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Abstract

We ask whether CFO's managerial skills affect corporate tax avoidance using a sample of Chinese-listed companies. To that end, we develop a CFO managerial skills index based on four dimensions of the CFO's work experience: (1) the number of current positions a CFO holds, (2) the number of functional departments a CFO has worked in during his career, (3) the number of firms he has worked for, and (4) whether the CFO has political connections. We find that CFOs with high managerial skills are more likely to engage in aggressive tax avoidance. This effect is weakened when CFOs are in their first year of employment, approaching retirement, and are too busy. Moreover, we find that CFOs with general management skills are more likely to adjust corporate tax avoidance to levels similar to their peers.

Keywords: Chief Financial Officer (CFO); work experience; managerial skills; tax avoidance
JEL: G30, H26, J24, M41

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1 Introduction

Tax avoidance is one of the most effective tools for companies to increase their corporate value by reducing their tax burden. For companies, tax avoidance is mainly beneficial in terms of the transfer of wealth to shareholders, but it also carries with it the risk of legal and penalty costs as well as reputational damage (Desai and Dharmapala, 2009; Ferris et al., 2017). Companies are more likely to engage in tax avoidance if the benefits outweigh the costs. According to agency theory, the separation of a company's ownership and operation can lead to corporate tax avoidance decisions being influenced by managers' interests. As a result, tax avoidance decisions may be influenced by both tax-saving motives and managerial self-interest.

The upper-echelon theory indicates that managers' cognitive processes, behaviors, as well as their decisions are affected by their characteristics (Hambrick and Mason, 1984). Research has examined the effect of executive characteristics on corporate tax avoidance from numerous perspectives, including executive financial experience (Huang and Zhang, 2020), military experience (Law and Mills, 2017), political connections (Francis et al., 2016), and overseas experience (Wen et al., 2020). As a result, executive characteristics and job experience rarely act alone as determining factors when it comes to influencing company decisions. When making decisions, decision-makers frequently combine skills acquired over a lifetime. According to Custódio et al. (2013), generalists with diverse work experience are more competitive in the job market than professionals specializing in a single area. The majority of research has concentrated on the influence of managers and executive teams on corporate decision-making, but little is known about the influence of diverse work experience on the decision to avoid taxes. We argue in this paper that differentiation exists not only in the characteristics of individuals, but also in the skills acquired through work experience.

The importance of comprehensive skills for top managers has become very pronounced. In the Chinese context, the Chinese government has repeatedly emphasized the importance of composite talent in building a strong nation. Fierce market competition creates a high demand for comprehensive talent, while rich job experience is critical to developing generalist competencies. Diversity of work experience enhances management resilience, cross-border capabilities, and risk-taking spirit, and provides them with a certain amount of social capital that allows them to allocate resources more effectively within the company. Dyreng et al. (2010) suggest that heterogeneity among managers plays an important role in corporate tax avoidance.

More experience can assist executives in understanding the impact of regulatory changes on their company's business model promptly, assessing the policy application of tax-related transactions, and applying expertise to save more taxes while maintaining compliance. Moreover, the complexity of tax avoidance activities can be exploited by executives to conceal their self-interest behavior (Desai et al., 2007). Based on this line of research, this study examines whether and how Chief Financial Officers (CFOs) with general management skills influence Chinese listed companies' tax avoidance behavior.

It is crucial to ask this question since the CEO relies heavily on the information provided by the CFO for tax planning (Jiang et al., 2010). CFOs are considered the watchdogs of financial reporting, and they can manipulate accounting information for different reasons than CEOs, as their roles and compensation differ (Feng et al., 2011). CFOs are primarily responsible for preparing company financial reports as well as tax returns, which play an important role in the company's operations and strategic positioning. Therefore, whether a CFO is a generalist or specialist might play a role in corporate tax planning.

Considering that the competencies of generalist executives are closely related to their career focus, we further examine whether the effects of an executive's first year of service, outside directorships, or retirement can moderate the relation between CFO work experience and tax avoidance. We argue that managers have limited knowledge of their organization's environment at the outset of their positions, which limits their ability to make future development plans and firm strategies. An executive who holds multiple outside directorships may be distracted by other commitments and not be able to deliver his best performance. For retiring executives, past literature has suggested that the CEO's retirement salary is determined by the company's performance in its final years (Antia et al., 2010; Dechow and Sloan, 1991; Ferris et al., 2017), and that CEOs nearing retirement may be more cautious about tax avoidance. The quality of the CFO's strategy and the ability to execute it can be affected by all of these factors. Therefore, we contend that generalist CFOs with extensive managerial skills are less likely to avoid taxes as a result of their retirement, their new employment, and their excessive workload.

Moreover, external factors may also influence the relation between managerial skills and tax avoidance in a competitive environment. It is more likely that managers will disregard internal data and follow the example of their competitors when there is significant uncertainty regarding the impact of tax avoidance strategies. This can be attributed to both the wealth transfer effect generated by corporate tax avoidance as well as the social interaction effect among firms. Prior literature suggests that companies can design or adjust their tax positions to avoid being perceived as overly tax aggressive or for reasons related to management career concerns (Bird et al., 2018; Lieberman and Asaba, 2006). In this study, we examine how CFOs with diverse work experience perform in comparison to their peers.

In this paper, we use a sample of Chinese A-share listed companies from 2010 to 2019. We manually collect information about CFOs' working experience and other personal information from CSMAR and other Internet resources. This information includes the number of positions, departments, and companies for which they have worked, as well as whether they have formed political connections throughout their career. We find that CFOs' management skills from their accumulated work experience not only help firms to improve their tax planning activities but also help firms' tax planning practices by inducing them to move their effective tax rates closer to the industry mean to avoid being considered overly tax aggressive. We also find that generalist CFOs nearing retirement, those who are too busy, or those who have just started in a firm are less tax aggressive and more likely to imitate their peers.

We contribute to the literature in several ways. First, we demonstrate that the working experience of the CFO is an important factor in corporate tax avoidance. Previous studies have extensively examined the impact of a manager's single career experience on tax avoidance. By examining the working experience of CFOs, we aim to gain a better understanding of how their characteristics affect corporate tax avoidance. Specifically, the study examines the transfer of management competencies to the workplace and whether individual differences in management skills have additional explanatory validity when explaining the quality and economic implications of firm decisions. Second, we analyze pathways and mechanisms by which CFO career experience influences tax avoidance in the Chinese context. According to Cai and Liu (2009), Chinese firms avoid taxes more frequently than in developed countries such as the US due to the imperfection of the Chinese tax collection system. Third, by examining working experience differences between CFOs and their peers, we improve our understanding of the importance of executive management skills and expand our knowledge of the factors of tax avoidance. To the best of our knowledge,

this is the first study to investigate how CFO working experience and corporate tax avoidance are related.

2 Literature review and hypothesis development

2.1 Upper echelon theory and executive's career experience

According to the upper-echelon theory, managers are not always rational. Their personal beliefs, values, and psychological characteristics will affect the substance of their decisions (Hambrick and Mason, 1984). Scholars have looked at the role that irrational managerial characteristics play in corporate governance in previous studies, identifying several individual characteristics that affect managers' decision-making, including gender (Faccio et al., 2016; Schubert et al., 1999), age (Serfling, 2014), education (Barker and Mueller, 2002), CEO overconfidence (Malmendier and Tate, 2008, 2005) and top management team heterogeneity (Plečnik and Wang, 2021).

More recent research has shifted the focus to the impact of the skills acquired by managers during their careers on strategic decisions. For example, Custódio & Metzger (2014) show that CEOs who are financial experts are more financially sophisticated and actively manage their financial policies. Malmendier et al. (2011) and Benmelech & Frydman (2015) document the significant impact of military service experience on managerial decisions and firm performance. Wu et al. (2018) find a positive relation between CEOs' political connections and firm performance, while Fan et al. (2007) suggest that politically connected CEOs underperform in terms of earnings, sales growth, and stock returns. Herrmann & Datta (2005) and Nielsen & Nielsen (2011) show that managers with international experience are more likely to engage in foreign direct investment. Although executives have a wide range of work experience, the majority of academic research usually studies one type of experience.

However, managers are not solely influenced by a single work experience when making decisions. As a result of their varied career experiences, they have developed significant heterogeneous characteristics and distinct perspectives on decision-making, which plays a significant role in their management style. Generalist managers can gain a more holistic picture of the opportunities and challenges presented by a dynamic company environment and make more diverse and adaptive strategic decisions. Generalists can apply their knowledge and skills to a wider range of organizations than executives with specialized experience in a single company and industry (Frydman and Jenter, 2010) and have a better understanding of the interactions between internal capabilities and external factors, and are more adept in collecting, integrating, and synthesizing information from a variety of sources (Wiersema and Bantel, 1992; Carpenter et al., 2004).

Management theory posits that knowledge from management members from different functional areas brings in human capital that adds to the overall knowledge of the firm. Bunderson (2003) finds that CEOs who have worked in multiple departments are exposed to a variety of policies and practices from various departments, giving them a broader perspective. By moving between different companies and departments, managers can quickly learn a variety of industry experiences and knowledge from different networks and fields of information and thus have better information processing skills. Similarly, Chen et al. (2015) find that executives who had worked at multiple companies were more likely to make prudent and conservative strategies than executives who had worked at the same company for a long time.

Further, the cumulative work experience of executives enables them to amass a diverse range of industry, sector, and firm management experience, which provides the organization with a variety of potential resources and advantages. In the course of regular company operations, due

to information asymmetry, executives cannot make well-informed judgments and must instead rely on their preconceived notions and values. By contrast, managers with extensive professional experience can draw on their social networks and other resources to gain an advantage in gathering information, which improves performance and the overall value of a company.

According to Custódio et al., (2013), managers with more work experience have come into contact with people from diverse backgrounds, which not only allows them to expand their social networks but also allows the market to gain a more comprehensive understanding of them through their professional performance, resulting in a higher level of confidence in the individual's capabilities. Similarly, Hu & Liu (2015) found that Chinese executives who had worked in several different firms can accumulate social capital and mitigate information asymmetries, reducing firms' investment cash flow sensitivity and improving corporate investment. Moreover, as a critical organizational resource, social networks enable managers to more efficiently allocate resources inside the firm by enhancing the quantity and quality of available information, as well as its relevance and timeliness. Ferris et al. (2017) suggest that managers with a wealth of social capital will manage the allocation of resources more effectively and through certain investment channels, ultimately increasing corporate investment and financial policies.

2.2 Tax avoidance and managers' characteristics

Tax avoidance can generally be defined as reducing tax liability by observing tax law requirements and using tax planning techniques reasonably and legally. Avoiding taxes transfers state resources to shareholders, enhances corporate cash flow, and increases the value of the company and investors' wealth. Tax planning behavior can also result in significant amounts of direct costs (e.g. the cost of tax planning, litigation costs, and penalties for tax avoidance), as well as indirect costs (e.g. agency costs, reputational costs, and capital costs) for the firm (Desai and Dharmapala, 2009;

Hasan et al., 2014). Aggressive tax avoidance practices may result in excessive direct and indirect costs that outweigh any tax savings, which could lower the company's after-tax worth.

The agency theory contends that separating ownership and management may result in conflicts of interest between the agent and principal, which may allow managers to incorporate their interests into corporate tax avoidance decisions and pursue personal profit from intricate tax avoidance strategies. However, the opportunity cost of management effort varies based on the heterogeneity of management ability (Dyreng et al., 2010). This raises questions regarding the causal relation between tax avoidance decisions and the knowledge and skills that executives accumulate throughout their careers.

Previous studies of the relation between managers' career experiences and corporate tax avoidance have focused on the impact of a single specific career experience on corporate financial behavior. Law and Mills (2017) indicate that managers with military experience are less likely to use aggressive tax planning strategies as a result of shared values regarding government legitimacy and government allegiance. Wen et al. (2020) suggest a significant negative relation between foreign-experienced directors and tax avoidance, implying that these directors can help constrain their companies' tax aggressiveness. Huang and Zhang (2020) found that CEOs with financial backgrounds are associated with a more aggressive tax avoidance strategy. Francis et al. (2016) suggest that companies with politically partisan CEOs are more likely to avoid paying taxes. Plečnik & Wang (2021) investigate intrapersonal functional variety in the top management team (TMT) and found that a higher level of functional diversity in TMT is associated with lower cash-effective tax rates.

Other scholars have looked at the impact of corporate executives on corporate tax avoidance behavior from the point of view of their management abilities. Park et al. (2016) find

that executives with a superior ability to manage corporate resources more effectively engage in less tax avoidance. Dyreng et al. (2010) explore whether top executives have a non-firm-specific impact on tax avoidance, finding that individual executives are responsible for a significant amount of tax avoidance. By using a managerial ability score, a variable developed by Demerjian et al. (2012) to assess executive effectiveness in managing firm resources through data envelopment analysis (DEA), Koester et al. (2017) find that CEOs with higher managerial abilities are more tax aggressive since they know their firm's operating environment better allowing them to act more strategically.

2.2.1 CFO work experience

According to the agency theory, information asymmetry creates moral hazard and adverse selection problems, in which one party uses its information advantage to gain benefits at the expense of the information disadvantaged party (Fama and Jensen, 1983). Managers with more general managerial ability have a broader awareness of the operating environment of the firms and are more adept at acquiring information, preventing risks, and controlling costs (Cannella et al., 2009; Hambrick, 2007). Nonetheless, managers with more general managerial abilities may have a higher risk-taking profile, believing that they have superb abilities to create profit and increase value, albeit this might be a result of managers being overconfident, thus further adding to agency problems (Mishra, 2014).

Tax evasion is a complex interdepartmental issue that affects almost every aspect of business strategy and operations. CFOs with extensive cross-border understanding can identify and exploit tax planning opportunities more rapidly from complex accounting standards (Demerjian et al., 2013). Thus, generalist managers have a distinct information advantage over shareholders, which drives them to pursue more complex and covert tax avoidance strategies to

protect their interests at the expense of the company's stockholders. Due to the increased complexity of corporate tax avoidance activities, it is significantly cheaper for executives to seek rent, and managers are likely to make more aggressive tax avoidance decisions.

The expectancy theory emphasizes the importance of linking rewards to performance and making sure that the rewards the organization gives to the recipients are those that they deserve and desire (Vroom, 1964). As a result, companies that use performance-based pay are expected to improve. Tax avoidance is a valuable exercise for shareholders, as it provides managers with incentive systems that are often based on the company's stock price or after-tax compensation rates. These incentives aim to encourage managers to make tax-saving decisions. Consequently, rational managers align their decisions so that they can maximize their total compensation (Phillips, 2003).

Custódio et al., (2013) find that CEOs with general management skills are paid more than CEOs with specialized management skills. Meanwhile, companies employ performance compensation arrangements to shift a portion of the firms' risk onto their CEO to reduce the exposure to operational risks (Demski and Feltham, 1978). This scheme effectively aligns CEOs' interests with firms and induces more talented workers to self-select. Previous studies provide evidence of a positive association between compensation and tax aggressiveness (Armstrong et al., 2015; Desai and Dharmapala, 2006; Phillips, 2003; Robinson et al., 2010). Rego & Wilson (2012) found riskier tax avoidance actions enhance stock volatility, which boosts the value of CEO stock options. Gul et al. (2018) found that more talented managers are more opportunistic in their financial reporting to maximize their stock pay. Hence, tax avoidance activities generate cash flow for the enterprise while allowing managers to pursue their interests, which results in a degree of

convergence of interests between principal and agent and significantly increases the incentive for generalist CFOs to use their competence to avoid tax.

Greater tax savings may signal to shareholders managers' ability to identify and exploit tax-saving opportunities to improve firm performance, because tax savings, which lead to higher after-tax earnings and cash flows, are typically viewed as beneficial to shareholders (Chyz and Gaertner, 2018). When uncertainty exists about managers' ability, the labor market, both internal and external, assesses it based on corporate performance, including tax savings (e.g., Hermalin and Weisbach, 1998). A positive assessment can enhance their pay, present job stability, and the chance for outside employment, whereas a negative assessment, can harm them by leading to the loss of their existing position and opportunities for external employment. Consistent with the notion that greater tax savings help signal managers' ability, Koester et al. (2017) show that managers with more general ability avoid more taxes.

Managers with more work experience, on the other hand, may be less likely to engage in tax avoidance activities because they are more concerned with the reputation of their careers. The market's perception of a manager's competence, according to Fama (1980), determines his or her reputation. It is an intangible asset of the manager that is frequently linked to long-term rewards such as compensation, power, and opportunities for advancement. It is critical to recognize that a manager's current market reputation influences their career development and decisions. As a result, managers are eager to be perceived in the marketplace as high-quality.

The results of tax avoidance practices may decrease a manager’s reputation. Generalist managers may commit resources to more effective management to maintain their professional reputation if tax avoidance presents a greater opportunity cost than other management activities or if tax evasion presents a greater tax liability than the benefits. General managers may encounter

greater opportunity and reputational costs than specialist managers when they are more capable of converting resources into economic benefit through normal operational activities. Thus, tax avoidance activities are a suboptimal strategy for a generalist manager. Park et al. (2016) are aligned with this argument and suggest that more capable executives are less likely to engage in aggressive tax avoidance based on the sample of Korean-listed companies.

Based on the above conflicting theoretical considerations, we propose our first hypothesis as follows:

> *H1: Under the hypothesis of increased risk-taking, CFOs with more working experience are expected to avoid more taxes.*

2.2.2 Peer effects

Behavioral studies suggest that firms make strategic decisions based on the behavior of their competitors and peers, exhibiting behavior that is in alignment with their peers (Manski, 1993). Several studies note that decisions such as capital structure (Leary and Roberts, 2014), dividend distribution (Grennan, 2019), cash holdings (Joo et al., 2016), information disclosure (Seo, 2021; Shroff et al., 2017), and executive compensation (Bizjak et al., 2008) are affected by peer effects. Modern corporations have a tremendous incentive to decrease their tax burden. However, there is a blurred line between legal tax evasion and illegal tax avoidance, and inappropriate tax avoidance could result in legal consequences. Asymmetric information and dynamic competition among organizations result in the interaction of tax avoidance among enterprises. For example, Armstrong et al. (2019) find that corporate tax avoidance behavior is affected by peer groups within the same industry. Similarly, Bird et al. (2018) find that executive turnover has a significant impact on firms' tax avoidance levels.

Parsons et al. (2018) suggest that social norms and culture have a considerable impact on business decision-making, resulting in the geographical clustering of corporate breaches. As part

of the Chinese tax system, the government provides a succession of region-specific preferential tax rates to encourage the development of certain enterprises and areas (Lin et al., 2017). This has also led to differences between regions in terms of taxation and regulation. Firms located in the same geographical region often face the same tax regulations and policy changes. Although executives may be motivated by tax incentives or opportunistic managerial behavior, they still learn from their peers and emulate their behavior to minimize the risks associated with aggressive tax planning.

The literature informs us that a firm's position in relation to its peers influences tax avoidance decisions (Armstrong et al., 2019; Kubick et al., 2015). According to this line of research, firms may attempt to imitate the leading firms in their respective industries to maintain or improve their performance, including tax avoidance strategies. These strategies depend on a combination of both costs and benefits of avoiding taxes and typically require management to integrate internal and external information to form expectations regarding the future development of the business and industry. The behavior of their fellow organizations is closely monitored by experienced corporate executives (Kaustia and Rantala, 2015).

The experience of generalist executives enables them to provide a more comprehensive array of information and management skills than those who specialize in a particular industry or firm. Because generalist executives have more information advantages and management skills, they are more likely to mimic the tax avoidance practices of other companies in order to avoid the legal risks associated with improper tax avoidance. Moreover, executives are inclined to imitate the behavior of other managers as a result of their reputation (Lieberman and Asaba, 2006). Through this, executives can make their tax avoidance strategies more legitimate and justifiable to their shareholders. It is also crucial for generalist managers to demonstrate to shareholders that

they are fulfilling their fiduciary responsibilities. This will allow them to obtain higher compensation and recognition from the company. With that in mind, we formulate our second hypothesis.

> *H2: CFOs with more working experience will make similar tax avoidance decisions as their peers.*

2.2.3 Other CFO characteristics

The age and tenure of executives play an important role in their decision-making. Past research has shown that older executives prefer lower-risk investments (Bertrand and Schoar, 2003) and are less effective when making decisions involving complex cognition, the processing of novel information, and problem-solving (Taylor, 1975). Generally, executives make investment decisions about their companies while they are employed, however, CEOs who are close to retirement tend to be more short-sighted. Hambrick et al., (1993) suggest that long-tenured executives are less likely to make changes to technology and more likely to stick with current plans. In a similar vein, James (1999) and Antia et al., (2010) note that executives reaching retirement age often refrain from making long-term investments due to the belief that their successors may benefit.

Further, Gibbons and Murphy (1992) assert that as executives near retirement, they may begin to prioritize their own interests over those of the company, and their career concerns may be overshadowed by the incentives provided by their current compensation. Several studies have found that CEO retirement pay is affected by the firm's performance in its final years (Antia et al., 2010; Dechow and Sloan, 1991; Ferris et al., 2017). As a result, CEOs invest more prudently in high-risk projects, protecting their companies' value to ensure larger pension plans, consistent with the hypothesis that executives nearing retirement have fewer incentives to employ aggressive tax avoidance strategies.

While increasing executive pension benefits is an incentive, executives may also be inclined to act opportunistically before retiring. Stefanescu et al. (2018) examine potential pension benefit manipulation in large U.S. firms before executive retirement. They find that during the year before retirement, the boards increase executive pension income through higher annual bonuses, and allowed lower plan discount rates on retirement lump sums to motivate executives to continue to run the company as they anticipate. This is in line with the rent-seeking perspective on CEO pay, which advocates using more aggressive tax avoidance strategies to serve the interests of shareholders.

Managers' human capital varies significantly, and it is linked to the extent to which they have accumulated general managerial abilities that are not tied to a specific industry or firm (Custódio et al., 2013; Li and Patel, 2019; Chen et al., 2020). A generalist CFO has higher pay and bargaining power in the labor market as a result of the wealth of management skills they have accumulated through inter-industry and inter-company mobility (Custódio et al., 2013). These dynamics might make them less likely to use aggressive tax avoidance to cater to shareholders and hence boost pension benefits when they approach retirement. Based on the above theoretical considerations, we propose our third hypotheses as follows:

H3: A positive relation between CFOs' working experience and tax avoidance is negatively moderated when CFOs are approaching retirement age.

CEOs perceive their careers differently during their tenure. Walters et al. (2007) find that CEOs lack job security at the beginning of their tenure. In addition, they need to improve their knowledge about the company's operations and competitors. Similar to this, Hambrick (1995) find that a lack of shared intra-firm experience between a new CEO from the outside and existing top manager can result in communication issues and knowledge fragmentation. Thus, the new

executive might lack sufficient understanding of the existing resources and future development direction of the enterprise. Moreover, Karaevli (2007) note that newly appointed CEOs were more likely to lose their positions if the board was uncertain about their suitability for the firm's business strategy. Thus, new executives are less likely to behave opportunistically and adopt a conservative management style to protect their careers due to the pressure of being fired and the need for time to understand the company's operations.

On the other hand, how well they perform early in their tenure determines the market's assessment of their abilities and long-term interests as well as their reputation in the managerial market. Most shareholders evaluate an executive's ability based on their current performance (Hermalin and Weisbach, 2012). As a means of establishing credibility and building a positive reputation, CEOs are under pressure to deliver high levels of performance at the beginning of their tenures. According to DeAngelo (1988), in the first year of service, executives tend to disclose adverse news and blame them on their predecessors, thereby reducing the future business risk of the firm and preserving their reputation. Therefore, new executives may take greater risks to seek higher performance for the market and show their managerial skills.

Diverse work exposure allows managers to acquire a wide variety of knowledge and experience, which enables them to thrive in various corporate environments and better deal with work pressure during their early tenure. Generalist CFOs build a professional reputation in the market for human capital by working in a variety of different industries and companies. This enables shareholders to trust more CFOs with more general managerial abilities. For generalist CFOs, long-term career advancement, reputation, and personal interests are more important than short-term gains. Thus, they have fewer incentives to actively plan for tax savings in their first year

of service and are more conservative in developing tax strategies. Given the above, we formulate our fourth hypothesis as follows:

H4: A positive relation between CFOs' working experience and tax avoidance is negatively moderated if the CFO is in the first year of work in the corporation.

Outside directorships are crucial in transferring strategy, knowledge, and information between companies and managers, as well as developing external resources (Beckman and Haunschild, 2002; Westphal et al., 2001). Executives who can serve as directors in multiple companies often have extensive experience and a high reputation, which allows them to build social networks, develop managerial skills, and benefit the firm value (Fama and Jensen, 1983). The reputation incentive encourages executives to exercise caution when accepting new positions in light of their increased responsibilities. Furthermore, executives will be wary of accepting appointments from other organizations to maintain the quality of their decision-making and oversight while also demonstrating their reputation in the labor market.

Nevertheless, holding multiple outside directorships also sends a signal of busyness. Due to time and energy constraints, executives who hold multiple jobs are unable to devote sufficient time and energy to each organization, which affects the value of each firm. By serving on outside boards, executives gain financially. As such managerial busyness could exacerbate agency problems since it interferes with the time managers devote to effectively manage the parent company (Perry and Peyer, 2005). Consistent with the busy executive hypothesis, Ferris et al. (2003) and Ahn et al., (2010) suggest that busy directors are less able to provide effective oversight and advisory decisions in their primary roles which hurt firm performance and firm value. Wang et al. (2022) find that executives who are also directors of subsidiaries are more aggressive in their tax avoidance strategies.

Because generalist CFOs possess broader skills they have more opportunities to take on more outside directorships than specialist CFOs. As a result, generalist CFOs are expected to be busier and give less attention to any firm. Consequently, they will be less motivated to make tax decisions, either because they want to protect their professional reputation or satisfy their interests. Given the above, we propose the following hypothesis:

H5: A positive relation between CFOs' working experience and tax avoidance is negatively moderated if the CFO holds outside directorships.

3 Data and methodology

3.1 Data

We conduct our analysis using a variety of data sources. Our primary data source include Shanghai and Shenzhen A-share listed companies for the years 2010 to 2019. We concentrate on A-share listed companies due to their specific status in the Chinese market and the fact that negotiable shares can only be sold publicly on the A-share market.

To this end, we utilize the CSMAR database that provides us with accounting, financial, and CFO information. We manually collect information about CFOs from firm public announcements, annual reports, Baidu Encyclopaedia, and Sina. We manually collect information regarding the four components of CFO career experience: (1) the number of current positions a CFO holds, (2) the number of functional departments a CFO has worked in during his career, (3) the number of firms he has worked for, and (4) whether the CFO has political connections.

This study excluded the following companies: 1) listed companies in the financial and insurance sectors, as well as public utilities as classified by the China Securities Regulatory Commission. Financial metrics for these enterprises cannot accurately reflect the effects of tax

avoidance due to the varying adoption of financial structures and tax legislation, as well as the unique institutional contexts in various industries. 2) We excluded samples that lacked CFO resumes or other relevant information. 3) We excluded companies whose stock codes begin with "ST" (special treatment) or "PT" (professional treatment) (particular transfer). These companies were facing severe financing constraints, had lost money for three years in a row, or were on the verge of delisting. And finally, 4) we excluded samples with a tax avoidance measure greater than one or less than zero (see e.g., Dyreng et al., 2010).

After completing the preceding steps, we have a final sample of 8,920 observations for 3,780 CFOs from 2,451 companies. To reduce the impact of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. The definitions of all variables and their sources are shown in Table 1.

[Insert Table 1 about here]

Tax avoidance proxies.—The level of corporate tax avoidance is difficult to precisely evaluate due to the diversified and intimate nature of tax planning. The effective tax rate is currently one of the most often used measures of tax planning (Dyreng et al., 2008). This measure illustrates the company's tax cost as a percentage of its pre-tax financial benefit. Given that China's tax policy differs from that of other countries, domestic listed firms receive significant government tax reductions, and each company has its nominal tax rate. The effective tax rates can demonstrate horizontal and vertical comparability of tax rates among firms. This study uses two alternative tax avoidance proxies for the dependent variable: *ETRgaap,* the Generally Accepted Accounting Principles effective tax rate, and the three-year sum effective tax rate (*ETRsum*). A higher (lower) *ETRgaap* and *ETRsum* are associated with less (more) tax avoidance. Further, to measure the peer effect of tax avoidance behavior, we follow the study of Armstrong et al. (2019) and Kubick et al.

(2015), using the difference between two tax avoidance proxies and year-industry, year-province, and year-industry-province mean respectively to measure the peer effect.

CFO work experience.—We construct a general ability index (*GAI*) for CFOs à la Custódio et al. (2013). This proxy captures the transferrable skills of managers based on prior employment experience in listed companies. Due to the limited disclosure of CFOs' CVs in Chinese-listed firms, the dimensions to calculate *GAI* are as follows.

The first factor we consider is the number of functional departments *(Nofunc)* in which CFOs have worked. A higher value for *Nofunc* would indicate that CFOs are more familiar with the overall operations of the organization and have a broader range of professional abilities. The second factor is the number of companies *(Nofirm)* for which a CFO has worked. CFOs with more company experience are expected to have developed more generic skills that allow them to deal with a wide range of corporate contexts. We manually gathered this information by reviewing the CFOs resumes and counting the number of different companies they have worked at. The third factor is the number of positions held by a CFO *(Nopst)*. We anticipate that a CFO with multiple positions will have had exposure in different functional areas, thus adding to the human capital of the firm he is employed. Finally, whether a CFO has worked for military or government agencies is the fourth factor we consider *(PoliticalTie)*. We anticipate that experience in the military or government will provide CFOs with rich and diverse social resources that differ from those of a typical for-profit company, as well as having a complex and far-reaching impact on their managerial style (Benmelech and Frydman, 2015).

Our goal is to investigate whether generalist CFOs avoid more taxes. To this end, we construct an index that captures a CFO's abilities and human capital using his lifetime work experience à la Custodio et al. (2013). The index we create captures skills that are transferrable and

not tied to a specific industry or corporation. As such, we use four proxies to capture the aforesaid. Specifically, (1) *Nopost*, which measures the number of different positions that a CFO has held, (2) *Nofunc*, which measures the number of distinct types of functions in which a CFO has been employed during his career, (3) *Nofirm*, which measures the number of companies in which the CFO has worked during his career, and, finally, (4) *PoliticalTie*, an indicator variable that equals 1 if a CFO has had political connections or has served for military organizations and government agencies, and zero otherwise. We then combine these variables into one score using principal components analysis and we end up with a component with an eigenvalue greater than 1 (eigenvalue of 1.433). All four components of the general ability index (*GAI*) enter with a positive coefficient. A higher value for *GAI* indicates that a CFO has more work experience.

$$GAI_{i.t} = 0.627\ Nofunc_{i.t} + 0.524\ Nofirm_{i.t} + 0.495\ Nopost_{i.t} + 0.295\ PoliticalTie_{i.t} \quad (1)$$

Moderating variables.—We include several variables that could moderate the relation between the CFO's general abilities and corporate tax avoidance. The first is an indicator variable (*CFO_Retire*), which has a value of one if a male CFO is over the age of 58 or a female CFO is over the age of 53. The current retirement age in China is 60 for men and 55 for women. Male civil servants with 30 years of service and female blue-collar workers with 30 years of service are both eligible for early retirement at 55 and 50. As a result, because we do not know precisely when a CFO will retire, we use average values. The second variable is the number of outside directorships (*Nodirector*) held by a CFO. The third variable we consider is whether a CFO is new to his position. Thus, we create a binary variable (*NewCFO*) to code the aforementioned based on the first year a CFO entered service.

Control variables.—This study employs several control variables known to be correlated with corporate tax avoidance (e.g., Davis et al., 2016; Desai and Dharmapala, 2009; Huseynov and Klamm, 2012), including *ROA* (return on asset), *Size* (firm size), *Lev* (leverage), *Cash* (cash and cash equivalents), *Capex* (capital expense), *Intang* (intangible assets), *TobinQ* (the ratio between a market value and replacement value of physical assets), and *Firmage* (the age of firm). Further, we control for the gender of CFOs (*Gender*). Female managers are believed to engage in less tax avoidance than males (Law and Mills, 2017). The definition of all variables is presented in Table 1.

We present descriptive statistics in Table 2. The number of observations ranges from 8,920 to 13,092. For our main dependent variables, *ETRgaap* and *ETRsum,* the median value is around 0.17 while the mean values is around 0.19. The average firm in our sample has an ETR that is about 5.5 percentage points smaller than the 25 percent statutory corporate tax rate. The mean *GAI* is 4.13, with a median of 3.85, and interquartile values ranging from 3.2 to 4.9. This suggests that the CFO general ability index is skewed to the right, with only a few CFOs possessing exceptional abilities.

Among the four components used to construct *GAI*, the number of companies (*Nofirm*) in which the CFO has had experience has the highest value compared to the other dimensions—that is, the number of positions held (*Nopost*), which has the lowest value, and functions (*Nofunc*). The mean (median) for *PoliticalTie* is 0.087 (0), respectively, indicating that the majority of CFOs do not have political connections. Overall, we contend that CFOs have a low level of career experience, implying that CFOs with a diverse set of experiences are scarce. As for the rest of the main control variables, *CFO_Retire* and *Nodirector* have a mean of 0.056 and 0.03, respectively, indicating that fewer CFOs in our sample were approaching retirement age and serving as directors in other listed firms. The *NewCFO* mean is 0.122, implying that 12.2% of the CFOs in the sample

were hired for the first time in their current firm. Finally, when we look at the difference between the firm-level ETR and that of the average ETR at the industry level, we find that the mean difference between the effective tax rate at the firm level and the six specifications of the industry tax rate mean is between 0.1% and 0.4%, indicating that most firms avoid more taxes relative to their peers.

[Insert Table 2 about here]

3.2 Model

The purpose of this paper is to investigate the impact of CFOs' lifetime work experience on the level of corporate tax avoidance, as well as the moderating effects of CFO retirement, the presence of CFO outside directorships, and CFOs' first year of employment. We used the following econometric models to test the aforementioned.

$$\begin{cases} TAXAV_{i,t} \\ PTAXAV_{i,t} \end{cases} = \beta_0 + \beta_1 GAI_{i,t} + \sum_{k=2}^{n} \beta_k Control_{i,t} + \varphi_{i,t} + \varepsilon_{i,t}, \quad (2)$$

$$\begin{cases} TAXAV_{i,t} \\ PTAXAV_{i,t} \end{cases} = \alpha_0 + \alpha_1 GAI_{i,t} + \alpha_2 \boldsymbol{Moderator}_{i,t} + \alpha_3 GAI_{i,t} \times \boldsymbol{Moderator}_{i,t} + \sum_{k=4}^{n} \alpha_k Control_{i,t} + \varphi_{i,t} + \varepsilon_{i,t}. \quad (3)$$

In the above specifications, *TAXAV* represents the tax avoidance proxies, *PTAXAV* denotes the difference between a firm's tax avoidance and the tax avoidance of its peers, *GAI* measures a CFO's general ability, while ***Moderator*** is a vector of the following variables: *CFO_Retire*, *Nodirector*, and *NewCEO*. *Control* denotes all other control variables that have been shown to affect firm tax avoidance, while ϕ denotes industry- and year-fixed effects. The standard errors are clustered at the firm level. We control for both industry and year fixed effects in the regressions.[1]

[1] We exclude firm fixed effects in our regression because panel data can be subject to cross-sectional dependence. This means that all units in the same cross-section are correlated. We use the Pesaran's CD test and Friedman's test to test

4 Empirical results

4.1 Baseline findings

Table 3 shows the result of whether CFOs with extensive work experience avoid more taxes. The dependent variable in columns 1 and 3 (2 and 4) is *ETRgaap* (*ETRsum*). Columns 1 and 2 contain our measure of CFO working experience proxy, *GAI*, control variables, and year- and industry-fixed effects, while columns 3 and 4 show results with *GAID* instead of GAI. The coefficient of *GAI (GAID)* is negative and statistically significant at the 1% level, consistent with the hypothesis that firms with CFOs with higher general managerial skills avoid more taxes. In columns 1 and 2, we find that the coefficient of *GAI* is -0.002 for both two tax avoidance proxies, suggesting that one standard deviation increase in *GAI* will reduce the tax expenses by 0.003 percentage points (calculated as -0.002 x 1.533). Given that the mean value of *ETRgaap* is 0.19, this translates into a decrease of 1.5%, which is economically significant. We also use an indicator variable, *GAID,* as an alternative way to classify CFOs into generalists and specialists. *GAID* takes value one if *GAI* is greater than the median value in a specific year, otherwise zero. The results, after employing this alternative specification, are qualitatively similar and are shown in columns 3 and 4. The *GAID* coefficient is negative and significant at the 1% level, indicating that generalist CFOs seek to save more taxes for the firms they are employed. Specifically, a generalist CFO saves about 0.7% more in taxes than a specialist CFO. These results support our first testable hypothesis, highlighting how CFO's work experience is positively associated with corporate tax avoidance.

[Insert Table 3 about here]

the cross-sectional dependence, the results rejects the null hypothesis of no cross-sectional dependence, indicating that there is a certain level of dependence among firms.

Table 4 presents results on how CFO's working experience is correlated with the firm-peer tax avoidance differentials. To this end, we construct the following control variables based on differences between firm-level *ETRgaap* (or *ETRsum*) and mean values of these variables at the year-industry, year-province, and year-industry-province levels. Again, using *GAI* or *GAID* as our primary control variables, we find strong coefficients. The coefficients are negative and significant at the 1% and 5% levels in all specifications, indicating that managers with more working experience and abilities help their firms to adopt tax planning practices that are closer to their peers. This finding is consistent with our hypothesis that CFOs with more work experience will seek to avoid taxes in ways that are similar to their peer companies to ensure the legitimacy of their tax decisions (Bird et al., 2018). Further, the results when employing *GAID* as our primary control variable indicate a more robust convergent pattern; generalist CFOs are more likely than specialist CFOs to alter their tax strategies in response to the degree of their peers' tax avoidance.

[Insert Table 4 about here]

4.2 Moderating effects

It is critical in our research to investigate how CFO heterogeneities influence the relation between CFO work experience and tax avoidance. We begin by determining whether a CFO is nearing retirement. We proxy this case with the indicator variable *CFO_Retire* (value one if a male CFO is 58 or older and a female CFO is 53 or older) and report the results in Table 5. A close examination of Table 5 reveals that the negative coefficient between *GAI* and tax avoidance measures is still present and statistically significant. More importantly, at conventional levels, the interaction term between *GAI* and *CFO_Retire* has a positive and statistically significant coefficient. This finding supports our third hypothesis, which states that as they near retirement, CFOs with extensive work experience change their tax planning decisions and are more likely to engage in less tax avoidance

to reduce risk, as this increases the firm value and means higher pensions for them (Antia et al., 2010; Dechow and Sloan, 1991; Ferris et al., 2017).

As a next step, we investigate the moderating effect of CFOs nearing retirement on the various firm-peer tax avoidance difference metrics, and we present results in Table 6. Our results indicate that, at conventional levels, the coefficients of the interaction term are both positive and significant. This finding is consistent with previous research indicating that executives are becoming more circumspect with their tax strategies as they near retirement, avoiding what may be perceived as excessive tax aggressiveness (Bird et al., 2018; Kubick et al., 2015) while preserving the company's value to receive a higher pension (Bird et al., 2018). (Antia et al., 2010; Dechow and Sloan, 1991; Ferris et al., 2017).

[Insert Tables 5 & 6 about here]

The next moderating effect we investigate is whether a CFO is new to his job. In H4, we hypothesized that new CFOs would have fewer incentives to avoid taxes. The reason for this is that newly appointed CFOs require time to become acquainted with a company's operations and strategic requirements (Ferris et al., 2017). Table 7 summarizes our findings. We find that the $GAI_{i,t} \times NewCFO_{i,t}$ interaction effect is positive and statistically significant at the 10% level, indicating that newly appointed CFOs with more general skills have fewer incentives to avoid taxes. We next study whether this channel applies when the dependent variables are various firm-peer tax avoidance difference metrics. The results show a positive and statistically significant effect on most of our specifications and coefficients range from 0.3% to 0.4%, reassuring our previous findings.

[Insert Tables 7 & 8 about here]

We next look at how the number of outside directorships moderates the relation between CFO work experience and corporate tax avoidance. We have previously hypothesized that more experienced CFOs are less tax aggressive when holding more outside directorships as they are too busy and inattentive (Cashman et al., 2012; Ferris et al., 2013). We report the results of this test in Table 9. The coefficient of the interaction term is positive and significant at the 10% level. This result suggests that CFO outside directorship weakens the negative relation between CFO lifetime work experience and tax avoidance. We then proceed by investigating the moderating effect when the dependent variables are various firm-peer tax avoidance difference metrics. In this case, we find that the interaction term is positive and statistically significant when we take the differences between *ETRgaap (ETRsum)* and their average values in the year-industry group. These results suggest that the peer effect is less apparent when a CFO is too busy to focus on their direct responsibilities.

[Insert Tables 9 & 10 about here]

4.3 Robustness tests

Our first robustness exercise is to use different proxies of the dependent variable for corporate tax avoidance. We use two such proxies: (i) the current ETR (*ETRcurrent*), and (ii) the book-tax-difference (*BTD*). A higher (lower) current ETR or a lower (higher) BTD indicates less (more) tax avoidance. Table 11 shows the results for the two alternative tax measures. The coefficients for *GAI* and *GAID* are positive and significant at the 10% level on *BTD* and are negative and significant at the 5% level on the current ETR, consistent with Hypothesis 1, that higher CFO experience is positively correlated with firm tax avoidance.

[Insert Table 11 about here]

Another test that we perform is to examine the robustness of the effect of the CFO's work experience on tax avoidance without taking into account the CFO's first and near retirement years. As such, we construct an indicator variable, *WorkYear*, which takes value one if the CFO is not in his first or near retirement years, and 0 otherwise. Table 12 shows the results with *WorkYear* as the moderating variable. The results show that the coefficient of the interaction term is negative and significant at the 1% level. This indicates that generalist CFOs are more likely to engage in aggressive tax avoidance in years other than their first year and the years close to retirement.

[Insert Table 12 about here]

As a final exercise, we examine the relationship between CFO work experience and tax avoidance while accounting for different levels of work experience. To that end, we divide CFOs into various work experience groups based on their GAI ranking in the same industry and year. We then create indicator variables for CFOs with top 5%, 10%, and 15% work experience. According to our findings in Table 13, the coefficient of interest is always negative in all of these exercises, but it is only statistically significant for the top 10% and 15%. This suggests that CFOs in the top 10% and 15% of GAI are more likely to pursue aggressive tax avoidance strategies than those in the top 5%. Our findings are consistent with Park et al. (2016), who argue that CFOs with more management skills based on their experience make more cautious tax avoidance decisions. In this case, tax avoidance activities are a poor choice for managers with advanced management skills. To protect their reputation, they may prefer to convert corporate resources into financial gain more effectively through normal business activities.

[Insert Table 13 about here]

5 Conclusion

This paper examines the relation between CFO's general ability, measured through life career experience, and corporate tax avoidance. We manually collect data to proxy for the career experience of CFOs of A-share listed companies in China from 2010 to 2019. With these data, we then construct a managerial ability index based on four dimensions of CFOs' career experience: the number of roles CFOs have taken throughout their careers, the number of companies they have worked, the number of positions they have held, and whether they have had political connections.

We find that firms that have CFOs with more work experience avoid more taxes. This suggests that CFOs become more aggressive in their tax avoidance decisions as they gain more managerial skills. This effect is profoundly found in the CFOs with general ability scores at the top of the distribution. In addition, we examine the moderating effects of several CFO work-related characteristics on the relation between a CFOs general ability score and tax avoidance, including their first year of employment, the year that they are approaching retirement, and their busyness (i.e., the number of concurrent directorships in other listed firms). We find that the aforesaid variables weaken the negative relation between CFO's general ability and tax avoidance. For example, CFOs will engage in a more conservative tax strategy if they are in their first year of employment, approaching retirement, and are excessively busy. Finally, we demonstrate that CFOs with greater managerial ability are more likely to make tax avoidance decisions similar to their peers. Our results are robust to various sensitivity tests, such as alternative tax avoidance measures.

In this paper, we expand the literature regarding the factors influencing corporate tax avoidance decisions from the CFO career experience perspective. We further advance the literature by providing new insights into the mechanisms at play. We show that CFOs are crucial in corporate tax avoidance decisions. With that in mind, tax authorities and policymakers could consider new

laws and regulations that manage CFOs' incentives to make the firm avoid paying taxes. Finally, our study provides avenues for future research. Due to data limitations, we were unable to use more career-related factors that determine managerial ability. We hope that new research will look into this important issue in more depth.

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Table 1: Variable definitions

Variable	Definition	Source
ETRgaap	Total tax expenses divided by pre-tax income.	CSMAR
ETRsum	The three-year sum of the income tax expense divided by the three-year sum of pre-tax income over the years (t-2) to t.	CSMAR
GAI	The result of the principal components analysis to four general managerial ability proxies: (1) number of current positions, (2) number of functional departments, (3) number of firms, and (4) political connection dummy.	Manually collected
Nopost	The number of different positions that a CFO has held.	CSMAR
Nofunc	The number of distinct types of functions in which a CFO has been employed during their career. There are ten types of functional departments studied in this paper including production operations, research, and development, design, human resources, finance and accounting, marketing, management, economic, legal, and others, taking into account the characteristics of executive resumes in China.	CSMAR
Nofirm	The number of companies in which the CFO has worked during their career.	Manually collected
PoliticalTie	An indicator variable that equals 1 if a CFO has a political connection or has served for military organizations and government agencies, and zero otherwise.	Manually collected
GAID	An indicator variable that equals 1 if a firm's GAI is greater than the median value of GAI in a specific year, and zero otherwise.	CSMAR
Gender	An indicator variable taking value 1 if the CFO is a male, and zero otherwise.	CSMAR
Size	The natural logarithm of the book value of year-end total assets.	CSMAR
Lev	Total debt divided by year-end total assets.	CSMAR
Cash	Cash and cash equivalents divided by year-end total assets.	CSMAR
Capex	Capital expense divided by year-end total assets.	CSMAR
TobinQ	Sum of total assets plus the market value of equity minus book value of equity divided by total assets	CSMAR
Firmage	A firm's age in years. This is calculated as the difference between CSMAR year and the year a firm is established.	Own calculations
Intang	Intangible assets divided by year-end total assets.	CSMAR
CFO_Retire	An indicator variable that takes value 1 if a male CFO's age is over 58 or a female CFO's age is over 53, otherwise 0.	CSMAR
Nodirector	The number of other listed firms a CFO serves as a director.	CSMAR
NewCFO	An indicator variable that takes value 1 if a CFO is newly appointed in a firm, otherwise 0.	CSMAR
ETRgiy	$ETR_{gaap} - \overline{ETR_{gaap\ at\ year\ and\ industry}}$. The difference between *ETRgaap* and the average value of *ETRgaap* by year and industry.	CSMAR
ETRsiy	$ETR_{sum} - \overline{ETR_{sum\ at\ year\ and\ industry}}$. The difference between *ETRsum* and the average value of *ETRsum* by year and industry.	CSMAR
ETRgpy	$ETR_{gaap} - \overline{ETR_{gaap\ at\ year\ and\ province}}$. The difference between *ETRgaap* and the average value of *ETRgaap* by year and province.	CSMAR
ETRspy	$ETR_{sum} - \overline{ETR_{sum\ at\ year\ and\ province}}$. The difference between *ETRsum* and the average value of *ETRsum* by year and province.	CSMAR
ETRgipy	$ETR_{gaap} - \overline{ETR_{gaap\ at\ year,industry,\ and\ province}}$. The difference between *ETRgaap* and the average value of *ETRgaap* by year, industry, and province.	CSMAR
ETRsipy	$ETR_{sum} - \overline{ETR_{sum\ at\ year,industry,\ and\ province}}$. The difference between *ETRsum* and the average value of *ETRsum* by year, industry, and province.	CSMAR
BTD	The total book-tax difference is measured as the difference between accounting income and current tax expense divided the by opening balance of total assets.	CSMAR
WorkYear	An indicator variable that takes the value 1 if a CFO is not in his or her first year in the position and he/she is not nearing retirement, otherwise it takes the value 0.	CSMAR
GAI5	An indicator variable that takes the value 1 if the CFO has a GAI within the top 5% of GAIs in the same year and industry, otherwise 0.	CSMAR
GAI10	An indicator variable that takes the value 1 if the CFO has a GAI within the top 10% of GAIs in the same year and industry, otherwise 0.	CSMAR
GAI15	An indicator variable that takes the value 1 if the CFO has a GAI within the top 15% of GAIs in the same year and industry, otherwise 0.	CSMAR

Table 2: Summary statistics

This table shows the descriptive statistics of the variables used in the analysis. Detailed definitions of all variables are in Table 1.

Variables	Obs.	Mean	Std.dev.	Min	p25	p50	p75	Max
ETRgaap	13092	0.194	0.116	0.001	0.130	0.166	0.245	0.675
ETRsum	8920	0.195	0.108	0.007	0.136	0.169	0.243	0.680
GAI	8920	4.130	1.533	1.646	3.190	3.846	4.895	10.78
GAID	8920	0.425	0.494	0.000	0.000	0.000	1.000	1.000
Nopost	8920	1.683	0.811	1.000	1.000	1.000	2.000	4.000
Nofunc	8920	2.077	0.751	1.000	2.000	2.000	2.000	4.000
Nofirm	8920	3.757	2.310	1.000	2.000	3.000	5.000	12.000
PoliticalTie	8920	0.087	0.281	0.000	0.000	0.000	0.000	1.000
Gender	8920	0.695	0.461	0.000	0.000	1.000	1.000	1.000
ROA	8920	0.635	0.425	0.079	0.359	0.538	0.782	2.533
Lev	8920	0.162	0.127	0.000	0.055	0.147	0.244	0.569
Size	8920	22.50	1.334	19.670	21.540	22.300	23.30	26.140
Cash	8920	0.003	0.073	-0.249	-0.028	0.003	0.033	0.482
Capex	8920	0.051	0.045	0.000	0.017	0.038	0.072	0.222
Intang	8920	0.045	0.042	0.000	0.019	0.035	0.058	0.241
TobinQ	8920	1.915	1.159	0.884	1.189	1.528	2.198	7.915
Firmage	8920	22.840	5.155	12.000	20.000	23.000	27.000	36.000
CFO_Retire	8897	0.056	0.230	0.000	0.000	0.000	0.000	1.000
Nodirector	8920	0.030	0.208	0.000	0.000	0.000	0.000	4.000
NewCFO	8920	0.122	0.328	0.000	0.000	0.000	0.000	1.000
ETRgiy	13092	0.003	0.108	-0.186	-0.053	-0.018	0.036	0.450
ETRgpy	13092	0.004	0.113	-0.191	-0.060	-0.020	0.053	0.454
ETRgipy	13092	0.002	0.100	-0.186	-0.051	-0.013	0.035	0.416
ETRsiy	8920	0.001	0.098	-0.172	-0.050	-0.018	0.032	0.440
ETRspy	8920	0.003	0.105	-0.183	-0.056	-0.020	0.049	0.454
ETRsipy	8920	0.001	0.091	-0.173	-0.046	-0.013	0.030	0.415
BTD	7877	0.034	0.036	0.000	0.010	0.023	0.044	0.213
ETRcurrent	11622	0.217	0.139	0.000	0.139	0.183	0.266	0.777
WorkYear	8920	0.822	0.382	0.000	1.000	1.000	1.000	1.000
GAI5	8920	0.053	0.224	0.000	0.000	0.000	0.000	1.000
GAI10	8920	0.101	0.302	0.000	0.000	0.000	0.000	1.000
GAI15	8920	0.148	0.355	0.000	0.000	0.000	0.000	1.000

Table 3: Relation between GAI on tax avoidance

This table reports results for the association between GAI and tax avoidance. The dependent variables are $ETRgaap$ *and* $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum	ETRgaap	ETRsum
	(1)	(2)	(3)	(4)
GAI	-0.002***	-0.002**		
	(-2.632)	(-2.394)		
GAID			-0.007***	-0.008***
			(-2.591)	(-2.666)
Gender	0.002	0.004	0.002	0.004
	(0.830)	(1.280)	(0.780)	(1.275)
ROA	0.013***	0.009**	0.013***	0.009**
	(3.180)	(2.036)	(3.196)	(2.032)
Lev	0.091***	0.098***	0.091***	0.099***
	(6.664)	(5.943)	(6.671)	(5.956)
Size	0.005***	0.001	0.005***	0.001
	(3.591)	(0.943)	(3.513)	(0.890)
Cash	-0.033***	-0.022	-0.033***	-0.022
	(-4.702)	(-1.552)	(-4.668)	(-1.535)
Capex	-0.201***	-0.233***	-0.201***	-0.233***
	(-7.271)	(-7.312)	(-7.309)	(-7.323)
Intang	0.178***	0.167***	0.179***	0.168***
	(3.939)	(3.398)	(3.954)	(3.423)
TobinQ	-0.008***	-0.008***	-0.008***	-0.008***
	(-5.419)	(-4.847)	(-5.430)	(-4.843)
Firmage	0.001***	0.001***	0.001***	0.001***
	(3.848)	(3.620)	(3.926)	(3.682)
Intercept	0.061**	0.135***	0.056*	0.130***
	(1.977)	(3.772)	(1.835)	(3.662)
Observations	13,092	8,920	13,092	8,920
Adjusted R-squared	0.129	0.152	0.129	0.152
Cluster	Firm	Firm	Firm	Firm
Year FE	√	√	√	√
Industry FE	√	√	√	√

Table 4: Relation between GAI and peer tax avoidance

This table reports results for the association between GAI and differences between firm-level ETRs and average peers' ETRs at various dimensions (i.e., combinations of year, industry, and province). The dependent variables are *ETRgiy, ETRsiy, ETRgpy, ETRspy, ETRgipy,* and *ETRsipy*. Robust standard errors, clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgiy		ETRsiy		ETRgpy		ETRspy		ETRgipy		ETRsipy	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
GAI	-0.002***		-0.002**		-0.002***		-0.002**		-0.002***		-0.002**	
	(-2.678)		(-2.455)		(-2.632)		(-2.464)		(-2.582)		(-2.335)	
GAID		-0.007***		-0.009***		-0.007***		-0.008***		-0.006***		-0.007***
		(-2.651)		(-2.823)		(-2.621)		(-2.722)		(-2.721)		(-2.655)
Gender	0.002	0.002	0.005	0.005	0.003	0.003	0.005	0.005	0.004	0.004	0.005*	0.005*
	(0.817)	(0.767)	(1.376)	(1.378)	(1.238)	(1.192)	(1.452)	(1.446)	(1.568)	(1.536)	(1.728)	(1.729)
ROA	0.012***	0.013***	0.009**	0.009**	0.014***	0.014***	0.010**	0.010**	0.011***	0.011***	0.008**	0.008**
	(3.237)	(3.253)	(2.010)	(2.006)	(3.563)	(3.579)	(2.120)	(2.116)	(3.190)	(3.204)	(2.022)	(2.018)
Lev	0.093***	0.093***	0.101***	0.101***	0.089***	0.089***	0.098***	0.098***	0.072***	0.072***	0.085***	0.085***
	(6.984)	(6.991)	(6.233)	(6.248)	(6.771)	(6.778)	(6.129)	(6.143)	(6.009)	(6.016)	(5.645)	(5.661)
Size	0.004***	0.004***	0.001	0.001	0.004***	0.004***	0.001	0.001	0.003***	0.003**	0.001	0.001
	(3.212)	(3.132)	(0.721)	(0.666)	(2.754)	(2.676)	(0.538)	(0.483)	(2.578)	(2.502)	(0.590)	(0.540)
Cash	-0.034***	-0.033***	-0.018	-0.018	-0.030***	-0.030***	-0.015	-0.015	-0.032***	-0.032***	-0.017	-0.017
	(-5.024)	(-4.986)	(-1.314)	(-1.297)	(-4.431)	(-4.394)	(-1.088)	(-1.070)	(-5.026)	(-4.985)	(-1.345)	(-1.329)
Capex	-0.200***	-0.201***	-0.231***	-0.231***	-0.173***	-0.174***	-0.218***	-0.219***	-0.171***	-0.172***	-0.213***	-0.214***
	(-7.452)	(-7.489)	(-7.418)	(-7.428)	(-6.459)	(-6.492)	(-6.976)	(-6.984)	(-6.900)	(-6.929)	(-7.321)	(-7.328)
Intang	0.178***	0.179***	0.164***	0.165***	0.165***	0.166***	0.163***	0.164***	0.177***	0.178***	0.164***	0.164***
	(4.044)	(4.060)	(3.428)	(3.455)	(3.782)	(3.797)	(3.444)	(3.470)	(4.609)	(4.627)	(3.772)	(3.805)
TobinQ	-0.007***	-0.007***	-0.007***	-0.007***	-0.008***	-0.008***	-0.008***	-0.008***	-0.006***	-0.006***	-0.006***	-0.006***
	(-5.381)	(-5.393)	(-4.701)	(-4.697)	(-5.598)	(-5.610)	(-5.056)	(-5.053)	(-5.404)	(-5.420)	(-4.121)	(-4.121)
Firmage	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.888)	(3.966)	(3.761)	(3.822)	(3.858)	(3.936)	(3.614)	(3.678)	(4.174)	(4.245)	(4.055)	(4.115)
Intercept	-0.117***	-0.121***	-0.052	-0.057	-0.103***	-0.107***	-0.042	-0.047	-0.095***	-0.099***	-0.049	-0.053
	(-3.910)	(-4.069)	(-1.482)	(-1.626)	(-3.462)	(-3.614)	(-1.195)	(-1.339)	(-3.433)	(-3.575)	(-1.488)	(-1.619)
Observations	13,092	13,092	8,920	8,920	13,092	13,092	8,920	8,920	13,092	13,092	8,920	8,920
Adjusted R-squared	0.048	0.048	0.048	0.049	0.125	0.125	0.150	0.150	0.042	0.042	0.044	0.044
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm
Year FE	√	√	√	√	√	√	√	√	√	√	√	√
Industry FE	√	√	√	√	√	√	√	√	√	√	√	√

Table 5: The moderating effect of CFO retirement

This table reports results for the moderating effect of CFO close to retirement on the association between GAI and tax avoidance. The dependent variables are $ETRgaap$ and $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum
	(1)	(2)
GAI	-0.003***	-0.003***
	(-2.869)	(-2.809)
CFO_Retire	-0.022*	-0.029**
	(-1.897)	(-2.215)
CFO_Retire×GAI	0.004*	0.007**
	(1.712)	(2.285)
Gender	0.002	0.005
	(0.767)	(1.360)
ROA	0.013***	0.009**
	(3.210)	(2.038)
Lev	0.091***	0.099***
	(6.678)	(5.975)
Size	0.005***	0.002
	(3.598)	(0.970)
Cash	-0.033***	-0.022
	(-4.681)	(-1.544)
Capex	-0.201***	-0.235***
	(-7.295)	(-7.361)
Intang	0.179***	0.168***
	(3.946)	(3.405)
TobinQ	-0.008***	-0.008***
	(-5.400)	(-4.812)
Firmage	0.001***	0.001***
	(3.887)	(3.618)
Intercept	0.061**	0.136***
	(1.999)	(3.782)
Observations	13,065	8,897
Adjusted R-squared	0.130	0.152
Cluster	Firm	Firm
Year FE	√	√
Industry FE	√	√

Table 6: The moderating effect of CFO retirement on peer tax avoidance

This table reports results for the moderating effect of CFO close to retirement on the association between GAI and the differences between firm-level ETRs and average peers' ETRs at various dimensions (i.e., combinations of year, industry, and province). The dependent variables are *ETRgiy, ETRsiy, ETRgpy, ETRspy, ETRgipy,* and *ETRsipy*. Robust standard errors, clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgiy	ETRsiy	ETRgpy	ETRspy	ETRgipy	ETRsipy
	(1)	(2)	(3)	(4)	(5)	(6)
GAI	-0.003***	-0.003***	-0.003***	-0.003***	-0.003***	-0.003***
	(-2.916)	(-2.844)	(-2.885)	(-2.863)	(-2.942)	(-2.835)
CFO_Retire	-0.020*	-0.026**	-0.023**	-0.029**	-0.022*	-0.027**
	(-1.799)	(-2.010)	(-2.023)	(-2.244)	(-1.910)	(-2.059)
CFO_Retire×GAI	0.004*	0.007**	0.005*	0.007**	0.005**	0.007**
	(1.651)	(2.089)	(1.782)	(2.246)	(2.064)	(2.407)
Gender	0.002	0.005	0.003	0.005	0.004	0.006*
	(0.769)	(1.462)	(1.146)	(1.498)	(1.585)	(1.889)
ROA	0.013***	0.009**	0.014***	0.010**	0.011***	0.008**
	(3.267)	(2.000)	(3.593)	(2.119)	(3.213)	(2.001)
Lev	0.093***	0.101***	0.089***	0.099***	0.073***	0.085***
	(6.994)	(6.255)	(6.788)	(6.168)	(6.017)	(5.669)
Size	0.004***	0.001	0.004***	0.001	0.003***	0.001
	(3.233)	(0.763)	(2.767)	(0.566)	(2.601)	(0.627)
Cash	-0.033***	-0.018	-0.030***	-0.015	-0.032***	-0.017
	(-5.003)	(-1.310)	(-4.415)	(-1.087)	(-5.026)	(-1.356)
Capex	-0.201***	-0.232***	-0.174***	-0.221***	-0.172***	-0.215***
	(-7.477)	(-7.461)	(-6.485)	(-7.033)	(-6.926)	(-7.377)
Intang	0.180***	0.166***	0.166***	0.163***	0.178***	0.164***
	(4.065)	(3.451)	(3.782)	(3.437)	(4.616)	(3.754)
TobinQ	-0.007***	-0.007***	-0.008***	-0.008***	-0.006***	-0.006***
	(-5.360)	(-4.660)	(-5.569)	(-5.005)	(-5.390)	(-4.079)
Firmage	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.922)	(3.760)	(3.899)	(3.619)	(4.197)	(4.045)
Intercept	-0.117***	-0.052	-0.102***	-0.041	-0.095***	-0.049
	(-3.892)	(-1.479)	(-3.430)	(-1.173)	(-3.410)	(-1.474)
Observations	13,065	8,897	13,065	8,897	13,065	8,897
Adjusted R-squared	0.049	0.049	0.125	0.150	0.042	0.045
Cluster	Firm	Firm	Firm	Firm	Firm	Firm
Year FE	√	√	√	√	√	√
Industry FE	√	√	√	√	√	√

Table 7: The moderating effect of CFOs' first-year service

This table reports results for the moderating effect of the CFO's first-year service on the association between GAI and tax avoidance. The dependent variables are $ETRgaap$ and $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum
	(1)	(2)
GAI	-0.003***	-0.003***
	(-3.002)	(-2.745)
NewCFO	-0.013*	-0.012
	(-1.700)	(-1.355)
NewCFO×GAI	0.004*	0.004*
	(1.898)	(1.855)
Gender	0.002	0.004
	(0.823)	(1.277)
ROA	0.013***	0.009**
	(3.181)	(2.039)
Lev	0.090***	0.098***
	(6.645)	(5.898)
Size	0.005***	0.001
	(3.605)	(0.944)
Cash	-0.033***	-0.022
	(-4.685)	(-1.571)
Capex	-0.200***	-0.231***
	(-7.250)	(-7.231)
Intang	0.178***	0.166***
	(3.936)	(3.384)
TobinQ	-0.008***	-0.008***
	(-5.383)	(-4.846)
Firmage	0.001***	0.001***
	(3.838)	(3.625)
Intercept	0.062**	0.136***
	(1.990)	(3.798)
Observations	13,092	8,920
Adjusted R-squared	0.129	0.152
Cluster	Firm	Firm
Year FE	√	√
Industry FE	√	√

Table 8: The moderating effect of CFO first year on peer tax avoidance

This table reports results for the moderating effect of the CFO's first year on the association between GAI and the differences between firm-level ETRs and average peers' ETRs at various dimensions (i.e., combinations of year, industry, and province). The dependent variables are *ETRgiy, ETRsiy, ETRgpy, ETRspy, ETRgipy,* and *ETRsipy*. Robust standard errors, clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgiy	ETRsiy	ETRgpy	ETRspy	ETRgipy	ETRsipy
	(1)	(2)	(3)	(4)	(5)	(6)
GAI	-0.003***	-0.003***	-0.003***	-0.003***	-0.002***	-0.003***
	(-3.070)	(-2.824)	(-2.942)	(-2.848)	(-2.812)	(-2.739)
NewCFO	-0.014*	-0.013	-0.013	-0.014	-0.009	-0.014*
	(-1.832)	(-1.468)	(-1.644)	(-1.525)	(-1.302)	(-1.696)
NewCFO×GAI	0.004**	0.004**	0.003*	0.004*	0.003	0.004**
	(2.033)	(1.965)	(1.739)	(1.960)	(1.483)	(2.015)
Gender	0.002	0.005	0.003	0.005	0.004	0.005*
	(0.810)	(1.373)	(1.234)	(1.450)	(1.562)	(1.728)
ROA	0.012***	0.009**	0.014***	0.010**	0.011***	0.008**
	(3.239)	(2.014)	(3.565)	(2.124)	(3.191)	(2.025)
Lev	0.092***	0.100***	0.088***	0.097***	0.072***	0.084***
	(6.963)	(6.188)	(6.753)	(6.084)	(5.994)	(5.601)
Size	0.004***	0.001	0.004***	0.001	0.003***	0.001
	(3.227)	(0.720)	(2.755)	(0.536)	(2.593)	(0.586)
Cash	-0.034***	-0.018	-0.030***	-0.015	-0.032***	-0.017
	(-4.997)	(-1.334)	(-4.371)	(-1.107)	(-5.024)	(-1.365)
Capex	-0.200***	-0.229***	-0.173***	-0.217***	-0.171***	-0.212***
	(-7.429)	(-7.333)	(-6.439)	(-6.895)	(-6.883)	(-7.238)
Intang	0.178***	0.163***	0.165***	0.162***	0.177***	0.163***
	(4.042)	(3.414)	(3.780)	(3.431)	(4.607)	(3.759)
TobinQ	-0.007***	-0.007***	-0.008***	-0.008***	-0.006***	-0.006***
	(-5.348)	(-4.701)	(-5.578)	(-5.059)	(-5.373)	(-4.124)
Firmage	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.876)	(3.765)	(3.844)	(3.618)	(4.167)	(4.056)
Intercept	-0.116***	-0.051	-0.101***	-0.041	-0.095***	-0.047
	(-3.827)	(-1.441)	(-3.373)	(-1.151)	(-3.375)	(-1.434)
Observations	13,092	8,920	13,092	8,920	13,092	8,920
Adjusted R-squared	0.048	0.049	0.125	0.150	0.042	0.044
Cluster	Firm	Firm	Firm	Firm	Firm	Firm
Year FE	√	√	√	√	√	√
Industry FE	√	√	√	√	√	√

Table 9: The moderating effect of CFO outside directorships

This table reports results for the moderating effect of CFOs outside directorships in listed firms on the association between GAI and tax avoidance. The dependent variables are $ETRgaap$ and $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum
	(1)	(2)
GAI	-0.002***	-0.002**
	(-2.723)	(-2.496)
Nodirector	-0.023*	-0.022*
	(-1.919)	(-1.745)
Nodirector×GAI	0.004*	0.004*
	(1.915)	(1.881)
Gender	0.003	0.004
	(0.860)	(1.303)
ROA	0.013***	0.009**
	(3.171)	(2.040)
Lev	0.090***	0.098***
	(6.656)	(5.937)
Size	0.005***	0.002
	(3.654)	(1.016)
Cash	-0.033***	-0.022
	(-4.696)	(-1.543)
Capex	-0.200***	-0.233***
	(-7.265)	(-7.305)
Intang	0.178***	0.168***
	(3.952)	(3.417)
TobinQ	-0.008***	-0.008***
	(-5.388)	(-4.818)
Firmage	0.001***	0.001***
	(3.849)	(3.622)
Intercept	0.058*	0.133***
	(1.890)	(3.679)
Observations	13,092	8,920
Adjusted R-squared	0.129	0.152
Cluster	Firm	Firm
Year FE	√	√
Industry FE	√	√

Table 10: The moderating effect of CFO outside directorships on peer tax avoidance

This table reports results for the moderating effect of CFO outside directorship in listed firms on the association between GAI and the differences between firm-level ETRs and average peers' ETRs at various dimensions (i.e., combinations of year, industry, and province). The dependent variables are *ETRgiy, ETRsiy, ETRgpy, ETRspy, ETRgipy,* and *ETRsjpy*. Robust standard errors, clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgiy	ETRsiy	ETRgpy	ETRspy	ETRgipy	ETRsipy
	(1)	(2)	(3)	(4)	(5)	(6)
GAI	-0.002***	-0.003**	-0.002***	-0.002**	-0.002***	-0.002**
	(-2.785)	(-2.566)	(-2.680)	(-2.540)	(-2.674)	(-2.432)
Nodirector	-0.024**	-0.022*	-0.017	-0.015	-0.011	-0.010
	(-1.963)	(-1.786)	(-1.445)	(-1.249)	(-1.006)	(-0.836)
Nodirector×GAI	0.004**	0.004*	0.003	0.003	0.002	0.002
	(1.995)	(1.949)	(1.349)	(1.328)	(1.165)	(1.095)
Gender	0.002	0.005	0.004	0.005	0.004	0.005*
	(0.847)	(1.400)	(1.260)	(1.466)	(1.579)	(1.733)
ROA	0.012***	0.009**	0.014***	0.010**	0.011***	0.008**
	(3.229)	(2.015)	(3.555)	(2.124)	(3.191)	(2.029)
Lev	0.092***	0.100***	0.088***	0.098***	0.072***	0.085***
	(6.977)	(6.227)	(6.764)	(6.126)	(6.008)	(5.647)
Size	0.004***	0.001	0.004***	0.001	0.003***	0.001
	(3.274)	(0.799)	(2.803)	(0.583)	(2.579)	(0.597)
Cash	-0.034***	-0.018	-0.030***	-0.015	-0.032***	-0.017
	(-5.016)	(-1.305)	(-4.428)	(-1.082)	(-5.020)	(-1.340)
Capex	-0.200***	-0.230***	-0.173***	-0.218***	-0.171***	-0.213***
	(-7.446)	(-7.410)	(-6.455)	(-6.970)	(-6.891)	(-7.312)
Intang	0.179***	0.165***	0.165***	0.163***	0.178***	0.164***
	(4.059)	(3.450)	(3.789)	(3.459)	(4.624)	(3.789)
TobinQ	-0.007***	-0.007***	-0.008***	-0.008***	-0.006***	-0.006***
	(-5.351)	(-4.670)	(-5.571)	(-5.038)	(-5.402)	(-4.121)
Firmage	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.890)	(3.763)	(3.858)	(3.617)	(4.178)	(4.061)
Intercept	-0.119***	-0.054	-0.105***	-0.043	-0.095***	-0.049
	(-3.951)	(-1.541)	(-3.497)	(-1.224)	(-3.424)	(-1.479)
Observations	13,092	8,920	13,092	8,920	13,092	8,920
Adjusted R-squared	0.048	0.048	0.125	0.150	0.042	0.044
Cluster	Firm	Firm	Firm	Firm	Firm	Firm
Year FE	√	√	√	√	√	√
Industry FE	√	√	√	√	√	√

Table 11: Results with alternative tax avoidance measures

This table reports results for the association between GAI and alternative tax avoidance measures. The dependent variable is *BTD* and *ETRcurrent*. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	BTD	BTD	ETRcurrent	ETRcurrent
	(1)	(2)	(3)	(4)
GAI	0.001*		-0.002**	
	(1.767)		(-1.964)	
GAID		0.002*		-0.007**
		(1.696)		(-2.289)
Gender	-0.003**	-0.003**	0.005	0.005
	(-2.244)	(-2.222)	(1.324)	(1.316)
ROA	-0.002	-0.002	0.006	0.006
	(-1.394)	(-1.410)	(1.239)	(1.258)
Lev	-0.052***	-0.052***	0.104***	0.104***
	(-12.146)	(-12.130)	(6.655)	(6.659)
Size	0.002***	0.002***	0.004**	0.004**
	(3.858)	(3.905)	(2.255)	(2.187)
Cash	0.069***	0.069***	-0.065***	-0.064***
	(12.821)	(12.821)	(-7.585)	(-7.552)
Capex	0.052***	0.052***	-0.236***	-0.236***
	(4.821)	(4.841)	(-7.380)	(-7.395)
Intang	0.003	0.003	0.175***	0.176***
	(0.148)	(0.138)	(3.291)	(3.299)
TobinQ	0.006***	0.006***	-0.013***	-0.013***
	(9.111)	(9.131)	(-8.588)	(-8.593)
Firmage	0.000	0.000	0.001***	0.001***
	(1.459)	(1.423)	(3.128)	(3.167)
Intercept	-0.030**	-0.029**	0.128***	0.125***
	(-2.235)	(-2.157)	(3.436)	(3.352)
Observations	7,877	7,877	11,622	11,622
Adjusted R-squared	0.118	0.118	0.123	0.123
Cluster	Firm	Firm	Firm	Firm
Year FE	√	√	√	√
Industry FE	√	√	√	√

Table 12: The moderating effect of the CFO's work-year service

This table shows the results for the moderating effect of the CFO's service on the association between *GAI* and tax avoidance, excluding CFO's first year in the position and the year before retirement. The dependent variables are $ETRgaap$ and $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum
	(1)	(2)
GAI	0.001	0.002
	(0.781)	(1.042)
WorkYear	0.018***	0.018**
	(2.608)	(2.283)
WorkYear×GAI	-0.004***	-0.005***
	(-2.655)	(-2.668)
Gender	0.002	0.005
	(0.855)	(1.396)
ROA	0.013***	0.010**
	(3.184)	(2.056)
Lev	0.090***	0.098***
	(6.631)	(5.893)
Size	0.005***	0.001
	(3.596)	(0.950)
Cash	-0.033***	-0.022
	(-4.625)	(-1.568)
Capex	-0.201***	-0.232***
	(-7.277)	(-7.266)
Intang	0.177***	0.165***
	(3.928)	(3.371)
TobinQ	-0.008***	-0.008***
	(-5.414)	(-4.853)
Firmage	0.001***	0.001***
	(3.843)	(3.627)
Intercept	0.046	0.120***
	(1.461)	(3.309)
Observations	13,092	8,920
Adjusted R-squared	0.130	0.152
Cluster	Firm	Firm
Year FE	√	√
Industry FE	√	√

Table 13: Results with alternative GAI measures

This table shows the relationship between alternative GAI measures (indicators with a value of one if a CFO's GAI is in the top 5%, 10%, or 15%, and zero otherwise) and tax avoidance. The dependent variables are $ETRgaap$ and $ETRsum$. Robust standard errors are clustered at the firm level, and t-statistics are reported in parentheses. ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively. A complete description of variables along with their sources is in Table 1.

	ETRgaap	ETRsum	ETRgaap	ETRsum	ETRgaap	ETRsum
	(1)	(2)	(3)	(4)	(5)	(6)
GAI5	-0.003	-0.007				
	(-0.514)	(-1.386)				
GAI10			-0.007**	-0.011***		
			(-1.971)	(-2.634)		
GAI15					-0.007**	-0.011***
					(-2.300)	(-2.915)
Gender	0.002	0.004	0.002	0.004	0.002	0.004
	(0.541)	(1.100)	(0.649)	(1.204)	(0.701)	(1.238)
ROA	0.013***	0.010**	0.013***	0.009**	0.013***	0.009**
	(3.214)	(2.049)	(3.194)	(2.038)	(3.171)	(2.019)
Lev	0.091***	0.098***	0.091***	0.098***	0.091***	0.098***
	(6.667)	(5.933)	(6.663)	(5.927)	(6.661)	(5.932)
Size	0.005***	0.001	0.005***	0.002	0.005***	0.002
	(3.554)	(0.944)	(3.605)	(0.985)	(3.599)	(0.966)
Cash	-0.034***	-0.022	-0.034***	-0.022	-0.033***	-0.022
	(-4.835)	(-1.532)	(-4.823)	(-1.535)	(-4.766)	(-1.529)
Capex	-0.203***	-0.236***	-0.202***	-0.234***	-0.202***	-0.234***
	(-7.355)	(-7.373)	(-7.331)	(-7.332)	(-7.324)	(-7.330)
Intang	0.179***	0.168***	0.179***	0.167***	0.179***	0.167***
	(3.958)	(3.419)	(3.957)	(3.405)	(3.961)	(3.394)
TobinQ	-0.008***	-0.008***	-0.008***	-0.008***	-0.008***	-0.008***
	(-5.429)	(-4.872)	(-5.415)	(-4.863)	(-5.394)	(-4.832)
Firmage	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(4.003)	(3.730)	(3.952)	(3.658)	(3.956)	(3.692)
Intercept	0.051*	0.126***	0.051*	0.125***	0.051*	0.126***
	(1.674)	(3.519)	(1.660)	(3.509)	(1.677)	(3.531)
Observations	13,092	8,920	13,092	8,920	13,092	8,920
Adjusted R-squared	0.128	0.151	0.129	0.152	0.129	0.152
Cluster	Firm	Firm	Firm	Firm	Firm	Firm
Year FE	√	√	√	√	√	√
Industry FE	√	√	√	√	√	√