean EngagAudNar	-0.0164		0.1095**		0.0415		0.0454	
Paired t-test p-values	(0.713)		(0.026)		(0.280)		(0.284)	

Panel B: Median of auditor narcissism partitioned by high and low RPT clients

	ABMSale		ABMRPT		Lending		GuaranteeTo	
Partition	Low	High	Low	High	Low	High	Low	High
Median RevAudNar	4.6876	4.7292	4.6973	4.7112	4.6867	4.7303	4.7052	4.7904
Expected rank	7353		6600		3751.5		6682.5	
Wilcoxon signed rank test p-values	(0.106)		(0.996)		(0.795)		(0.404)	
Median EngagAudNar	4.5017	4.5122	4.4961	4.5238	4.5028	4.5800	4.5175	4.6119
Expected rank	2889		1580**		2475		3220.5	
Wilcoxon signed rank test p-values	(0.299)		(0.045)		(0.213)		(0.300)	

This table presents the differences of mean and median of the review and engagement auditor narcissism between low ABMSale (in the lowest tercile) and high ABMSale (in the highest tercile) clients. The rest of columns display the same analysis result between lowest and highest terciles of ABMRPT, Lending, and GuaranteeTo respectively. P-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6.3 Endogeneity Concerns

Another challenge in ensuring the impact of auditor narcissism on client firms' abnormal related-party sales is addressing the potential endogeneity problem. Three different identification strategies are implemented to tackle this concern. First, we employ the system generalized method of moments (GMM) to eliminate the time-invariant fixed effects. Second, we adopt a propensity score matching (PSM), where we pair firm-years having higher levels of engagement auditor narcissism with firm-years having lower levels of engagement auditor narcissism, and with insignificant differences of all other control variables. Third, we use a difference-in-differences (DID) analysis to compare changes in *ABMSale* and benchmark beating via *ABMSale* when a low-narcissistic engagement auditor is replaced by a high-narcissistic engagement auditor.

3.6.3.1 Generalized Method of Moments Estimation

As expected, in Table 3.11, the effect of the lag of *ABMSale* (*L.ABMSale*) on *ABMSale* is significantly positive and the overall model fits for each GMM (*p*-value of F-statistic = 0.0000), suggesting that all models are highly significant for each regression estimation. Engagement auditor narcissism shows a positive relation with *ABMSale* (β = 0.3591, $p < 0.05$) in SOEs when employing the GMM estimation. In the benchmark beating incentive model, the results correspond to the findings in the main analysis, where *Incentive*LEngagAudNar* statistically reduces *ABMSale* in the full sample (β = - 0.5100, $p < 0.05$) and private firms (β = - 0.8977, $p <$ 0.01). Table 3.11 also reports the validity of the GMM estimations. For instance, in Column (1) of Table 3.11, regarding the autocorrelation tests, we reject the null hypothesis of no autocorrelation with a significant Arellano-Bond test for order one AR (1) (p = 0.0000) and accept the null hypothesis of no autocorrelation with a nonsignificant Arellano-Bond test for order two AR (2) (p = 0.7358). This implies that the original error term is serially uncorrelated, and the moment conditions are correctly specified. In instrument validity tests, we accept both Sargan test's (p = 0.8396) and Hansen test's (p = 0.7353) null hypotheses, giving support to the choice of the instruments.

Table 3.11 Generalised methods of moments (GMM) estimate

	GMM in ABMSale Model			GMM in Benchmark beating incentive Model		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private
L.ABMSale	0.3501***	0.2331**	0.4049***	0.3596***	0.3027**	0.4356***
	(0.000)	(0.014)	(0.000)	(0.000)	(0.013)	(0.000)
Incentive				0.0091	0.1068	-0.0067
				(0.921)	(0.402)	(0.954)
LRevAudNar	0.0875	-0.0993	0.2440*	-0.0240	0.0127	0.0352
	(0.402)	(0.496)	(0.082)	(0.843)	(0.942)	(0.824)
LEngagAudNar	0.0381	**0.3591****	-0.1733	0.2481*	0.4379**	0.1013
	(0.735)	**(0.018)**	(0.242)	(0.085)	(0.028)	(0.571)
Incentive*LRevAudNar				0.3394*	-0.2387	0.6789**
				(0.096)	(0.387)	(0.015)
Incentive*LEngagAudNar				**-0.5100****	0.0659	**-0.8977*****
				(0.018)	(0.825)	**(0.001)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2471	1061	1410	2191	919	1272
F Statistic (p-value)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Instruments	31	31	31	34	34	34
Groups	716	304	449	700	295	439
Arellano-Bond test for order one AR (1) (p-value):	0.0000	0.0007	0.0000	0.0000	0.0075	0.0000
Arellano-Bond test for order two AR (2) (p-value):	0.7358	0.7800	0.4137	0.2978	0.3109	0.7731
Sargan test of over-identifying restrictions (p-value):	0.8396	0.8849	0.9228	0.8039	0.5803	0.9965
Hansen test of over-identifying restrictions (p-value):	0.7353	0.8187	0.9635	0.9181	0.7793	0.9944

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. P-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6.3.2 Propensity Score Matching Estimates

Tackling the endogeneity concern, following Usman et al. (2021), we also implement propensity score matching in both *ABMSale* and the benchmark beating model.[61] We create dummy variables *LRevAudNardum* and *LEngagAudNardum* for auditor narcissism which equal 1 if a firm-year's auditor narcissism is higher than the sample median, and 0 otherwise.[62] In Panel A of Table 3.12, we first estimate the propensity score using a logit model, regressing *LEngagAudNardum* on all control variables before and after the matching. [63]

Two analyses are carried out to testify differences of each observable characteristic between the matched treatment and control firms. The first test, as in Columns (4) to (6) in Panel A of Table 3.12, suggests that most observable characteristics are identical between the treatment and control firms after the PSM, except for *Leverage*, *MTB*, and *CEOcompen*. In the second test, as in Panel B of Table 3.12, similar results imply that most observable characteristics are indistinguishable after the matching except for *Leverage*, *IndDirPerc*, and *CEOcompen*. Collectively, two diagnostic tests reveal that, though the PSM procedure helps eliminate most of the noticeable differences within the matched groups, interpretation of the results should be cautious in that a few of the potential differences in terms of *Leverage*, *MTB*, *IndDirPerc*, and *CEOcompen* might still exist after the matching.

Panel C of Table 3.12 displays differences of *ABMSale* between firms with high-narcissistic engagement auditors (treated) and firms with low-narcissistic engagement auditors (controls). Results are comparable to the main analysis, showing insignificant differences between treated and control groups in the *ABMSale* model while there are statistically significant differences in the benchmark beating incentive model in private firms. Finally, we run baseline regression models using the matched sample, and the results in Panel D of Table 3.12 show that our inference of engagement auditor narcissism being essential to the size of *ABMSale* and firm's incentive to exploit *ABMSale* for benchmark beating is indeed sustained.

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[61] The untabulated results of the PSM show that the final number of blocks are 9. This number ensures that the mean propensity score is not different between the treated and control in each block. Besides, we use *recmmpch* instead of *cvxmmpch* since PSM requires the balancing property to be satisfied, meaning in each of these blocks not only the propensity score but also the x characteristics are similar. Among four proxies (*recpixpch*, *recmmpch*, *cvxpixpch*, *cvxmmpch*) of signature size, only *recmmpch* yields a satisfied balancing property, therefore is applied in this analysis.

[62] Since the results in main analysis show engagement auditor narcissism significantly influencing RPTs, we primarily target engagement auditor narcissism in this test, meaning we implement the propensity matching process based on the value of *AudNar2*.

[63] The procedure of matching a pair of treatment and control firms requires the closest propensity score with a maximum difference of 1% (with replacement matching and the nearest-neighbor approach being adopted) between each pair of treatment and control firms. Noted that we also perform all PSM estimates using *LRevAudNardum*, as the post-match sample dropped to merely 130 observations in total with no SOEs remaining; we therefore have not included these results in this paper given concerns over reliability and validity from the small sample size.

Table 3.12 Propensity score matching (PSM) estimate

Panel A: Pre-match propensity score regression and post-match diagnostic regression

	Dependent Variable: Equals 1 if engagement auditor narcissism higher than median value and 0 otherwise					
	Pre-match			Post-match		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private
FirmSize	0.0803	0.0789	0.0917	0.1124	0.1649	0.0845
	(0.108)	(0.345)	(0.157)	(0.221)	(0.264)	(0.507)
Leverage	-0.0769	-0.7346	0.2699	**-0.8952***	**-1.6242***	-0.4759
	(0.780)	(0.123)	(0.423)	(0.096)	(0.083)	(0.493)
ROA	-0.2885	-0.6148	-0.1508	-0.9752	-0.0412	-2.1647
	(0.634)	(0.620)	(0.830)	(0.448)	(0.987)	(0.165)
MTB	8.5646	5.4069	10.6411	**45.2983****	**58.6063***	39.7165
	(0.268)	(0.732)	(0.259)	(0.035)	(0.076)	(0.180)
BoardSize	-0.0394	-0.0280	-0.0426	-0.0096	0.0490	-0.1104
	(0.205)	(0.541)	(0.325)	(0.853)	(0.492)	(0.181)
Big4	**0.4696****	0.4360	**0.4793****	-0.3521	-0.4316	-0.1789
	(0.012)	(0.131)	(0.039)	(0.344)	(0.440)	(0.753)
Concentration	0.0042	0.0063	0.0042	0.0011	0.0007	-0.0009
	(0.182)	(0.245)	(0.270)	(0.850)	(0.948)	(0.910)
IndDirPerc	-1.1827	-0.4224	-1.4640	-1.7305	0.6246	**-4.3468***
	(0.205)	(0.763)	(0.253)	(0.297)	(0.807)	(0.070)
ACIndPerc	-0.0251	-1.0760	**1.1429***	-0.2176	-1.6294	1.2239
	(0.959)	(0.112)	(0.085)	(0.825)	(0.262)	(0.406)
CEOduality	0.0879	0.0072	0.0868	0.0800	0.1852	0.0449
	(0.404)	(0.976)	(0.475)	(0.717)	(0.687)	(0.861)
CEOage	0.0068	0.0162	0.0041	0.0032	0.0114	-0.0031
	(0.342)	(0.275)	(0.615)	(0.834)	(0.698)	(0.863)
CEOfemale	-0.0533	-0.3791	0.0598	-0.1003	-0.4428	-0.0798
	(0.782)	(0.391)	(0.783)	(0.759)	(0.572)	(0.831)
CEOtenure	0.0056	-0.0239	0.0184	-0.0198	-0.0247	-0.0301
	(0.678)	(0.280)	(0.265)	(0.435)	(0.570)	(0.364)
CEOcompen	-0.0137	-0.0067	-0.0278	**0.0569***	0.0457	**0.0927***
	(0.354)	(0.743)	(0.194)	(0.062)	(0.251)	(0.073)
Avgdircompen	0.0129	0.0763	-0.0088	-0.0331	-0.2325	0.0960
	(0.836)	(0.493)	(0.910)	(0.782)	(0.241)	(0.562)
Fedirperc	0.4467	1.0418	0.2421	0.5565	1.0785	-0.0302
	(0.394)	(0.285)	(0.697)	(0.572)	(0.540)	(0.981)
Feinddirperc	-0.2605	-0.7712	-0.0490	-0.1653	-1.3606	0.5834

	(0.377)	(0.144)	(0.889)	(0.769)	(0.197)	(0.398)
Audgendiv	**-0.4692*** **	**-0.4725*** **	**-0.4981*** **	-0.0020	-0.2645	0.1521
	(0.000)	(0.000)	(0.000)	(0.990)	(0.292)	(0.467)
RevAudTenure	0.0191	0.0398	-0.0027	0.0314	0.1255	-0.0507
	(0.523)	(0.395)	(0.945)	(0.633)	(0.232)	(0.566)
EngagAudTenure	**0.0742** **	0.0652	**0.0818** *	-0.0070	-0.0766	0.0359
	(0.038)	(0.233)	(0.080)	(0.922)	(0.469)	(0.725)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0281	0.0381	0.0362	0.0292	0.0760	0.0348
Obs	5388	2031	3357	934	389	545

Panel B: Differences in firm characteristics

	Pre-match Sample				Post-match Sample			
	Firm-year obs. with low narcissistic engagement auditor (N=2669)	Firm-year obs. with high narcissistic engagement auditor (N=2719)	Difference	t-stat	Firm-year obs. with low narcissistic engagement auditor (N=468)	Firm-year obs. with high narcissistic engagement auditor (N=468)	Difference	t-stat
FirmSize	22.529	22.770	**0.240*** **	-6.065	22.754	22.703	-0.051	0.589
Leverage	0.474	0.487	**0.014** **	-2.397	0.498	0.474	**-0.024** *	1.855
ROA	0.041	0.040	-0.001	0.344	0.041	0.043	0.003	-0.612
MTB	0.004	0.004	0.000	0.345	0.003	0.003	0.000	-1.259
BoardSize	8.713	8.752	0.039	-0.831	8.923	8.985	0.062	-0.539
Big4	0.069	0.118	**0.049*** **	-6.153	0.062	0.053	-0.009	0.560
Concentration	36.772	38.307	**1.535*** **	-3.731	37.343	37.934	0.591	-0.627
IndDirPerc	0.375	0.375	-0.001	0.464	0.376	0.370	**-0.006** *	1.649
ACIndPerc	0.680	0.685	**0.004** *	-1.654	0.681	0.678	-0.003	0.563
CEOduality	0.771	0.797	**0.025** **	-2.246	0.825	0.835	0.011	-0.435
CEOage	50.308	50.692	**0.384** **	-2.262	50.329	50.363	0.034	-0.091
CEOfemale	0.054	0.050	-0.004	0.589	0.056	0.051	-0.004	0.290
CEOtenure	3.909	3.981	0.072	-0.806	3.831	3.729	-0.103	0.496
CEOcompen	12.938	12.814	**-0.124** *	1.709	12.780	13.064	**0.284** *	-1.773
Avgdircompen	12.245	12.253	0.008	-0.355	12.240	12.225	-0.015	0.297
Fedirperc	0.138	0.134	-0.004	1.183	0.128	0.129	0.001	-0.184
Feinddirperc	0.182	0.173	**-0.009** *	1.695	0.180	0.178	-0.001	0.088
Audgendiv	0.502	0.392	**-0.110*** **	8.142	0.530	0.534	0.004	-0.131
RevAudTenure	2.032	2.072	0.039	-1.273	2.077	2.096	0.019	-0.251
EngagAudTenure	1.925	1.995	**0.069** **	-2.327	1.931	1.940	0.009	-0.123

Panel C: Propensity score matching estimator

	Full				State				Private			
Model	Treated	Controls	Difference	t-stat	Treated	Controls	Difference	t-stat	Treated	Controls	Difference	t-stat
ABMSale	0.021	-0.035	0.056	0.520	0.411	0.210	0.201	1.270	-0.280	-0.147	-0.133	-0.880
Benchmark incentive	0.058	0.520	-0.462	-1.890	0.311	0.579	-0.268	-0.710	**-0.204**	**0.511**	**-0.714***	**-1.980**

Panel D: Propensity score matching sample in regression model

	ABMSale Model			Benchmark beating incentive Model		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	State	Private	Full	State	Private
Incentive				0.8537**	0.9858*	1.0251**
				(0.025)	(0.074)	(0.039)
LRevAudNardum	0.3463*	0.5759*	0.1867	0.3888	0.6670*	0.3152
	(0.086)	(0.053)	(0.488)	(0.116)	(0.078)	(0.350)
LEngagAudNardum	0.2625	0.5886*	0.0193	0.6956***	1.0802**	0.5097
	(0.203)	(0.066)	(0.946)	(0.007)	(0.014)	(0.153)
Incentive*LRevAudNardum				-0.1363	-0.5696	0.1163
				(0.760)	(0.312)	(0.856)
Incentive*LEngagAudNardum				**-1.3113*** **	**-1.2748** **	**-1.7670*** **
				(0.006)	**(0.038)**	**(0.009)**
All cotrols	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0402	0.0693	0.0361	0.0558	0.0704	0.0498
Obs	800	338	462	699	287	412

This table provides the propensity score matching estimation procedure. Panel A reports logistic regression used to calculate the propensity scores. The dependent variable is dummy variable indicates one if engagement auditor narcissism higher than the median, zero otherwise. Independent variables include all control variables used in the baseline model shown in Table 3.4 and 3.5. Panel B reports univariate analysis of pre-match and post-match firm characteristics between low and high narcissistic engagement auditor's clients. Panel C reports the PSM average treatment effects estimates in our two baseline models. In Panel D, we centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6.3.3 Difference-In-Differences Approach

Our third approach to eliminate endogeneity is to perform a difference-in-differences estimation comparing *ABMSale* between firm-years with the treatment and firm-years without the treatment. This aims at reducing the potential of effects arising from the differences of covariate variables instead of auditor narcissism. The treatment group consists of firms that replaced a low-narcissistic engagement auditor (*LEngagAudNardum* = 0) with a high-narcissistic engagement auditor (*LEngagAudNardum* = 1). The control group, on the other hand, consists of firms that replaced a high-narcissistic engagement auditor (*LEngagAudNardum* = 1) with a low-narcissistic engagement auditor (*LEngagAudNardum* = 0). Treatment and control groups are then matched based on the propensity score to affirm that consequences are not influenced by observable characteristics. Ultimately, 103 pairs of treatment and control groups are recognised from this procedure.

In Panel A of Table 3.13, the univariate analysis indicates that no statistically significant differences exist in observable characteristics after the matching. The result of the DID is presented in Panel B of Table 3.13, and estimations are based on two regression models as below:

$$ABMSale = \alpha + \beta_1 LEngagAudNardum_{it} + \beta_2 Post_{it} + \boldsymbol{\beta_3 LEngagAudNardum_{it} * Post_{it}} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (3)$$

$$ABMSale = \alpha + \beta_1 Incentive_{it} + \beta_2 LEngagAudNardum_{it} + \beta_3 Post_{it} + \beta_4 Incentive_{it} * LEngagAudNardum_{it} + \beta_5 Incentive_{it} * Post_{it} + \beta_6 LEngagAudNardum_{it} * Post_{it} + \boldsymbol{\beta_7 Incentive_{it} * LEngagAudNardum_{it} * Post_{it}} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (4)$$

Column (4) in Panel B of Table 3.13 suggests that after the recruitment of a high-narcissistic engagement auditor to replace a low one, these firms are less likely to exploit *ABMSale* for benchmark beating purposes. In accordance with the baseline analysis, no significant results exist in the *ABMSale* model after the treatment.

Table 3.13 Difference-in-differences matching estimate

Panel A: Post-match differences

	Treatment	Control	Difference	t-stat
FirmSize	22.965	23.206	-0.241	1.262
Leverage	0.516	0.516	-0.001	0.027
ROA	0.036	0.044	-0.008	0.811
MTB	0.003	0.003	0.001	-0.949
BoardSize	8.864	8.835	0.029	-0.119
Big4	0.078	0.136	-0.058	1.353
Concentration	37.691	40.470	-2.780	1.300
IndDirPerc	0.370	0.379	-0.009	1.160
ACIndPerc	0.689	0.674	0.015	-1.115
CEOduality	0.874	0.835	0.039	-0.787
CEOage	49.913	51.223	-1.311	1.635
CEOfemale	0.039	0.049	-0.010	0.339
CEOtenure	3.466	3.796	-0.330	0.778
CEOcompen	12.486	12.394	0.092	-0.188
Avgdircompen	12.124	12.199	-0.076	0.666
Fedirperc	0.128	0.126	0.002	-0.157
Feinddirperc	0.198	0.199	0.000	0.015
Audgendiv	0.485	0.466	0.019	-0.278
RevAudTenure	1.903	1.748	0.155	-1.006
EngagAudTenure	1.126	1.097	0.029	-0.421

Panel B: Difference-in-differences in regression model

	ABMSale Model			Benchmark beating incentive Model		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private
Incentive				0.3964*	0.3616	0.5214*
				(0.072)	(0.217)	(0.093)
EngagAudNardum	0.0403	0.0734	-0.0237	0.1172	0.3115	-0.0104
	(0.815)	(0.768)	(0.919)	(0.562)	(0.297)	(0.969)
Post	0.5369*	0.7067**	0.5487	0.5505*	0.7098*	0.6334
	(0.053)	(0.048)	(0.168)	(0.070)	(0.065)	(0.169)
Incentive*EngagAudNardum				-0.1905	-0.4556	-0.1585
				(0.538)	(0.266)	(0.709)
Incentive*Post				0.1540	-0.0731	0.1520
				(0.744)	(0.912)	(0.818)
EngagAudNardum*Post	-0.1898	0.1185	-0.5817	0.0989	0.2692	-0.2851
	(0.561)	(0.775)	(0.213)	(0.794)	(0.580)	(0.601)

Incentive*EngagAudNardum*Post				**-1.2121****	-0.4021	-1.3035
				(0.049)	(0.648)	(0.118)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0533	0.0649	0.0625	0.0643	0.0673	0.0712
Obs	2988	1253	1735	2623	1077	1546

This table reports results of the difference-in-differences estimation. Panel A shows the differences of observable characteristics between firm-years replace a low narcissistic engagement auditor with a high one (Treatment group) and firm-years replace a high narcissistic engagement auditor with a low one (Control group). The matching procedure is executed using the propensity score method. Panel B reports the difference-in-differences estimate where dependent variable is *ABMSale*, results based on two baseline models are shown in column (1) - (3) and (4) - (6), respectively. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

3.6.4 Other Robustness Checks

A set of other robustness tests are presented in Appendix B.5 to reaffirm that the impact of engagement auditor narcissism on abnormal related-party sales and benchmark beating via abnormal related-party sales is sustained when: (i) raw signature size of the auditor is used (without averaging the size of the same auditor across years and among clients); (ii) an alternative range of ROE is used to indicate incentives for benchmark beating; (iii) other operationalizations of signature size are applied (i.e., recpixpch, recmmpch, and cvxpixpch); (iv) SOEs are recognized by the nature of the shares held by controlling shareholders; (v) control audit firm size is based on the Top 8 accounting firms each year in China; (vi) operating profits generated from *ABMSale* are used as the dependent variable; (vii) current year auditor narcissism is used; (viii) last year *Incentive* is used; (ix) local and central government-controlled firms are compared; (x) include dummy control variable Covid-19.

3.7 Conclusion and Discussion

In this paper, we examine whether narcissistic audit partners exacerbate or mitigate firms' intentions to engage in opportunistic activities such as abnormal related-party sales. Our findings show that while narcissistic review auditors tend to facilitate abnormal related-party sales, narcissistic engagement auditors alleviate clients from exploiting abnormal related-party sales in the period when the firm is closest to the threshold of being delisted or issuing new shares. Prior research on auditor narcissism has revealed the beneficial impacts of narcissitic auditors on both audit quality and negotiations with clients (Chou et al., 2021; Church et al., 2020). Our results suggest that narcissistic auditors also exert an influence on a client's engagement in opportunistic RPTs, with this effect varying based on the position of the narcissistic auditors. Future research can systematically investigate additional attributes of auditors that might also determine the influence of narcissistic auditors. Taken together, our results underscore the significance of auditor narcissism as a key individual auditor attribute that influences clients' involvement in opportunistic activities.

Furthermore, the effects of review and engagement auditor narcissism on opportunistic RPTs are notably more pronounced in private firms compared to SOEs. This aligns with the findings from Berkman et al. (2010), who observed that firms with government connections do not witness the anticipated reduction in RPTs despite external monitoring, such as regulatory interventions. This pheonomenon may be attributed to the authoritative and stringent practices characteristic of SOEs, which inherently resist external influence. As a result, SOEs exhibit greater control and resilience against external interventions, including those from narcissistic auditors. Finally, our results maintain their validity after mitigating potential endogeneity concerns through the generalized method of moments, propensity score matching, and difference-in-differences approach.

Our results have implications for researchers, investors, auditors, and policymakers in several ways. First, this paper highlights the importance of regulators and policymakers to place considerable attention to external monitoring systems, such as external auditors, when seeking to alleviate agency conflicts arising from opportunistic RPTs and protect minority shareholders from manipulative activity. Second, given the demand for more professional external auditing to keep up with the rapid development of the Chinese economy, this paper delivers an informative message to audit firms in recruiting and assigning audit partners in recognition of their narcissism tendencies (Liu & Subramaniam, 2013; Church et al., 2020).

This research is subject to several caveats and limitations. First, given the time and cost of manually collected auditor signatures, we restrict our sample to firms listed on the SSE. Chinese firms listed on the Shenzhen Stock Exchange may yield similar results given the similar characteristics of the two stock exchanges. Future research that extends the present analysis to other stock markets in regions that are distinguishable to that in China might be valuable. Second, this study employs one means (signature size) to evaluate the level of auditor narcissism, which might not comprehensibly capture the multifaceted nature of narcissism. Future research could incorporate other approaches to proxy auditor narcissism and test whether the present results are sustained or not. Third, given the involvement of government exerting great impact on the effect of auditor narcissism on opportunistic RPTs, we provide a starting point for future exploration on other potentially contextual factors that might shape or alter the impact of narcissistic auditors on firm's opportunistic behaviour, such as those attained through abnormal RPTs.

Chapter 4 Does Audit Team Busyness Affect Opportunistic Activities? Evidence from Group-Affiliated Firms in China

Abstract

Using a sample of Chinese listed firms between 2000 and 2020, this study examines the impact of audit team busyness on client firm's incentive to engage in opportunistic behaviours. The findings indicate that clients audited by busy audit teams do not show varying incentives for earnings manipulation via abnormal related-party sales. Nonetheless, it is found that busy audit teams effectively deter controlling shareholders from expropriating resources through loans to related-parties. Moreover, busy audit teams appear to mitigate intercorporate loans in either group-affiliated, non-group, or small business group samples. However, this restraining effect does not extend to client firms that are part of a big business group. In additional analyses, we find that the influence of busy audit team on opportunistic activities is more pronounced when clients are economically important to the audit team and when audit team possesses industry-specific expertise. Conversely, busy audit team characterised with less experience or low level of independence (i.e., longer audit tenure or returning audit team members) exhibit a diminished effects on restraining clients' opportunistic activities. Further, a series of robustness tests were conducted using the logarithm of audit team busyness, average number of clients in the audit team portfolio, and audit team workload based on total client assets. These results are qualitatively similar to the main findings. Finally, our baseline results remain robust after employing fixed effect model and addressing potential reverse causality and endogeneity concerns.

Keywords: audit teams, related-party transactions (RPTs), multiple audit clients, earnings management, business groups

4.1 Introduction

Our first objective is to provide evidence on whether audit team busyness influences client firm's incentive to engage in opportunistic activities. Second, we identify specific contexts in which agency problems become more severe. In particular, group-affiliated firms are typically characterised by more complex group structures and opaque intragroup transactions, which facilitate controlling shareholders and managers to misappropriate resources and manipulate earnings at the expense of other member firms. However, insufficient research has been conducted to examine how external auditing may deter business groups from tunneling and propping in the form of related-party transactions (RPTs).

Even though audit work is typically conducted by teams assigned to specific engagements, there is scant research investigating the performance of audit team as a cohesive unit. The concept of auditor busyness, as

indicated by the number of clients in an auditor's portfolio in a given year, has gained considerable interest from both the academia and the Public Company Accounting Oversight Board (PCAOB) (Hurley, 2017). While prior research has concentrated on the busyness of individual auditors, this study emphasises the necessity of examining the busyness of an audit team as a collective unit. Specifically, we focus on busyness of the engagement team to consider the level of busyness based on the aggregate client portfolio of all individual auditors in the same audit engagement.[64] Audit work is typically conducted by an engagement auditor who prepare the evidence and a review auditor who takes a leadership role in issuing the audit opinions (Wang et al., 2015). Given that individual auditors commonly engage in multiple audit works and are exposed to various range of clients, focusing on client portfolio of an audit team not only takes into account the resource and workload allocation within a team but also the accumulated experiences and exchange of knowledge between members in the same audit engagement (Cahan et al., 2022).

Extant studies examine the effects of auditor busyness on multiple aspects of audit quality, including the level of discretionary accruals, likelihood of misstatements, and issued audit opinions (Goodwin et al., 2016; Gul et al., 2017; Lai et al., 2018). However, less is known in understanding the influence of auditor busyness on clients' behaviours, particularly their incentives to undertake opportunistic activities, which can subsequently lead to increased audit risk, financial misstatements, and, in some cases, accounting scandals. The anecdotal evidence from a series of financial scandals in recent decades have underscored the importance of practitioners and academics to draw attention to insiders' manipulative activities. In US, Enron used off-balance-sheet special purpose vehicles to hide its mountains of debt and toxic assets from investors and creditors. In Europe, Parmalat issued convertible bond to a buyer who was indeed another unit of Parmalat to lift reported equity on the parent company's balance sheet. Kansai Group in Asia exploited fake sales to subsidiaries to hide loss and manipulate profits in order to maintain stock exchange listing status. This study therefore focusses on how busy audit teams influence client's intention to engaging these manipulative activities.

Previous studies find busy auditors with less effort paid to each client result in a lower audit quality and higher likelihood of firms engaging in fraudulent activities (Caramanis & Lennox, 2008; Lai et al., 2018). Contrarily, busy auditors with a larger client portfolio typically signal a possess of higher level of experience and weaker economic dependency on each client (DeAngelo, 1981). In this vein, auditor busyness is viewed as a positive indicator of the audit performance (Choi et al., 2010). Different from the above two perspectives, the equilibrium theory however posits that auditors tend to weigh the costs and benefits of incorporating additional clients to their portfolio to mitigate the risk of reputation damage and loss of significant clients (Goodwin et al., 2016). Given the unresolved conclusion on busy auditors, this study seeks to examine the impact of auditor busyness in a more challenging setting such as auditing client firms' opportunistic behaviours. In this context, while the complexity of the audit tasks exceeds the efforts and expertise an audit team can balance (i.e., detect and evaluate

[64] The client portfolio of an audit team is defined as the aggregate audit clients of the review and engagement auditors in that year.

opportunistic activities that insiders tend to hide from external auditors), we aim to provide evidence on the effects of audit team busyness while concurrently minimise the potential of audit teams intentionally manage the busyness or their client portfolio (Goodwin et al., 2016; Libby & Tan, 1994).

Our research question is examined in Chinese listed companies for two reasons. First, the policies of special treatment (ST) and new share issuance heighten the risk of delisting and losing right to issue new shares if firm's return on equity (ROE) fails to reach the threshold (Peng et al., 2011). These therefore stimulates the incentive of Chinese firms to prop up earnings to maintain listing status or qualify for rights offering (Jian & Wong, 2010). As supported by Jian & Wong (2010), those Chinese controlling shareholders have a strong incentive to manipulate earnings by making fake or unfair sales to related-parties. Second, a significant proportion of Chinese public firms have a concentrated ownership structure, which has led to a considerable occurrence of tunneling though related-party transactions in China. As in Table 4.2 Panel C, the largest shareholder controls approximately 36.20% of the firm's shareholding, this percentage is even higher (39.65%) in group-affiliated firms. In this circumstance, it is even more challenging for minority shareholders to protect their own interest against expropriation of the controller. In accordance with this, a large body of literature suggests that the higher ownership held by the largest shareholder, the higher the possibility of controlling shareholder misappropriate wealth from minority shareholders (Cheung et al., 2009; Lo et al., 2010). Collectively, China provides an ideal setting to explore the role of audit team busyness on client firms' engagement in opportunistic activities.

Using a sample of 11,182 firm-year observations during the period of 2000 to 2020, we find that clients audited by busy audit teams show indifferent incentives to engage in abnormal related-party sales. However, busy audit teams effectively restrain client firms from issuing loans to related-parties.[65] We further find that busy audit teams reduce intercorporate loans in either group-affiliated, non-group, or small business group samples. However, it fails to restrain the firm from intercorporate loans if the firm is a member of a big business group. These results suggest that busy audit teams help restricting the firm from tunneling through intercorporate loans in the condition that the firm is not belong to a big business group. The monitoring role of audit team busyness disappears when client firms engage in abnormal related-party sales. Collectively, these imply that the effect of busy audit teams on firm's opportunistic activities diminishes in situations involving intricate and demanding clients who engage in insider manipulation through business transactions (i.e., sales to related-parties), and when there are business groups comprising more than five member firms.[66]

Further, we perform a set of robustness checks using the logarithm of audit team busyness or average number of clients of members within an audit team, results are consistent with the primary analysis. Interestingly, while we differentiate between high and low busy audit teams based on the median level of audit team busyness of

[65] The terms "intercorporate loans", "loans to related-parties", "related-party loans" are used interchangeably in this paper.

[66] As argued in Goodwin *et al.* (2016) and Cahan et al. (2011), the influence of auditor busyness is likely to be affected by other potential auditor attributes when audit task becomes complicated.

the sample, we find that group-affiliated firms audited by high busy audit teams are less likely to engage in abnormal related-party sales. This suggests that while audit team busyness has no impact on the level of abnormal related-party sales, audit teams that audit above median number of clients helps restrict group firms from engaging in abnormal related-party sales. In addition, we also find that audit teams with more than one client help reduce abnormal related-party sales in non-group firms. Taken together, these findings indicate that busy audit teams exhibit efficiency in reducing abnormal related-party sales in non-group firms when they possess experience with multiple clients. Results are qualitatively similar to the baseline when we proxy audit team workload based on total client assets of the team. Finally, our baseline results sustain after applying fixed effect model and addressing potential reverse causality and endogeneity concerns.

We extend prior research and contribute to the literature in several ways. First, while extant studies have explored the effects of busy auditors on audit quality (Gul et al., 2017; Lai et al., 2018), there is still a gap in understanding how auditor busyness influences client firms' engagement in opportunistic activities. We move this literature forward by examining the extent to which busy audit teams restrain client firms from manipulative and expropriative behaviours. Inadequately monitoring of these activities can elevate audit risks, precipitate financial misstatements, and, in severe instances, lead to accounting scandals (Fang et al., 2018).

Second, in light of the varied findings in prior research regarding the influence of auditor busyness on audit quality such as likelihood of misstatements (Goodwin et al., 2016), audit opinions (Gul et al., 2017), level of discretionary accrual (Lai et al., 2018), this study offers a novel contribution by exploring the impact of audit team busyness in more challenging scenarios. Our findings reveal that while a busy audit team can effectively mitigate intercorporate loans, its efficacy diminishes under more challenging circumstances, particularly during periods when managers are more likely to exploit related-party sales to meet benchmarks and when controlling shareholders of client firms possess excessive control rights relative to ownership rights. These insights not only expand upon the existing literature concerning busy auditors but also deepen our comprehension of potential determinants of auditor busyness.

Third, this study offers insights into the existing contentious findings regarding the impact of auditor busyness. We highlight several attributes of audit teams that moderate the effect of audit team busyness on clients' behaviours. Specifically, the influence of busy audit team on opportunistic activities is more pronounced when clients are economically important to the audit team and when audit team possesses industry-specific expertise. Conversely, busy audit team characterised with less experience or low level of independence (i.e., longer audit tenure or returning audit team members) exhibit a diminished effects on restraining clients' opportunistic activities.

Fourth, we further contribute to auditor busyness research by highlighting different impacts of busy audit teams on client firms' tunneling activities between big and small business groups. In particular, big business groups tend to have a larger economic importance with the audit team comparing to small business groups (Sun et al.,

2020). Our findings identify a situation where busy audit teams fail to adequately monitor expropriate activities, especially when there is a significant economic dependence on the client firm (i.e., firms in big business groups).

The remainder of this paper is set out as follows. Section 4.2 provides a literature review and outlines hypotheses. Section 4.3 considers the method used to address the research question, and Section 4.4 presents empirical results of the research. Section 4.5 reports robustness tests. Finally, Section 4.6 summarises and concludes the paper.

4.2 Literature Review and Hypotheses Development

4.2.1 Audit Team Busyness

In recent decades, there has been a notable expansion in auditing research, shifting the focus from the broader audit firm level to the more specific individual auditor level (Gul et al., 2013; Lee et al., 2019; Sundgren & Svanström, 2014). This aligns with the call from DeFond & Francis (2005), who advocated for a deeper exploration of auditing research at the individual partner level to gain a better understanding of auditor behaviours and decision-making processes. Given that the audit work is generally carried out by an engagement team consist of multiple members, a new strand of research highlights the significance of examining audit teams as cohesive units (Cameran et al., 2018; Christensen et al., 2021). An audit team typically comprises a set of auditors collaboratively assigned with planning and executing the audit process (Rich et al., 1997). In contrast to audit firms or individual auditors, audit teams possess the unique ability to incorporate not only the human resources of their respective audit firms but also include individual auditors with varied specialisations and levels of experience irrespective of their hierarchical positions (Cahan et al., 2022). Thus, attributes of the engagement team, viewed as an integrated unit, offer a more precise representation of how these diverse skills and dynamics among members within an engagement team collectively contribute to the audit outcomes.

Beyond the scope of audit teams, there is a stream of research concentrates on the concept of auditor busyness. Specifically, auditors who manage a larger portfolio of clients are typically categorised as busy auditors (Sundgren & Svanström, 2014). However, existed literature holds contrasting views regarding the influence of audit busyness on the audit performance. On the one hand, the limited attention theory articulates that the more clients in an auditor's portfolio, the less attention and effort an auditor can pay to each client, resulting in a lower quality of audit services (Lai et al., 2018).

On the other hand, other studies claim that busy auditors provide higher audit quality than non-busy auditors. Firstly, the directorship theory articulates that multiple directorships indicate more competent of the director (Fama & Jensen, 1983). Following this, DeAngelo (1981) suggest that the number of clients in an auditor's portfolio signals the extent of experience and expertise of the auditor. Secondly, the economic dependence

perspective articulates the more clients in an auditor's portfolio, the weaker economic bond with each audit client (DeAngelo, 1981). Thus, busy auditors are less likely to compromise the audit independency to retain a client (Choi et al., 2010). Collectively, busy auditors who have a larger client portfolio are associated with higher audit competence and higher audit independence, thus leading to a higher quality of audit service.

In a departure from the prevailing viewpoints, the equilibrium theory contends that when the level of busyness is strategically managed by the audit partners, in equilibrium, there is no causal relationship between auditor busyness and audit quality (Goodwin et al., 2016). In line with this, Goodwin et al. (2016) find that higher audit partner busyness reduces the likelihood of issuing first-time going-concern opinions only when there is an exogenous shock that hinders auditors rebalance and optimal choice of their client portfolios. This highlights the importance of taking accounting of the equilibrium condition in examining the associations between auditor busyness and audit outcomes.

Collectively, the extant research on the impact of auditor busyness presents contentious findings, this study is positioned to contribute additional evidence to enrich the existing body of knowledge and enhance our understanding of the effect of auditor busyness.

4.2.2 Related-Party Transactions

Interestingly, while many scholars have investigated auditor busyness in Australia (Goodwin et al., 2016), US (López & Peters, 2012), China (Gul et al., 2017), and Malaysia (Lai et al., 2018), the majority of these studies focus on its impact on audit quality such as the level of discretionary accruals, propensity of misstatements, issued audit opinions. While these are mostly outcome indicators used to assess audit quality, there remains a gap in understanding how auditor busyness might affect other areas of concerns that demand more time and effort from the audit team. It is posited that client firms' opportunistic manipulations via related-party transactions might represent one of these areas. The Auditing Standards No. 1323 from Ministry of Finance stipulates that Chinese auditors are required to implement specific procedures to audit related-party transactions. For example, the auditors should understand the internal controls applied by the listed firms to adequately authorise and record RPTs and the nature of related-party relationship, obtain and review the approval documents from shareholders and board of directors on RPTs, confirm and discuss relavant information with individuals and institutions related to the transaction (e.g., banks, lawyers, guarantors, or agents, etc), inquire key management personnel about the business rationale of material transactions.

Since 2006, the China Securities Regulatory Commission (CSRC) has toughened the governance policies and audit procedures of reviewing and approving transactions with related-parties. The PCAOB also imposed new auditing standards of RPTs as a respond to the sequence of auditor failures associated with RPTs. In this study, we therefore aim to examine the efficacy of busy audit teams in monitoring clients' activities that might require more attention and experience from external auditors, specifically, on identifying and evaluating transactions

with related-parties for opportunistic purposes. Considering that not all transactions involving related-parties are utilized for manipulative purposes, this study draws on two specific types of transactions commonly associated with opportunistic intentions: related-party sales and intercorporate loans (Fang et al., 2018).

A significant portion of transactions with related-parties consists of commodity sales, which are considered a regular part of business operations. However, the two contradictory implications concerning sales to related-parties exacerbates the challenge faced by auditors in identifying these transactions. On one side, the efficient contract theory supposes the familiarity built between related-parties facilitates the efficacy and reduces the cost of communication and cooperation (Fisman & Wang, 2010; Kohlbeck & Mayhew, 2010). On the flip side, opportunistic managers exploit related-party sales as a substitute of accrual management to prop up the earnings (Jian & Wong, 2010; Lo et al., 2010). Previous literature finds firms are inclined to manage earnings through related-party sales in several approaches. For instance, management tends to inflate earnings via cash-based related-party sales, in order to minimise the excessive accruals that attract scrutinisation of external auditors (Jian & Wong, 2010). Opportunistic managers may also maneuver transfer prices of sales to related-parties (i.e., at non-market prices) to boost profits or cheat on taxes within the group (Lo et al., 2010). Thus, identifying related-party sales employed for earnings manipulation becomes a significant yet highly challenging task in audit work.

Besides the opportunistic incentives underlying related-party sales, prior literature has also shown that loans to related-parties as a common channel through which controlling shareholders expropriate wealth from minority investors (Liu & Tian, 2012). An example of this is when controlling shareholders receive significant amounts of funding from listed firms on favourable terms such as low interest rates or extended repayment deadlines, but often fail to repay the funds in the end (Du, 2014; Jiang et al., 2010). Earlier research has suggested that other receivables listed on the balance sheet could serve as a suitable substitute for detecting expropriations of controlling shareholders. This is because these receivables are not subject to fair value assessments, differ from other forms of tunneling such as related-party transactions and transfer pricing, are less prone to scrutiny by external auditors (Aharony et al., 2010). As a result, companies that have a significant amount of other receivables tend to exhibit poor operational performance, a high likelihood of receiving special treatment, modified audit opinions, financial restatements, and discounted market values (Fang et al., 2018; Jiang et al., 2010; Kohlbeck & Mayhew, 2017). Therefore, this study examines the role of busy audit teams on regulating clients' behaviours in transferring wealth via intercorporate loans.

4.2.3 The Impact of Audit Team Busyness on Opportunistic RPTs

In response to the debate on auditor busyness in equilibrium, this study attempts to examine the effect of busy audit teams in a heightened complexity setting such as auditing clients' opportunistic behaviours, in which more efforts and expertise are in demand to perform the audit work appropriately. Specifically, when the complexity of audit tasks exceeds the capacity an audit team can balance the costs and benefits of additional audits, we

examine the impact of busy audit teams while concurrently minimising the potential of audit teams strategically manage busyness or client portfolio (Goodwin et al., 2016; Libby & Tan, 1994).

On the one hand, previous studies find that client firms are more likely to manage earnings when they are audited by busy auditors that pay less effort to the client (Caramanis & Lennox, 2008). This means that busy auditors associated with less effort paid to each audit client result in lower quality of auditing. Accordingly, busy audit teams with more clients in-charge distribute less efforts to each audit client, would lead to weaker scrutinisation of insiders' opportunistic activities. Therefore, insiders may take advantage of the lack of oversight by the busy audit team to engage in tunneling and propping activities via transactions with related-parties (Tanyi & Smith, 2015).

On the other hand, auditors with a larger client base are viewed to be more reliable in guaranteeing the integrity and accuracy of clients' financial report, which therefore attracts more clients in the audit market (Goodwin et al., 2016). Besides, in cases of audit failures, auditors with a larger client base typicaly experience greater reputational damage, resulting in higher losses compared to those with fewer clients (DeAngelo, 1981). Therefore, busy auditors are more motivated to deliever higher quality of audit services. Thus, clients audited by a busy audit team exhibit a reduced tendency to engage in manipulative activities, concerning the higher audit competence and audit independence of these teams.

Given the two contrasting views on the relationship between audit team busyness and opportunistic RPTs, we test the following hypothesis:

H_1: Audit team busyness has an impact on the occurrence of opportunistic RPTs in client firms.

4.2.4 The Moderating Effects of Business Groups

A business group typically represents a collection of legal entities that share the same ultimate owner through equity blocks (Faccio et al., 2020).[67] Previous research has documented a dominance of business groups in various regions including China, India, Thailand, Malaysia, Indonesia, Philippines, South Korea, Japan, Singapore, Hong Kong, and Taiwan (Khanna & Palepu, 2000; Claessens et al., 2006; Sun et al., 2020). However, the prevalence of group-affiliated firms can be attributed to two contrasting reasons. On one perspective, business groups establish an internal market that can support peer firms under financial distress to minimise losses and boost group efficiency (Beaver et al., 2015). For instance, Bae et al. (2008) finds that outside investors respond with higher market value of affiliated firms when other group firms announce increased earnings. This

[67] Hereafter, we use "business groups", "group-affiliated firms", "group firms", "member firms", and "peer firms" interchangeably to represent firms that share the same ultimate owner with at least one another entity.

is because investors expect group-affiliated firms to allocate capital and resources more efficiently and benefit from more transparent environment within the group.

From another perspective, controlling shareholders are incentivised to exploit intragroup transactions for tunneling and propping purposes. Specifically, controlling shareholders can transfer assets and resources from their lower to higher ownership member firms at the expense of minority shareholders (Cheung et al., 2021). Additionally, opportunistic managers tend to manipulate sales within the business group to beat the benchmark or achieve tax avoidance (Jian & Wong, 2010; Bauer et al., 2020). This stream of research suggests that group-affiliated firms exacerbate agency problems between controlling and minority shareholders (Fang et al., 2017; Sun et al., 2020).

Regarding the audit of group-affiliated firms, prior literature has focused on business groups' auditor appointment strategy. For example, Fang et al. (2017) finds group firms tend to hire high-quality auditors (i.e., Big 4) to signal a transparent information environment and exclusion from insider expropriations. However, Cheung et al. (2021) shows that business groups that appoint multiple audit firms engage more opportunistic RPTs than those appoint single audit firms. This indicates business groups' intention of employing a divide and conquer strategy to weaken external monitoring from auditors. Similarly, Sun et al. (2020) shows that group-affiliated firms that share the same audit firm within the group (so-called 'network auditors') result in a lower audit quality than groups that do not.

Collectively, the impact of busy audit teams on monitoring opportunistic RPTs can be affected by business groups through two mechanisms. First, the prevalence and ease of access to transactions among related-entities within a group may exacerbate opportunistic RPTs, potentially diminishing the efficacy of busy audit teams in restraining such activities. Second, the contentious strategies employed by business groups in selecting high quality audit firms, while concurrently implementing a divide and conquer strategy of appointing multiple audit firms, imply that the function of a busy audit team in overseeing opportunistic RPTs may be either enhanced or compromised, contingent upon the underlying incentives of the group-affiliated firms. Therefore, acknowledging the distinct scenarios in group-affiliated versus non-group affiliated firms, we propose the following hypothesis:

H_2: The impact of audit team busyness on opportunistic RPTs differs between group-affiliated and non-group affiliated firms.

Further, Cheung et al. (2021) finds that the larger the number of members firms within a group, the more likely they are to appoint multiple audit firms. A multi-auditor appointment also represents more efforts and experienced auditors are assigned to the group, thus more stringent monitoring and auditing are imposed to opportunistic activities (Cheung et al., 2021). Therefore, large business groups who appoint multi-auditor tend to signal a more transparent financial reporting environment to outside investors and are less likely to engage in opportunistic RPTs that would impair their firm values. In a similar vein, Fang et al. (2017) find small

business groups are less likely to appoint Top 10 auditors comparing to large business groups. This lends additional support that small business groups have less demand for a high-quality audit service to indicate the integrity of their financial statements compared to large business groups.

Accordingly, the discrepancy in the appointment of audit firms between large and small business group firms may lead to variation in the quality and efficacy of external auditing services. Consequently, the effect of audit team busyness on managing opportunistic RPTs is likely to diverge between small and large business groups, attributable to the differences in audit firm appointment strategies and resultant variance in audit service quality.

H_3: The impact of audit team busyness on opportunistic RPTs differs between firms in small business groups and firms in large business groups.

4.3 Research Design and Sample Selection

4.3.1 Measuring Variables

The main variable of interest in this study is the audit team busyness, *AudTeamBusy*, represents the number of clients audited by an audit team in that year.[68] We measure client firm's opportunistic activities based on two variables: the first being abnormal related-party sales developed by Jian & Wong (2010), the second is intercorporate loans constructed by Jiang et al. (2010).

Extant studies show that group-affiliated firms are incentivised to manipulate earnings through sales to related-parties to beat the benchmark (Jian & Wong, 2010). Specifically, Chinese parent firms tend to prop up listed firms though purchasing goods and services to meet the earnings target (Fisman & Wang, 2010). Comparable to accounting accruals, related-party sales can be either used for normal business purposes or for manipulating incentives. Therefore, to remove normal components of related-party sales, we construct an *ABMSale* by taking the residual from the regression model of total amount of related-party sales on firm size, leverage, market-to-book ratio, and industry dummies within each year. Intercorporate loans are another tool that commonly used by controlling shareholders to expropriate minority investors for private benefits. Typically, controlling shareholders extract wealth from the listed firm through lending to themselves, which are reported as "other receivables". We therefore follow Jiang et al. (2010) to use net other receivable to total assets ratio to measure intercorporate loans that have been used for tunneling.

[68] Specifically, an audit team typically consists of a review auditor and an engagement auditor, we take the sum of clients audited by review auditor and clients audited by engagement auditor minus one to represent the audit team busyness. We use the aggregate number of clients of review and engagement auditors minus one to subtract the focal client firm that is counted twice from clients of two auditors.

4.3.2 Empirical Model

To test our first hypothesis, we estimate the following two regression models to examine the impact of audit team busyness on abnormal related-party sales and intercorporate loans:

$$ABMSale_{it} = \alpha + \beta_1 AudTeamBusy_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (1)$$

$$IntercorporateLoan_{it} = \alpha + \beta_1 AudTeamBusy_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (2)$$

where the dependent variable, *ABMSale*, captures the abnormal proportion of sales to related-parties that are likely exploited for earnings manipulation. *IntercorporateLoan* is the amount of net other receivables in the balance sheet divided by total assets in the current firm-year.

We consider controlling client firm financial and governance attributes that may determine the level of opportunistic RPTs. Given concentrated ownership being an important determinant of firm's incentive to engage in opportunistic RPTs, we control for Concentration indicating the percentage of shares held by the largest shareholder in the firm-year (Lo et al., 2010). A majority of RPT literature emphasises the role of corporate governance quality on the magnitude of opportunistic RPT, we therefore control for the following governance attributes comprising board size (Balsam et al., 2017), board independence (Wu & Li, 2015), audit committee independence (Doo & Yoon, 2020), CEO duality (Balsam et al., 2017), female directors (Usman et al., 2021), state ownership (Berkman et al., 2010), and Big 4 audit firms (Bennouri et al., 2015). Besides, we also take into consideration of firm financial indicators that have been found to influence the potential of engagement in opportunistic RPTs including firm size (Kohlbeck & Mayhew, 2010), return on assets (ROA) (Jiang et al., 2010), leverage ratio (Berkman et al., 2010), and market-to-book ratio (Berkman et al., 2009). The above control variables have been included in all analyses in this paper.

To test the second and third hypothesis, we partition sample into group and non-group firms and small and large business group firms, respectively. In each of the above models, we also include industry and year fixed effects to control for the influence of industry and year on opportunistic RPTs. To address potential cross-sectional correlation across client firms, we calculate t-statistics based on standard errors that are clustered by each client firm.

4.3.3 Sample Selection

Our sample consists of all companies listed on Shanghai and Shenzhen Stock Exchanges. Firm financial and governance information are both obtained from China Stock Market and Accounting Research (CSMAR) database. We identify the name of individual auditor from the CSMAR Audit Research Database and collect the amount of sales between related-parties from CSMAR Related Party Transaction Database. We identify a firm as a group-affiliated firm if it shares the same ultimate controller with at least another firm in the sample, ownership data is sourced from CSMAR Shareholder Database.

The initial sample comprises of 33,883 firm-year observations available in CSMAR till 2020. We exclude the following observations as reported in Panel A of Table 4.1: (i) 852 observations in the financial industry; (ii) 248 observations of B-share; (iii) 21,601 observations missing information about client firm financial and governance data. This data selection process yields a sample of 11,182 firm-year observations from 2000 to 2020. Further, we exclude 4,654 observations missing related-party sales from the *ABMSale* model and 4 observations missing intercorporate loans from the *IntercorporateLoan* model, respectively. This gives us a final sample of 6,660 observations for the *ABMSale* model and 11,178 observations for the *IntercorporateLoan* model, respectively.

Panel B of Table 4.1 presents the industry distribution of included observations. The largest industry group is the manufacturing, followed by real estate, information transmission, software and information, and electric power, heat, gas and water production and supply.

Table 4.1 Sample Description

Panel A: Sample selection

	No. of firms	No. of observations
Initial observations available in CSMAR		33,883
Less: observations in financial industry		(852)
Less: observations associated with B-share		(248)
Less: observations with missing client firm data		(21,601)
Sample included	**2,224**	**11,182**
Less: observations with missing data to calculate abnormal related-party sales		(4,654)
Sample for abnormal related-party sales test	**1,477**	**6,660**
Less: observations with missing intercorporate loans data		(4)
Sample for intercorporate loans test	**2,224**	**11,178**

Panel B: Industry distribution

	Freq.	Percent	Cum.
Agriculture, forestry, animal husbandry and fishery	161	1.44	1.44
Construction	311	2.78	4.22
Culture, sports and entertainment	184	1.65	5.87
Diversified industries	93	0.83	6.70
Education	21	0.19	6.89
Electric power, heat, gas and water production and supply	577	5.16	12.05
Health and social work	29	0.26	12.31
Information transmission, software and information technology services	643	5.75	18.06
Leasing and commercial service	164	1.47	19.52
Manufacturing	6302	56.36	75.88
Mining	431	3.85	79.74
Real estate	654	5.85	85.58
Scientific research and technical service	113	1.01	86.59
Transport, storage and postal service	536	4.79	91.39
Water conservancy, environment and public facility management	144	1.29	92.68
Wholesale and retail industry	819	7.32	100.00
Total	11182	100.00	

This table presents the industry distribution of the sample. Firm's industry is collected from CSMAR database, classification refers to 2012 CSRC industry classification.

4.4 Empirical Results

4.4.1 Descriptive Statistics

A summary of descriptive statistics and correlation matrix are reported in Table 4.2.[69] Panel A shows that the mean level of abnormal related-party sales (*ABMSale*) is higher in group-affiliated firms (0.788) comparing to non-group firms (-0.481), while the average intercorporate loans (*IntercorporateLoan*) is similar between group (0.018) and non-group firms (0.019). Similarly, *ABMSale* is on average higher in big business groups (1.075) comparing to small business groups (0.265), the mean value of *IntercorporateLoan* is similar between big (0.018) and small business groups (0.019).

Table 2 Panel B reports that audit teams of group-affiliated firms (4.298) are less busy (*AudTeamBusy*) comparing to audit teams in non-group firms (5.216). Audit teams of big business groups (4.084) are less busy than audit teams of small business groups (4.649). Review and engagement auditor busyness are lower in group affiliated firms than non-group firms and lower in big business groups that in small business groups. Review auditors (*RevAudBusy* 3.860) who typically are more senior and experienced show higher busyness than engagement auditors (*EngagAudBusy* 1.918) who are junior auditors.

Table 3 presents correlation matrix between our dependent variables and variable of interest. We find that *AudTeamBusy* is negatively correlated with both *ABMSale* and *IntercorporateLoan* ($p < 0.05$). Besides, we find that both review and engagement auditor busyness are negatively correlated with *ABMSale* and *IntercorporateLoan* ($p < 0.05$). These provides preliminary support to the association between auditor busyness and opportunistic RPTs.

[69] Appendix C.2 Detailed Summary Descriptive Statistics presents other descriptive statistics including number of observations, mean, standard deviation, mininum, maximum, 25 percentile, 75 percentile, skewness, and kurtosis.

Table 4.2 Descriptive Statistics

Panel A: Descriptive Statistics of Related-Party Transactions

	Full Sample			Group-affiliated			Non-group			Big Group			Small Group		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
ABMSale	0.228	0.458	2.576	**0.788**	0.968	2.342	**-0.481**	-0.208	2.681	**1.075**	1.247	2.297	**0.265**	0.469	2.335
IntercorporateLoan	0.019	0.008	0.03	**0.018**	0.008	0.027	**0.019**	0.008	0.032	**0.018**	0.008	0.026	**0.019**	0.008	0.029

Panel B: Descriptive Statistics of Audit Team Busyness

	Full Sample			Group-affiliated			Non-group			Big Group			Small Group		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
AudTeamBusy	**4.797**	4.000	3.302	**4.298**	4.000	3.076	**5.216**	5.000	3.425	**4.084**	3.000	2.946	**4.649**	4.000	3.325
RevAudBusy	**3.860**	3.000	2.658	**3.514**	3.000	2.506	**4.150**	4.000	2.747	**3.358**	3.000	2.441	**3.795**	3.000	2.736
EngagAudBusy	**1.918**	2.000	1.209	**1.769**	1.000	1.101	**2.043**	2.000	1.279	**1.716**	1.000	1.061	**1.851**	1.000	1.156
WithIndustBusy	0.148	0.000	0.432	0.137	0.000	0.416	0.157	0.000	0.445	0.185	0.000	0.502	0.164	0.000	0.473
CrossIndustBusy	5.633	5.000	3.206	5.148	4.000	3.000	6.042	5.000	3.314	4.899	4.000	2.881	5.488	5.000	3.243
AudTeamBusyDum	0.886	1.000	0.318	0.375	0.000	0.484	0.508	1.000	0.500	0.239	0.000	0.426	0.320	0.000	0.467
LnAudTeamBusy	2.009	2.079	0.747	1.896	2.079	0.740	2.104	2.303	0.740	1.850	1.792	0.726	1.967	2.079	0.759
AvgAudTeamBusy	2.898	2.500	1.651	2.649	2.500	1.538	3.108	3.000	1.712	2.542	2.000	1.473	2.825	2.500	1.662
AudMultipleClient	0.970	1.000	0.170	0.827	1.000	0.378	0.880	1.000	0.325	0.822	1.000	0.382	0.835	1.000	0.371

Panel C: Descriptive Statistics of Control Variables

	Full Sample			Group-affiliated			Non-group			Big Group			Small Group		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
FirmSize	22.003	21.835	1.305	22.581	22.435	1.452	21.688	21.600	1.090	22.856	22.710	1.520	22.257	22.166	1.294
Leverage	0.445	0.437	0.217	0.513	0.520	0.207	0.407	0.392	0.213	0.529	0.539	0.205	0.493	0.499	0.209
ROA	0.043	0.038	0.079	0.037	0.032	0.070	0.046	0.043	0.083	0.035	0.031	0.064	0.038	0.033	0.077
MTB	0.004	0.003	0.004	0.003	0.002	0.004	0.004	0.003	0.004	0.003	0.002	0.003	0.003	0.002	0.004
BoardSize	8.703	9.000	1.760	9.209	9.000	1.894	8.422	9.000	1.615	9.326	9.000	1.888	9.071	9.000	1.892
Big4	0.064	0.000	0.244	0.113	0.000	0.317	0.036	0.000	0.187	0.161	0.000	0.368	0.057	0.000	0.231
Concentration	35.227	33.038	14.928	39.115	37.933	15.419	33.074	30.531	14.198	41.409	41.389	15.163	36.412	34.387	15.280
IndDirPerc	0.372	0.333	0.052	0.368	0.333	0.053	0.374	0.333	0.052	0.369	0.333	0.056	0.367	0.333	0.049
ACIndPerc	0.680	0.667	0.096	0.690	0.667	0.115	0.672	0.667	0.077	0.693	0.667	0.121	0.685	0.667	0.104
CEOduality	0.743	1.000	0.437	0.888	1.000	0.316	0.664	1.000	0.473	0.929	1.000	0.257	0.839	1.000	0.368
Fedirperc	0.138	0.111	0.121	0.111	0.100	0.106	0.153	0.125	0.126	0.097	0.091	0.097	0.127	0.111	0.114
StateHolder	0.337	0.000	0.473	0.763	1.000	0.425	0.101	0.000	0.301	0.974	1.000	0.159	0.514	1.000	0.500
AudFirmSwitch	0.116	0.000	0.320	0.133	0.000	0.339	0.106	0.000	0.307	0.151	0.000	0.358	0.110	0.000	0.313
RevAudSwitch	0.313	0.000	0.464	0.371	0.000	0.483	0.356	0.000	0.479	0.379	0.000	0.485	0.361	0.000	0.480
EngagAudSwitch	0.378	0.000	0.485	0.447	0.000	0.497	0.431	0.000	0.495	0.460	0.000	0.498	0.433	0.000	0.496
AudFirmTenure	6.926	6.000	5.075	6.957	5.000	5.645	6.926	6.000	4.744	6.317	5.000	5.416	7.712	6.000	5.814
RevAudTenure	2.535	2.000	1.784	2.777	2.000	1.990	2.820	2.000	1.982	2.649	2.000	1.896	2.927	2.000	2.085
EngagAudTenure	2.146	2.000	1.365	2.233	2.000	1.482	2.304	2.000	1.513	2.145	2.000	1.423	2.337	2.000	1.543
Covid	0.078	0.000	0.269	0.088	0.000	0.283	0.098	0.000	0.298	0.091	0.000	0.288	0.084	0.000	0.277

Panel A reports descriptive statistics for abnormal related-party sales in full sample, group-affiliated, non-group, big group, and small group firms. Panel B reports descriptive information of audit team busyness and other alternative proxies of audit team busyness. Panel C reports summary statistics for audit firm characteristics, individual auditor characteristics, client firm characteristics, and corporate governance characteristics control variables in full sample, group-affiliated, non-group, big group, and small group firms. To alleviate the influence of outliers, we winsorize all non-dummy variables at 1% and 99%. Variables are defined in Appendix C.1.

Table 4.3 Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) ABMSale	1.000																				
(2) IntercorporateLoan	-0.045*	1.000																			
(3) AudTeamBusy	**-0.060***	**-0.031***	1.000																		
(4) RevAudBusy	-0.050*	-0.034*	0.935*	1.000																	
(5) EngagAudBusy	-0.052*	-0.010	0.630*	0.320*	1.000																
(6) FirmSize	0.005	-0.088*	-0.127*	-0.111*	-0.101*	1.000															
(7) Leverage	0.002	0.255*	-0.092*	-0.080*	-0.072*	0.362*	1.000														
(8) ROA	0.002	-0.243*	0.050*	0.050*	0.023*	0.066*	-0.357*	1.000													
(9) MTB	0.000	0.067*	0.035*	0.027*	0.038*	-0.349*	0.017*	0.067*	1.000												
(10) BoardSize	0.062*	-0.004	-0.043*	-0.035*	-0.040*	0.223*	0.136*	0.021*	-0.118*	1.000											
(11) Big4	0.024*	-0.029*	**-0.145***	**-0.127***	**-0.115***	0.353*	0.076*	0.051*	-0.090*	0.119*	1.000										
(12) Concentration	0.100*	-0.081*	-0.033*	-0.029*	-0.023*	0.196*	0.017*	0.134*	-0.086*	0.041*	0.146*	1.000									
(13) IndDirPerc	-0.019*	-0.011*	-0.007	-0.009	0.001	0.032*	-0.017*	-0.015*	0.049*	-0.471*	0.022*	0.021*	1.000								
(14) ACIndPerc	0.014	-0.005	-0.059*	-0.052*	-0.048*	0.146*	0.039*	-0.006	-0.040*	-0.026*	0.204*	0.068*	0.134*	1.000							
(15) CEOduality	0.095*	0.033*	-0.062*	-0.055*	-0.050*	0.152*	0.142*	-0.034*	-0.076*	0.187*	0.069*	0.057*	-0.121*	0.005	1.000						
(16) Fedirperc	-0.069*	-0.027*	0.024*	0.018*	0.027*	-0.110*	-0.096*	0.015*	0.057*	-0.117*	-0.077*	-0.065*	0.045*	-0.035*	-0.114*	1.000					
(17) StateHolder	0.200*	-0.019*	-0.122*	-0.104*	-0.103*	0.322*	0.251*	-0.069*	-0.152*	0.250*	0.142*	0.227*	-0.061*	0.081*	0.264*	-0.179*	1.000				
(18) BusGroup	**0.201***	-0.007	-0.116*	-0.097*	-0.101*	0.328*	0.232*	-0.058*	-0.115*	0.214*	0.151*	0.194*	-0.054*	0.092*	0.246*	-0.167*	0.671*	1.000			
(19) BigGroup	**0.165***	-0.043*	-0.089*	-0.072*	-0.083*	0.205*	0.086*	-0.021*	-0.069*	0.067*	0.165*	0.162*	0.021*	0.034*	0.142*	-0.143*	0.539*		1.000		
(20) AudTeamClientImp	0.041*	0.032*	-0.794*	-0.741*	-0.507*	0.139*	0.087*	-0.027*	-0.041*	0.056*	0.154*	0.036*	0.002	0.063*	0.057*	-0.032*	0.107*	0.095*	0.074*	1.000	
(21) Covid	0.001	-0.030*	-0.053*	-0.048*	-0.036*	0.083*	-0.018*	-0.037*	-0.013*	-0.071*	0.001	-0.060*	0.045*	0.019*	-0.037*	0.077*	-0.041*	-0.017*	0.013	-0.018*	1.000

P-values are reported in parentheses, * indicates statistical significance at the 5% level. Variables are defined in Appendix C.1.

4.4.2 Main Results

We report our analysis investigating whether audit team busyness influenced abnormal related-party sales and intercorporate loans in Table 4.4. While our results reported under column (1) show that the coefficient on *ABMSale* is insignificant, the coefficient on *IntercorporateLoan* is negative and significant at 1% in full sample (ß = - 0.0004, $p < 0.01$). This demonstrates that a one-standard-deviation increase in the audit team busyness is expected to result in a decrease in intercorporate loans of 0.13 percent (= - 0.0004 × 3.302) which supports the monitoring role of busy audit teams. A potential explanation for the negligible influence of busy audit team on *ABMSale* may reside in the auditors' risk assessment: loan covenants are often viewed as riskier compared to earnings management. This perception could result in auditors dedicating more effort and attention to loan-related issues than earnings manipulations when assessing misstatements (Maksymov et al., 2023).[70]

To test H_2, we partition our sample into group-affiliated and non-group firms and re-estimate our analysis for both samples separately. Results reported under column (2) - (3) and (5) - (6) of Table 4.4 show that busy audit team has no impact on *ABMSale* neither in group nor in non-group firms, and it indistinguishably reduces *IntercorporateLoan* in both group and non-group firms. Further, to test H_3, we partition sample into firms in small business groups and firms in large business groups. We find that busy audit team reduces *IntercorporateLoan* in small groups (ß = - 0.0007, $p < 0.05$), while it has no impact on *IntercorporateLoan* in large groups. This suggests that the role of busy audit team on mitigating intercorporate loans between related-parties diminishes in large business groups. Given the intense competition in Chinese audit market, retaining large business group clients becomes crucial to audit firms (Sun et al., 2020). This leads to an increased risk that busy audit teams may compromise their independence and overall audit quality to satisfy these prominent clients.

[70] The findings of a survey conducted by Maksymov et al. (2023) indicate that only a minority of auditors signal material misstatements when a client is close to missing its earnings target. Nonetheless, they assert that a breach of a loan covenant significantly increases their evaluation of the material risk associated with the client firm.

Table 4.4 Impact of audit team busyness on *ABMSale* and *IntercorporateLoan*

Panel A: Impact of audit team busyness on *ABMSale*

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0177	-0.0170	-0.0196	-0.0055	-0.0331
	(0.198)	(0.321)	(0.329)	(0.793)	(0.227)
FirmSize	-0.2718***	-0.2914***	-0.3712***	-0.2956***	-0.4095***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
Leverage	-0.5121	-0.6987	-0.1996	-0.6932	-1.1918*
	(0.130)	(0.102)	(0.696)	(0.172)	(0.073)
ROA	1.2150*	1.3880*	1.5041	2.6912***	0.1529
	(0.069)	(0.091)	(0.117)	(0.009)	(0.900)
MTB	5.6104	-5.8954	16.2445	-2.3032	-10.3987
	(0.614)	(0.725)	(0.274)	(0.915)	(0.639)
BoardSize	0.0891***	0.1058***	0.0464	0.1194***	0.1219**
	(0.006)	(0.004)	(0.471)	(0.007)	(0.045)
Big4	0.2890	0.3148	0.1765	0.1515	0.8714**
	(0.147)	(0.170)	(0.614)	(0.589)	(0.011)
Concentration	0.0069*	0.0118**	-0.0004	0.0133**	0.0065
	(0.092)	(0.021)	(0.949)	(0.045)	(0.320)
IndDirPerc	0.0794	0.1844	-0.3944	-0.6251	3.5562*
	(0.940)	(0.882)	(0.826)	(0.671)	(0.086)
ACIndPerc	-0.0127	0.1195	-0.7395	0.2553	0.0014
	(0.980)	(0.833)	(0.438)	(0.713)	(0.999)
CEOduality	0.2439*	0.0013	0.2390	0.0623	-0.0833
	(0.057)	(0.994)	(0.146)	(0.785)	(0.738)
Fedirperc	-0.8113*	-1.0140*	-0.4605	-0.5818	-1.3082*
	(0.073)	(0.095)	(0.451)	(0.481)	(0.097)
StateHolder	1.2161***	0.7681***	0.5814**	-0.3684	0.6731***
	(0.000)	(0.000)	(0.021)	(0.338)	(0.004)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1281	0.1501	0.0582	0.1423	0.1724
Obs	6660	3718	2938	2404	1307

Panel B: Impact of audit team busyness on *IntercorporateLoan*

	IntercorporateLoan				
	(1) Full	(2) Group	(4) Non-Group	(5) Big-Group	(6) Small-Group
AudTeamBusy	**-0.0004*** **	**-0.0004** **	**-0.0003*** **	-0.0002	**-0.0007** **
	(0.000)	**(0.018)**	**(0.009)**	(0.357)	**(0.012)**
FirmSize	0.0000	0.0010	-0.0006	0.0016*	-0.0000
	(0.995)	(0.183)	(0.490)	(0.087)	(0.988)
Leverage	0.0217***	0.0128***	0.0281***	0.0080**	0.0183***
	(0.000)	(0.001)	(0.000)	(0.048)	(0.004)
ROA	-0.0490***	-0.0270***	-0.0577***	-0.0183*	-0.0337**
	(0.000)	(0.003)	(0.000)	(0.072)	(0.038)
MTB	0.2678**	0.4276**	0.1662	0.7617***	0.0965
	(0.026)	(0.029)	(0.261)	(0.008)	(0.676)
BoardSize	0.0001	-0.0000	0.0002	0.0001	0.0001
	(0.845)	(0.952)	(0.640)	(0.786)	(0.830)
Big4	0.0004	-0.0005	-0.0011	0.0005	-0.0045
	(0.823)	(0.818)	(0.752)	(0.849)	(0.158)
Concentration	-0.0001***	-0.0001**	-0.0001***	-0.0001	-0.0002***
	(0.000)	(0.042)	(0.003)	(0.265)	(0.008)
IndDirPerc	0.0108	0.0196	0.0085	0.0155	0.0363
	(0.240)	(0.130)	(0.494)	(0.275)	(0.118)

ACIndPerc	-0.0048	-0.0066	-0.0021	-0.0056	-0.0116
	(0.268)	(0.176)	(0.799)	(0.335)	(0.133)
CEOduality	-0.0005	-0.0025	-0.0003	-0.0044	-0.0000
	(0.604)	(0.183)	(0.809)	(0.121)	(1.000)
Fedirperc	-0.0050	0.0011	-0.0086*	0.0011	-0.0019
	(0.152)	(0.846)	(0.054)	(0.868)	(0.820)
StateHolder	-0.0040***	-0.0032*	-0.0049**	0.0023	-0.0040*
	(0.000)	(0.066)	(0.021)	(0.537)	(0.062)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1507	0.1652	0.1728	0.2275	0.1573
Obs	11178	5104	6072	3086	2013

This table presents results from OLS regressions of the effect of audit team busyness. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.3 Context Specific Analyses and Opportunistic RPTs

Build upon the theory of auditor busyness, the effect of busy auditors can be multifaceted. First, busy audit teams allocate less attention to each client, potentially diminishing the monitoring role of external auditors (Lai et al., 2018). Second, busy audit teams are typically viewed as possessing greater expertise, potentially leading to enhanced audit performance (DeAngelo, 1981). Third, busy audit teams exhibit greater independence due to reduced economic ties with individual clients (Choi et al., 2010). Thus, in this section, we intend to investigate the mechanisms through which a busy audit team affect the clients engagement in opportunistic RPTs. Specifically, we incorporate contingency traits of the audit team that manifest the three dimensions respectively: effort and attention paid to the audit client, knowledge and experience of the audit team, and audit team independence.

4.4.3.1 Team Attention

Considering that auditors are economically dependent on larger clients within their portfolio, busy audit teams can allocate more attention and effort to the audit of important clients to reduce the risks of reputational damage and loss of future clients (Sundgren & Svanström, 2014). Our results in Table 4.5 show that busy audit teams tend to restrict client firms from abnormal related-party sales and intercorporate loans if the client is economical important (*AudTeamClientImp*). This implies that busy audit teams dedicate greater focus and effort when auditing key clients to prevent financial misconduct or audit failures that could damage their reputations and substantially affect the revenues (Chen et al., 2010). Given that group-affiliated firms are relatively more economical important comparing to non-group firms, we find particular significant moderating effect of client

importance in non-group firms in Table 4.5 Panel B (Sun et al., 2020).[71] This means that client importance matters more when the client firm does not belong to a business group.

Table 4.5 Effect of client importance and audit team busyness

Panel A: Moderating effect of client importance in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	0.0041	-0.0021	0.0187	-0.0019	0.0247
	(0.865)	(0.942)	(0.602)	(0.959)	(0.606)
AudTeamClientImp	-0.0338	-0.4260	0.4904	-0.4516	0.1234
	(0.946)	(0.480)	(0.525)	(0.528)	(0.913)
AudTeamBusy*AudTeamClientImp	**-0.3108***	-0.2437	-0.4045	-0.1270	-0.5473
	(0.074)	(0.254)	(0.125)	(0.609)	(0.135)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0827	0.0735	0.0277	0.0577	0.0658
Obs	6662	3720	2940	2404	1313

Panel B: Moderating effect of client importance in *IntercorporateLoan* model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0000	-0.0000	-0.0000	0.0001	-0.0001
	(0.866)	(0.913)	(0.873)	(0.795)	(0.778)
AudTeamClientImp	0.0074	0.0134**	0.0030	0.0126*	0.0165
	(0.132)	(0.030)	(0.672)	(0.089)	(0.125)
AudTeamBusy*AudTeamClientImp	**-0.0034****	-0.0008	**-0.0053*****	-0.0012	-0.0002
	(0.010)	(0.679)	**(0.005)**	(0.628)	(0.957)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1146	0.1092	0.1307	0.1257	0.1385
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the moderating effect of *AudTeamClientImp*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.3.2 Team Knowledge

While we have posited that an audit team handling a greater number of clients is generally perceived as more knowledgeable due to their increased exposure to auditing practices, it is crucial to discover whether busy audit teams that are more knowledgeable perform better than the other teams. In this study, we use two indicators to measure the knowledge of the audit team: audit team industry specific expertise and the initial year of audit

[71] Table 4.2 Panel D presents that the correlation between *BusGroup* and *AudTeamClientImp* is significantly positive, which corroborates that group-affiliated firm are typically more economically important comparing to non-group firms.

engagement. For instance, Bianchi et al. (2019) find that clients audited by auditors acquiring greater tax knowledge and expertise have lower tax rates. Cahan et al. (2022) also extend that different member of an audit team having varying levels of exposure to an industry than others, reinforcing the importance of capturing the industry knowledge of the entire audit team collectively. Our results in Table 4.6 show that while industry specialised audit team does not influence the impact of busy audit team on intercorporate loans, industry specialisation reinforces the effect of busy audit teams on reducing abnormal related-party sales. This means that busy teams with specialised industry knowledge restricts earnings manipulations in the form of abnormal related-party sales.

Table 4.6 Effect of industry specialization and audit team busyness

Panel A: Moderating effect of industry specialization in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) NonGroup	(4) BigGroup	(5) SmallGroup
AudTeamBusy	0.0073	0.0371	-0.0184	0.0377	0.0417
	(0.673)	(0.107)	(0.414)	(0.155)	(0.292)
TeamIndusSpecialized	0.3040	0.2352	0.3852	0.4172	-0.0945
	(0.161)	(0.388)	(0.272)	(0.209)	(0.828)
AudTeamBusy*TeamIndusSpecialized	**-0.0512****	**-0.0690****	-0.0270	-0.0577	-0.0868
	(0.043)	**(0.031)**	(0.488)	(0.140)	(0.114)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0810	0.0716	0.0297	0.0569	0.0669
Obs	6342	3574	2766	2302	1269

Panel B: Moderating effect of industry specialization in *IntercorporateLoan* model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) NonGroup	(4) BigGroup	(5) SmallGroup
AudTeamBusy	-0.0006***	-0.0006**	-0.0005***	-0.0006*	-0.0006*
	(0.000)	(0.013)	(0.009)	(0.054)	(0.082)
TeamIndusSpecialized	-0.0034	-0.0044	-0.0025	-0.0036	-0.0034
	(0.119)	(0.121)	(0.453)	(0.276)	(0.483)
AudTeamBusy*TeamIndusSpecialized	0.0001	0.0001	0.0000	0.0002	-0.0001
	(0.619)	(0.877)	(0.965)	(0.673)	(0.906)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1132	0.1089	0.1294	0.1254	0.1379
Obs	10649	4915	5734	2967	1945

This table presents results from OLS regressions of the moderating effect of *TeamIndusSpecialized*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

Results in Table 4.7 show that, an engagement auditor in a busy audit team, in his/her first year of auditing the focal client, encounters a heightened challenges and workload. This exacerbation of pressures therefore

diminishes their ability to effectively detect and oversee opportunistic activities within client firms.[72] This phenomenon is particularly significant in the auditing of abnormal related-party sales due to the intricate nature of these transactions comparing to intercorporate loans.[73] In addition, this effect is specifically pronounced in client firms within business group and big business groups. The complex group structures and prevalent intragroup transactions exacerbate information asymmetry and agency conflicts within these firms (Fang et al., 2017). These collectively contribute to the increased challenges of auditing opportunistic activities within these firms.

Table 4.7 Effect of first year audit and audit team busyness

Panel A: Moderating effect of engagement auditor first year audit in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0244	-0.0252	-0.0185	-0.0269	-0.0213
	(0.132)	(0.195)	(0.437)	(0.290)	(0.498)
EngagAudFirstYR	-0.1493	-0.2619**	-0.0270	-0.3387**	-0.1884
	(0.138)	(0.024)	(0.877)	(0.017)	(0.384)
AudTeamBusy*EngagAudFirstYR	0.0270	**0.0549****	-0.0030	**0.0728*****	0.0150
	(0.134)	**(0.017)**	(0.916)	**(0.009)**	(0.720)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0823	0.0740	0.0266	0.0595	0.0640
Obs	6662	3720	2940	2404	1313

Panel B: Moderating effect of engagement auditor first year audit in *IntercorporateLoan* model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0004***	-0.0005**	-0.0003*	-0.0005	-0.0005*
	(0.006)	(0.014)	(0.094)	(0.128)	(0.060)
EngagAudFirstYR	0.0016	0.0015	0.0015	-0.0004	0.0046**
	(0.133)	(0.268)	(0.366)	(0.812)	(0.049)
AudTeamBusy*EngagAudFirstYR	-0.0002	-0.0001	-0.0003	0.0001	-0.0003
	(0.191)	(0.810)	(0.242)	(0.819)	(0.495)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1140	0.1084	0.1297	0.1245	0.1397
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the moderating effect of *EngagAudFirstYR*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered

[72] We also conduct this analysis using review auditors' first year of audit, results show that first year audit of the review auditor within a busy audit team does not significantly affect the occurrence of *ABMSale* and *IntercorporateLoan*. This implies that, relative to review auditors, engagement auditors tend to be more likely to exhibit a lower quality of overseeing opportunistic activities in their initial year within a busy audit team.

[73] Abnormal related-party sales are acknowledged as a more complicated auditing task compared to intercorporate loans due to their dual-faceted motives (i.e., benchmark beating and legitimate business purposes).

by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.3.3 Team Independence

We examine the moderating role of audit team independence using two attributes of the audit team: audit team tenure and audit team continuity. In Table 4.8, we investigate whether long tenure of the audit team moderates the impact of busy audit team on *ABMSale* and *IntercorporateLoan*. Results show that there is no moderating effect of audit team tenure on the impact of busy audit team on *ABMSale*, while longer tenure busy audit team exacerbates intercorporate loans in full sample (ß = 0.003, $p < 0.05$). These imply that longer tenure with the client might diminish the independence of the audit team, which therefore facilitates more tunneling activities through intercorporate loans. In prior research, Gul et al. (2017) discover that longer tenure alleviates the adverse effects of auditor busyness, while Goodwin et al. (2016) report no moderating influence of tenure on auditor busyness. Our findings add valuable insights to the ongoing discussion, demonstrating that longer tenure diminishes the independence of a busy audit team, resulting in less vigilant monitoring in tunneling activities.

Table 4.8 Effect of audit tenure and audit team busyness

Panel A: Moderating effect of audit tenure in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0177	-0.0099	-0.0207	0.0061	-0.0585
	(0.301)	(0.677)	(0.375)	(0.824)	(0.191)
LongTenure	-0.0120	-0.0992	0.1325	-0.0110	-0.2759
	(0.919)	(0.459)	(0.530)	(0.947)	(0.240)
AudTeamBusy* LongTenure	0.0062	0.0119	-0.0027	-0.0011	0.0652
	(0.769)	(0.647)	(0.933)	(0.973)	(0.157)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0820	0.0729	0.0270	0.0573	0.0650
Obs	6662	3720	2940	2404	1313

Panel B: Moderating effect of audit tenure in *IntercorporateLoan* model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0007***	-0.0007***	-0.0006***	-0.0006**	-0.0007**
	(0.000)	(0.004)	(0.001)	(0.047)	(0.047)
LongTenure	-0.0020*	-0.0034**	-0.0002	-0.0031*	-0.0034
	(0.074)	(0.018)	(0.895)	(0.067)	(0.160)
AudTeamBusy*LongTenure	**0.0004****	0.0003	0.0003	0.0003	0.0002
	(0.023)	(0.193)	(0.262)	(0.286)	(0.619)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1142	0.1094	0.1299	0.1258	0.1385
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the moderating effect of *LongTenure*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

Existing research suggests that returning audit team members could potentially undermine their audit independence, subsequently affecting the quality of audit (Christensen et al., 2021). In support with this body of work, our findings in Table 4.9 show that busy audit teams with returning auditors (*TeamContinuity*) fail to restrain intercorporate loans. Collectively, these findings combined with results from audit tenure analysis, suggest that busy audit teams are more likely to facilitate tunneling activities when audit independence is compromised (i.e., longer tenure or returning auditors).

Table 4.9 Effect of team continuity and audit team busyness

Panel A: Moderating effect of team continuity in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) NonGroup	(4) BigGroup	(5) SmallGroup
AudTeamBusy	-0.0016	0.0086	-0.0108	0.0304	-0.0460
	(0.938)	(0.761)	(0.704)	(0.338)	(0.396)
TeamContinuity	0.1280	0.0911	0.1592	0.1547	0.0178
	(0.324)	(0.535)	(0.491)	(0.369)	(0.950)
AudTeamBusy*TeamContinuity	-0.0193	-0.0189	-0.0149	-0.0396	0.0379
	(0.434)	(0.557)	(0.691)	(0.291)	(0.518)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0821	0.0728	0.0267	0.0577	0.0644
Obs	6662	3720	2940	2404	1313

Panel B: Moderating effect of team continuity in *IntercorporateLoan* model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) NonGroup	(4) BigGroup	(5) SmallGroup
AudTeamBusy	-0.0007***	-0.0005*	-0.0008***	-0.0004	-0.0006
	(0.000)	(0.061)	(0.001)	(0.187)	(0.196)
TeamContinuity	-0.0028*	-0.0026	-0.0025	-0.0016	-0.0040
	(0.051)	(0.144)	(0.249)	(0.457)	(0.182)
AudTeamBusy*TeamContinuity	**0.0004***	0.0001	0.0005	0.0000	0.0000
	(0.088)	(0.862)	(0.105)	(0.929)	(0.943)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1142	0.1089	0.1298	0.1249	0.1390
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the moderating effect of *TeamContinuity*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.4 Further Analyses

4.4.4.1 Benchmark beating via *ABMSale*

In order to delve into the analysis of the impact of busy audit team on *ABMSale*, we follow Jian & Wong (*2010*) to investigate in periods where client firms are strongly incentivised to exploit abnormal related-party sales to beat the benchmark. Specifically, we construct a dummy variable Incentive that equals to one when the return on equity is between 0% - 2% or 6% - 8%, zero otherwise. The results reported under column (3) in Table 4.10 show that the coefficient on Incentive is significantly negative (ß = - 0.4685, p < 0.10). This suggests that non-group firms conduct less *ABMSale* during benchmark beating period. While the presence of busy audit teams facilitates abnormal related-party sales during benchmark beating in full (ß = 0.0540, p < 0.05) and non-group firms (ß = 0.0863, p < 0.05). This might because that non-group firms, fearing detection by auditors and subsequent devaluation by investors, therefore tend to avoid engaging in abnormal related-party sales during benchmark beating periods (ß = - 0.4685, p < 0.10). Nevertheless, when audited by a busy audit team, these companies are more likely to take the chance to manipulate abnormal related-party sales for benchmark beating (ß = 0.0863, p < 0.05), as less attention is devoted to each individual client firm.

Table 4.10 Impact of audit team busyness on benchmark beating through *ABMSale*

	Benchmark Beating Model				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
Incentive	-0.1705	-0.0429	**-0.4685***	0.0141	-0.2522
	(0.264)	(0.809)	**(0.069)**	(0.947)	(0.407)
AudTeamBusy	-0.0312*	-0.0144	-0.0433*	-0.0006	-0.0277
	(0.059)	(0.489)	(0.070)	(0.982)	(0.385)
Incentive*AudTeamBusy	**0.0540****	0.0328	**0.0863****	0.0198	0.0599
	(0.034)	(0.330)	**(0.025)**	(0.647)	(0.248)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0843	0.0751	0.0286	0.0673	0.0571
Obs	5850	3256	2591	2105	1149

This table presents results of the impact of *AudTeamBusy* on *ABMSale* during benchmark beating period. *Incentive* is a dummy variable equals to 1 when the return on equity is between 0%-2% or 6%-8%, zero otherwise. The dependent variable is *ABMSale*. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.4.2 Review auditor versus engagement auditor busyness

Given the distinct role of review and engagement auditors during the audit process, we also investigate two auditors' busyness separately. Results in Table 4.11 report that while both auditors' busyness has no impact on

ABMSale, we find a reduction of intercorporate loans particularly driven by busy review auditors (ß = - 0.0004, $p < 0.01$). This result supports the concept that busy review auditors gained experiences from more clients and senior position exhibit higher quality of auditing tunneling activities. This is also in line with findings from Christensen et al. (2021), which suggest that senior auditors are less affected by increased workload in comparison to junior auditors. It suggests that audit firms need to place more emphasis on the role of busy review auditors when assigning clients with potential risks of opportunistic activities. However, the impact of review auditor busyness on reducing *IntercorporateLoan* disappears in big business group firms. This is comparable to results in Table 4.4 panel B, suggesting that the role of audit busyness (i.e., *AudTeamBusy* or *RevAudBusy*) in refraining firms from tunneling through intercorporate loans is weakened if the firm is from a big business group. The reason for this might be twofold. On one hand, big business groups commonly have access to a wider range of financial sources and are less dependent on loans between related-parties (Fang et al., 2017). On the other hand, the independence of busy audit teams might be discounted in big business groups given these firms typically have a larger economic importance comparing to firms in small business groups (Sun et al., 2020).[74] Therefore, the monitoring role of busy auditors on intercorporate loans is diminished.

Table 4.11 Review auditor busyness versus engagement auditor busyness

Panel A: Review and engagement auditor busyness on *ABMSale*

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
RevAudBusy	-0.0075	-0.0185	0.0004	-0.0068	-0.0222
	(0.653)	(0.385)	(0.987)	(0.785)	(0.485)
EngagAudBusy	-0.0508	-0.0161	-0.0804	-0.0017	-0.0689
	(0.146)	(0.710)	(0.119)	(0.977)	(0.279)
Control	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1282	0.1499	0.0586	0.1419	0.1720
Obs	6660	3718	2938	2404	1307

Panel B: Review and engagement auditor busyness on *IntercorporateLoan*

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
RevAudBusy	**-0.0004*** **	**-0.0004***	**-0.0004****	-0.0002	**-0.0007****
	(0.002)	**(0.069)**	**(0.016)**	(0.521)	**(0.035)**
EngagAudBusy	-0.0002	-0.0005	-0.0001	-0.0003	-0.0006
	(0.414)	(0.207)	(0.792)	(0.518)	(0.290)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1507	0.1650	0.1729	0.2273	0.1566
Obs	11178	5104	6072	3086	2013

[74] This is evidenced by findings presented in Table 4.3 Correlation Matrix, indicating a positive correlation between *BigGroup* and *AudTeamClientImp* (0.074, $p < 0.05$). This suggests that firms belong to big business groups are likely to hold greater economic importance for the audit team.

This table presents results from OLS regressions of the impacts of *RevAudBusy* and *EngagAudBusy*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.4.3 Client firms with controlling shareholder holding excess control rights

Panel A of Table 4.12 show that group-affiliated firms with controlling shareholder holding excess control rights are more incentivised to exploit abnormal related-party sales (ß = 0.6152, p < 0.01). There is no impact of excess control rights on the relationship between busy audit team and *ABMSale*. In Panel B of Table 4.12, we find the firms with controlling shareholder holding excess control rights are less motivated to issue loans to related-parties in group (ß = - 0.0008, p < 0.01), non-group (ß = - 0.0052, p < 0.10), and small-group firms (ß = - 0.0052, p < 0.10). However, we find the busy audit teams exacerbate intercorporate loans when controlling shareholder holding excess control rights in group (ß = - 0.0007, p < 0.05), non-group (ß = - 0.0008, p < 0.10), big-group (ß = 0.0008, p < 0.05), and small-group firms (ß = - 0.0008, p < 0.10).

Table 4.12 Controlling shareholder holding excess control rights

Panel A: The role of excess control rights in influencing the impact of busy audit team on *ABMSale*

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	0.0072	0.0168	-0.0155	0.0257	-0.0021
	(0.700)	(0.435)	(0.590)	(0.333)	(0.959)
ExcessControlDum	0.5711***	0.6210***	0.2527	0.8085***	-0.0047
	(0.001)	(0.003)	(0.369)	(0.001)	(0.990)
ExcessControlDum*AudTeamBusy	-0.0344	-0.0351	-0.0049	-0.0332	-0.0289
	(0.188)	(0.303)	(0.898)	(0.458)	(0.601)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0880	0.0819	0.0280	0.0774	0.0642
Obs	6662	3720	2940	2404	1313

Panel B: The role of excess control rights in influencing the impact of busy audit team on *IntercorporateLoan*

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0005***	-0.0008***	-0.0001	-0.0007**	-0.0011***
	(0.005)	(0.001)	(0.535)	(0.027)	(0.001)
ExcessControlDum	0.0007	-0.0038*	0.0043*	-0.0039	-0.0051*
	(0.665)	(0.051)	(0.053)	(0.116)	(0.081)
ExcessControlDum*AudTeamBusy	0.0000	**0.0007****	**-0.0005***	**0.0008****	**0.0008***
	(0.866)	**(0.033)**	**(0.096)**	**(0.046)**	**(0.095)**
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes

SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1140	0.1094	0.1305	0.1262	0.1390
Obs	11179	5106	6073	3087	2016

This table presents results of the impact of *AudTeamBusy* on *ABMSale* in firms with controlling shareholders holding excess control rights. *ExcessControlDum* is a dummy variable equals to one if controller's control rights exceed ownership rights, zero otherwise.The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.4.4 Busy audit team in Big 4 audit firms

We further delve into busy audit teams from Big 4 audit firms in Table 4.13, results show that busy audit teams from Big 4 audit firms alleviate abnormal related-party sales used in group (ß = - 0.1092, p < 0.05) and especially big business group firms (ß = - 0.1015, p < 0.10). Similarly, busy audit teams from Big 4 audit firms alleviate intercorporate loans in non-group firms (ß = - 0.0030, p < 0.01), while facilitate intercorporate loans in small business group firms (ß = 0.0009, p < 0.10).[75]

Table 4.13 Busy audit teams from big 4 audit firms

Panel A: The role of Big 4 on the impact of audit team busyess on *ABMSale*

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0105	0.0035	-0.0202	0.0135	-0.0071
	(0.465)	(0.847)	(0.314)	(0.553)	(0.817)
Big4	0.4373*	0.5958**	-0.1129	0.3836	1.0212***
	(0.094)	(0.047)	(0.824)	(0.304)	(0.006)
AudTeamBusy*Big4	-0.0708	**-0.1051****	0.0526	-0.0975	-0.1255
	(0.100)	**(0.035)**	(0.548)	(0.108)	(0.121)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0824	0.0742	0.0270	0.0588	0.0655
Obs	6662	3720	2940	2404	1313

Panel B: The role of Big 4 on the impact of audit team busyess on *IntercorporateLoan*

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0005***	-0.0006***	-0.0004**	-0.0004*	-0.0007***
	(0.000)	(0.002)	(0.015)	(0.075)	(0.007)
Big4	0.0011	-0.0025	0.0101	-0.0007	-0.0086**
	(0.723)	(0.458)	(0.146)	(0.861)	(0.032)
AudTeamBusy*Big4	-0.0004	0.0005	**-0.0033*****	0.0001	**0.0010***

[75] We also perfomed this analysis for busy audit teams from Top 8 accounting firms and find qualitatively similar results that Top 8 busy audit teams restrict client firms from abnormal related-party sales while exacerbate tunneling through intercorporate loans.

	(0.470)	(0.498)	**(0.005)**	(0.905)	**(0.066)**
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1140	0.1082	0.1313	0.1248	0.1378
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the moderating effect of *Big4*. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.4.4.5 Within-industry versus cross-industry audit team busyness

The impact of audit team busyness can be different comparing between auditing clients within the same industry or auditing clients from various industries (Chen et al., 2020). Table 4.14 suggest that neither within nor cross-industry audit team busyness has an impact on firm's abnormal related-party sales, while we find within-industry busyness help reduce intercorporate loans in big-group firms (ß = - 0.0024, p < 0.05) and cross-industry busyness reduce intercorporate loans in small-group firms (ß = - 0.0006, p < 0.05).

Combining with baseline results in Table 4.4 panel B, this indicates that while busy audit team fails to regulate intercorporate loans in big-group firms, having more expertise on the same industry of current client (*WithinIndustBusy*) helps busy audit team to efficiently alleviate intercorporate loans in big business groups. Results also indicate that it is the experience of auditing cross-industry clients that enhances busy audit team's competence in restraining intercorporate loans in group (ß = - 0.0005, p < 0.01), non-group (ß = 0.0004, p < 0.01), and small-group firms (ß = 0.0006, p < 0.05).

Table 4.14 Within-industry versus cross-industry audit team busyness

Panel A: Within and cross-industry audit team busyness on *ABMSale*

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
WithinIndustBusy	0.1014	0.1549	0.0057	0.1798	-0.0499
	(0.306)	(0.264)	(0.967)	(0.218)	(0.756)
CrossIndustBusy	-0.0187	-0.0104	-0.0198	-0.0031	-0.0118
	(0.195)	(0.566)	(0.333)	(0.889)	(0.692)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0825	0.0742	0.0266	0.0596	0.0647
Obs	6662	3720	2940	2404	1313

Panel B: Within and cross-industry audit team busyness on *IntercorporateLoan*

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group

WithinIndustBusy	-0.0002	-0.0010	0.0008	**-0.0024****	-0.0001
	(0.848)	(0.354)	(0.448)	**(0.012)**	(0.946)
CrossIndustBusy	**-0.0004*****	**-0.0005*****	**-0.0004*****	-0.0003	**-0.0006****
	(0.000)	**(0.008)**	**(0.003)**	(0.213)	**(0.015)**
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1207	0.1114	0.1382	0.1322	0.1288
Obs	11179	5106	6073	3087	2016

This table presents results from OLS regressions of the impacts of *WithinIndustBusy* and *CrossIndustBusy*. *WithinIndustBusy* is the aggregate number of other clients that review and engagement audit partner audit in the same industry as the focus client in that year. *CrossIndustBusy* is the aggregate number of other clients that review and engagement audit partner audit in different industries from the focus client in that year. The dependent variable is *ABMSale* in Panel A and *IntercorporateLoan* in Panel B. The sample includes all firms in column (1), group-affiliated firms in column (2), non-group firms in column (3), big group firms in column (4), and small group firms in column (5) for both Panel A and Panel B. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.5 Robustness Tests

4.5.1 Audit Firm Fixed Effect

To better account for potential omitted and correlated variables beyond the client level, especially factors related to audit firms, we re-evaluated Models (1) and (2), incorporating the fixed effects associated with audit firms as show in Table 4.15. The results indicate that busy audit teams restrained abnormal related-party sales in small-group firms and reduced intercorporate loans in both group and big-group firms. These findings show that even though a busy audit team fails to affect *ABMSale* in the OLS regression, there is a noticeable reduction in *ABMSale* within small-group firms when we control audit firm associated factors. In addition, the effect of audit team busyness on intercorporate loans sustains in group-affiliated and big-group firms.

Table 4.15 Audit firm fixed effect

Panel A: Audit firm fixed effect in *ABMSale* model

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0077	-0.0104	-0.0053	0.0096	**-0.0581***
	(0.590)	(0.582)	(0.793)	(0.670)	**(0.079)**
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Adj. R-squared	0.1079	0.1130	0.0673	0.1221	0.1226
Obs	6633	3691	2910	2380	1285

Panel B: Audit firm fixed effect in *IntercorporateLoan* model

	IntercorporateLoan

	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0002	**-0.0005****	0.0000	**-0.0005***	-0.0004
	(0.137)	**(0.016)**	(0.778)	**(0.090)**	(0.192)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Adj. R-squared	0.1413	0.1208	0.1762	0.1592	0.1225
Obs	11146	5072	6039	3060	1985

This table presents the regression results of controlling for audit firm fixed effect in *ABMSale* and *IntercorporateLoan* models in Panel A and Panel B, respectively. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.5.2 Addressing Threat of Reverse Causality

To resolve the concern that client firms with a high level of abnormal related-party sales or intercorporate loans tend to appoint audit teams with fewer clients, we examine reverse causation using two methods. In the first method, we focus on cases where the audit team maintains unchanged over two consecutive years, indicating that the shifts in abnormal related-party sales or intercorporate loans do not influence the busyness of the audit team. In Panel A and B of Table 4.16, we find that a busy audit team consistently serves a monitoring role in reducing both *ABMSale* and *IntercorporateLoan*. This influence is notably stronger for *ABMSale* in non-group firms and *IntercorporateLoan* within group, big-group, and small-group firms.

Table 4.16 Audit team maintains unchange for two consecutive years

Panel A: Audit team maintains unchange in *ABMSale* model

	Audit Team Maintains Unchange for Two Consecutive Years Dependent Variable: ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	**-0.0343***	-0.0141	**-0.0522***	0.0093	-0.0407
	(0.072)	(0.547)	**(0.059)**	(0.756)	(0.291)
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0720	0.0523	0.0294	0.0406	0.0311
Obs	2713	1545	1166	992	552

Panel B: Audit team maintains unchange in *IntercorporateLoan* model

	Audit Team Maintains Unchange for Two Consecutive Years Dependent Variable: IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	**-0.0004****	**-0.0006*****	-0.0003	**-0.0005****	**-0.0006***
	(0.024)	**(0.009)**	(0.221)	**(0.046)**	**(0.065)**
Controls	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1068	0.1080	0.1187	0.1479	0.0728
Obs	4527	2117	2409	1281	834

This table presents regression results examining the potential for reverse causality in situations where the audit team remained unchanged for two consecutive years. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *Fedirperc*, *StateHolder* are included, but suppressed for brevity. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

In the second method, we segregate firms based on the level of *ABMSale*: those raking in the lowest tercile are identified as having low *ABMSale* and those positioned in the highest tercile are considered to have high *ABMSale*. We then analyse the number of clients of audit teams who audit low *ABMSale* firms with those who audit high *ABMSale* firms. As presented in Table 4.17, there are not statistically significant variances in the mean or median values of *AudTeamBusy* between low and high *ABMSale* clients. Similarly, when we categorise clients based on their levels of *IntercorporateLoan*, we observe analogous outcomes. This helps dispel the concern that firms, contingent on their level of *ABMSale* or *IntercorporateLoan*, strategically appoint audit teams based on the number of clients in their portfolio.

Table 4.17 Audit team busyness partitioned by high and low RPT clients

Panel A: Mean of audit team busyness partitioned by high and low RPT clients

Partition	ABMSale		IntercorporateLoan	
	Low	High	Low	High
Mean AudTeamBusy	6.0556	6.0624	6.8414	6.8244
Test of difference in Mean AudTeamBusy		0.0067		-0.0170
Paired t-test p-values		(0.933)		(0.926)

Panel B: Median of audit team busyness partitioned by high and low RPT clients

	ABMSale		IntercorporateLoan	
Partition	Low	High	Low	High
Median AudTeamBusy	4.0000	4.0000	4.0000	4.0000
Expected rank		97227.0		13557.5
Wilcoxon signed rank test		(0.654)		(0.888)

This table presents the differences of mean and median of the AudTeamBusy between low ABMSale (in the lowest tercile) and high *ABMSale* (in the highest tercile) clients. Column 3 and 4 in Panel A and Panel B displays the same analysis result between lowest and highest terciles of *IntercorporateLoan*.

4.5.3 Endogeneity Concerns

We acknowledge that endogeneity might be a potential concern in this study. On the one hand, clients audited by busy audit teams may be fundamentally different from clients audited by less busy audit teams. On the other hand, busy audit teams may be assigned to less complex clients, who are less likely to engage in tunneling and propping initially. To mitigate potential endogenous issues, we use the two-stage instrumental variables (IV) estimation and the difference in difference (DID) estimate (Caramanis & Lennox, 2008; Sun et al., 2020).

4.5.3.1 Two-Stage Instrumental Variables Estimation

In the first stage, we estimate a model of audit team busyness:

$$AudTeamBusy_{it} = \eta_0 + \eta_1 LAudTeamBusy_{it-1} + \sum\beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (3)$$

where *LAudTeamBusy* equals to the previous year of audit team busyness and *Controls* are all the control variables in the baseline model with two additional variables *AudFirmSwitch* and *AudFirmTenure* that may affect audit team busyness.

Results in Panel A of Table 4.18 show that *LAudTeamBusy* is significantly associated with *AudTeamBusy* in full sample and all subsamples. This assures that our instrumental variable is strongly correlated with *AudTeamBusy*. As *LAudTeamBusy* is a lagged year audit team busyness, it is therefore considered to be a pre-determined factor that is uncorrelated with current year *ABMSale* or *IntercorporateLoan*. In addition, we also find that audit teams in Big 4 audit firms have lower busyness than non-Big 4 audit teams. The reason for this could be that Big 4 audit firms typically have a more developed structure and management system, enabling them to allocate work to audit teams in a more effective and efficient manner. This therefore helps to prevent audit teams from becoming overloaded.

Table 4.18 Two-stage instrumental variables estimation

Panel A: First Stage – determinants of audit team busyness and predict instrumented audit team busyness

	Dependent Variable: AudTeamBusy									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
LAudTeamBusy	**0.5425*** **	**0.5357*** **	**0.5232*** **	**0.5344*** **	**0.5438*** **	**0.5193*** **	**0.4961*** **	**0.5108*** **	**0.5195*** **	**0.5181*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
AudFirmSwitch		-0.0633		0.1018		-0.2756		0.1158		-0.0144
		(0.599)		(0.528)		(0.134)		(0.560)		(0.959)
AudFirmTenure		0.0217***		0.0190**		0.0203**		-0.0036		0.0466***
		(0.000)		(0.014)		(0.011)		(0.722)		(0.000)
FirmSize	-0.0168	0.0023	0.0112	-0.0206	-0.0401	0.0280	-0.0063	-0.0015	0.0414	-0.0886
	(0.557)	(0.943)	(0.773)	(0.624)	(0.369)	(0.578)	(0.898)	(0.978)	(0.566)	(0.246)
Leverage	-0.4862***	-0.5115**	-0.6397***	-0.4247	-0.4114	-0.6248**	-0.5908*	-0.5131	-0.8978**	-0.1186
	(0.006)	(0.012)	(0.006)	(0.120)	(0.106)	(0.040)	(0.061)	(0.161)	(0.017)	(0.786)
ROA	0.6930	0.2731	0.7349	0.8302	0.5459	-0.2630	0.1286	0.6168	1.1551	1.2986
	(0.105)	(0.580)	(0.255)	(0.282)	(0.343)	(0.689)	(0.891)	(0.581)	(0.211)	(0.252)
MTB	1.7862	5.4135	1.5054	-6.6801	2.3848	11.4575	-5.3266	-14.2591	9.6323	-2.9674
	(0.758)	(0.466)	(0.867)	(0.522)	(0.768)	(0.273)	(0.702)	(0.381)	(0.403)	(0.813)
BoardSize	-0.0144	-0.0250	-0.0237	-0.0196	0.0090	-0.0238	-0.0099	-0.0228	-0.0289	0.0293
	(0.429)	(0.190)	(0.299)	(0.418)	(0.765)	(0.449)	(0.728)	(0.448)	(0.480)	(0.490)
Big4	-0.8440***	-0.8322***	-0.8835***	-0.8047***	-0.8832***	-0.9255***	-0.9871***	-0.9885***	-0.6361**	-0.3194
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.040)	(0.305)
Concentration	-0.0003	0.0004	-0.0023	-0.0011	0.0019	0.0036	0.0015	0.0007	-0.0091*	-0.0026
	(0.891)	(0.843)	(0.432)	(0.712)	(0.457)	(0.230)	(0.694)	(0.853)	(0.051)	(0.597)
IndDirPerc	-0.1778	-0.1990	-0.5950	-0.1397	0.1868	-0.2743	0.4304	0.6031	-1.5283	0.6888
	(0.745)	(0.749)	(0.438)	(0.867)	(0.820)	(0.770)	(0.642)	(0.554)	(0.319)	(0.672)
ACIndPerc	-0.4375*	-0.2317	0.0092	0.0643	-1.1589***	-0.7962	0.5976	0.5880	-1.5890**	-1.3283**
	(0.090)	(0.436)	(0.978)	(0.857)	(0.007)	(0.132)	(0.141)	(0.183)	(0.017)	(0.046)
CEOduality	-0.1255*	-0.1374*	-0.1708	-0.2066	-0.0942	-0.1260	-0.2463	-0.3105	-0.1682	-0.1907
	(0.065)	(0.077)	(0.192)	(0.161)	(0.247)	(0.181)	(0.178)	(0.130)	(0.366)	(0.343)
Fedirperc	0.0985	0.0713	0.4590	0.4226	-0.0292	0.0366	0.9790*	0.9576	-0.3153	-0.0762
	(0.676)	(0.789)	(0.215)	(0.316)	(0.923)	(0.914)	(0.059)	(0.107)	(0.596)	(0.910)
StateHolder	-0.2509***	-0.2574***	-0.0435	-0.0857	-0.3667***	-0.4796***	0.0024	-0.0606	0.0256	-0.1218
	(0.000)	(0.000)	(0.704)	(0.496)	(0.001)	(0.000)	(0.992)	(0.798)	(0.876)	(0.508)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.3763	0.3787	0.3641	0.3808	0.3662	0.3628	0.3504	0.3640	0.3758	0.4034
Obs	10976	7907	5020	3820	5954	4080	3031	2361	1984	1453

Panel B: Second Stage – The impact of instrumented audit team busyness on *ABMSale*

	Dependent Variable: ABMSale									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
AudTeamBusy	-0.0166		-0.0176		-0.0211		-0.0148		-0.0373	
	(0.305)		(0.365)		(0.394)		(0.521)		(0.236)	
AudTeamBusy_predict		-0.0204		0.0087		-0.0579		0.0047		0.0071
		(0.479)		(0.790)		(0.214)		(0.909)		(0.890)
AudFirmSwitch	0.0816	0.0786	0.0078	0.0040	0.3046	0.2855	0.0868	0.0836	-0.1058	-0.1055
	(0.497)	(0.512)	(0.955)	(0.976)	(0.188)	(0.215)	(0.552)	(0.567)	(0.716)	(0.717)
AudFirmTenure	0.0015	0.0017	-0.0191	-0.0202*	0.0442**	0.0461***	-0.0123	-0.0127	-0.0132	-0.0163
	(0.890)	(0.874)	(0.109)	(0.093)	(0.011)	(0.008)	(0.427)	(0.416)	(0.443)	(0.359)
FirmSize	-0.2608***	-0.2614***	-0.2825***	-0.2841***	-0.3375***	-0.3382***	-0.2855***	-0.2863***	-0.4107***	-0.4132***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
Leverage	-0.5073	-0.5087	-0.7295	-0.7053	-0.1413	-0.1495	-0.7558	-0.7347	-1.3327*	-1.2889
	(0.184)	(0.185)	(0.127)	(0.141)	(0.812)	(0.802)	(0.181)	(0.196)	(0.089)	(0.101)
ROA	2.0632***	2.0754***	2.0916**	2.0257**	2.5026**	2.5492**	3.3345***	3.2939***	0.3972	0.2734
	(0.006)	(0.006)	(0.023)	(0.029)	(0.022)	(0.020)	(0.003)	(0.004)	(0.779)	(0.848)
MTB	7.4221	7.3160	-10.0649	-10.1421	18.2722	18.0055	-3.0351	-2.9115	-9.7704	-10.7438
	(0.555)	(0.560)	(0.597)	(0.593)	(0.288)	(0.293)	(0.898)	(0.901)	(0.726)	(0.702)
BoardSize	0.0901**	0.0906**	0.0951**	0.0972**	0.0545	0.0552	0.1038**	0.1051**	0.0913	0.0931
	(0.017)	(0.017)	(0.024)	(0.021)	(0.482)	(0.477)	(0.036)	(0.034)	(0.199)	(0.190)
Big4	0.3108	0.3046	0.2961	0.3479	0.2404	0.1705	0.1756	0.2169	0.6460	0.7101*
	(0.160)	(0.174)	(0.246)	(0.181)	(0.550)	(0.676)	(0.571)	(0.485)	(0.109)	(0.085)
Concentration	0.0054	0.0054	0.0112**	0.0113**	-0.0021	-0.0019	0.0141*	0.0141*	0.0006	0.0012
	(0.249)	(0.247)	(0.048)	(0.046)	(0.765)	(0.793)	(0.054)	(0.054)	(0.938)	(0.870)
IndDirPerc	-0.5001	-0.4870	-0.0871	-0.0610	-1.9919	-1.9898	-0.3072	-0.3155	2.5518	2.6160
	(0.685)	(0.693)	(0.951)	(0.966)	(0.365)	(0.365)	(0.856)	(0.852)	(0.293)	(0.279)
ACIndPerc	0.1669	0.1595	0.2256	0.2098	-0.0810	-0.1529	0.2166	0.1961	0.3655	0.4351
	(0.772)	(0.782)	(0.728)	(0.747)	(0.947)	(0.899)	(0.782)	(0.802)	(0.696)	(0.644)
CEOduality	0.2212	0.2202	0.0144	0.0197	0.1570	0.1405	0.2351	0.2424	-0.2476	-0.2446
	(0.132)	(0.134)	(0.943)	(0.922)	(0.408)	(0.457)	(0.360)	(0.346)	(0.402)	(0.410)
Fedirperc	-0.8322	-0.8332	-1.0974	-1.1357*	-0.3376	-0.3622	-0.8100	-0.8534	-1.1924	-1.1959
	(0.107)	(0.107)	(0.108)	(0.097)	(0.640)	(0.615)	(0.388)	(0.364)	(0.163)	(0.165)
StateHolder	1.2765***	1.2734***	0.7733***	0.7815***	0.5139*	0.4778	-0.2685	-0.2699	0.6403**	0.6535**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.081)	(0.107)	(0.555)	(0.553)	(0.030)	(0.027)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1348	0.1346	0.1539	0.1535	0.0662	0.0669	0.1459	0.1456	0.1852	0.1830
Obs	4932	4932	2830	2830	2095	2095	1859	1859	969	969

Panel C: Second Stage – The impact of instrumented audit team busyness on *IntercorporateLoan*

	Dependent Variable: IntercorporateLoan									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
AudTeamBusy	-0.0004***		-0.0005***		-0.0004**		-0.0003		-0.0007**	
	(0.000)		(0.007)		(0.011)		(0.268)		(0.020)	
AudTeamBusy_predict		**-0.0006*** **		**-0.0008** **		-0.0005		-0.0006		**-0.0011** **
		(0.004)		**(0.011)**		(0.126)		(0.138)		**(0.049)**
AudFirmSwitch	0.0017	0.0017	0.0004	0.0004	0.0027	0.0027	0.0011	0.0011	-0.0019	-0.0019
	(0.146)	(0.148)	(0.718)	(0.701)	(0.183)	(0.187)	(0.402)	(0.402)	(0.415)	(0.417)
AudFirmTenure	-0.0001	-0.0001	-0.0000	0.0000	-0.0002	-0.0002	0.0001	0.0001	-0.0002*	-0.0002
	(0.235)	(0.295)	(0.930)	(0.944)	(0.100)	(0.105)	(0.319)	(0.312)	(0.079)	(0.142)
FirmSize	0.0008	0.0008	0.0013	0.0013	0.0005	0.0005	0.0019*	0.0019*	0.0007	0.0007
	(0.228)	(0.226)	(0.127)	(0.126)	(0.597)	(0.594)	(0.082)	(0.082)	(0.592)	(0.602)
Leverage	0.0201***	0.0199***	0.0134***	0.0131***	0.0257***	0.0257***	0.0082*	0.0078*	0.0170**	0.0167**
	(0.000)	(0.000)	(0.002)	(0.003)	(0.000)	(0.000)	(0.080)	(0.094)	(0.027)	(0.029)
ROA	-0.0529***	-0.0527***	-0.0326***	-0.0319***	-0.0617***	-0.0618***	-0.0204*	-0.0201	-0.0479**	-0.0468**
	(0.000)	(0.000)	(0.004)	(0.005)	(0.000)	(0.000)	(0.099)	(0.105)	(0.017)	(0.021)
MTB	0.2557*	0.2577*	0.4901**	0.4899**	0.0894	0.0905	0.8398**	0.8336**	0.1523	0.1560
	(0.068)	(0.067)	(0.040)	(0.040)	(0.589)	(0.586)	(0.020)	(0.020)	(0.585)	(0.577)
BoardSize	-0.0000	-0.0000	-0.0000	-0.0000	0.0002	0.0002	0.0002	0.0002	-0.0001	-0.0001
	(0.977)	(0.959)	(0.961)	(0.935)	(0.782)	(0.785)	(0.603)	(0.618)	(0.834)	(0.851)
Big4	0.0000	-0.0003	-0.0011	-0.0017	-0.0013	-0.0014	-0.0003	-0.0009	-0.0041	-0.0044
	(0.992)	(0.880)	(0.652)	(0.488)	(0.742)	(0.727)	(0.928)	(0.753)	(0.276)	(0.236)
Concentration	-0.0001***	-0.0001***	-0.0001	-0.0001	-0.0001**	-0.0001**	-0.0000	-0.0000	-0.0002***	-0.0002***
	(0.002)	(0.002)	(0.121)	(0.118)	(0.012)	(0.013)	(0.508)	(0.514)	(0.003)	(0.003)
IndDirPerc	0.0117	0.0116	0.0252*	0.0253*	0.0065	0.0064	0.0189	0.0193	0.0417	0.0423
	(0.249)	(0.253)	(0.071)	(0.071)	(0.652)	(0.655)	(0.217)	(0.205)	(0.127)	(0.125)
ACIndPerc	-0.0072	-0.0073	-0.0065	-0.0064	-0.0103	-0.0104	-0.0024	-0.0022	-0.0135	-0.0140
	(0.141)	(0.137)	(0.248)	(0.255)	(0.255)	(0.252)	(0.714)	(0.741)	(0.152)	(0.139)
CEOduality	-0.0011	-0.0012	-0.0020	-0.0022	-0.0010	-0.0010	-0.0046	-0.0048*	0.0016	0.0015
	(0.319)	(0.294)	(0.310)	(0.282)	(0.441)	(0.435)	(0.105)	(0.091)	(0.544)	(0.563)
Fedirperc	-0.0023	-0.0023	0.0021	0.0026	-0.0055	-0.0055	0.0034	0.0040	-0.0076	-0.0075
	(0.556)	(0.557)	(0.724)	(0.672)	(0.307)	(0.305)	(0.656)	(0.594)	(0.396)	(0.402)
StateHolder	-0.0039***	-0.0040***	-0.0035*	-0.0036*	-0.0042*	-0.0042*	0.0019	0.0019	-0.0040*	-0.0040*
	(0.002)	(0.002)	(0.078)	(0.071)	(0.095)	(0.093)	(0.633)	(0.638)	(0.099)	(0.091)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1511	0.1503	0.1768	0.1764	0.1667	0.1656	0.2603	0.2607	0.1428	0.1405
Obs	7904	7904	3819	3819	4078	4078	2360	2360	1453	1453

This table presents results from a two-stage instrumental variables estimation. Panel A presents the results of estimating a model of *AudTeamBusy* and use the estimated coefficients to obtain predicted audit team busyness. Panel B presents results of regressing the predicted audit team busyness on *ABMSale*. Panel C presents similar analysis

results on *IntercorporateLoan*. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

In the second stage, we obtain the instrumented (predicted) audit team busyness (*AudTeamBusy_predict*) using the coefficient estimates η1 in the first stage and then replace *AudTeamBusy* with *AudTeamBusy_predict* in models below:

$$ABMSale_{it} = \alpha + \beta_1 AudTeamBusy\_predict_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (4)$$

$$IntercorporateLoan_{it} = \alpha + \beta_1 AudTeamBusy\_predict_{it} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (5)$$

Results in Panel B and Panel C of Table 4.18 suggest that, after controlling for endogeneity concern using the instrumented audit team busyness (*AudTeamBusy_predict*), our preliminary inference of busy audit teams has no impact on abnormal related-party sales while helps reduce intercorporate loans in group (ß = - 0.0006, p < 0.01) and in particular small group (ß = - 0.0011, p < 0.05) firms sustain. We also perform the two-stage IV estimation on busyness of two auditors individually in the supplementary tests, results are qualitatively similar.

4.5.3.2 Difference-In-Difference Estimation

Our second approach to eliminate the endogeneity concern is to perform a difference-in-difference estimation. To eliminate the potential effects arisen from differences of covariates variables instead of audit team busyness, we first employ a propensity score matching to match treatment group with the closest propensity score of control group. Panel A of Table 4.19 indicates that no statistically significant differences exist in observable characteristics after the matching. Afterwards, we perform the DID regression model below to compare *ABMSale* and *IntercorporateLoan* between firm-years with the treatment and firm-years without the treatment:

$$ABMSale_{it} = \alpha + \beta_1 AudTeamBusySwitch_{it} + \beta_2 Post_{it} + \boldsymbol{\beta_3 AudTeamBusySwitch_{it} * Post_{it}} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (6)$$

$$IntercorporateLoan_{it} = \alpha + \beta_1 AudTeamBusySwitch_{it} + \beta_2 Post_{it} + \boldsymbol{\beta_3 AudTeamBusySwitch_{it} * Post_{it}} + \sum \beta_k Controls + Industry\ Effects + Year\ Effects + error_{it} \quad (7)$$

where *AudTeamBusySwitch* is a dummy of one for the treatment sample consists of firms that replaced a low busyness audit team with a high busyness audit team. *Post* is a dummy of one for year after the switch of a low to high busyness review auditor, and zero for year before the switch.[76] The interaction term between these two dummies (i.e., *AudTeamBusySwitch*Post*) is the variable of interest.

[76] We use a post switch of low to high review auditor busyness in the DID estimation for two reasons. First, due to the collinearity between a post switch of low to high busy audit team and *AudTeamBusySwitch*, this analysis cannot be implemented with these two variables together. Second, due to the limitation above, we resort to use a post switch of individual auditor busyness in replace of a post switch of audit team busyness. Given the more important role of review auditor busyness than engagement auditor busyness found in previous analysis, we therefore use a post switch of review auditor busyness to perform the DID estimation.

Table 4.19 Difference in difference estimate

Panel A: Post-match differences

	Control	Treatment	Difference	t-stat
FirmSize	22.313	22.224	-0.089	0.919
Leverage	0.464	0.462	-0.002	0.156
ROA	0.050	0.044	-0.006	1.069
MTB	0.004	0.004	0.000	0.346
BoardSize	8.678	8.753	0.075	-0.576
Big4	0.047	0.033	-0.014	0.947
Concentration	35.366	35.024	-0.341	0.312
IndDirPerc	0.374	0.373	-0.001	0.159
ACIndPerc	0.672	0.676	0.004	-0.616
CEOduality	0.744	0.769	0.025	-0.781
Fedirperc	0.128	0.130	0.003	-0.290
StateHolder	0.428	0.397	-0.031	0.832

Panel B: One year after switching to a busy review partner

	ABMSale			IntercorporateLoan		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	Group	Non-Group	Full	Group	Non-Group
AudTeamBusySwitch	2.4272*	5.2422**	-0.0864	0.0168	0.0213	0.0077
	(0.095)	(0.014)	(0.975)	(0.350)	(0.137)	(0.730)
Post	0.5007	1.0054	-0.6739	-0.0006	0.0026	-0.0043
	(0.483)	(0.367)	(0.579)	(0.907)	(0.777)	(0.541)
AudTeamBusySwitch*Post	-2.1918	**-5.2675****	2.0510	-0.0224	**-0.0322***	-0.0075
	(0.151)	**(0.042)**	(0.530)	(0.223)	**(0.076)**	(0.758)
FirmSize	-0.3387	-0.4584	0.7382	-0.0009	-0.0005	0.0022
	(0.237)	(0.220)	(0.269)	(0.743)	(0.881)	(0.587)
Leverage	-1.8468	-1.9071	-4.2663	-0.0034	-0.0045	0.0047
	(0.221)	(0.444)	(0.472)	(0.837)	(0.759)	(0.849)
ROA	-3.4801	1.8862	-3.1108	-0.1346**	-0.1021	-0.1693*
	(0.449)	(0.832)	(0.801)	(0.021)	(0.122)	(0.055)
MTB	7.8416	60.5000	101.1220	0.4701	-1.2037*	1.7803
	(0.922)	(0.557)	(0.724)	(0.631)	(0.077)	(0.221)
BoardSize	0.1124	0.1638	-0.2088	-0.0003	0.0005	-0.0013
	(0.539)	(0.537)	(0.626)	(0.824)	(0.769)	(0.552)
Big4	-0.0428	2.4278	0.0000	-0.0060	0.0089	-0.0154
	(0.982)	(0.317)	(.)	(0.626)	(0.490)	(0.535)
Concentration	0.0222	0.0102	-0.0976	-0.0004**	-0.0005**	0.0001
	(0.405)	(0.816)	(0.201)	(0.044)	(0.013)	(0.701)

IndDirPerc	0.9898	2.3350	1.3383	-0.0446	-0.1011	0.0075
	(0.891)	(0.862)	(0.926)	(0.430)	(0.104)	(0.932)
ACIndPerc	-9.2396**	-7.6012	-32.6887***	0.0158	-0.0014	0.0080
	(0.030)	(0.240)	(0.009)	(0.428)	(0.927)	(0.853)
CEOduality	0.2571	0.0601	-0.5075	-0.0082	0.0009	-0.0036
	(0.755)	(0.974)	(0.766)	(0.199)	(0.907)	(0.628)
Fedirperc	3.3139	3.9106	5.0724	0.0196	-0.0290	0.0167
	(0.239)	(0.351)	(0.407)	(0.390)	(0.279)	(0.521)
StateHolder	0.8045	1.5278	-2.7453	0.0064	-0.0007	0.0366
	(0.262)	(0.212)	(0.416)	(0.384)	(0.915)	(0.141)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	-0.0934	-0.1362	-0.2802	0.1166	0.1043	0.1433
Obs	120	68	44	210	90	113

Panel C: Two years after switching to a busy review partner

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
AudTeamBusySwitch	2.4272*	5.2422**	-0.0864	0.0168	0.0213	0.0077
	(0.095)	(0.014)	(0.975)	(0.350)	(0.137)	(0.730)
TwoYearPost	0.5007	1.0054	-0.6739	-0.0006	0.0026	-0.0043
	(0.483)	(0.367)	(0.579)	(0.907)	(0.777)	(0.541)
AudTeamBusySwitch*TwoYearPost	-2.1918	**-5.2675****	2.0510	-0.0224	**-0.0322***	-0.0075
	(0.151)	**(0.042)**	(0.530)	(0.223)	**(0.076)**	(0.758)
All Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	-0.0934	-0.1362	-0.2802	0.1166	0.1043	0.1433
Obs	120	68	44	210	90	113

Panel D: Three years after switching to a busy review partner

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
AudTeamBusySwitch	2.4272*	5.2422**	-0.0864	0.0168	0.0213	0.0077
	(0.095)	(0.014)	(0.975)	(0.350)	(0.137)	(0.730)
ThreeYearPost	0.5007	1.0054	-0.6739	-0.0006	0.0026	-0.0043
	(0.483)	(0.367)	(0.579)	(0.907)	(0.777)	(0.541)
AudTeamBusySwitch*ThreeYearPost	-2.1918	**-5.2675****	2.0510	-0.0224	**-0.0322***	-0.0075
	(0.151)	**(0.042)**	(0.530)	(0.223)	**(0.076)**	(0.758)

All Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	-0.0934	-0.1362	-0.2802	0.1166	0.1043	0.1433
Obs	120	68	44	210	90	113

This table presents results of the difference-in-differences estimation. Panel A shows the differences of observable characteristics between firm-years replace a low busyness audit team with a high busyness audit team (Treatment group) and firm-years replace a high busyness audit team with a low busyness audit team (Control group). The matching procedure is executed using the propensity score method. Panel B presents the difference-in-differences estimate where the dependent variable is *ABMSale* and IntercorporateLoan, results based on two baseline models are shown in column (1) – (3) and (4) – (6), respectively. Panel C and Panel D present similar analysis results based on a post of two and three years after switching from a low to high busyness audit team. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *Fedirperc*, *StateHolder* are included, but suppressed for brevity. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

In Panel B of Table 4.19, the results show that the coefficients on the interaction term are significantly negative for group-affiliated firms in *ABMSale* model (ß = - 5.2675, $p < 0.05$) and *IntercorporateLoan* mode (ß = - 0.0322, $p < 0.10$).[77] This suggests that when audited by busy audit team, group-affiliated firms tend to engage in less abnormal related-party sales and intercorporate loans. These findings are generally consistent with the main tests except that busy audit teams show insignificant impact on *ABMSale* in baseline regression model.

Besides, we also perform the above DID analysis based on a post two (*TwoYearPost*) and three years (*ThreeYearPost*) of a switch of low to high busyness review auditor. Results in Panel C and Panel D of Table 4.19 show that our conclusion of the role of busy audit team on reducing *ABMSale* and *IntercorporateLoan* is robust in DID test in regard of one, two, or three years after the switch to a high busyness review auditor.

4.5.4 Other Robustness Checks

To affirm our results are robust, we also perform a set of tests using alternative proxies for opportunistic RPTs and audit team busyness including (i) operating profits generated from abnormal related-party sales of commodity and services; (ii) guarantees to related-parties; (iii) audit team busyness dummy based on median size of the sample; (iv) logarithm of audit team busyness; (v) average auditor busyness of two auditors; (vi) audit team with single or multiple clients; (vii) audit team workload based on total client assets; (viii) control for Covid-19. Most results have been sustained under the above circumstances, with the exception that *AudTeamBusyDum* reduces *ABMSale* in group firms and *AudMultipleClient* reduces *ABMSale* in non-group firms. Although this may indicate slight variations in the use of different proxies to measure audit team busyness, these results still support the conclusion that a busy audit team restrains client firms from abusing abnormal related-party sales and intercorporate loans.

[77] Note that due to the small sample size of big (48 observations) and small group (26 observations) firms after the matching, we therefore do not perform DID for these two samples individually.

Table 4.20 Alternative proxies for opportunistic RPTs

	lnOpeProABMComSerSale			GuaranteeTo		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	Group	Non-Group	Full	Group	Non-Group
AudTeamBusy	**-0.0341****	**-0.0387****	-0.0269	-0.0005	**-0.0024***	0.0001
	(0.036)	**(0.040)**	(0.327)	(0.617)	**(0.093)**	(0.964)
FirmSize	-1.1647***	-1.1150***	-1.3381***	-0.0160***	-0.0196***	-0.0105
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.149)
Leverage	3.4136***	3.2157***	4.4045***	0.1965***	0.1489***	0.2422***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-3.0478***	-2.7712**	-3.9023**	-0.0780	-0.0548	-0.1071
	(0.001)	(0.020)	(0.013)	(0.180)	(0.462)	(0.185)
MTB	-40.3016**	-36.1602*	-45.6361*	-2.4307**	-0.7659	-3.3192**
	(0.023)	(0.087)	(0.058)	(0.016)	(0.610)	(0.017)
BoardSize	0.0087	-0.0115	0.0709	-0.0001	-0.0009	-0.0010
	(0.761)	(0.731)	(0.233)	(0.966)	(0.772)	(0.824)
Big4	-0.2904*	-0.4294**	0.1658	-0.0421***	-0.0322**	-0.0517*
	(0.092)	(0.033)	(0.652)	(0.006)	(0.046)	(0.068)
Concentration	-0.0026	-0.0056	-0.0005	-0.0005*	-0.0008**	-0.0001
	(0.526)	(0.271)	(0.944)	(0.074)	(0.044)	(0.731)
IndDirPerc	0.7787	0.8103	1.3209	0.0337	-0.0397	0.1004
	(0.431)	(0.490)	(0.482)	(0.702)	(0.712)	(0.460)
ACIndPerc	-0.8605**	-0.8102*	-1.7344*	0.1053**	0.1113*	0.0264
	(0.042)	(0.096)	(0.093)	(0.038)	(0.059)	(0.725)
CEOduality	0.0696	0.0979	-0.0055	-0.0082	-0.0375*	0.0084
	(0.651)	(0.645)	(0.981)	(0.457)	(0.064)	(0.527)
Fedirperc	-1.3636***	-0.8781	-1.9187**	0.0287	0.0330	0.0121
	(0.003)	(0.123)	(0.020)	(0.452)	(0.567)	(0.795)
StateHolder	0.5531***	0.6842***	0.4977**	-0.0700***	-0.0642***	-0.0665***
	(0.000)	(0.000)	(0.043)	(0.000)	(0.000)	(0.000)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.5859	0.6125	0.5361	0.1255	0.1439	0.1102
Obs	1654	1232	412	5812	2772	3029

This table presents results from OLS regressions of the effect of audit team busyness. The dependent variable is *lnOpeProABMComSerSale* in column (1) – (3) and *GuaranteeTo* in column (4) – (5). *lnOpeProABMComSerSale* is the natural logarithm of the ratio of operating profit margin multiplied by abnormal related-party sales of commodity and services over firm's total equity at the year-end. *GuaranteeTo* is total amount of guarantees provided to related-parties divided by current firm-year total assets. All regressions include year fixed effects, industry fixed effects. Standard errors are clustered by each client firm. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

Table 4.21 Alternative proxies for audit team busyness

Panel A: Audit team busyness dummy based on median team busyness

	ABMSale			IntercorporateLoan		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	Group	Non-Group	Full	Group	Non-Group
AudTeamBusyDum	-0.1318	**-0.2077****	-0.0473	**-0.0020*****	**-0.0021****	**-0.0018***
	(0.110)	**(0.038)**	(0.712)	**(0.003)**	**(0.028)**	**(0.060)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1282	0.1513	0.0577	0.1502	0.1646	0.1723
Obs	6660	3718	2938	11178	5104	6072

Panel B: Logarithmn of audit team busyness

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
LnAudTeamBusy	-0.0856	-0.0691	-0.1196	**-0.0020*** **	**-0.0020*** **	**-0.0020*** **
	(0.137)	(0.333)	(0.160)	**(0.000)**	**(0.007)**	**(0.004)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1282	0.1501	0.0586	0.1514	0.1658	0.1735
Obs	6660	3718	2938	11178	5104	6072

Panel C: Average number of clients of two audit partners

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
AvgAudTeamBusy	-0.0355	-0.0340	-0.0392	**-0.0008*** **	**-0.0008** **	**-0.0007*** **
	(0.198)	(0.321)	(0.329)	**(0.000)**	**(0.018)**	**(0.009)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1281	0.1501	0.0582	0.1507	0.1652	0.1728
Obs	6660	3718	2938	11178	5104	6072

Panel D: Differentiate between audit team with single or multiple clients

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
AudMultipleClient	-0.0921	0.0689	**-0.3909** **	**-0.0036*** **	**-0.0033*** **	**-0.0043*** **
	(0.366)	(0.572)	**(0.016)**	**(0.000)**	**(0.008)**	**(0.006)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1278	0.1498	0.0599	0.1509	0.1653	0.1734
Obs	6660	3718	2938	11178	5104	6072

Panel E: Audit team workload based on total client assets

	ABMSale			IntercorporateLoan		
	(1) Full	(2) Group	(3) Non-Group	(4) Full	(5) Group	(6) Non-Group
AudTeamWorkload	-0.0772	-0.0440	-0.1230	**-0.0026*** **	**-0.0030*** **	**-0.0023** **
	(0.343)	(0.667)	(0.298)	**(0.001)**	**(0.006)**	**(0.031)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1274	0.1484	0.0581	0.1424	0.1571	0.1629
Obs	6660	3718	2938	11178	5104	6072

This table presents results using alternative proxies of audit team busyness including *AudTeamBusyDum*, *LnAudTeamBusy*, *AvgAudTeamBusy*, *AudMultipleClient*, and *AudTeamWorkload*. The dependent variable is *ABMSale* in column (1) – (3) and *IntercorporateLoan* in column (4) – (5). Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *Fedirperc*, *StateHolder* are included, but suppressed for brevity. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

Table 4.22 Control for Covid-19 in two baseline models

	ABMSale			IntercorporateLoan		
	(1)	(2)	(3)	(4)	(5)	(6)

	Full	Group	Non-Group	Full	Group	Non-Group
AudTeamBusy	-0.0232*	-0.0239	-0.0242	-0.0004***	-0.0004**	-0.0004***
	(0.087)	(0.152)	(0.227)	(0.001)	(0.018)	(0.009)
Covid	0.1575*	0.3496***	-0.0709	-0.0009	-0.0019*	-0.0002
	(0.068)	(0.000)	(0.633)	(0.297)	(0.072)	(0.870)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1221	0.1359	0.0552	0.1360	0.1444	0.1591
Obs	6660	3719	2939	11178	5104	6072

This table presents regression results of the impact of *AudTeamBusy* on *ABMSale* and *IntercorporateLoan* controlling for the effect of Covid in column (1) – (3) and column (4) – (5), respectively. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *Fedirperc*, *StateHolder* are included, but suppressed for brevity. P-values are reported in parentheses, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Variables are defined in Appendix C.1.

4.6 Conclusion and Discussion

While prior auditing studies have investigated the impact of busy auditors on audit quality at the individual auditor level (Gul et al., 2017; Lai et al., 2018), our study shifts its focus to examining whether the level of busyness within audit teams influences client firms' incentive to engage in opportunistic activities, specifically RPTs. The results of our analysis can be summaried as follows. First, using a large sample of Chinese public companies from 2000 to 2020, we find that busy audit teams are more efficient in restraining clients from tunneling through intercorporate loans. This findings is consistent with the directorship theory and economic dependence perspective claiming that more clients in an auditor's portfolio indicate more experienced and expertise and less economic bond with each audit client (DeAngelo, 1981; Fama & Jensen, 1983).

Second, our study provides unique insight into auditor busyness research in a more challenging context, in particular, while the complexity of the audit tasks runs over the attention and efforts an audit team can afford (i.e., detecting and monitoring opportunistic and manipulative activities). Our quantitative results suggest that busy audit teams can exacerbate abnormal related-party sales and intercorporate loans when insider opportunism is more severe (i.e., during benchmark beating period and client firms with controlling shareholders holding excess control rights). In a similar vein, we also find some evidence that the effect of busy audit teams is attenuated when the client firm belongs to a big business group. These results are consistent with the limited attention theory, which posits that as audit teams become busier, their ability to allocate sufficient attention and effort to each audit client diminishes, consequently creating a less stringent external monitoring environment (Lai et al., 2018). Third, we also find that the effect of busy audit teams on intercorporate loans is primarily driven by senior audit staff, specifically busy review auditors. This leads us to conclude that audit firms need to carefully consider the assignment of busy review auditors, especially for firms exhibiting higher tendencies toward engaging in opportunistic activities.

We caution that our study is subject to certain caveats. First, our measure of audit team busyness is based on clients that are publicly listed on Shanghai or Shenzhen Stock Exchanges. It is possible that the focal audit team

also audit non-public companies that have not been included in this study. Thus, we recommend future scholars to expand current research to consider private clients of audit team where this information is available. Second, we implement the two-stage instrumental variable and the difference-in-difference estimation to mitigate the concern of endogeneity surrounding audit team busyness. However, we cannot fully rule out the potential effect of omitted variables and endogeneity that has not been considered in the analysis.

Overall, our findings suggest both policymakers and audit firms to place more emphasis on the client portfolio of an audit team. In particular, audit firms can assign audit teams with more experiences of auditing multiple clients to difficult tasks such as evaluating opportunistic behaviours. Further evidence also suggests that allocating audit teams with a higher number of clients within the same industry can effectively restrain big business groups from engaging in tunneling activities. Given the dearth of research on audit team performance, we recommend future studies to delve into attributes and outcomes at the audit team level. This would provide valuable insights to audit firms, supporting them in optimizing audit assignments and team compositions for a higher quality of audit team performance.

Chapter 5 Thesis Conclusion

5.1 Summary of Key Findings

With the main focus on Related-party transactions (RPTs), this thesis presents a comprehensive review of existing literature on RPTs, delves into the influence of auditors' psychological characteristics in monitoring opportunistic RPTs, and examines the relationship between audit team busyness and the frequency of client's manipulation via RPTs. In summary, key findings from each core chapter are outlined as follows:

Chapter 2 reveals that while prior research on RPTs mainly utilised the agency theory and transaction cost theory, additional theoretical frameworks (e.g., contingent theory, social capital theory, and internal market theory) also merit attention. Extant research underscored the influence of internal governance and institutional environments on RPTs and the effect of RPTs on corporate performance. This chapter identifies a need for future studies to examine emerging corporate governance elements (e.g., audit committees, professionals, director compensation, and financial determinants) and wider institutional factors (e.g., economic, cultural, or political systems) affecting RPTs. It also suggests expanding research beyond the impacts on accounting and stock market performance to include strategic decision-making and other potential organisational outcomes in this area.

Chapter 3 finds that while narcissistic engagement auditors do not influence abnormal related-party sales, narcissistic review auditors exacerbate the occurrence of abnormal related-party sales. This effect is particularly pronounced in private firms than in state-owned enterprises (SOEs), particularly for clients that are economically important to the auditors. The results also suggest that this impact of auditor narcissism also influence client's engagement in other types of opportunistic RPTs including related-party lending, related-party guarantees, and total amount of abnormal RPTs.

Chapter 4 shows that while busy audit teams do not affect client's engagement in abnormal related-party sales, they do appear to mitigate expropriations in the form of related-party loans. The magnitude of this impact is notably greater in firms that are part of a business group, with a marked emphasis observed in smaller business groups. Furthermore, the findings underscore the significance of various attributes of the audit team—namely, team attention, knowledge, and independence—as key factors that moderate this relationship.

5.2 Thesis Contributions

Essentially, this thesis extends existing body of research on RPTs by providing a comprehensive theoretical framework for future research, integrating psychological aspects (i.e., narcissism) into extrant audit literature, which has predominantly focused on economic attributes (e.g., tenure, expertise, and education). Additionally, this thesis expands research on auditor busyness by emphasising the audit engagement team as a cohesive unit. It highlights the significance of team characteiristics, such as industry specialisation, experiences, and client importance, in determining the impact of audit team busyness.

Employing a systematic review on the topic of RPTs, this first study consolidates existing knowledge and develops comprehensive synthesis that informs practitioners and academics in this field through three contributions. Firstly, the review study contributes to the body of literature on RPTs by undertaking one of the first systematic reviews to systematically search, screen, and select, and examine extant knowledge regard RPTs. By incorporating one of the extensive datasets in this field, comprising of 171 studies, this review aims to mitigate the bias that typically emerges from analyses a relatively smaller sample of articles.

Secondly, the review study addresses a gap in the literature on RPTs, which has developed over two decades yet lacks a comprehensive theoretical framework. This review contributes by proposing a theoretical structure that elucidates the influence of both internal and external governance factors on the incidence of RPTs. Furthermore, it examines the impact of RPTs on firm valuation, accounting performance, strategic decision-making, and audit risks. This framework serves to facilitate more rigorous research in the field by providing a foundational structure for future scholarly research.

The third contribution of the review study is its systematically aggregation of methodological components of RPTs. Specifically, we analysed the measurement approaches, types of transactions, identities of the related-parties involved, and the categorisation strategies employed. These elements are important, as it remains inconsistent within existing literature regarding the method in measuring and categorising RPTs. This review therefore provides a clearer understanding of these methodological variances, thus offering a consolidated foundation for the development of future research in this field.

Integrating psychological aspects into corporate research, the second study makes two contributions. Firstly, we diverge from the conventional focus of prior research on RPTs, which predominantly examined economic attributes such as independence, ownership structure, gender, or reputation (Bansal & Thenmozhi, 2020; Bennouri et al., 2015; Usman et al., 2021; Wang, 2015). Instead, our research centres on a psychological dimension of one of the key external monitoring players - specifically, the narcissism of external auditors. This approach represents a novel addition to literature that aims to address the governance issues associated with opportunistic RPTs as well as mitigate conflict of interests between controlling and minority shareholders. Our findings highlight the significance of considering individual auditor personality traits in the research of opportunistic behaviours through RPTs.

Secondly, we depart from previous audit research by focusing on the hierarchical positioning of individual auditors, specifically distinguishing between engagement and review audit partners. Our results reveal that, contingent on auditor rank, narcissism personality influences auditor behaviours differently. In particular, narcissism appears to negatively affect the behaviours of review auditors as they ascend the professional ladder, in contrast to engagement auditors, who are intrinsically driven to exert considerable effort in their audit work, aiming to build their reputation within the audit market and attain higher professional status. This finding underscores the necessity of considering an individual's role and rank when examining the influence of narcissism in the auditing context.

Transitioning the focus from individual auditors to the audit engagement team as an integrated unit, the third study provides three contributions. First, extant studies have investigated the impact of busy auditors on audit quality manifested in several dimensions including the level of discretionary accruals, propensity of misstatements, and issued audit opinions (Gul et al., 2017; Lai et al., 2018). The third study contributes to this strand of literature by examining how auditor busyness may determine clients' incentive to engage in opportunistic behaviours.

Second, the third study contributes to the existing contentious findings surrounding the impact of auditor busyness. We emphasise the significance of different audit team characteristics in shaping the consequences of team busyness. These attributes include team industry specialisation, team experiences, the importance of a client to the audit team, and audit team independence. Collectively, we show that while client importance and team industry expertise strengthen the monitoring function of busy audit team, less team experiences and low level of team independence attenuates the role of busy audit team in regulating opportunistic activities.

Third, the third study extends the research on auditor busyness by underscoring the different impacts of busy audit teams on the tunneling activities between large and small business groups. Notably, clients belonging to larger business groups generally hold greater economic significance for audit teams compared to those in a smaller business group (Sun et al., 2020). Our findings identify a scenario wherein busy audit teams are less effective in monitoring expropriate activities, particularly in cases where there is substantial economic reliance on the client firm, as observed in firms belonging to larger business groups.

In conclusion, this thesis provides considerable value to academics and practitioners in their efforts to regulate opportunistic related-party transactions in order to alleviate conflicts of interest between managers and shareholders, as well as between controlling and minority investors. In light of the findings in this thesis, investors and policymakers could use this information to review the management of opportunistic RPTs, efficacy of external auditors, and the function of controlling ownership in Chinese listed firms, thus helps the alleviation of agency problems and facilitation external auditing practices.

5.3 Thesis Implications

Overall, this thesis provides sufficient, varied evidence that external auditors play a significant role in regulating RPTs and characteristics of the ownership structure of the client firms (i.e., state ownership and group-affiliation) might shape this relationship. Furthermore, considering the unique regional attributes of China, such as its weak investor protection and a competitive audit market, and the application of methodologies originating from medicine and healthcare, notably the systematic literature review, along with theoretical principles rooted in psychology, specifically individual narcissism, this thesis holds several practical implications.

First, this thesis delivers crucial insights for investors and minority shareholders concerning protecting themselves against manipulation practices in corporate governance. It highlights the importance of examining the attributes of individual external auditors engaged with the listed entities. This provides stakeholders additional framework to evaluate the risk of opportunistic behaviours by insiders and empowers audit committees in the selection of external auditors to oversee and curb exploitation of transactions with related-parties (Fang et al., 2018).

Second, this thesis emphasises the significance of regulators and policymakers giving focus to external monitoring systems like external auditors. This attention is crucial for addressing agency conflicts that arise from related-party transactions and protecting minority shareholders from manipulative behaviour. Furthermore, considering the increasing need for enhanced auditing in response to the rapid growth of the Chinese economy, this study provides valuable insights to audit firms regarding the selection and allocation of audit partners based on their psychological characteristics, specifically focusing on traits such as narcissism (Church et al., 2020; Liu & Subramaniam, 2013).

Third, this thesis recommends that policymakers and audit firms give importance to the client portfolio of an audit team. Specifically, audit firms can assign audit teams with more experiences of auditing multiple clients to handle challenging tasks such as assessing opportunistic behaviours (Sundgren & Svanström, 2014). Additional evidence suggests that assigning audit teams with a larger number of clients in the same industry can effectively deter large business groups from participating in tunneling activities. Furthermore, we offer a more nuanced and contextualised understanding of audit team busyness - one that acknowledges the effects of various attributes including team attention, team expertise, and team independence on the influence of busy audit team (Cahan et al., 2022).

5.4 Thesis Limitations and Future Research

Research on related-party transactions has received significant attention over the past few decades. Nonetheless, this is still an area of study with numerous unexplored avenues and knowledge gaps that need further investigation and exploration. This thesis aims to address particular research voids by conducting a

comprehensive literature review and presenting empirical evidence regarding the influence of individual auditors' personality trait, specifically narcissism, and the roles of busy auditors within engagement teams on clients' intentions to engage in opportunistic activities via transactions involving related-parties. Additionally, we investigate how ownership characteristics, particularly political connections and group-affiliations, moderate these relationships. Despite the multidisciplinary theoretical underpinning and the robustness of its findings along with valuable contributions it has made to the existing body of work, it is essential to recognise that there are also certain limitations and weaknesses that need to be acknowledged.

The first study exhibits several limitations. Firstly, our data collection was completed by December 2020, it is worth noting that more recent articles have been and will continue to be published in this field. With the growing interest in RPTs among researchers since the 2000s, this subject is expected to gain even more attention from the academic community in the coming years. As a result, future research may consider extending the present review to encompass an analysis of articles published after 2021. Secondly, to ensure the credibility of the evidence provided, we carried out a quality assessment using AJG index. As a result, we excluded articles that were not published in the AJG within the fields of ACCOUNT, ECON, FINANCE, or ETHICS-CSR-MAN. For future studies, it might be worth considering employing alternative journal indices such as the Australian Business Deans Council Journal Quality list (ABDC) to address the gaps in this review. Thirdly, it is important to acknowledge that this review solely focuses on the analysis of articles written in English. However, undertaking a systematic review of RPTs encompassing articles in other languages can complement the present study if there are sufficient language proficiency and accessible sources available.

There are a few caveats to acknowledge in the second study. Firstly, we need to mention that our sample is limited to firms listed on the Shanghai Stock Exchange (SSE) due to the constraints of time and cost associated with manually collecting auditor signatures. Even though, Chinese firms listed on the Shenzhen Stock Exchange may yield analogous results given the shared similar characteristics of these two stock exchanges. Future research may expand the current analysis to include other stock markets from regions outside of China to provide valuable insights for further development in this field. Secondly, this study utilises a single metric, namely, signature size, to assess the extent of auditor narcissism, which may not provide a comprehensive representation of the multifaceted nature of narcissism. Therefore, future research could consider incorporating alternative methods to approximate auditor narcissism and investigate whether the results align with the findings of this study. Thirdly, considering the substantial influence of government involvement on the relationship between auditor narcissism and opportunistic RPTs, this study serves as an initial step towards investigating other contextual factors that could potentially moderate the effects of narcissistic auditors on a firm's opportunistic conduct. Future research could delve into these additional factors to gain a more extensive understanding of this complex dynamic.

The third study is subject to two specific limitations. First, our measure of audit team busyness relies on publicly listed client firms on the Shanghai and Shenzhen Stock Exchanges. There is a possibility that the focal audit

team also provides services to non-public companies that have not been accounted for in this study. Thus, we encourage future researchers to broaden the scope of current research to encompass private clients of audit teams, wherever such data is accessible. Second, considering the lack of research on the performance of audit teams, we suggest that future studies focus on exploring other characteristics and outcomes at the team level. This would offer insights to audit firms helping them improve their audit assignments and team compositions to achieve a higher quality of audit team performance. Finally, we implement a two-stage instrumental variable approach and a difference-in-difference estimation technique to address any concerns regarding the endogeneity associated with the busyness of the audit team. However, there might still be omitted variables and potential endogeneity effects that have not been addressed in our analysis. We suggest readers to be cautious about this when interpreting our results.

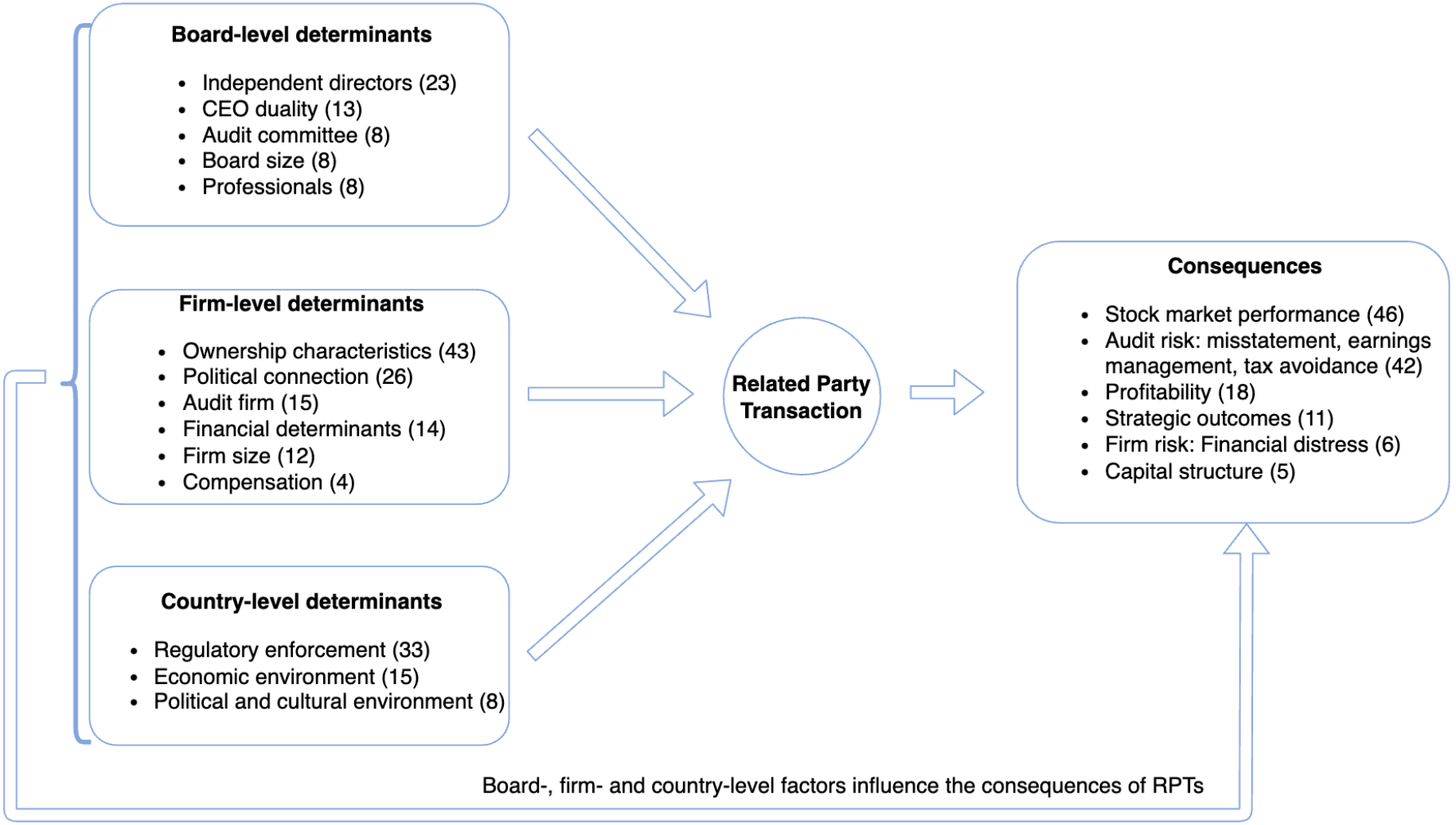
Appendix A Appendix to Chapter 2

A.1 Build Search Strategy

Database	Field Codes	Concept A: "related party"	Proximity	Concept B: "transaction"	Boolean	Additional search terms	Interpretation
Business Source Complete	AB (Abstract or Author-Supplied Abstract) OR KW (Author-Supplied Keywords) OR TI (Title)	((“related-part″ *OR "related person" OR "related entit*” OR "connected part*")	N3	(transact* OR trad* OR disclos* OR relationship* OR loan* OR sale* OR purchas* OR sell* OR lend* OR borrow* OR outsourc* OR payable* OR arrangement* OR service* OR exchange* OR transfer* OR acquisition* OR commitment* OR lease*))	OR	(“intercorporate loan″ *OR "inter-corporate loan*” OR "connected transaction*")	* Find word endings. Any hyphenated words will automatically search for the word in both hyphenated and non-hyphenated forms. “… …” use to enclose phrases. N finds the words if they are a maximum of five words apart from one another, regardless of the order in which they appear.
EconLit	AB (Abstract) OR KW (Keywords) OR TI (Title)	((“related-part″ *OR "related person" OR "related entit*” OR "connected part*")	WITHIN “3”	(transact* OR trad* OR disclos* OR relationship* OR loan* OR sale* OR purchas* OR sell* OR lend* OR borrow* OR outsourc* OR payable* OR arrangement* OR service* OR exchange* OR transfer* OR acquisition* OR commitment* OR lease*))	OR	(“intercorporate loan″ *OR "inter-corporate loan*” OR "connected transaction*")	WITHIN “X” to narrow a search by specifying a proximity relationship of fewer than “X” words between search terms. () use to group words or phrases when combining Boolean phrases. * Expands a search term to include forms of a root word.
Web of Science	TS (Topic Search) covers Title, Abstract,	((“related-part″ *OR "related*	NEAR/3	(transact* OR trad* OR disclos* OR relationship* OR loan* OR sale* OR purchas*	OR	(“intercorporate loan″ *OR "inter-corporate loan*” OR	NEAR/x to find records where the terms joined by the operators are x words of each other. * Represents

	Keywords and Keywords Plus	*person" OR "related entit*" OR "connected part*")		OR sell* OR lend* OR borrow* OR outsourc* OR payable* OR arrangement* OR service* OR exchange* OR transfer* OR acquisition* OR commitment* OR lease*))		"connected transaction*")	any group of characters, including no character. Any hyphenated words will automatically search word in both hyphenated and non-hyphenated forms.
Scopus	TITLE-ABS-KEY (Title, Abstracts, Keyword)	((“related-part*" OR "related person" OR "related entit*” OR "connected part*")	W/3	(transact* OR trad* OR disclos* OR relationship* OR loan* OR sale* OR purchas* OR sell* OR lend* OR borrow* OR outsourc* OR payable* OR arrangement* OR service* OR exchange* OR transfer* OR acquisition* OR commitment* OR lease*))	OR	(“intercorporate loan" OR "inter-corporate loan*” OR "connected transaction*")	W/n to find terms within a specified number of terms (n.). * Replaces a fixed number of characters. “… …” to find documents that contain a loose/approximate phrase.

A.2 Thematic Framework



A.3 Journal, Field, and Ranking

ACCOUNT	AJG1	AJG2	AJG3	AJG4	AJG4*	No of studies
Abacus			2			2
Accounting Research Journal		3				3
Accounting Review					1	1
Accounting and Finance		3				3
Accounting, Economics and Law - A Convivium		1				1
Asia-Pacific Journal of Accounting and Economics		4				4
Asian Review of Accounting		2				2
Auditing A Journal of Practice and Theory			2			2
Australasian Accounting, Business and Finance Journal	2					2
Behavioral Research in Accounting			1			1
China Journal of Accounting Research		4				4
China Journal of Accounting Studies	1					1
Contemporary Accounting Research				3		3
Current Issues in Auditing		1				1
International Journal of Accounting & Information Management		7				7
International Journal of Accounting, Auditing and Performance Evaluation		3				3
International Journal of Disclosure and Governance		4				4
Journal of Accounting Research					1	1
Journal of Accounting and Public Policy			6			6
Journal of Accounting in Emerging Economies		1				1
Journal of Accounting, Auditing and Finance			1			1
Journal of Applied Accounting Research		1				1
Journal of Business Finance and Accounting			1			1
Journal of Contemporary Accounting and Economics		4				4
Journal of International Accounting Research		1				1
Journal of International Accounting, Auditing and Taxation			2			2
Journal of International Financial Management and Accounting		1				1

Journal of Islamic Accounting and Business Research	1					1
Journal of Journal of International Accounting Research		1				1
Journal of Public Budgeting, Accounting & Financial Management		1				1
Managerial Auditing Journal		2				2
Pacific Accounting Review	2					2
Review of Accounting Studies				4		4
World Tax Journal	1					1
Subtotal	7	44	15	7	2	75
ECON	**AJG1**	**AJG2**	**AJG3**	**AJG4**	**AJG4***	**No of studies**
American Economic Review					1	1
Applied Economics		1				1
Asian Economic Journal	1					1
China & World Economy	1					1
China Economic Review		1				1
Economic Modelling		1				1
Energy Economics			1			1
International Review of Economics and Finance		3				3
Journal of Developing Areas	2					2
Journal of Economic Policy Reform	1					1
Journal of Law, Economics and Organizations			1			1
Land Economics			1			1
Managerial and Decision Economics		1				1
North American Journal of Economics and Finance		1				1
Pacific Economic Review		1				1
Subtotal	5	9	3	0	1	18
ETHICS-CSR-MAN	**AJG1**	**AJG2**	**AJG3**	**AJG4**	**AJG4***	**No of studies**
Administrative Science Quarterly					1	1
California Management Review			1			1
Corporate Board: Role, Duties and Composition	3					3

Eurasian Business Review	1					1
Harvard Business Review			1			1
Journal of Business Ethics			5			5
Journal of Business Research			1			1
Journal of General Management		1				1
Journal of Governance and Regulation	1					1
Journal of Management and Governance	3					3
Review of Managerial Science		2				2
Subtotal	8	3	8	0	1	20
FINANCE	**AJG1**	**AJG2**	**AJG3**	**AJG4**	**AJG4***	**No of studies**
Applied Financial Economics		2				2
Corporate Governance International Journal of Business in Society		1				1
Corporate Governance: An International Review			4			4
Corporate Governance: The International Journal of Business in Society		2				2
Emerging Markets Finance and Trade		3				3
European Journal of Finance			2			2
Finance Research Letters		1				1
International Journal of Business Governance and Ethics		1				1
International Journal of Finance and Economics			3			3
International Journal of Managerial Finance		2				2
International Review of Financial Analysis			1			1
Journal of Banking and Finance			5			5
Journal of Corporate Finance				7		7
Journal of Financial Economics					2	2
Journal of Financial and Quantitative Analysis				2		2
Journal of Property Investment and Finance	1					1
Journal of Real Estate Finance and Economics			1			1
Pacific-Basin Finance Journal		10				10
Research in International Business and Finance		3				3
Review of Accounting and Finance		1				1

Review of Finance				1		1
Review of Quantitative Finance and Accounting			3			3
Subtotal	1	26	19	10	2	58
Total	**21**	**82**	**45**	**17**	**6**	**171**

Appendix B Appendix to Chapter 3

B.1 Variable Definitions

Name	Variable	Definition
Related-Party Transaction Variables		
ABMSale	Abnormal related sale	Computed as the residuals from a regression of total amount of related-party sales on leverage, firm size, market-to-book ratio, and industry dummies within each year.
lnOpeProABMSale	Operating profits generated by abnormal related-party sales	The natural logarithm of the ratio of operating profit margin multiplied by abnormal related-party sales over firm's total equity at the year-end.
Lending	Related-party lending	Total amount of lending to related-parties divided by current firm-year total assets.
GuaranteeTo	Guarantees to related-parties	Total amount of guarantees provided to related-parties divided by current firm-year total assets.
ABMRPT	Abnormal related-party transactions	Computed as the residuals from a regression of total amount of related-party transactions on leverage, firm size, market-to-book ratio, and industry dummies within each year.
Auditor Narcissism Variables		
RevAudNar	Review auditor narcissism	Auditor narcissism is proxied by the average of handwritten signature sizes across years and clients for the same review auditor.
EngagAudNar	Engagement auditor narcissism	Auditor narcissism is proxied by the average of handwritten signature sizes across years and clients for the same engagement auditor.
Signature Size - Draw Rectangle		
recpixpch	Rectangle size in pixels per character	The rectangle size in pixels divided by the number of characters in the name.
recmmpch	Rectangle size in millimetres per character	Measure rectangle size in millimetres given the real size of an A4 paper and divided by number of characters in the name.
Signature Size - Draw Convex hull		
cvxpixpch	Convex hull size in pixels per character	The convex hull size in pixels divided by the number of characters in the name.
cvxmmpch	Convex hull size in millimetres per character	Measure convex hull size in millimetres given the real size of an A4 paper and divided by number of characters in the name.
Corporate Governance Control Variables		
AudCom	Audit committee	A dummy variable equals to one if there is audit committee in that firm-year, zero otherwise.
ACIndPerc	Audit committee independent director percentage	The number of independent directors on audit committee divided by the total number of audit committee members.
Big4	Big 4	A dummy variable equals to one if the listed firm is audited by one of the international big-four audit firms, zero otherwise.
Top8	Top 8	A dummy variable equals to 1 if the listed firm is audited by one of the top 8 accounting firms in that year, zero otherwise.
BoardSize	Board size	The total number of directors on the board.
Concentration	Ownership concentration	The shareholding percentage of the largest shareholder in that firm-year.
IndDirPerc	Independent directors' percentage	The number of independent directors[78] divided by the total number of directors on the board.

[78] In accordance with guidelines from China Securities Regulatory Commission (CSRC), independent directors of the listed company refer to the directors who hold no posts in the company other than the position of director, and who maintain no relations with the listed company and its major shareholder that might prevent them from making objective judgment independently.

CEOduality	CEO Duality	A dummy variable equals to one if the CEO also serves as the board chair, zero otherwise.[79]
StateHolder	State shareholder	A dummy variable equals to one if the nature of the largest shareholder of the listed firm is a local institution or central institution, 0 otherwise.
StateShare	State-owned share	A dummy variable equals to one if the nature of share held by the largest shareholder of the listed firm is state-owned share[80], zero otherwise.
Firm Characteristic Control Variables		
FirmSize	Firm size	The natural logarithm of the firm's total asset at the year-end.
Leverage	Leverage	Ratio of total liabilities over total assets at the year-end.
ROA	Return on assets	Ratio of net profit to total assets in the previous fiscal year.
MTB	Market-to-book	Ratio of market value to book value of equity at the year-end.
CEOage	CEO age	Age of the CEO in current firm-year.
CEOfemale	Female CEO	A dummy variable equals to one if the CEO is a female in current firm-year, zero otherwise.
CEOtenure	CEO tenure	The number of years this CEO is appointed in this firm.
Fedirperc	Female director percentage	The number of female directors divided by the total number of directors on board.
Feinddirperc	Female independent director percentage	The number of female independent directors divided by the number of independent directors on board.
Audgendiv	Auditor gender diversity	A dummy variable equals to one if two audit partners are in different gender, zero otherwise.
RevAudTenure	Review auditor tenure	The number of years this review audit partner served this firm
EngagAudTenure	Engagement auditor tenure	The number of years this engagement audit partner served this firm.
CEOcompen	CEO compensation	The natural logarithm of the CEO compensation for each firm-year.
Avgdircompen	Average director compensation	The natural logarithm of the average director compensation for each firm-year.
Other Variables		
RevClientImp	Review auditor client importance	The total asset of the current client divided by total assets of all clients audited by this review auditor in a given year.
EngagClientImp	Engagement auditor client importance	The total asset of the current client divided by total assets of all clients audited by this engagement auditor in a given year.
RevAudNardum	Review auditor narcissism dummy	A dummy variable equals to one if review auditor narcissism higher than the median, zero otherwise.
EngagAudNardum	Engagement auditor narcissism dummy	A dummy variable equals to one if engagement auditor narcissism higher than the median, zero otherwise.
Post	Post-treatment period	A dummy variable equals to one in the period after the first change of low to high narcissistic enagegemnt auditor, and zero otherwise.
Incentive	Incentive for benchmark beating	Incentive is a dummy variable equals to 1 when the return on equity is between 0%-2% or 6%-8%, zero otherwise.
Incentive2	Alternative incentive for benchmark beating	Incentive2 is a dummy variable equals to 1 when the return on equity is between 0%-1.5% or 6%-7.5%, zero otherwise.

[79] Note that data of General Manager (GM) is collected to proxy information of CEO for three reasons: (i) previous studies recognise GM and CEO as the same position; (ii) CSMAR Corporate Governance database use CEO data in replace of GM when data of GM is not available and provide directly data on whther GM and board chairman serve as the same person; (iii) CEO data is constricted, yields only hundreds of observations.

[80] State-owned share are shares held by governmental agencies or institutions, which are authorized to invest on behalf of the state, including state shares and state-owned legal person shares.

Incentive3	Alternative incentive for benchmark beating	Incentive3 is a dummy variable equals to 1 when the return on equity is between 0%-2.5% or 6%-8.5%, zero otherwise.

This table displays definitions for RPT variables, auditor narcissism variables, corporate governance control variables and firm characteristic control variables independently. Note that, among four operationalisations (i.e., *recpixpch*, *recmmpch*, *cvxpixpch*, *cvxmmpch*) for signature size, results present in main analysis use *cvxmmpch* for auditor narcissism (*AudNar*). We also use the other three operationalisations for signature size in the robustness tests, results do not change qualitatively.

B.2 Other Descriptive Statistics

Table B2.1 Detailed summary descriptive statistics

	N	Mean	SD	Min	Max	p25	p75	Skewness	Kurtosis
ABMSale	4121	0.008	2.538	-7.580	4.965	-1.400	1.784	-0.570	3.272
avgrecpixpch1	8106	9.182	0.463	8.181	10.505	8.859	9.463	0.370	3.138
avgrecmmpch1	8106	5.055	0.435	4.101	6.142	4.747	5.334	0.219	2.796
avgcvxpixpch1	8106	8.853	0.439	7.863	10.079	8.549	9.127	0.304	3.110
avgcvxmmpch1	8106	4.726	0.410	3.819	5.759	4.448	4.999	0.167	2.796
avgrecpixpch2	8106	8.955	0.469	7.848	10.166	8.644	9.263	0.061	2.880
avgrecmmpch2	8106	4.838	0.444	3.798	5.900	4.540	5.147	0.010	2.683
avgcvxpixpch2	8106	8.655	0.439	7.619	9.803	8.360	8.943	0.058	2.878
avgcvxmmpch2	8106	4.539	0.413	3.566	5.529	4.252	4.829	0.011	2.677
FirmSize	6918	22.581	1.461	19.517	26.651	21.542	23.496	0.504	3.030
Leverage	6918	0.477	0.213	0.077	0.978	0.315	0.635	0.151	2.295
ROA	6535	0.040	0.069	-0.232	0.276	0.012	0.069	-0.295	7.058
MTB	6918	0.004	0.005	0.000	0.042	0.001	0.004	5.150	34.158
BoardSize	6915	8.764	1.753	5.000	15.000	7.000	9.000	0.789	4.985
Big4	6915	0.100	0.301	0.000	1.000	0.000	0.000	2.660	8.076
Concentration	6915	38.072	15.286	9.517	76.532	26.289	49.293	0.323	2.481
IndDirPerc	6915	0.374	0.051	0.333	0.556	0.333	0.429	1.217	4.090
ACIndPerc	6157	0.682	0.094	0.500	1.000	0.667	0.667	2.478	9.315
CEOduality	6894	0.783	0.412	0.000	1.000	1.000	1.000	-1.372	2.883
CEOage	6915	50.396	6.232	34.000	65.000	46.000	55.000	-0.285	2.950
CEOfemale	6915	0.054	0.225	0.000	1.000	0.000	0.000	3.968	16.746
CEOtenure	6915	3.828	3.263	1.000	16.000	2.000	5.000	1.682	5.606
CEOcompen	6892	12.878	2.595	0.000	15.425	12.845	13.800	-4.283	21.534
Avgdircompen	6915	12.215	0.805	9.904	14.240	11.721	12.748	-0.207	3.343
fedirperc	6915	0.137	0.119	0.000	0.500	0.000	0.214	0.798	3.149
feinddirperc	6915	0.175	0.199	0.000	0.667	0.000	0.333	0.832	2.781
audgendiv	7434	0.445	0.497	0.000	1.000	0.000	1.000	0.223	1.050
RevAudTenure	8106	1.899	1.102	1.000	5.000	1.000	2.000	1.174	3.584
EngagAudTenure	8106	1.808	1.048	1.000	5.000	1.000	2.000	1.282	3.937
Covid	49148	0.095	0.293	0.000	1.000	0.000	0.000	2.759	8.614

Table B2.2 Descriptive statistics on other types of RPTs

Full sample	State-controlled	Private-controlled

	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
AssetAcq	0.011	0.001	0.031	0.011	0.001	0.032	0.011	0.001	0.031
AssetSale	0.016	0.001	0.041	0.016	0.001	0.042	0.015	0.001	0.041
CommodSale	**0.043**	**0.006**	**0.101**	**0.043**	**0.007**	**0.099**	**0.043**	**0.005**	**0.102**
CommodPurc	0.038	0.007	0.082	0.042	0.011	0.083	0.034	0.005	0.082
ServBuy	0.008	0.001	0.018	0.009	0.002	0.018	0.007	0.001	0.018
ServSell	0.014	0.001	0.047	0.013	0.001	0.042	0.015	0.001	0.052
Borrow	0.086	0.027	0.164	0.077	0.026	0.145	0.095	0.029	0.180
Lending	**0.067**	**0.011**	**0.184**	**0.061**	**0.011**	**0.172**	**0.073**	**0.012**	**0.194**
GuaranteeRec	0.161	0.087	0.208	0.112	0.059	0.157	0.187	0.108	0.227
GuaranteeTo	**0.162**	**0.081**	**0.213**	**0.128**	**0.065**	**0.178**	**0.183**	**0.094**	**0.230**
EquityBuy	0.070	0.013	0.150	0.059	0.009	0.136	0.077	0.016	0.158
EquitySell	0.058	0.004	0.156	0.043	0.002	0.123	0.070	0.007	0.177

Definition of different types of RPTs are summarised in Appendix B.6.

B.3 Impact of auditor narcissism on other types of RPT ratio in full, state, and private-controlled firms

Panel A: Full sample

	Full sample											
	(1) AssetAcq	(2) AssetSale	(3) CommodSale	(4) CommodPurc	(5) ServBuy	(6) ServSell	(7) Borrow	(8) Lending	(9) GuaranteeRec	(10) GuaranteeTo	(11) EquityBuy	(12) EquitySell
LRevAudNar	0.0016	0.0029	0.0006	-0.0024	-0.0001	-0.0033	-0.0090	0.0330**	-0.0007	0.0063	0.0050	0.0094
	(0.640)	(0.525)	(0.918)	(0.685)	(0.927)	(0.310)	(0.354)	(0.042)	(0.952)	(0.594)	(0.747)	(0.474)
LEngagAudNar	0.0054	0.0049	0.0123*	0.0008	0.0010	0.0000	-0.0018	-0.0358*	-0.0181	-0.0262**	0.0017	-0.0100
	(0.172)	(0.380)	(0.068)	(0.889)	(0.348)	(0.998)	(0.856)	(0.061)	(0.185)	(0.045)	(0.906)	(0.523)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1071	0.0938	0.0799	0.0994	0.0918	0.1623	0.1739	0.0309	0.1513	0.1068	0.0978	0.0968
Obs	829	536	2912	2976	2612	2105	1889	1664	2288	2550	830	814

Panel B: State-controlled firms

	State-controlled firms											
	(1) AssetAcq	(2) AssetSale	(3) CommodSale	(4) CommodPurc	(5) ServBuy	(6) ServSell	(7) Borrow	(8) Lending	(9) GuaranteeRec	(10) GuaranteeTo	(11) EquityBuy	(12) EquitySell
LRevAudNar	-0.0028	0.0003	0.0022	0.0078	0.0007	-0.0058	-0.0068	0.0441**	-0.0048	-0.0095	-0.0258	0.0114
	(0.539)	(0.968)	(0.828)	(0.513)	(0.710)	(0.138)	(0.504)	(0.028)	(0.753)	(0.515)	(0.280)	(0.437)
LEngagAudNar	0.0068	0.0012	0.0159	0.0022	0.0000	-0.0005	0.0160	-0.0443*	0.0008	-0.0104	0.0244	-0.0003
	(0.156)	(0.877)	(0.141)	(0.838)	(0.980)	(0.911)	(0.167)	(0.088)	(0.964)	(0.511)	(0.230)	(0.986)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Adj. R-squared	0.2343	0.1766	0.0805	0.1026	0.0882	0.2550	0.2438	0.0719	0.1658	0.1529	0.1078	0.1007
Obs	404	247	1241	1305	1266	1045	960	814	842	993	344	366

Panel C: Private-controlled firms

	Private-controlled firms											
	(1) AssetAcq	(2) AssetSale	(3) CommodSale	(4) CommodPurc	(5) ServBuy	(6) ServSell	(7) Borrow	(8) Lending	(9) GuaranteeRec	(10) GuaranteeTo	(11) EquityBuy	(12) EquitySell
LRevAudNar	0.0007	-0.0016	0.0017	-0.0071	-0.0011	-0.0011	-0.0131	0.0230	0.0029	0.0221	0.0358	0.0077
	(0.863)	(0.827)	(0.780)	(0.119)	(0.502)	(0.822)	(0.437)	(0.305)	(0.866)	(0.186)	(0.107)	(0.711)
LEngagAudNar	-0.0008	0.0054	0.0073	-0.0017	0.0013	0.0021	-0.0153	-0.0280	-0.0321*	-0.0309*	-0.0144	-0.0261
	(0.877)	(0.497)	(0.367)	(0.799)	(0.309)	(0.645)	(0.319)	(0.198)	(0.078)	(0.100)	(0.449)	(0.293)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1601	0.1432	0.0932	0.1282	0.1793	0.2213	0.1595	0.0378	0.1429	0.0959	0.1125	0.0988
Obs	423	287	1671	1671	1346	1060	929	850	1446	1557	486	445

Noted that dependent variables are the ratio of the amount of each type of transaction divided by total assets in current firm-year. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

B.4 Impact of auditor narcissism on other types of RPT dummy in full, state, and private-controlled firms

Panel A: Full sample

	Full Sample											
	(1) AssetAcqdum	(2) AssetSaledum	(3) CommodSaledum	(4) CommodPurcdum	(5) ServBuydum	(6) ServSelldum	(7) Borrowdum	(8) Lenddum	(9) GuaranteeRecdum	(10) GuaranteeTodum	(11) EquityBuydum	(12) EquitySelldum
LRevAudNar	0.1094	0.1019	0.1528	0.3156**	0.2841**	-0.1524	0.1685	0.0370	-0.1928*	-0.1446	0.2736***	-0.1634
	(0.371)	(0.459)	(0.207)	(0.013)	(0.016)	(0.201)	(0.141)	(0.749)	(0.077)	(0.186)	(0.010)	(0.119)
LEngagAudNar	0.0741	0.3253***	0.0957	-0.0278	0.0122	0.1022	-0.0343	0.1653	-0.0576	0.0520	-0.0694	0.1226
	(0.555)	(0.009)	(0.417)	(0.811)	(0.913)	(0.345)	(0.754)	(0.137)	(0.590)	(0.621)	(0.497)	(0.248)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0952	0.0458	0.1824	0.1815	0.1784	0.1946	0.1789	0.1488	0.1337	0.1538	0.0444	0.0533
Obs	5388	5377	5388	5388	5388	5388	5388	5388	5388	5388	5388	5388

Panel B: State-controlled firms

	State-controlled firms

	(1) AssetAcqdum	(2) AssetSaledum	(3) CommodSaledum	(4) CommodPurcdum	(5) ServBuydum	(6) ServSelldum	(7) Borrowdum	(8) Lenddum	(9) GuaranteeRecdum	(10) GuaranteeTodum	(11) EquityBuydum	(12) EquitySelldum
LRevAudNar	0.1920	0.1979	0.3610*	0.5162**	0.4678**	-0.0640	0.3385**	-0.0078	-0.0979	0.1913	0.3289**	-0.1433
	(0.295)	(0.294)	(0.078)	(0.025)	(0.015)	(0.717)	(0.047)	(0.964)	(0.568)	(0.295)	(0.049)	(0.379)
LEngagAudNar	-0.0649	0.2445	0.5225**	0.0962	0.1166	0.3700*	-0.1758	0.2838	0.0760	0.2333	-0.0813	0.1102
	(0.736)	(0.203)	(0.014)	(0.675)	(0.589)	(0.059)	(0.300)	(0.123)	(0.672)	(0.209)	(0.653)	(0.540)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.1023	0.0709	0.2178	0.2423	0.1973	0.2319	0.1739	0.1505	0.1535	0.1442	0.0585	0.0512
Obs	2012	2025	2031	2031	2031	2031	2031	2012	2031	2012	2012	2025

Panel C: Private-controlled firms

	Private-controlled firms											
	(1) AssetAcqdum	(2) AssetSaledum	(3) CommodSaledum	(4) CommodPurcdum	(5) ServBuydum	(6) ServSelldum	(7) Borrowdum	(8) Lenddum	(9) GuaranteeRecdum	(10) GuaranteeTodum	(11) EquityBuydum	(12) EquitySelldum
LRevAudNar	0.0243	0.0486	0.0548	0.2275	0.2383	-0.1865	0.0519	0.0903	-0.1897	-0.3592***	0.2658**	-0.1557
	(0.883)	(0.805)	(0.713)	(0.120)	(0.101)	(0.232)	(0.732)	(0.555)	(0.161)	(0.008)	(0.049)	(0.257)
LEngagAudNar	0.1705	0.4326***	-0.1029	-0.0645	0.0206	-0.0036	0.0556	0.1011	-0.1107	-0.0262	-0.0398	0.1475
	(0.314)	(0.009)	(0.488)	(0.651)	(0.879)	(0.979)	(0.695)	(0.479)	(0.412)	(0.842)	(0.750)	(0.254)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.1065	0.0501	0.1962	0.1711	0.1452	0.1656	0.1622	0.1341	0.1573	0.1745	0.0522	0.0653
Obs	3357	3328	3357	3357	3357	3357	3357	3357	3357	3357	3357	3357

Noted that dependent variables are the dummy of each type of transaction equals to one if there is at least one this type of transaction in current firm-year, zero otherwise . Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

B.5 Robustness tests

Table B5.1 Raw signature size (without averaging signature size for the same auditor)

	Dependent variable: ABMSale	Benchmark beating incentive Model

	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private
Incentive				0.1153	0.0177	0.1994
				(0.413)	(0.928)	(0.312)
LRevAudNar	0.2754*	0.1985	0.3810*	0.1270	0.1750	0.1886
	(0.066)	(0.384)	(0.055)	(0.468)	(0.510)	(0.419)
LEngagAudNar	0.0230	0.3244	-0.2446	0.3011	0.5023**	0.1337
	(0.882)	(0.106)	(0.273)	(0.126)	(0.047)	(0.635)
Incentive*LRevAudNar				0.5248*	0.1034	0.7727*
				(0.078)	(0.812)	(0.052)
Incentive*LEngagAudNar				**-0.7802****	-0.2027	**-1.3000*****
				(0.011)	(0.634)	**(0.003)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0451	0.0429	0.0575	0.0538	0.0388	0.0686
Obs	2817	1189	1628	2483	1025	1458

The raw signature size of cvxmmpch for each auditor in each client-year is used to proxy RevAudNar and EngagAudNar in this analysis. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity.

Table B5.2 Alternative incentive proxies are used in the benchmark beating Model

	Benchmark beating incentive Model (Alternative Incentive Proxies)					
	Alternative Incentive equals to one if ROE between 0-1.5% or 6%-7.5%			Alternative Incentive equals to one if ROE between 0-2.5% or 6%-8.5%		
	Full	State	Private	Full	State	Private
Alternative Incentive	0.0709	0.0178	0.1079	0.1738	0.0899	0.2972
	(0.594)	(0.919)	(0.574)	(0.225)	(0.666)	(0.132)
LRevAudNar	0.2014	0.2102	0.3008	0.2072	0.2349	0.3308
	(0.301)	(0.473)	(0.255)	(0.285)	(0.428)	(0.205)
LEngagAudNar	0.2838	0.6373**	0.0344	0.3407	0.6398**	0.1045
	(0.194)	(0.026)	(0.911)	(0.120)	(0.032)	(0.727)
Alternative Incentive*LRevAudNar	0.2524	-0.4885	0.8516**	0.2533	-0.6256	0.8230*
	(0.408)	(0.239)	(0.048)	(0.459)	(0.214)	(0.066)
Alternative Incentive*LEngagAudNar	**-0.6697****	-0.2937	**-1.0458****	**-0.8484****	-0.2192	**-1.3503*****
	(0.033)	(0.498)	**(0.015)**	**(0.015)**	(0.650)	**(0.004)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0512	0.0389	0.0686	0.0543	0.0436	0.0679
Obs	2565	1064	1501	2402	993	1409

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in this analysis to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.3 Four proxies for signature size

Panel A: Dependent variable ABMSale

	Dependent variable: ABMSale											
	recpixpch			recmmpch			cvxpixpch			cvxmmpch		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private	(7) Full	(8) State	(9) Private	(10) Full	(11) State	(12) Private
LRevAudNar	0.2813*	0.1353	0.4068*	0.3124*	0.1327	0.4634**	0.2639*	0.0844	0.4398**	0.2903*	0.0706	0.4993**
	(0.067)	(0.518)	(0.057)	(0.056)	(0.572)	(0.037)	(0.096)	(0.705)	(0.044)	(0.089)	(0.778)	(0.031)
LEngagAudNar	-0.0207	0.2268	-0.2338	-0.0084	0.3367	-0.2886	-0.0026	0.2397	-0.2258	0.0140	0.3796	-0.2875
	(0.892)	(0.282)	(0.265)	(0.959)	(0.124)	(0.203)	(0.987)	(0.292)	(0.323)	(0.937)	(0.110)	(0.249)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0450	0.0398	0.0582	0.0453	0.0418	0.0591	0.0446	0.0391	0.0581	0.0448	0.0412	0.0589
Obs	2817	1189	1628	2817	1189	1628	2817	1189	1628	2817	1189	1628

Panel B: Dependent variable ABMRPT

	Dependent variable: ABMRPT											
	recpixpch			recmmpch			cvxpixpch			cvxmmpch		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private	(7) Full	(8) State	(9) Private	(10) Full	(11) State	(12) Private
LRevAudNar	0.0460	0.1585*	-0.0175	0.0485	0.1702*	-0.0221	0.0242	0.1542	-0.0490	0.0328	0.1628	-0.0445
	(0.491)	(0.077)	(0.845)	(0.513)	(0.090)	(0.823)	(0.737)	(0.107)	(0.610)	(0.685)	(0.133)	(0.680)
LEngagAudNar	-0.0567	0.1477	**-0.1798****	-0.0679	0.1619	**-0.1990****	-0.0672	0.1474	**-0.1898***	-0.0830	0.1648	**-0.2151****
	(0.406)	(0.129)	**(0.044)**	(0.355)	(0.122)	**(0.037)**	(0.365)	(0.161)	**(0.051)**	(0.300)	(0.147)	**(0.039)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0310	0.0602	0.0517	0.0311	0.0604	0.0520	0.0310	0.0593	0.0521	0.0311	0.0594	0.0523
Obs	4652	1761	2891	4652	1761	2891	4652	1761	2891	4652	1761	2891

Panel C: Benchmark beating incentive Model (current year Incentive)

	Benchmark beating incentive Model (current year Incentive)											
	recpixpch			recmmpch			cvxpixpch			cvxmmpch		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private	(7) Full	(8) State	(9) Private	(10) Full	(11) State	(12) Private
Incentive	0.1123	0.0383	0.1967	0.1166	0.0597	0.2013	0.1144	0.0381	0.2015	0.1171	0.0601	0.2032

	(0.427)	(0.846)	(0.323)	(0.410)	(0.762)	(0.311)	(0.419)	(0.846)	(0.308)	(0.407)	(0.760)	(0.301)
LRevAudNar	0.1732	0.2535	0.2316	0.2018	0.2686	0.2607	0.1471	0.1546	0.2743	0.1611	0.1515	0.2939
	(0.316)	(0.315)	(0.327)	(0.275)	(0.333)	(0.293)	(0.417)	(0.560)	(0.270)	(0.411)	(0.606)	(0.268)
LEngagAudNar	0.1688	0.4791*	-0.0548	0.2269	0.5605**	-0.0180	0.2188	0.5386*	-0.0166	0.2999	0.6573**	0.0406
	(0.368)	(0.072)	(0.828)	(0.253)	(0.037)	(0.948)	(0.287)	(0.065)	(0.952)	(0.170)	(0.025)	(0.893)
Incentive*LRevAudNar	0.2473	-0.3442	0.6364	0.2650	-0.4419	0.7488*	0.3274	-0.2997	0.7492*	0.3862	-0.3969	0.9300**
	(0.398)	(0.361)	(0.137)	(0.394)	(0.286)	(0.089)	(0.280)	(0.473)	(0.080)	(0.236)	(0.391)	(0.035)
Incentive*LEngagAudNar	-0.4334	-0.4115	-0.5289	**-0.5730***	-0.2431	**-0.8625****	**-0.5576***	-0.5021	-0.7057	**-0.7709****	-0.3373	**-1.1463****
	(0.143)	(0.301)	(0.196)	**(0.065)**	(0.572)	**(0.038)**	**(0.079)**	(0.250)	(0.108)	**(0.021)**	(0.476)	**(0.010)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0508	0.0375	0.0627	0.0518	0.0400	0.0658	0.0511	0.0364	0.0641	0.0525	0.0392	0.0684
Obs	2483	1025	1458	2483	1025	1458	2483	1025	1458	2483	1025	1458

Panel D: Benchmark beating incentive Model (last year Incentive)

	Benchmark beating incentive Model **(use last year Incentive)**											
	recpixpch			recmmpch			cvxpixpch			cvxmmpch		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Full	State	Private	Full	State	Private	Full	State	Private	Full	State	Private
LIncentive	0.2782*	0.0728	0.4191**	0.2836**	0.0862	0.4332**	0.2806**	0.0747	0.4236**	0.2857**	0.0890	0.4366**
	(0.051)	(0.718)	(0.036)	(0.046)	(0.666)	(0.031)	(0.049)	(0.710)	(0.033)	(0.045)	(0.656)	(0.028)
LRevAudNar	0.2821	0.3170	0.3549	0.2934	0.3394	0.3594	0.2672	0.2579	0.3911	0.2678	0.2621	0.3910
	(0.123)	(0.250)	(0.149)	(0.137)	(0.250)	(0.173)	(0.159)	(0.373)	(0.124)	(0.192)	(0.398)	(0.152)
LEngagAudNar	0.1216	0.4020	-0.0991	0.1649	0.5418**	-0.1263	0.1627	0.4568	-0.0758	0.2206	0.6421**	-0.0984
	(0.519)	(0.130)	(0.701)	(0.415)	(0.048)	(0.654)	(0.439)	(0.128)	(0.791)	(0.330)	(0.039)	(0.753)
LIncentive*LRevAudNar	-0.0154	-0.2875	0.0958	0.0502	-0.3436	0.2370	0.0125	-0.2793	0.1442	0.0956	-0.3297	0.2968
	(0.962)	(0.466)	(0.847)	(0.881)	(0.437)	(0.629)	(0.970)	(0.501)	(0.775)	(0.783)	(0.483)	(0.554)
LIncentive*LEngagAudNar	**-0.5241***	-0.3850	-0.6533	**-0.6860****	-0.4456	**-0.8893****	**-0.6228****	-0.4359	**-0.7985***	**-0.8283****	-0.5117	**-1.1027****
	(0.073)	(0.314)	(0.110)	**(0.024)**	(0.277)	**(0.033)**	**(0.048)**	(0.288)	**(0.071)**	**(0.011)**	(0.248)	**(0.015)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0504	0.0363	0.0629	0.0513	0.0393	0.0657	0.0504	0.0354	0.0637	0.0516	0.0389	0.0670
Obs	2394	994	1400	2394	994	1400	2394	994	1400	2394	994	1400

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in benchmark beating incentive Models to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.4 Use StateShare (nature of share held by controlling shareholder) in replace of StateHolder (nature of the shareholder) to differentiate state firms from private firms

	Dependent variable: ABMSale			Benchmark beating incentive Model		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	State	Private	Full	State	Private
Incentive				0.1171	0.1775	0.0988
				(0.407)	(0.568)	(0.519)
LRevAudNar	0.2903*	-0.4831	0.4356**	0.1611	-0.6330	0.3257
	(0.089)	(0.188)	(0.018)	(0.411)	(0.151)	(0.130)
LEngagAudNar	0.0140	**0.9649****	-0.1379	0.2999	1.4370***	0.1039
	(0.937)	**(0.018)**	(0.472)	(0.170)	(0.009)	(0.645)
Incentive*LRevAudNar				0.3862	0.3439	0.3156
				(0.236)	(0.673)	(0.387)
Incentive*LEngagAudNar				**-0.7709****	-0.6468	**-0.7827****
				(0.021)	(0.383)	**(0.033)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0448	0.0872	0.0490	0.0525	0.0835	0.0578
Obs	2817	440	2375	2483	380	2101

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Noted that CSMAR provide two sources of data to identify state-controlled firms, StateShare indicates the nature of share held by the ultimate controller is state share, StateHolder indicates the nature of the ultimate controller is state. Variables are defined in Appendix B.1.

Table B5.5 Use Top 8 in replace of Big 4 as proxy to control the size of audit firm

	Dependent variable: ABMSale			Benchmark beating incentive Model		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	State	Private	Full	State	Private
Incentive				0.1195	0.0639	0.2099
				(0.397)	(0.747)	(0.284)
LRevAudNar	0.2993*	0.0633	0.5382**	0.1727	0.1373	0.3308
	(0.074)	(0.794)	(0.019)	(0.373)	(0.634)	(0.210)
LEngagAudNar	0.0168	0.3817	-0.2853	0.2964	0.6492**	0.0367
	(0.925)	(0.105)	(0.253)	(0.177)	(0.024)	(0.903)
Incentive*LRevAudNar				0.3828	-0.4013	0.9438**
				(0.237)	(0.386)	(0.031)
Incentive*LEngagAudNar				**-0.7507****	-0.3418	**-1.1023****
				(0.024)	(0.469)	**(0.012)**
Top8				0.1418	0.1148	0.0944
				(0.364)	(0.624)	(0.645)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0440	0.0413	0.0569	0.0519	0.0397	0.0663
Obs	2817	1189	1628	2483	1025	1458

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Other control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.6 Operating profits from ABMSale

	Operating Profits from ABMSale			Benchmark beating via operating profits from ABMSale		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	State	Private	Full	State	Private
Incentive				0.5122***	0.4403**	0.5809***
				(0.000)	(0.015)	(0.000)
LRevAudNar	0.0506	0.2375	0.0016	-0.3014*	-0.0337	-0.3054
	(0.666)	(0.192)	(0.992)	(0.056)	(0.903)	(0.126)
LEngagAudNar	0.0120	-0.0963	0.0113	0.1956	0.0921	0.2256
	(0.929)	(0.606)	(0.948)	(0.280)	(0.743)	(0.299)
Incentive*LRevAudNar				0.8830***	0.7576*	0.7586**
				(0.000)	(0.053)	(0.014)
Incentive*LEngagAudNar				**-0.4498***	-0.5745	-0.4474
				(0.067)	(0.129)	(0.136)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.5030	0.5593	0.4843	0.5034	0.5381	0.5070
Obs	1489	679	810	1291	570	721

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.7 Current year AudNar is used

	ABMSale Model			Benchmark beating incentive Model		
	(1)	(2)	(3)	(4)	(5)	(6)
	Full	State	Private	Full	State	Private
Incentive				0.1590	0.0725	0.2768
				(0.227)	(0.691)	(0.133)
RevAudNar	0.1958	0.0166	0.3417	0.1583	0.1821	0.2495
	(0.217)	(0.942)	(0.119)	(0.379)	(0.484)	(0.313)
EngagAudNar	-0.0109	0.1443	-0.1641	0.1347	0.2971	-0.0141
	(0.947)	(0.522)	(0.470)	(0.501)	(0.281)	(0.959)
Incentive*RevAudNar				0.3108	-0.2601	0.6825
				(0.326)	(0.521)	(0.149)
Incentive*EngagAudNar				**-0.5032***	-0.2875	**-0.7092***
				(0.100)	(0.454)	**(0.096)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0497	0.0412	0.0626	0.0556	0.0367	0.0698
Obs	3274	1377	1897	2879	1186	1693

We centralise the continuous variable *RevAudNar* and *EngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.8 Last year Incentive is used

	Benchmark beating incentive Model		
	(1)	(2)	(3)
	Full	State	Private
LIncentive	0.2857**	0.0890	0.4366**
	(0.045)	(0.656)	(0.028)
LRevAudNar	0.2678	0.2621	0.3910

	(0.192)	(0.398)	(0.152)
LEngagAudNar	0.2206	0.6421**	-0.0984
	(0.330)	(0.039)	(0.753)
LIncentive*LRevAudNar	0.0956	-0.3297	0.2968
	(0.783)	(0.483)	(0.554)
LIncentive*LEngagAudNar	**-0.8283****	-0.5117	**-1.1027****
	(0.011)	(0.248)	**(0.015)**
Controls	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes
Adj. R-squared	0.0516	0.0389	0.0670
Obs	2394	994	1400

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.9 Compare between local and central government-controlled firms in two baseline models

	Dependent variable: ABMSale			Benchmark beating incentive Model		
	(1) Local	(2) Central	(3) Private	(4) Local	(5) Central	(6) Private
Incentive				0.1191	-0.6276	0.1171
				(0.576)	(0.105)	(0.407)
LRevAudNar	0.2776	**-0.9290****	0.2903*	0.3886	-0.8646	0.1611
	(0.327)	**(0.027)**	(0.089)	(0.232)	(0.128)	(0.411)
LEngagAudNar	**0.5505****	0.3499	0.0140	0.8531**	0.0474	0.2999
	(0.046)	(0.306)	(0.937)	(0.010)	(0.932)	(0.170)
Incentive*LRevAudNar				-0.5096	0.3572	0.3862
				(0.370)	(0.628)	(0.236)
Incentive*LEngagAudNar				-0.2910	0.1605	**-0.7709****
				(0.600)	(0.873)	**(0.021)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0624	0.2173	0.0448	0.0651	0.2506	0.0525
Obs	921	267	2817	799	225	2483

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

Table B5.10 Control for Covid-19 in two baseline models

	ABMSale Model			Benchmark Beating Model		
	(1) Full	(2) State	(3) Private	(4) Full	(5) State	(6) Private
Incentive				0.1199	0.0680	0.2030
				(0.393)	(0.730)	(0.297)
LRevAudNar	0.2929*	0.0497	0.5058**	0.1630	0.1335	0.2976
	(0.086)	(0.840)	(0.028)	(0.404)	(0.642)	(0.261)
LEngagAudNar	0.0105	0.3635	-0.2863	0.2959	0.6360**	0.0390
	(0.953)	(0.124)	(0.247)	(0.176)	(0.029)	(0.897)
Incentive*LRevAudNar				0.3826	-0.4035	0.9382**
				(0.239)	(0.382)	(0.033)
Incentive*LEngagAudNar				-0.7749**	-0.2885	-1.1604***

				(0.019)	(0.539)	(0.009)
Covid	0.1925	0.1755	0.1493	0.1309	0.1787	0.0726
	(0.103)	(0.277)	(0.374)	(0.324)	(0.344)	(0.689)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0455	0.0413	0.0600	0.0535	0.0414	0.0696
Obs	2817	1189	1628	2483	1025	1458

We centralise the continuous variable *LRevAudNar* and *LEngagAudNar* in column (4), (5), and (6) to reduce its correlation with the interaction term. Control variables encompassing *FirmSize*, *Leverage*, *ROA*, *MTB*, *BoardSize*, *Big4*, *Concentration*, *IndDirPerc*, *ACIndPerc*, *CEOduality*, *CEOage*, *CEOfemale*, *CEOtenure*, *CEOcompen*, *Avgdircompen*, *Fedirperc*, *Feinddirperc*, *Audgendiv*, *RevAudTenure*, and *EngagAudTenure* are included, but suppressed for brevity. *P*-values are reported in parentheses, ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.1.

B.6 Classification of Related-Party Transactions

Name	Variable	Definition
AssetAcq	Asset Acquisition	All businesses involving the purchase of asset (other intangible and fixed assets except commodities), and transfer, use, swap, restructuring and trust of asset in related-party transactions
AssetSale	Asset Sale	All businesses involving the sale of asset (other intangible and fixed assets except commodities), and transfer, use, swap, restructuring and trust of asset in related-party transactions
CommodSale	Commodity Sale	All businesses involving the sale of commodities (including goods, products, materials, raw materials, water, electricity, gas and power), purchase of commodities and supply of commodities in related-party transactions
CommodPurc	Commodity Purchase	All businesses involving the purchase of commodities (including goods, products, materials, raw materials, water, electricity, gas and power), purchase of commodities and supply of commodities in related-party transactions
ServBuy	Service Buy	Listed firms receiving services from related-parties.
ServSell	Service Sell	Listed firms rendering services to related-parties.
Borrow	Borrowing	Fund transaction receiving from related-parties.
Lend	Lending	Fund transaction providing to related-parties.
GuaranteeRec	Guarantee Receive	Receiving guarantees from related-parties.
GuaranteeTo	Guarantee To	Providing guarantees to related-parties.
EquityBuy	Equity Buy	Buying equity transaction (stock transfer, stock entrust, distribution of dividend) from related-parties.
EquitySell	Equity Sell	Selling equity transaction (stock transfer, stock entrust, distribution of dividend) to related-parties.

Classification of types of RPTs source from CSMAR Related Party Transaction Database, differentiation of selling from buying based on the direction of the transaction provided in the database.

B.7 Supplement Materials

Supplement A: Exclusion Criteria for Audit Reports

Audit reports that meet one of the three exclusion conditions below are eliminated:

(i) 390 audit reports signed by three auditors were excluded because we are not able to differentiate the role of each auditor. In a report signed by two auditors, the signature of the review auditor is placed above that of the engagement auditor which allowed us to identify the two roles (Church et al., 2020; Lennox et al., 2014). Figure 5.1 in Appendix B.8 displays example of audit report signed by three auditors and audit report signed by two auditors, respectively.

(ii) 313 audit reports on which the signature is hard to see/not clear/illegible or is covered by a black stamp are excluded. As illustrated in Ham et al. (2017), those would make the signature

difficult to be readable and extracted for measuring in later step. Example of illegible signatures are shown in Figure 5.2 in Appendix B.8.

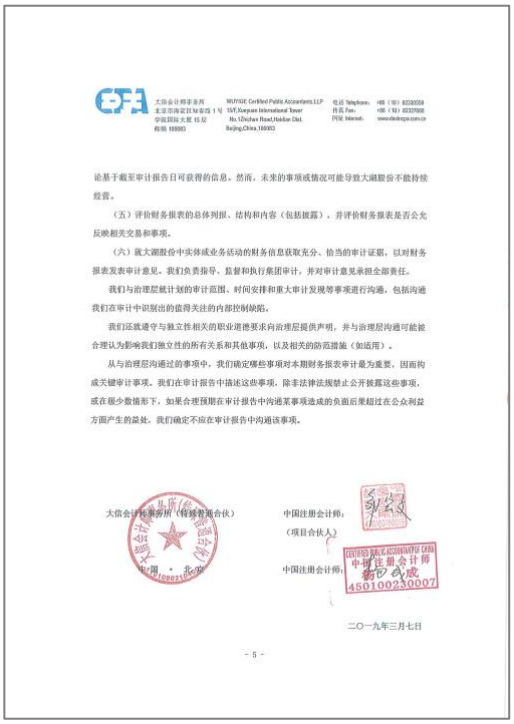
(iii) 308 audit reports that are not scanned or captured as a standard A4 paper size or the edge of the paper is not clear are excluded. These reports may lead to measurement errors concerning the size of the signatures, reasons are explained in Appendix B.7 Supplement B.

Supplement B: Evidence and reasons why standard A4 paper or clear edge of the paper are required

Not A4 paper but can identify the edge → Cropped to A4 paper

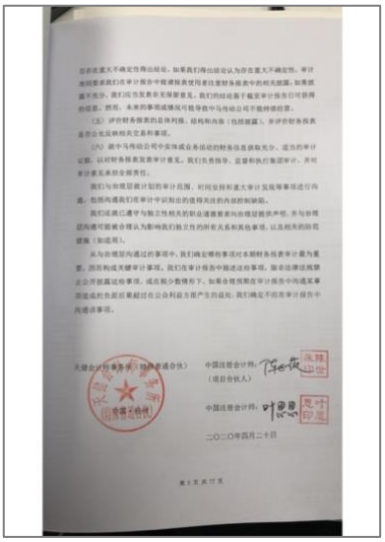
(i) Why clear edge is necessary: For reports that are not an A4 paper, but edge is clear, it can be cropped to an A4 paper.

Not A4 paper and edge is not clear



Standard A4 paper

(ii) Why ensuring all reports are standard A4 paper necessary: Take the above two reports from the same company in different years as examples, if we intend to compare the size of the signatures on these two reports, ideally, as a reference, the same printed title text ("中国注册会计师") should be the same size to make sure signatures on two reports are also comparable. However, in the case that one report is not a standard A4 paper as shown on the left, the size of the same printed text "中国注册会计师" is 3289 pixel^2 on the left report while 5236 pixel^2 on the right report. In this situation, signatures on a non-standard A4 paper would not be reasonably compared with those on a standard A4 paper, therefore should be excluded to ensure the validity of this measurement. More examples are shown below in which the real size of the signature would not be accurate and comparable with those on standard A4 paper reports:

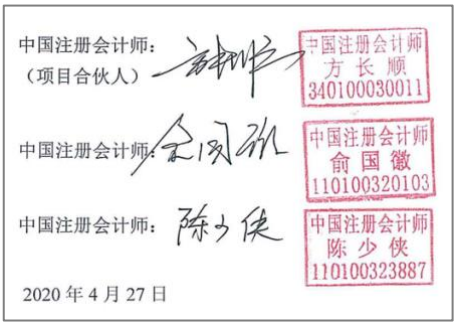


Supplement C: Number of observations with zero for the focus RPT type

Focus RPT Type	Number of obs with zero transaction	Total observation	Percentage
AssetAcqam	18,223	21,770	83.710
CommodSaleam	9,033	21,770	41.490
CommodPurcam	9,000	21,770	41.340
ServBuyam	12,086	21,770	55.520
ServSellam	14,630	21,770	67.200
Borrowam	15,275	21,770	70.170
Lendam	15,758	21,770	72.380
GuaranteeRecam	12,789	21,770	58.750
GuaranteeToam	12,731	21,770	58.480
EquityBuyam	18,547	21,770	85.200
EquitySellam	18,560	21,770	85.250

B.8 Supplement of Figures

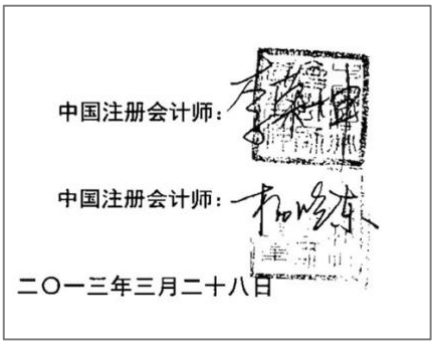
Figure 5.1 Example of audit reports signed by three auditors and two auditors



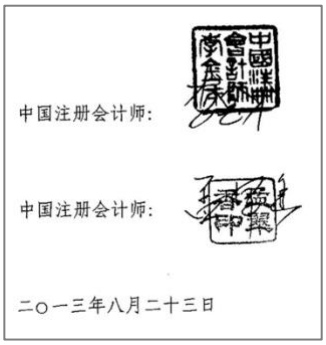
2019 Audit Report for Firm 600199

2014 Audit Report for Firm 600006

Figure 5.2 Example of illegible auditor signatures



2012 Audit Report for Firm 60002



2012 Audit Report for Firm 600067

Figure 5.3: Prepare signature for software to detect it

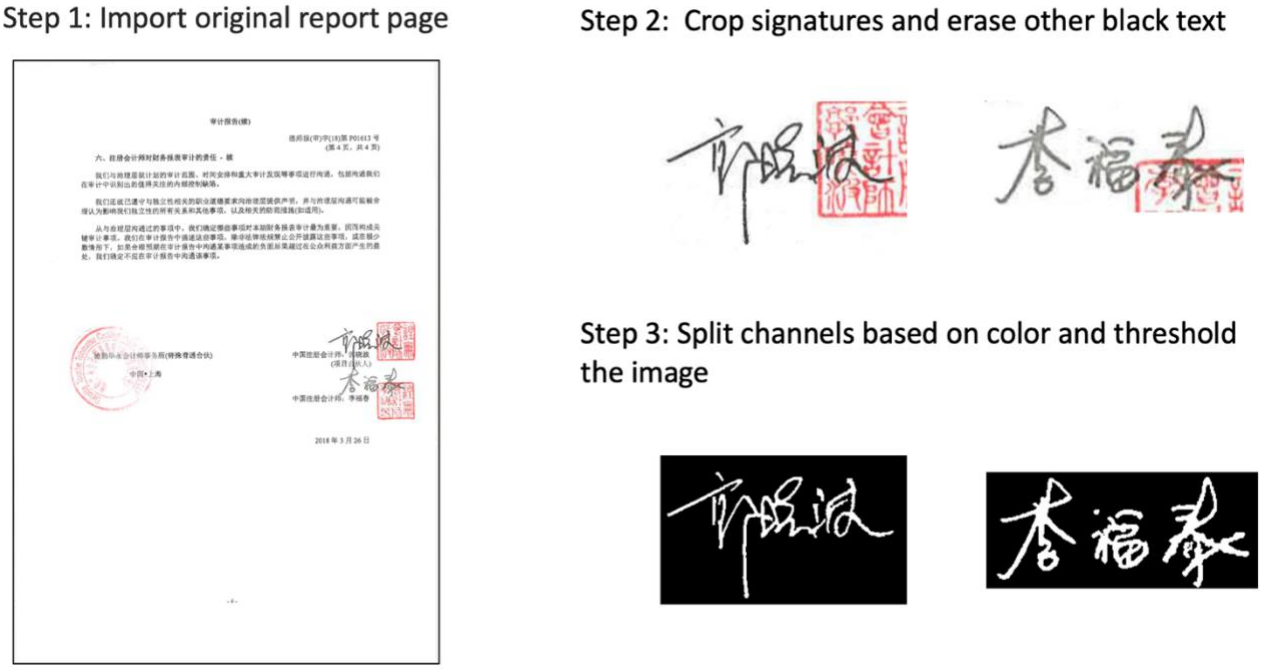
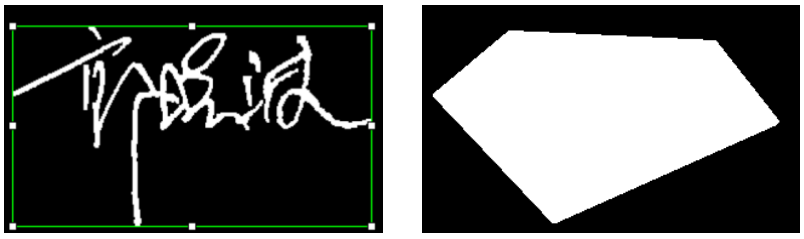


Figure 5.4: Software automatically draws rectangle and convex hull around each signature



Rectangle 45,474 pixels Convex Hull 28,177 pixels

Figure 5.5: Example of report pages with different resolutions

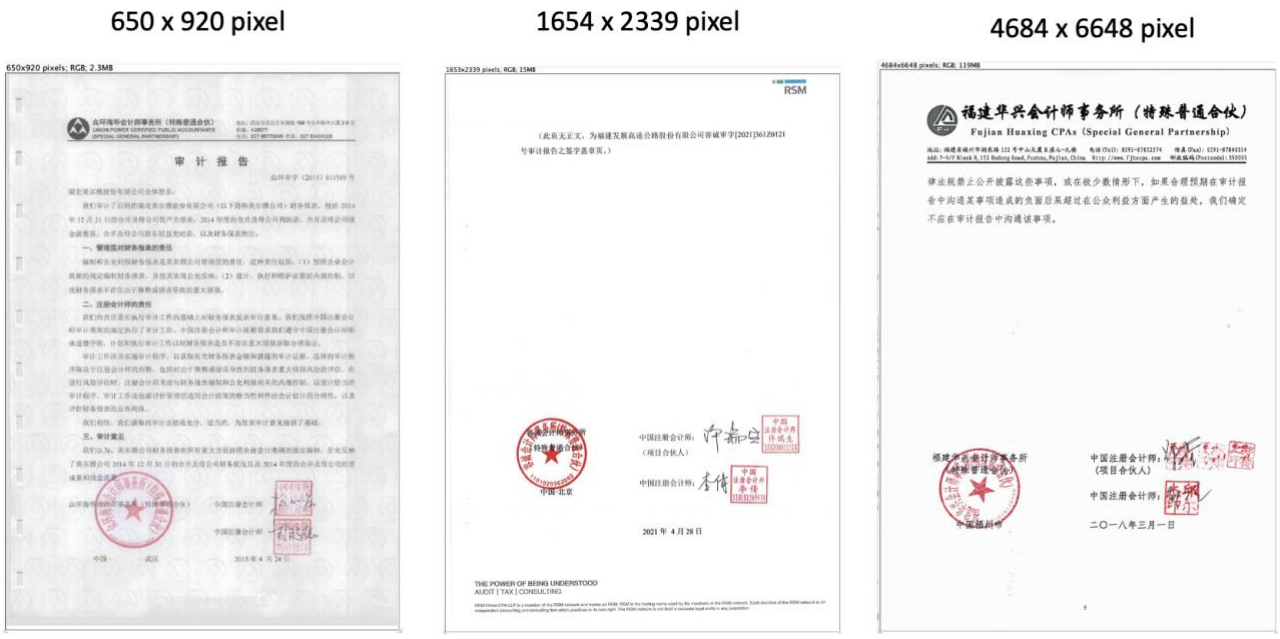


Figure 5.6: Compare between archived names in database and hand-collected names from audit reports

comp	Freq.	Percent	Cum.
different	86	1.05	1.05
invert	564	6.91	7.97
same	7,509	92.03	100.00
Total	8,159	100.00	

B.9 Summary of Findings

	ABMSale			Benchmark Beating		
	Full	State	Private	Full	State	Private
LRevAudNar	+	/	+			
LEngagAudNar	/	/	/			
Incentive*LRevAudNar				/	/	+
Incentive*LEngagAudNar				-	/	-
LRevClientImp*LRevAudNar	/	/	/			
LEngagClientImp*LEngagAudNar	/	/	/			
Incentive*LRevClientImp*LRevAudNar				+	+	+
Incentive*LEngagClientImp*LEngagAudNar				/	/	/

Appendix C Appendix to Chapter 4

C.1 Variable Definitions

Name	Variable	Definition
Opportunistic RPTs Variables		
ABMSale	Abnormal related-party sale	Computed as the residuals from a regression of total amount of related-party commodity sales on leverage, firm size, market-to-book ratio, and industry dummies within each year.
IntercorporateLoan	Intercorporate loans	The amount of net other receivables in the balance sheet divided by total assets in the current firm-year.
lnOpeProABMComSerSale	Operating profits generated by abnormal related-party sales of commodity and services	The natural logarithm of the ratio of operating profit margin multiplied by abnormal related-party sales of commodity and services over firm's total equity at the year-end.
GuaranteeTo	Guarantees to related-parties	Total amount of guarantees provided to related-parties divided by current firm-year total assets.
Audit Team Busyness Variables		
AudTeamBusy	Audit team busyness	The aggregate number of clients review and engagement audit partners audit in that year minus one (i.e., the duplicate focal client firm).
RevAudBusy	Review audit partner client portfolio	The number of clients review audit partner audit in that year.
EngagAudBusy	Engagement audit partner client portfolio	The number of clients engagement audit partner audit in that year.
WithIndustBusy	Within-industry auditor client portfolio	The aggregate number of other clients that review and engagement audit partner audit in the same industry as the focus client in that year.
CrossIndustBusy	Cross-industry auditor client portfolio	The aggregate number of other clients that review and engagement audit partner audit in different industries from the focus client in that year.
AudTeamBusyDum	Audit team busyness dummy	A dummy variable equals to one if AudTeamBusy is above the median level, zero otherwise.
LnAudTeamBusy	Logarithmn of audit team busyness	The natural logarithmn of AudTeamBusy.
AvgAudTeamBusy	Average audit team busyness	The aggregate number of clients review and engagement audit partners audit in that year divided by two.
AudMultipleClient	Audit team audit multiple clients	A dummy variable equals to one if the audit team audit more than one client, zero otherwise.
AudTeamWorkload	Audit team workload	The natural logarithmn of the total client assets of the audit team.
Control Variables		
FirmSize	Firm size	The natural logarithm of the firm's total asset at the year-end.
Leverage	Leverage	Ratio of total liabilities over total assets at the year-end.
ROA	Return on assets	Ratio of net profit to total assets in the previous fiscal year.
MTB	Market-to-book	Ratio of market value to book value of equity at the year-end.
BoardSize	Board size	The total number of directors on the board.
Concentration	Ownership concentration	The shareholding percentage of the largest shareholder in that firm-year.

IndDirPerc	Independent directors' percentage	The number of independent directors divided by the total number of directors on the board.[81]
ACIndPerc	Audit committee independent director percentage	The number of independent directors on audit committee divided by the total number of audit committee members.
Big4	Big 4	A dummy variable equals to one if the listed firm is audited by one of the international big-four audit firms, zero otherwise.
CEOduality	CEO Duality	A dummy variable equals to one if the CEO also serves as the board chair, zero otherwise.[82]
Fedirperc	Female director percentage	The number of female directors divided by the total number of directors on board.
StateHolder	State shareholder	A dummy variable equals to one if the nature of the largest shareholder of the listed firm is a local institution or central institution, zero otherwise.[83]
Other Variables		
BusGroup	Business group-affiliated firms	A dummy variable equals to one if the firm share the same ultimate controller with at least one another firm, zero otherwise.
BigGroup	Big business group-affiliated firms	A dummy variable equals to one if the firm share the same ultimate controller with at least five other firms, zero otherwise.[84]
AudTeamClientImp	Audit team client importance	The proportion of the client's total assets divided by the sum of total assets of all clients audited by the same audit team in a given year.
TeamIndusSpecialized	Audit team industry specialization	A dummy variable equals to one if both review and engagement auditors are industry specialists, whose total audit client assets belongs to the highest quartile, zero if neither of them are industry specialists.
EngagAudFirstYR	Engagement auditor first year audit	A dummy variable equals to one if the engagement auditor is in his/her initial year of auditing the client.
LongTenure	Long audit team tenure	A dummy variable equals to one if the aggregate tenure of two audit partners exceeds median, zero otherwise.
TeamContinuity	Audit team continuity	A dummy variable equals to 1 if both review and engagement audit partners audited the client in the prior year return in current year, 0.5 if either review or engagement audit partners in the prior year return, 0 otherwise.
Incentive	Incentive for benchmark beating	Incentive is a dummy variable equals to 1 when the return on equity is between 0%-2% or 6%-8%, zero otherwise.

[81] In accordance with guidelines from China Securities Regulatory Commission (CSRC), independent directors of the listed company refer to the directors who hold no posts in the company other than the position of director, and who maintain no relations with the listed company and its major shareholder that might prevent them from making objective judgment independently.

[82] Note that data of General Manager (GM) is collected to proxy information of CEO for three reasons: (i) previous studies recognise GM and CEO as the same position; (ii) CSMAR Corporate Governance database use CEO data in replace of GM when data of GM is not available and provide directly data on whether GM and board chairman serve as the same person; (iii) CEO data is constricted, yields only hundreds of observations.

[83] This variable is used to differentiate between state-controlled and private-controlled firms.

[84] We identify the business group as a big group if the group member is equal or larger than six, the median level of members of all business groups in the sample.

ExcessControlDum	Control rights exceed ownership rights	A dummy variable equals to one if controller's control rights exceed ownership rights, zero otherwise.
AudTeamBusySwitch	Switch from low to high busyness audit team	A dummy variable equals to one if the firm switch from a low busyness audit team last year to a high busyness audit team this year.
Post	Post year of switch to a busy review partner	A dummy variable equals to one in the year is after a switch of low to high busyness review partner, zero in the year prior to the switch.[85]
TwoYearPost	Two years post switch to a busy review partner	A dummy variable equals to one in the second year is after a switch of low to high busyness review partner, zero in the year prior to the switch.
ThreeYearPost	Three years post switch to a busy review partner	A dummy variable equals to one in the third year is after a switch of low to high busyness review partner, zero in the year prior to the switch.

C.2 Detailed Summary Descriptive Statistics

	N	Mean	SD	Min	Max	p25	p75	Skewness	Kurtosis
ABMSale	17462	-0.013	2.563	-7.678	4.983	-1.530	1.811	-0.580	3.249
NORECratio	32311	0.021	0.037	0.000	0.246	0.003	0.021	3.867	20.299
lnOpeProABMSale	9221	-18.432	2.066	-24.086	-13.439	-19.714	-17.113	-0.166	3.103
Saleratio	17603	0.328	22.152	-0.302	2348.469	0.001	0.054	95.364	9344.027
GuaranteeTo	15331	0.150	0.195	0.000	1.052	0.026	0.194	2.392	9.475
AudTeamBusy	32779	5.057	3.487	1.000	18.000	2.000	7.000	1.173	4.377
RevAudBusy	32779	4.056	2.857	1.000	15.000	2.000	6.000	1.230	4.536
EngagAudBusy	32779	1.992	1.263	1.000	7.000	1.000	2.000	1.647	5.909
WithIndustBusy	32779	0.222	0.569	0.000	3.000	0.000	0.000	2.842	11.145
CrossIndustBusy	32779	5.833	3.375	2.000	19.000	3.000	8.000	1.235	4.655
AudTeamBusyDum	32779	0.369	0.482	0.000	1.000	0.000	1.000	0.544	1.296
LnAudTeamBusy	32779	2.060	0.752	0.693	3.584	1.386	2.639	-0.340	2.344
AvgAudTeamBusy	32779	3.028	1.744	1.000	9.500	1.500	4.000	1.173	4.377
AudTeamMultipleClient	32779	0.866	0.340	0.000	1.000	1.000	1.000	-2.152	5.633
FirmSize	32398	22.003	1.305	19.335	26.037	21.068	22.743	0.686	3.476
Leverage	32398	0.445	0.217	0.055	1.035	0.274	0.602	0.284	2.516
ROA	30478	0.043	0.079	-0.279	0.317	0.013	0.075	-0.434	7.692
MTB	32398	0.004	0.004	-0.001	0.027	0.002	0.004	3.463	18.754
BoardSize	32321	8.703	1.760	5.000	15.000	7.000	9.000	0.687	4.901
Big4	32321	0.064	0.244	0.000	1.000	0.000	0.000	3.574	13.773
Concentration	32321	35.227	14.928	9.229	74.824	23.463	45.313	0.495	2.602
IndDirPerc	32320	0.372	0.052	0.294	0.571	0.333	0.429	1.363	4.857
ACIndPerc	11973	0.680	0.096	0.500	1.000	0.667	0.667	2.345	9.039
CEOduality	31703	0.743	0.437	0.000	1.000	0.000	1.000	-1.113	2.239
Fedirperc	32321	0.138	0.121	0.000	0.714	0.000	0.222	0.851	3.572
StateHolder	32319	0.337	0.473	0.000	1.000	0.000	1.000	0.691	1.478
Top8	32321	0.433	0.496	0.000	1.000	0.000	1.000	0.270	1.073
AudFirmSwitch	27014	0.116	0.320	0.000	1.000	0.000	0.000	2.401	6.767
RevAudSwitch	48313	0.313	0.464	0.000	1.000	0.000	1.000	0.806	1.650
EngagAudSwitch	48313	0.378	0.485	0.000	1.000	0.000	1.000	0.503	1.253
AudFirmTenure	32768	6.926	5.075	1.000	23.000	3.000	10.000	1.048	3.684
RevAudTenure	54197	2.535	1.784	1.000	9.000	1.000	3.000	1.433	4.905

[85] We implement the DID analysis interact the *AudTeamBusySwitch* with a post switch of busy review partner for two reasons: (i) Due to collinearity issue, a post switch of large audit team interacted with *AudTeamBusySwitch* fail to yield a valid result during the analysis, same applied to an interaction of post switch of large review partner client portfolio with *RevSizeSwitch*; (ii) on the basis of the first reason, notice that review partner busyness plays a more important role in influencing opportunistic RPTs, we therefore use the interacted AudTeamBusySwitch and a post switch of busy review partner to implement the analysis.

EngagAudTenure	54197	2.146	1.365	1.000	7.000	1.000	3.000	1.296	4.348
TeamGender	22531	0.164	0.371	0.000	1.000	0.000	0.000	1.811	4.281
FeRevAud	45905	0.253	0.435	0.000	1.000	0.000	1.000	1.137	2.293
FeEngagAud	43980	0.357	0.479	0.000	1.000	0.000	1.000	0.598	1.358
Covid	60389	0.080	0.271	0.000	1.000	0.000	0.000	3.096	10.582

C.3 Busy Audit Teams from Top 8 Audit Firms

Panel A: The role of Top 8 on the impact of audit team busyess on ABMSale

	ABMSale				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	0.0130	0.0218	0.0010	0.0364	0.0073
	(0.523)	(0.375)	(0.972)	(0.210)	(0.854)
Top8	0.4759***	0.5391***	0.2815	0.5457**	0.4147
	(0.004)	(0.009)	(0.274)	(0.026)	(0.222)
AudTeamBusy*Top8	**-0.0615****	**-0.0594***	-0.0438	-0.0571	-0.0626
	(0.018)	**(0.061)**	(0.248)	(0.126)	(0.250)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.0842	0.0763	0.0277	0.0626	0.0620
Obs	6662	3720	2940	2404	1313

Panel B: The role of Top 8 on the impact of audit team busyness on IntercorporateLoan model

	IntercorporateLoan				
	(1) Full	(2) Group	(3) Non-Group	(4) Big-Group	(5) Small-Group
AudTeamBusy	-0.0007***	-0.0007***	-0.0007***	-0.0003	-0.0011***
	(0.000)	(0.002)	(0.001)	(0.409)	(0.000)
Top8	-0.0036**	-0.0016	-0.0064***	0.0008	-0.0046
	(0.013)	(0.402)	(0.003)	(0.728)	(0.137)
AudTeamBusy*Top8	**0.0005****	0.0004	**0.0007****	-0.0002	**0.0011****
	(0.025)	(0.238)	**(0.020)**	(0.550)	**(0.037)**
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1148	0.1083	0.1320	0.1249	0.1389
Obs	11179	5106	6073	3087	2016

C.4 Two-Stage Instrumental Variables Estimation on Review Audit Partner Busyness

Panel A: First Stage

	RevAudBusy									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
LRevAudBusy	0.5084***	0.4965***	0.5013***	0.4886***	0.5010***	0.4900***	0.4856***	0.4763***	0.4880***	0.4715***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RevAudSwitch		0.1315***		0.1456**		0.1166*		0.0391		0.3034***
		(0.007)		(0.034)		(0.099)		(0.651)		(0.006)
RevAudTenure		0.1759***		0.1670***		0.1859***		0.1262***		0.2209***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.3355	0.3512	0.3417	0.3572	0.3191	0.3354	0.3431	0.3525	0.3354	0.3615
Obs	10976	10976	5020	5020	5954	5954	3031	3031	1984	1984

Panel B: Second Stage on ABMSale

	ABMSale									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
RevAudBusy	-0.0163		-0.0222		-0.0113		-0.0098		-0.0373	
	(0.345)		(0.291)		(0.664)		(0.693)		(0.264)	
RevAudBusy_predict		-0.0279		0.0115		-0.0559		0.0105		0.0154
		(0.382)		(0.759)		(0.269)		(0.821)		(0.789)
RevAudSwitch	0.0990	0.1008	0.0845	0.0788	0.1061	0.1139	0.1659*	0.1641*	-0.0504	-0.0701
	(0.125)	(0.120)	(0.273)	(0.308)	(0.304)	(0.271)	(0.090)	(0.093)	(0.671)	(0.557)
RevAudTenure	0.0259	0.0286	0.0181	0.0106	0.0227	0.0343	0.0220	0.0183	0.0191	0.0041
	(0.217)	(0.191)	(0.449)	(0.665)	(0.504)	(0.337)	(0.485)	(0.566)	(0.539)	(0.895)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1277	0.1276	0.1508	0.1504	0.0576	0.0583	0.1438	0.1437	0.1706	0.1691
Obs	6545	6545	3655	3655	2885	2885	2360	2360	1286	1286

Panel C: Second Stage on IntercorporateLoan

	IntercorporateLoan									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
RevAudBusy	-0.0004***		-0.0004**		-0.0004**		-0.0002		-0.0007**	
	(0.001)		(0.045)		(0.013)		(0.458)		(0.018)	
RevAudBusy_predict		-0.0008***		-0.0010**		-0.0007**		-0.0008		-0.0013**
		(0.001)		(0.012)		(0.042)		(0.103)		(0.026)
RevAudSwitch	0.0003	0.0004	0.0006	0.0007	-0.0001	-0.0001	0.0012	0.0012	-0.0000	0.0001
	(0.621)	(0.546)	(0.431)	(0.373)	(0.900)	(0.938)	(0.192)	(0.182)	(0.973)	(0.905)
RevAudTenure	-0.0002	-0.0001	-0.0003	-0.0002	-0.0002	-0.0001	-0.0003	-0.0002	-0.0001	0.0001
	(0.177)	(0.469)	(0.194)	(0.476)	(0.400)	(0.595)	(0.214)	(0.405)	(0.845)	(0.758)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1492	0.1492	0.1650	0.1655	0.1700	0.1696	0.2321	0.2330	0.1250	0.1239
Obs	10973	10973	5019	5019	5952	5952	3030	3030	1984	1984

C.5 Two-Stage Instrumental Variables Estimation on Engagement Audit Partner Busyness

Panel A: First Stage

	EngagAudBusy									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
LEngagAudBusy	0.4356***	0.4337***	0.3856***	0.3845***	0.4563***	0.4532***	0.3456***	0.3464***	0.3993***	0.3953***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
EngagAudSwitch		-0.0879***		-0.0156		-0.1438***		-0.0290		0.0132
		(0.000)		(0.641)		(0.000)		(0.495)		(0.817)
EngagAudTenure		0.0456***		0.0441***		0.0495***		0.0277*		0.0637***
		(0.000)		(0.001)		(0.000)		(0.087)		(0.003)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.2385	0.2452	0.2000	0.2039	0.2501	0.2598	0.1770	0.1787	0.2355	0.2417
Obs	10976	10976	5020	5020	5954	5954	3031	3031	1984	1984

Panel B: Second Stage on ABMSale

	ABMSale

	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
EngagAudBusy	-0.0585*		-0.0293		-0.0864*		-0.0113		-0.0823	
	(0.098)		(0.492)		(0.095)		(0.839)		(0.214)	
EngagAudBusy_predict		-0.1424*		-0.0466		-0.2243**		-0.0745		0.0007
		(0.063)		(0.626)		(0.046)		(0.592)		(0.996)
EngagAudSwitch	-0.0890	-0.0898	-0.1463	-0.1453	-0.0275	-0.0306	-0.1119	-0.1107	-0.0598	-0.0655
	(0.228)	(0.225)	(0.104)	(0.108)	(0.816)	(0.796)	(0.321)	(0.327)	(0.678)	(0.652)
EngagAudTenure	-0.0167	-0.0103	-0.0550	-0.0537	0.0182	0.0311	-0.0268	-0.0245	-0.0372	-0.0445
	(0.561)	(0.725)	(0.105)	(0.121)	(0.685)	(0.497)	(0.549)	(0.587)	(0.451)	(0.384)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1279	0.1281	0.1513	0.1512	0.0587	0.0594	0.1432	0.1433	0.1709	0.1694
Obs	6545	6545	3655	3655	2885	2885	2360	2360	1286	1286

Panel C: Second Stage on IntercorporateLoan

	IntercorporateLoan									
	Full		Group		Non-Group		Big-Group		Small-Group	
	(1)	(2)	(3)	(4)	(5)	(6)	(3)	(4)	(5)	(6)
EngagAudBusy	-0.0005**		-0.0006*		-0.0005		-0.0004		-0.0008	
	(0.043)		(0.087)		(0.174)		(0.398)		(0.152)	
EngagAudBusy_predict		-0.0013**		-0.0017*		-0.0011		-0.0008		-0.0020
		(0.026)		(0.087)		(0.134)		(0.550)		(0.146)
EngagAudSwitch	0.0005	0.0004	-0.0005	-0.0005	0.0012	0.0011	-0.0000	-0.0000	-0.0011	-0.0010
	(0.489)	(0.505)	(0.520)	(0.552)	(0.237)	(0.256)	(0.994)	(0.999)	(0.370)	(0.416)
EngagAudTenure	-0.0002	-0.0001	-0.0008**	-0.0007**	0.0002	0.0003	-0.0001	-0.0001	-0.0014***	-0.0013***
	(0.515)	(0.672)	(0.022)	(0.036)	(0.561)	(0.468)	(0.843)	(0.866)	(0.000)	(0.001)
Year and Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.1479	0.1480	0.1648	0.1649	0.1690	0.1691	0.2303	0.2302	0.1270	0.1270
Obs	10973	10973	5019	5019	5952	5952	3030	3030	1984	1984

C.6 Summary of Findings

	ABMSale	Intercorporate Loan

	Full	Group	Non-Group	Big-Group	Small-Group	Full	Group	Non-Group	Big-Group	Small-Group
AudTeamBusy	/	/	/	/	/	-	-	-	/	-
AudTeamBusy*AudTeamClientImp	-	/	/	/	/	-	/	-	/	/
AudTeamBusy*TeamIndusSpecialized	-	-	/	/	/	/	/	/	/	/
AudTeamBusy*EngagAudFirstYR	/	+	/	+	/	/	/	/	/	/
AudTeamBusy* LongTenure	/	/	/	/	/	+	/	/	/	/
AudTeamBusy*TeamContinuity	/	/	/	/	/	+	/	/	/	/
Incentive*AudTeamBusy	+	/	+	/	/					
RevAudBusy	/	/	/	/	/	-	-	-	/	-
EngagAudBusy	/	/	/	/	/	/	/	/	/	/
ExcessControlDum*AudTeamBusy	/	/	/	/	/	/	+	-	+	+
AudTeamBusy*Big4	/	-	/	/	/	/	/	-	/	+
WithinIndustBusy	/	/	/	/	/	/	/	/	-	/
CrossIndustBusy	/	/	/	/	/	-	-	-	/	-

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