

PHBS WORKING PAPER SERIES

**Peer pressure and moral hazard: Evidence from retail banking investment advisors**

Chen Lin  
The University of Hong Kong

Chenhao Wang  
Zhejiang University

Yuchen Xu  
Peking University

Ting Zhang

November 2022

Working Paper 20221106

**Abstract**

It is generally believed that pressure from peers induces employees to improve their efficiency and performance, but there is little literature analysing whether employees' improved performance is detrimental to the interests of others, and the issue of moral hazard behind peer pressure has yet to be studied. Based on data from a sample of accounts at a large commercial bank in China, this paper measures peer pressure in terms of the performance of financial managers relative to their colleagues, in terms of sales of financial products, and moral hazard in terms of sales of poor-quality financial products ("high-risk-low-return" products). This empirical study finds that peer pressure can improve the performance of financial managers, but it can also exacerbate moral hazard, resulting in a significant increase in sales of poor-quality financial products, especially among poor-performing financial managers. In addition, customer complaints can be effective in reducing moral hazard, and the number of competitors provides the threshold condition by which peer pressure can trigger moral hazard. Based on correspondence between financial managers and clients, we find that moral hazard occurs mainly between female financial managers and male clients, and between financial managers who lack work experience and clients who lack investment experience.

*Keywords:* Peer pressure, Moral hazard, Retail investment advisor

*JEL Classification:* L12, G32

Peking University HSBC Business School  
University Town, Nanshan District  
Shenzhen 518055, China



**PHBS**  
北京大学汇丰商学院



# Peer pressure and moral hazard: Evidence from retail banking investment advisors<sup>\*</sup>

Chen Lin

The University of Hong Kong

Chenhao Wang

Zhejiang University

Yuchen Xu

Peking University HSBC Business School

Ting Zhang

July 2022

## **Abstract**

It is generally believed that pressure from peers induces employees to improve their efficiency and performance, but there is little literature analysing whether employees' improved performance is detrimental to the interests of others, and the issue of moral hazard behind peer pressure has yet to be studied. Based on data from a sample of accounts at a large commercial bank in China, this paper measures peer pressure in terms of the performance of financial managers relative to their colleagues, in terms of sales of financial products, and moral hazard in terms of sales of poor-quality financial products ("high-risk-low-return" products). This empirical study finds that peer pressure can improve the performance of financial managers, but it can also exacerbate moral hazard, resulting in a significant increase in sales of poor-quality financial products, especially among poor-performing financial managers. In addition, customer complaints can be effective in reducing moral hazard, and the number of competitors provides the threshold condition by which peer pressure can trigger moral hazard. Based on correspondence between financial managers and clients, we find that moral hazard occurs mainly between female financial managers and male clients, and between financial managers who lack work experience and clients who lack investment experience.

Keywords: Peer pressure, moral hazard, retail investment advisor

JEL Classification: L12, G32

---

<sup>\*</sup> Preliminary draft, please do not distribute.

# 1 Introduction

In everyday life and work, people's thoughts and behaviours are to greater or lesser degrees influenced by their 'peers' (Barron and Gjerde, 1997; Bursztyn and Jensen, 2015), either by imitating each other, competing with each other, or monitoring each other, commonly known as "peer pressure" (Kandel and Lazear, 1992). In recent years economists have applied this sociological phenomenon to the field of economics and finance and found that peer pressure permeates every decision of brokers make in consumption, investment, production, etc. (Falk and Ichino, 2006; Mas and Moretti, 2009; Kaur, Kremer and Mullainathan, 2010).<sup>2</sup> Some of these scholars have focused on the role of peer effects in business and have found that peer effects ultimately have an impact on business output through influencing the behaviour of employees. In addition to phenomena such as information sharing between peers (Serafinelli, 2013), it also creates mutual pressure between colleagues, and this pressure creates a working atmosphere of competition and monitoring. Proper competition helps to increase employee productivity (Mas and Moretti, 2009) and proper supervision helps to reduce unethical behaviour of employees such as 'free-riding' and irregularities (Chan, 2016; Silver, 2021). Overall, the available studies all tend to support the positive effect of peer pressure on business management performance. In reality, we do often observe that companies deliberately set competitive KPI targets as a way of creating a certain amount of peer pressure to increase employee effort and productivity. But is competition a good medicine that can be used with impunity? Is it a 'good thing' in the purest sense of the word? It should come as no surprise that under peer pressure, people have a strong incentive to do whatever it takes to improve their performance, especially when the performance appraisal of the company focuses on the short-term performance of the employees, who are more likely to develop short-sightedness and sacrifice the long-term interests of the company, thus creating a new moral hazard. In this context, the specific question we ask is what means do employees use to improve their performance when subjected to peer pressure from colleagues? Are there any 'immoral'

---

<sup>2</sup> Even professional finance practitioners are not immune (Dimmock, Gerken, and Graham, 2018), and it can be argued that a significant portion of behavioural finance theory is derived from the peer effect

means involved?

Few empirical results of the above-mentioned issues have been published in the literature so far. The reasons for this are, on the one hand, the lack of micro-level data and, on the other hand, the fact that moral hazard behaviour is relatively hidden and not easy to measure. This paper seeks to explore empirically the issue of moral hazard due to peer pressure, based on micro-level data of bank financial managers selling financial products to individual customers.

The data we obtained came from a national commercial bank within China, which is a representative top commercial bank in China with a total of 1,000 business outlets in 122 cities across the country and achieved a turnover of nearly RMB 100 billion by 2021. We obtained a sample of 20,000 retail wealth management customers from all branches of the bank in Beijing (64 branches in total), pooling their financial assets between June 2019 and June 2020, of which 5,518 had one-to-one, non-managerial financial managers, corresponding to a total of 463 financial managers, representing 37% of the total number of non-managerial financial managers in the sample. Our subsequent empirical research focuses on these 5,518 clients with non-managerial level financial managers and their 463 corresponding financial managers. Our sample data covers the average daily financial asset size, purchase history of rigid financial products and some personal information (e.g. age, gender, account opening time, bank, risk preference, etc.) for each month of the sampled customers, as well as the monthly appraisal achievement status, rank,<sup>3</sup> total personal and corporate assets under management and some personal information (e.g. age, gender, working time, etc.) of the corresponding financial managers.

Due to the detailed nature of this data, we are able to measure peer pressure on individual financial managers specifically, using performance indicators and whether individuals are trying to improve their future performance through ‘immoral’ sales practices, thus building a complete picture of whether employees are working hard due

---

<sup>3</sup> A grading system for money managers, with levels 1-10, the higher the level, the more senior the adviser, and the target profit per month per adviser is related to their assigned level

to competitive peer pressure and by what means they are improving their performance.

The retail financial manager industry is particularly well suited to the study of peer pressure and moral hazard. On the one hand, the performance of financial managers is based on their individual performance in selling financial products and is not assessed on a team basis. Banks do not regularly publish individual performance rankings, so individual financial managers are vulnerable to competitive pressure from their peers.<sup>4</sup> In our data, the bank assesses the performance of its retail business at the end of each month, with the main assessment being whether the financial manager has met the sales targets set at the beginning of the month. Performance is measured by the ‘expected return’ (RMB) metric,<sup>5</sup> which is based on the volume of new financial assets sold to clients by financial managers during the month, adjusted for the expected return and weighting of the financial product categories. It is clear that ‘sales’ is a clear result-oriented assessment indicator, which is clearer and more intuitive than the general career assessment. In addition, and most importantly, in the retail financial sector, the products sold (i.e., financial products) usually have a certain level of information asymmetry and uncertainty for the client, as the underlying assets and transaction information corresponding to the financial products are not accessible to the client, which gives the financial manager sufficient room to make immoral sales. This is demonstrated by the fact that banks continue to launch a large number of financial products, which fall into different risk classes and investment types. However, due to the high cost of access to information and the single means of access available to retail customers (relying only on product brochures or bank app information), it is generally difficult for them to compare all the relevant details of financial products in detail, and their choice of purchase is almost entirely dependent on the recommendation of their financial managers, whose job is precisely to recommend the right financial products

---

<sup>4</sup> The head office will look at the total sales of each branch, but at the specific sales level, financial managers and customers are engaged in a one-to-one sales model, and internal and regional assessments are conducted at the individual branch manager level

<sup>5</sup> Financial assets include wealth management, time deposits, demand deposits, securities, securities-in-transit, trusts, insurance and precious metals; when calculating the completion rate (simulated profit), banks not only assess the absolute amount of sales, but also assign different weights to different products by category, as explained in Chapter 3 section

to their customers. In other words, a financial manager who is dedicated to his or her clients should do what he or she is supposed to do, which is to help them select the most comprehensive financial products with good value for money, while understanding their risk appetite, so that they can maximise their returns. In this respect, clients should not buy as much as they can, but should allocate their funds wisely and choose the right time to buy the right financial products. Combined with the performance appraisal metrics for financial managers, the motivations of the financial manager and the goals of the client are not fully aligned, at least not in the short term. A short-sighted financial manager may encourage clients to purchase unsuitable or even inferior financial products in order to increase their own short-term sales<sup>6</sup> at the expense of their long-term returns, which is the core basis of the definition of ‘moral hazard’. The main model assumption in this paper is that financial managers under peer pressure will engage in unethical sales practices in order to improve their short-term sales performance.

We test the above hypothesis empirically based on micro-level data. We first examine whether peer pressure motivates financial managers to improve their short-term performance. We use two variables to measure peer pressure, one is the difference between a financial manager's last month's completion rate (expected return relative to target return) and the median completion rate of their peer group, notated as Distance to Median. The other is the rank decile of the last month's completion rate of the same level of financial manager, the variable is labelled ‘Rank decile’. For performance, we construct separate variables at the manager and client levels. Firstly, at the manager level, we look at the manager's effort for the month, measured by the 'completion rate growth'<sup>7</sup> relative to the previous month. As we do not have a sample of all clients managed by each financial manager, we calculate the ‘Net sales of bail-out products (log)’ at client level for each client for that month as a proxy for the financial manager's sales performance, and run regressions at client level. The empirical results of the

---

<sup>6</sup> The risk of doing so is losing the trust of the client and causing client loss in the long term, so the long-term motivation of the financial manager should be aligned with serving the client well

<sup>7</sup> The reason for looking at 'progress' rather than absolute performance is that the absolute performance of financial managers is highly autocorrelated, with an AR(1) coefficient of 0.87 for the completion rate of financial managers in our sample interval, and we believe that the change in completion rate measures the extent to which financial managers have exceeded their usual effort for the month

multidimensional fixed effects at both the financial manager level and the client level show that the more pressure the financial manager received from peers in the previous month, the greater the improvement in performance appraisal in the month, as evidenced by greater sales of financial products to clients.

The next step is to look at whether there is a moral hazard in the financial manager's efforts to increase sales - what we call unethical sales practices that are not in the client's interests. Our data not only provides a record of every purchase and sale of each client's rigid financial product, but also provides information about the corresponding financial product (mainly risk rating, expected return and term). We define the product with the lowest expected return for the same risk level-maturity as the relative 'inferior product', and for each customer the amount of inferior product purchased measures the unethical sales behaviour of the financial manager<sup>8</sup> (Net sales of inferior products (log) ). The empirical results found that the more pressure the financial manager was under from peer comparison competition in the previous month, the more inferior products he or she sold to clients in the month, meaning that the financial manager engaged in more unethical sales practices.<sup>9</sup> As a placebo variable, we measured sales of superior products (Net sales of superior products (log)) , which found no significant empirical association was found with peer pressure, further arguing for the validity of unethical selling behaviour.

Financial managers in the 'upper middle' of the performance spectrum (outperforming the median of their peer group) and those in the 'lower middle' of the spectrum are likely to feel peer pressure of varying intensity. Upper-middle level financial managers are under less pressure to survive in the short term and are likely to be more focused on developing long-term client trust, thus exhibiting less unethical selling, while lower-middle level financial managers are under more competitive pressure and are likely to have a greater incentive to sell poor quality financial products. We divided the data

---

<sup>8</sup> The better financial products are generally better sellers and the quota is gone soon after they are listed, so the financial manager has an incentive to sell poor quality products.

<sup>9</sup> As a robustness check, we used the share of sales of poor quality products in total rigid financial product sales as the dependent variable, resulting in a higher share of sales of poor quality products, validating our moral hazard hypothesis.

sample into two samples of upper and lower middle managers according to the median performance of the same level of financial managers in each month, and then repeated the basic regression as described before. The results, as expected, show an increase in performance and unethical sales behaviour for the upper middle group of financial managers, but with lower measured significance and smaller absolute values of the coefficients, and a significant increase in performance and the proportion of poor quality products sold for the lower middle group of financial managers, suggesting that peer pressure does encourage employees to work hard and that poorer performers in particular exhibit moral hazard.

In the next section, we examine two sets of moderating variables that may affect peer pressure or moral hazard. The first variable is customer complaints. If a branch bank is mismanaged, for example by failing to stop a financial manager from selling indiscriminately, it will trigger a customer complaint, and after a complaint the branch bank will generally rectify the situation and curb the unethical behaviour of the financial manager in a number of ways. We obtained records of customer complaints at branch level and found that the effect of peer pressure on performance growth and moral hazard disappeared econometrically in branches with a record of customer complaints in the previous month, demonstrating the dampening effect of customer complaints on moral hazard. The second moderating variable is branch size. In branches with larger numbers, financial managers are subject to more intuitive peer pressure to compete and are therefore likely to exhibit more effort and more unethical sales behaviour, we define branches with more than 100 financial managers as large branches and split the sample into large and small branch self-samples for grouped regressions. We find that the behaviour of being subject to peer pressure to further improve short-term performance by over-selling poor quality products only occurs in large branches.

The final section looks at both gender and experience, exploring the questions of what kind of financial managers are more likely to feel pressure to over-sell and what kind of clients they are primarily selling to. From a gender perspective, we distinguish between male and female groups of financial managers and clients by gender. We first find that female financial managers are more likely to be subject to peer pressure to engage in unethical sales practices, but at the client level, male clients are more likely



to buy poor quality products marketed by stressed financial managers. When we divided the financial manager-client population into four groups by gender and regressed the groups, we found that unethical sales practices occurred only in the female financial manager-male client group. On the experience dimension, we divided the financial managers and clients into experienced and novice groups according to the median time in the business (with the bank) and the median time the client (with the bank) has been in the business. The results show that less experienced financial managers are significantly more likely to push up short-term performance by over-selling poor quality products, nearly twice as much as experienced financial managers, suggesting that experience in the business allows financial managers to gain more skills or accumulate more trust from clients, which allows them to improve performance more often through normal sales. At customer level, only inexperienced customers will over purchase inferior products. In the four groups of regressions where experience and novice were paired separately, unethical sales practices occurred particularly between less experienced financial managers facing less experienced clients, with experienced financial managers also selling poor quality products to novice clients, but to a relatively lesser extent.

In summary, this paper paints a complete picture of peer pressure and job performance, and moral hazard, based on granular data on the retail financial manager-client-sales. Under competitive pressure from peer-to-peer comparisons, financial managers will sell their clients poor quality financial products with poor value for money in order to push up short-term performance. Such moral hazard issues are particularly evident among lower to mid-performing financial managers. More competitive pressure from larger branches increases the incentive to over-sell, while customer complaints discourage unethical behaviour. Analysing the personal characteristics of both financial managers and clients, we find that female financial managers are more likely to be influenced by pressure and over-sell to mainly male clients, while novice financial managers are more likely to be influenced by peer pressure and prefer to sell to inexperienced novice clients.

This paper contributes as follows:

First, peer pressure has been found to trigger moral hazard. It has been argued that intense competition can dampen employee moral hazard and enhance consumer welfare (Gaynor, M., Haas-Wilson, D. and Vogt, W.B. 2000; Gelman, M., Khan, Z., Shoham, A. and Tarba, S.Y., 2021). However, unethical behaviour is usually hidden. This paper obtains data on bank wealth managers' product sales to individual customers and gives empirical evidence of peer pressure triggering moral hazard based on the specific sales behaviour of wealth managers (i.e. financial managers).

Secondly, the two-sided effect of peer pressure on organisational performance is argued. Existing research has mainly found a positive effect of peer pressure on employee performance. Peer pressure can have productivity spillovers (Falk and Ichino, 2006; Mas and Moretti, 2009; Kaur, Kremer and Mullainathan, 2010) and knowledge spillovers (Serafinelli, 2013), enhancing employee productivity. However, performance is only one of the corporate management objectives, and the role of peer pressure on customer benefits remains to be explored due to the lack of micro-level data. This paper finds that peer pressure promotes the sales performance of financial managers while at the same time harming the interests of clients, arguing that there are two sides to peer pressure.

Thirdly, it expands the research on the incentive mechanism of financial managers. A reasonable incentive mechanism is a prerequisite for safeguarding the interests of clients, and inappropriate incentives may intensify moral hazard. The literature has mainly examined the role of individual performance mechanisms for financial managers. Financial managers have been found to deliberately exacerbate investment bias to create sales charges (Mullainathan, Noeth, and Schoar, 2012), tend to sell high commission products (Célérier and Vallée, 2017; Anagol, Cole, and Sarkar, 2017), and engage in a large amount of misconduct that infringes on clients' interests (Egan, Matvos, and Seru, 2019). (Egan, Matvos, and Seru, 2019). This paper examines the motivational effects of peer pressure on financial managers, adding to the existing literature's understanding of financial manager incentives from the perspective of peer competition.

The article is then structured as follows: Chapter 2 summarises the relevant literature; Chapter 3 introduces the institutional background; including the industry status of banks, the current development of the industry, regulatory policies and management practices of the bank's wealth management products, the assessment process and performance indicators of wealth managers, as well as setting out the basic assumptions of the article; Chapter 4 introduces the data sources and the main variables constructed. Chapter 5 discusses the empirical results of the impact of peer pressure on performance and moral hazard; Chapter 6 explores the moderating variables affecting the relationship between peer pressure and moral hazard; Chapter 7 examines the impact of personal characteristics of financial managers and clients on moral hazard; and finally, Chapter 8 draws conclusions.

## **2 Related literature**

### **2.1 Peer pressure and work performance**

Peer pressure is the direct or indirect influence on peers, i.e. members of a social group with similar interests, experiences or social status. Following the introduction of this concept, Kandel, E. and Lazear, E. P. (1992) first theorised on the principles of peer pressure and analysed how profit sharing, mutual supervision, empathy and guilt interact to positively motivate employees to generate greater profits for the company using peer pressure as a channel of action. Subsequently, scholars have demonstrated through empirical studies that peer pressure is widespread across many domains (e.g. Falk, A. and Ichino, A., 2006; Mas, A. and Moretti, E., 2009; Dustmann, C. and Schönberg, U., 2017).

Several scholars have shown that peer effects have a significant impact on productivity. A laboratory experiment designed by Falk and Ichino (2006) found that multiple subjects were more productive when working in the same room than when working alone, even though work output was independent of pay. Mas and Moretti (2009) studied data from a large supermarket chain and found that the productivity of average employees increased when they worked with more productive colleagues, suggesting that increased social pressure had a positive effect on employee productivity. Kaur,

Kremer and Mullainathan (2010) reach similar conclusions, reporting a spillover effect on the productivity of employees with similar work stations in an Indian firm. In the experiment by Bandiera, Barankay and Rasul (2010), when a single picker with superior work ability was present on a large farm picking plot, the productivity of other pickers increased, but the most capable person on the whole farm was personally but less productive, partially validating the productivity spillover effect previously suggested by scholars and demonstrating the two-sided nature of the effects of peer pressure. Peer pressure is also a possible channel of action in Chan, Li and Pierce's (2014) study of salesperson productivity in department stores and in Lindquist, Sauermann and Zenou's (2015) study of network effects in call centre employee productivity. In addition to the important factor of peer productivity, other specific dimensions of the peer group may also influence employee performance to some extent, such as the employee's relationship with peers (Bandiera et al., 2010), the gender of peers (Gneezy et al., 2003; Niederle and Vesterlund, 2007) and other factors. Gneezy et al. (2003) noted that employees in male collectives work faster, which may be a reflection of competitor behaviour; however, as the number of people within the group increases, employees work significantly less quickly, reflecting potential moral hazard (Gaynor et al., 2004; Chan, 2016, 2018). Ichino and Maggi (2000) found through analysis of employee performance data from a large Italian bank that peer absenteeism had a significant effect on individual employees on absenteeism, demonstrating that peer effects can act not only on productivity but also on behavioural performance.

However, a few scholars have argued that peer pressure does not significantly affect the performance of subjects. Guryan, J., Kroft, K., and Notowidigdo, M. J. (2009) used a randomised trial with golfers and empirical results did not find a significant effect of peer competence on performance.

The findings of the current empirical research on peer influence due to knowledge spillover in the work environment are more controversial. Ichino and Maggi (2000) found that medical teachers and researchers were able to learn from each other and improve their overall knowledge and productivity, confirming knowledge spillover; Serafinelli (2013) showed that when employees switched from higher to lower paying firms, the productivity of other employees in lower paying firms increased significantly,

also confirming the impact of knowledge spillover. However, in a subsequent study by Waldinger (2012), there was no direct evidence of significant knowledge spillover between scientists within the same sector. Other studies have extended the experimental scenario from the workplace to sport for further discussion (e.g. Guryan, Kroft and Notowidigdo, 2009; Gould and Winter, 2009). Cornelissen (2016), on the other hand, provides a detailed non-technical discussion of peer impact in relation to the efficiency of peer groups by reviewing the relevant literature.

Despite the economic importance of peer pressure research, existing studies have only been able to provide convincing evidence for the presence (or absence) of peer effects in particular settings, but the extent to which these findings are applicable is unclear due to the difficulty of obtaining data and the difficulty of accurately measuring employee effectiveness in complex settings. In addition, the current empirical data is limited to some specific industries and simplistic scenarios, or is based on laboratory simulations, making the conclusions less generalisable.

## **2.2 Peer pressure and moral hazard**

In financial transactions, the difference in the amount and content of information available to the participants in the transaction ultimately poses two major risks: moral hazard, and adverse selection (Hansen, 1987; Martin, 1996; Hartzell et al., 2004). Moral hazard is the inability of a trader on the information disadvantaged side to observe and monitor the execution and implementation of the cooperation contract at zero cost after the parties have entered into the contract, thus facilitating the use of various means by the information advantaged side to usurp the interests of the information disadvantaged side. As the field has been explored in depth, new branches of moral hazard theory have been created and the research has become more refined. Moral hazard theory is an important part of modern economic theory and one of the most difficult problems to solve. The development of its theory not only helps to understand some of the phenomena and problems in financial transactions, but also involves human games and conflicts.

According to information economics, moral hazard is caused by information

asymmetry and the human tendency to behave opportunistically, and is closely related to concepts such as hidden actions and hidden information. If an agent's actions are hidden, and if the principal cannot observe whether the agent is being productive, then the principal will not be able to stipulate these actions by contract. Moral hazard also arises when an agent has hidden information, i.e. information about the demand, technology or cost situation that the principal does not have. By withholding this information, the agent is able to be unproductive without fear of punishment because the agent can simply use his informational advantage to convince his principal that the action he has chosen is in fact the most appropriate.

In the standard Arrow-Debreu Model of competitive risk theory, the visibility of the insured's state makes insurance free from incentives and substitution effects, and the problem of moral hazard arises when insurers are influenced by their observation of the insured's individual behaviour or state and are unable to confirm the truthfulness of the information disclosed by the insured and to incentivise effective accident prevention and measures accordingly. Fama and Jensen (1983) argue that there are two major developments in the principal-agent problem derived from moral hazard models, i.e. ex post asymmetric information models: 'positivist agency theory' and 'principal-agent theory'. The former focuses on scenarios where conflicts of interest may arise between the parties to a principal relationship and how to curb the moral hazard behaviour of agents; the latter is usually based on a number of conditional assumptions, mathematical proofs and logical deductions to obtain the optimal contract under specific conditions.

Radner and Rubbinstein were the first to propose a dynamic model for governing moral hazard. They demonstrated through a repeated game model that Pareto first-order optimal risk sharing and incentives can be achieved if principals and agents remain cooperative over time and have sufficient patience, but the performance of the agents cannot be evaluated and measured in this model. Leisel, Holmstrom, and Rawson offer their perspectives on how to use the tournament system for performance evaluation to address incentive issues. The ratchet model and reputation model proposed by Holmstrom (1982) also enhance the realisability of incentives to some extent. Moreover, a growing number of scholars (e.g. Shapiro and Stiglitz) are placing more emphasis on the importance of external oversight for moral hazard management.

As theoretical research has matured, scholars have deepened and refined the empirical analysis related to moral hazard, exploring the impact of various factors in the market on moral hazard. Gaynor, M., Haas-Wilson, D. and Vogt, W.B. (2000) studied moral hazard in the health insurance market; it was found that in a competitive insurance market, where consumers can always sign up for better quality insurance contracts at lower prices, moral hazard in the market cannot be dampened by increasing transaction prices. Akerlof and Shiller (2015) show that the behavioural norms of market participants are influenced by the intense competition in the industry, and that a poor market environment encourages participants to use deceptive means in exchange for benefits; therefore, the market structure may influence the moral hazard of practitioners. Chan, D. C. (2016) examined joint monitoring and management mechanisms in teamwork and found that peer benefits can be effective in reducing moral hazard. Rud, O.A., Rabanal, J.P. and Horowitz, J. (2018), on the other hand, exploit the fact that agents' remuneration depends on their sales performance to experimentally explore whether the behaviour of financial intermediaries is influenced by market structure. The experimental results suggest that monopolistic head intermediaries are better able to curb moral hazard and protect clients' interests than competitive markets. Gelman, M., Khan, Z., Shoham, A. and Tarba, S.Y. (2021) examine the effects of market competition and firm market position on adviser misconduct by analysing data from a large sample of over 3.8 million investment advisers, using M&A transactions and local monopolies as two exogenous shocks, and find that the intensity of competition in a county market and a firm's market position have a negative impact on investment adviser misconduct, with a firm tending to be less likely to exhibit misconduct when it has greater market power.

### **2.3 Investment advisors**

According to the 2013 Consumer Financial Survey, more than 40 million American households in the US market consult and receive investment advice from a financial advisor, and the majority of individual investors worldwide rely on financial managers to make investment decisions. However, the financial adviser remuneration mechanism creates a conflict of interest with the investor, which can lead to compromised advice quality and higher advice costs, a negative effect that has divided the industry's view of

the financial advisory profession. In the Australian, UK and US markets, for example, policy makers have sought to reduce conflicts of interest between the two parties by requiring advisers to prohibit commissions or by requiring advisers to also invest in the products held by their clients, putting their clients' interests ahead of their own. According to a 2015 study by the Council of Economic Advisers, eliminating the conflicting interests of advisers and investors would increase the annual rate of return on pension accounts by one percentage point.

Inderst, Roman, and Marco Ottaviani (2009) were the first to analyse the inherent conflict between the agent's task of "developing new customers" and "making appropriate recommendations on customer needs based on product characteristics", and to examine how a company's compensation structure traded off the expected loss of "mis-selling" unsuitable products against the cost of providing sales incentives. They also explore how characteristics of agency issues (such as transparency in pay structures, promotion patterns within the firm, etc.) affect the 'equilibrium point' of a company's constructed pay structure.

Existing research has validated the negative impact that conflicts of interest between advisory parties can have. According to empirical tests, broker-sold mutual funds and directed investment accounts underperform the returns of brokers investing with their own funds (Bergstresser, Chalmers, and Tufano, 2009; Hackethal, Inderst, and Meyer, 2012; Christoffersen, Evans, and Musto, 2013). In addition, brokers who retail in the structured products market (Célérier and Vallée, 2017; Egan, 2019) and in the insurance market (Anagol, Cole, and Sarkar, 2017) not only charge a price mark-up but also have a tendency to sell products with a higher commission. Pool, Sialm, and Stefanescu (2016) show that for product providers, there is a significant bias towards the firm's mutual funds when designing the composition of pension products. In contrast, Egan, Matvos, and Seru (2017, 2019) use empirical data to demonstrate that financial advisors can be employed by their firms or within the industry even if they have committed misconduct in violation of professional codes, and that the industry is more inclusive of misbehaving financial advisors.

In addition to this, some academics have analysed the advice given by financial advisers



and generally found it to be less effective. Mullainathan, Nöth, and Schoar (2012) note that when clients experience behavioural biases and misconceptions about expertise, advisers not only fail to effectively address the client's biases, but often reinforce the biases that are in the adviser's interest, encouraging clients to strategically hold expensive portfolios and sell higher fee actively managed funds. Subsequently, Linnainmaa, Juhani T., Brian T. Melzer, and Alessandro Previtero (2021) validated this finding and further explored the specific reasons why advisors fail to eliminate bias.

However, some scholars are positive about the direct relationship between financial advisers and investors, arguing that even if there is a conflict of interest in the advisory relationship, agents are still able to prioritise the interests of their clients, provide effective investment advice and there is consistency between the agents' own investment decisions and the advice they give. Dvorak and Norbu (2013) find that employees of mutual fund firms advise clients but also invest their pension plans in their own firm's higher fee actively managed funds; Dvorak (2015) validates a similar finding that financial firms offering pension services also offer similar services to their own employees, with both holding a similar composition of products and similar performance; Cheng, Raina and Xiong (2013) find that middle managers in the securities industry personally invested in real estate during the early 21st century real estate boom, a departure from previous research by Levitt and Syverson (2008), who argue that real estate brokers kept their homes on the market longer and sold them at a higher price than their clients' homes. In addition to this, Bronnenberg et al. (2015) show that pharmacists and chefs are less likely to purchase national branded goods than less expensive private label alternatives. In contrast, financial intermediaries will not shift their purchases to lower cost alternatives. Gaudecker, Hans Martin (2015), on the other hand, highlight the importance of financial managers in household investments, finding that households who are more financially literate themselves and those who make investment decisions by consulting professionals achieve reasonable returns on their investments, compared to households with little financial knowledge of their own and who do not seek advice, who lose an average of 50 basis points in annual returns on their investments.

## **3 Institutional background and hypothesis development**

### **3.1 The sample bank**

The commercial bank we will be examining is a national, state-controlled joint-stock commercial bank in China, with total assets of over RMB 3 trillion and operating income of nearly RMB 100 billion by the end of 2021. The bank has set up more than 40 primary branches and 70 secondary branches in 122 cities across China, with a total of 1,000 business outlets and nearly 40,000 employees, forming an institutional system that is based in economically developed cities and radiating nationwide. Ranked among the top 100 banks in the world by Britain's The Banker Global 1000 ranking published in July 2021, it is a representative top commercial bank in China. In recent years, the bank has aimed to build a domestic first-class capital management institution, carried out reform and innovation in terms of development strategy, organisational structure and operational mechanism, and accelerated the transformation and development of its wealth management business. In 2020, the bank established a wealth management subsidiary to build a market brand for absolute return products, focusing on cash management products, fixed income products, structured products, non-standard project investment products, Manager of managers (MOM)/fund of fund (FOF) products and quantitative investment products. On the one hand, the bank is increasing the sales of wealth management products through traditional channels such as retail and public, and on the other hand, it is actively expanding off-bank distribution channels and building a direct sales team for institutional customers, while vigorously developing online channels such as e-banking, mobile banking and mobile APP to form a network of product sales channels covering both on and off-bank, online and offline, so as to enhance the market influence and share of wealth management business. However, as things stand, relying on the bank's own branch sales force for wealth management product sales remains the main channel for growth in sales of its wealth management business at present. At the end of 2021, the bank had a balance of 456.9 billion RMB in personal finance and 64.6 billion RMB in funds sold on its behalf. Total financial assets of personal customers amounted to 977.4 billion RMB, of which, total financial assets of VIP customers amounted to RMB 177.2 billion, total financial assets

of wealth customers amounted to RMB 338.9 billion, total financial assets of quasi-private banking customers amounted to RMB 104.4 billion and total financial assets of private banking customers amounted to RMB 221.1 billion. In 2021, the bank earned wealth management fee and commission income of 1,912 RMB.

### **3.2 The performance appraisal system (PAS) for investment advisors**

In the sample bank's system, financial managers are divided into nine levels based on seniority performance, with the first three levels being managerial and the assessment system distinguishing them from ordinary wealth managers. For the general financial manager, also termed wealth manager, which is the main focus of this article, the bank sets a completion rate target for each level on a monthly basis. The target is consistent for wealth managers within that level and varies less in the time dimension, and meeting the target is considered as meeting the target. If the target is not met in that month, part of their bonus may be deducted, and if the target is not met for more than one consecutive month (usually more than one quarter), the bank will downgrade their level. If the target is exceeded, the financial manager will be rewarded with a corresponding cash dividend.

The expected return target set by the sample banks for their financial managers is the return that the size of the customer's financial assets is expected to generate for the bank (the sum of the stock of different categories of financial assets multiplied by the expected rate of return for that category of assets in RMB). The size of a customer's assets is the sum of the customer's financial assets with that bank, including wealth management, fixed rate deposits, demand deposits, securities, securities-in-transit, trusts, insurance and precious metals, excluding loans. Increasing the size of a client's assets through sales is a reflection of the value of a financial manager, achieving positive growth by retaining clients' assets within the bank and being able to compete with peers for share, allowing clients to transfer other bank funds in. Financial managers therefore need to work hard to develop new clients or persuade old clients to deposit funds or buy financial assets on the one hand, and to maintain client relationships to avoid losing funds on the other. In other words, expected return is a composite measure combining asset growth, asset stock, with product mix. In calculating the expected

return, each financial asset has its own fixed expected rate of return, which is relatively stable, but from time to time the bank will adjust the expected return accordingly for key products to encourage wealth managers to focus on sales and thus receive additional incentives.

The performance appraisal evaluation of wealth managers is carried out on a monthly basis, with their remuneration bonuses and rank adjustments determined at the end of the month mainly based on expected returns. The specific process is as follows:

- Performance targets are set at the beginning of each month, and these targets are approved uniformly according to the grade of the financial manager, with the higher the grade of the position, the higher the expected return target.
- At the end of each month, the expected return achieved by the financial manager is calculated and compared with the expected return target. Based on the achievement of the expected return each month and the grade of the financial manager's position, the financial manager's salary and bonus are finally determined.
- Quarterly performance appraisals are conducted to inform the overall quarterly run, as well as the branches and financial managers with outstanding performance.
- Financial managers are re-graded annually by evaluating their marketing performance, years of experience, qualifications and other factors.

### **3.3 Hypothesis development: peer pressure, performance and moral hazard**

This performance appraisal model for bank financial managers, and for bank financial managers in general, constructs an empirical environment particularly suited to the study of peer pressure, performance and moral hazard. We now combine the characteristics of the sample for the derivation of the model hypothesis.

Firstly, the performance appraisal of financial managers is mainly based on individual sales performance. Although the bank's head office level also gives overall appraisal

targets for the region or branch, the final appraisal targets are all allocated to the individual level, with the completion rate of each month's target as the core appraisal target, and when selling, financial managers are also responsible for their clients in a one-to-one sales approach, with no team selling, so wealth managers They feel the comparative pressure from their peers at the individual level and the source of peer pressure is very intuitive, both in terms of the performance of the individual financial manager and the performance of their peers. In our sample, 73.90% of our financial managers exceeded the target completion rate approved at the beginning of the month, which shows that the pressure to perform is not primarily from the 'pressure to complete' but from the motivation to 'perform better'. This motivation comes not only from the cash reward for exceeding targets, but also from peer pressure. Clearly, having sensed the gap between their performance and that of their peers, the financial manager's goal is to improve their sales performance next month. Our first hypothesis is therefore that:

*H1: Competitive peer pressure will motivate financial managers to improve their short-term performance.*

Unlike most of the literature, our data are particularly well suited to further exploring the relationship between peer pressure and moral hazard. It is important to note that the term 'moral hazard' is not narrowly defined in finance as a serious breach of the law, but rather as an agent who accepts a mandate from a principal but does not fully maximise the principal's interests. In the context of a financial manager, the principal is the client and the agent is the wealth manager, who is entrusted with recommending cost-effective financial products to maximise the return on his or her asset portfolio. There is a strong information asymmetry in customers' knowledge of specific financial products, both in the past and at present, the underlying assets and transaction information corresponding to financial products are not accessible to customers, they can only understand the basic information of financial products through product brochures or bank mobile app pages, and there are generally more financial products of the same type launched by banks, so it is difficult for customers to compare all the relevant details of financial products in detail, and the choice of purchase is almost entirely dependent on the recommendation of financial managers, whose job is precisely to recommend suitable financial products to customers. The personal

motivation of financial managers comes from expanding their clientele and selling financial products more often. In the long term, the goals of the customer and the personal motivations of the financial manager are aligned. A financial manager who is considerate of the customer will inevitably gain more trust from the customer, thus increasing customer loyalty and also expanding the clientele base through word of mouth. In the short term, however, financial managers may over-sell clients on financial products that are not suitable for them due to performance pressures. While this behaviour will damage the relationship with the customer in the long term, as performance reviews are on a monthly basis, it cannot be ruled out that financial managers may engage in unethical sales behaviour due to short-sightedness and pressure.

It is worth noting that peer pressure has been documented to help reduce moral hazard, with the main mechanism being supervision from peers (Silver, 2021). However, as mentioned above, financial managers sell one-to-one to their clients, so we believe that there is less of a role for peer monitoring and more of a role for peer pressure in the financial manager community. While 'unethical' behaviour at work is generally very subtle and difficult to capture in empirical data, our data provides a near-perfect sample of the individual records of financial products sold by financial managers to their clients. We measure the intensity of unethical sales practices by defining the proportion of 'poor quality financial products' sold to clients by financial managers, as described in Chapter 4. Our second hypothesis is that:

*H2: Financial managers who are subject to peer pressure will exhibit more unethical sales practices.*

In addition to the above two core model hypotheses, this paper will also make extended research based on external moderating variables and individual characteristics of financial managers and clients, without developing the hypotheses in detail here. Refer to chapters 5 to 7 for details.

## **4 Data and variables**

### **4.1 Data sample**

We obtained a sample of data from the sample bank, with an initial dataset of 20,000 retail wealth management customers from all branches of the bank in Beijing (64 branches in total) and reported their financial asset positions between June 2019 and June 2020. Of these, 5793 have one-to-one financial managers, corresponding to a total of 520 financial managers. As the assessment index will not be limited to individual product sales after the financial manager enters management, but will integrate more difficult to quantify management-level considerations, we further screen out non-management-level financial managers, and this part of the sample contains 5518 clients corresponding to one-to-one, non-management-level, accounting for 37% of the true number of non-management level financial managers (1,230 financial managers in Beijing in the sample period). Our subsequent empirical study focuses on this sample of 463 financial managers.

Our data variables include the customer's average daily total financial assets per month, purchase history of rigid payment financial products and some personal information (e.g. age, gender, time of account opening, bank of account opening, risk appetite, etc.). In terms of financial managers, the data set reports each advisers's monthly target achievement rate, actual achievement rate, rank, total personal and business assets under management, and some personal information (e.g. age, gender, working hours, etc.). For rigid payment financial products with purchase records, we obtained the risk level and expected return of the product. As it is a rigid payment product, the expected return of all products in the sample period was honoured and therefore the expected return is also the actual return.

In terms of clients, the average age of the 5,518 clients in the sample was 52.8 years old and the average length of investment was 4.4 years. 72.6% of the clients were risk

averse, i.e. with a risk appetite level of 3 or less.<sup>10</sup> Of the sample, 44.1% were male customers, and age and risk appetite were very similarly distributed between the male and female customer groups (average female age 53, 72.8% of risk averse customers, average male age 52, 72.2 of risk averse customers).

In terms of financial managers, the sample included 463 financial managers with an average of 11.6 years of experience, of which 30.0% were male, and the sample only included financial managers in key management positions, accounting for 89.4% of the total number of financial managers.<sup>11</sup>

In terms of financial assets, the main financial assets purchased by retail customers comprised wealth management, fixed deposits, demand deposits, securities, securities-in-transit, trusts, insurance and precious metals. Of these, wealth management and deposits predominate, with the share of customers' rigid payment wealth management products accounting for over 60% of the sample and bank deposits accounting for nearly 30%, far exceeding the total of the remaining financial assets. As the interest rate on deposits is fixed, it is not strictly an 'investment' and does not require a recommendation from a wealth manager, so we focused mainly on rigid payment financial products. The returns on all of the products in the sample period were eventually realised, which shows that the products are almost risk-free and extremely homogeneous. The average investment term for these products ranges from 1 month to 3 years, with an average of 7.1 months, and the expected annual return varies according to the investment term.

## **4.2 Variables**

### **4.2.1 Peer pressure**

Peer pressure in this study refers specifically to the comparative, or competitive,

---

<sup>10</sup> The sample banks have categorized their customers into five risk scores, with 1 being cautious and 5 being aggressive

<sup>11</sup> The sample banks have nine levels of money managers, the first three of which are key management levels



pressure on financial managers from their colleagues, so measuring peer pressure is not just about individual performance, but about identifying the gap between one's own performance and that of one's peers, or the relative position of one's performance among colleagues. We propose two variables to measure peer pressure:

**Distance to median.** The first measure we propose is the difference between the financial manager's completion rate (the expected return he/she achieves divided by the target return) and the median completion rate of the financial manager at his peer level. To allow the value of the variable to increase with pressure, we use the median completion rate of the financial manager at his peer level minus the actual completion rate of this financial manager. This measure is negative for financial managers at the upper-middle level of completion rate for the month and positive for financial managers at the lower-middle level of completion rate for the month; the larger the value, the greater the peer pressure on the financial manager. The reason we use target returns as the denominator to construct completion rates rather than the original value of expected returns for financial managers is that each of the nine wealth manager levels in the sample bank has a different target return, with higher levels associated with greater target returns, and to make peer pressure comparable across different levels of appraisal managers, we use peer differences in completion rates.

We have chosen to use the median as a benchmark because it is a stressful watershed for most employees in terms of reaching the 'upper middle' and the median is likely to be a better overall measure of peer performance. In addition, given that completion rate targets are set at a hierarchical level, employees should also be under competitive pressure from similar levels of peer performance, so the median completion rate for each financial manager's level was chosen as a benchmark.

Table 1 reports the basic summary statistics for the variables, with the average expected return to the bank for each month of our sample being around 850,000 RMB, with a median of 630,000 RMB and a minimum value of 0 RMB. The top performing financial managers reached an expected return of 10.22 million RMB. The completion rate statistic constructed based on the denominator of the level target return shows that the median completion rate for financial managers is approximately 1.02, meaning that the

average monthly expected return achieved by medium financial managers is 1.02 times the target, which is in the state of "just about completing the target performance", with 73% of the financial managers in the sample meeting the target in a month. This means that close to a quarter of the financial managers struggled to meet the pass mark, which means that achieving the monthly target expected return is not an easy task. The median distance statistic shows that the completion rate of the best performing financial manager exceeds the median of the same level by 3.62 times, while the monthly completion rate of the worst financial manager is reported as 0%.<sup>12</sup> The standard deviation of the median distance reaches 0.51 times, i.e. a one standard deviation increase in the median distance results in a 51% increase in the actual expected return of the financial manager relative to the target completion rate, indicating that the difference in performance between competent and poor financial managers is significant.

[Insert Table 1 about here]

**Rank decile.** The second measure we propose is to calculate the ranking decile of the financial manager's own completion rate among the same level of financial managers. This is calculated by ranking the completion rates of financial managers at the same level into deciles, with the individual financial manager taking the value of the level at which he is performing. This measure takes a value of 1-10, with a higher value representing a lower ranking of the financial manager's performance and greater peer pressure. In reality, the bank does not publish rankings every month and the financial managers do not know exactly how others are performing and how they are ranked, but based on our interviews with some of the financial managers, we know that they have an approximate idea of how they are performing among their colleagues, and even if they do not know exactly where they are ranked, they have an approximate idea of

---

<sup>12</sup> The financial manager may give the bank agent negative expected returns due to business losses, but the frequency of negative expected returns is extremely low (only 12 observations in the sample interval have negative returns), the reasons for their occurrence are exceptional (low-cost loans, customer defaults, etc.) and the minimum value of the performance pay for money managers is zero, i.e. negative expected returns do not cause the money manager to earn less than 0 RMB in the month. We therefore excluded observations with negative expected returns below 0 from the sample.

where they are, so we define deciles of ranking to measure peer pressure.

#### 4.2.2 Performance

We use two levels of metrics to measure the performance of our wealth managers.

**Completion rate growth.** We first use the increase in completion rate to measure the financial manager's over performance, i.e. the extra 'effort' in the month compared to the previous month. The reason for looking at 'progress' rather than absolute performance is that the absolute performance of financial managers is strongly autocorrelated, with a first-order autocorrelation AR(1) coefficient of 0.85 for the completion rate of financial managers in our sample interval. This is mainly due to the fact that the bank's formula for calculating the monthly expected return of a wealth manager is an estimate of the return that the financial assets in that manager's name will bring to the bank in that month, and the stock of financial asset size is highly correlated with the financial manager's own long-term client accumulation. When financial managers are subject to stronger peer pressure in the previous month, they may make extra efforts to sell in the month, and the corresponding data measure should be reflected in the incremental increase in financial assets, i.e. the growth in expected returns.

As can be seen from the summary statistics, the average expected return growth for the financial managers was 0, meaning that the financial managers' monthly expected returns achieved were very stable, with the most serious regression reaching as much as 3.6 times, meaning that the ratio of relative expected returns to target returns for the month relative to the previous month regressed by 3.6 times and progressed by a maximum of 1.28 times.

**Net sales of rigid payment products (log).** The second performance indicator we construct is the amount of rigid financial products purchased per client per month (log plus one), which is panel data at the client-monthly level, with each client corresponding to a financial manager that is fixed in our sample interval. We make the following points of explanation for this measure.

Firstly, while the peer pressure indicator for financial managers is at the financial manager level, we still construct performance indicators at the client level for two reasons. On the one hand, subsequent construction of indicators such as moral hazard requires the use of clients' purchase records, and we do not have access to a sample of all clients managed by each financial manager. The summation of client-level data to the financial manager level would result in strong measurement bias, so we choose to conduct regression analysis at the client level, while controlling for client (i.e. client-financial manager) fixed effects.

Secondly, although we do not have access to records of all financial assets specifically purchased by our clients, we believe that a focus on the purchase history of rigid financial products is sufficient. On the one hand, in our sample area, rigid financial products account for over 60% of customers' net financial assets, followed by demand and fixed deposits (close to 30%), with the remaining financial products such as treasury bonds and funds accounting for a very small proportion, showing that rigid financial products are the main products sold by commercial banks in retail finance. On the other hand, rigid financial products are a suitable sample for subsequent studies of the risk of unethical sales. In the framework of defining unethical sales, we need to clearly capture the fact that the financial manager is indeed selling a less cost-effective financial product to the client, and that it is somewhat reasonable to define a financial product with a worse return in the same risk-maturity as a relatively inferior one due to the certainty of the return of rigid financial products (see the next chapter). Conversely, for financial products such as funds and trusts that carry a certain level of return risk, it is difficult to define a priori before maturity (at the time of sale) whether a product is of good or poor quality. Demand and fixed deposits, on the other hand, have a fully defined return, in most cases based on the client's asset allocation needs, and there is less risk of 'unethical selling'.

Thirdly, the main source of growth in the financial manager's expected return is the sale of financial products. If the financial manager only maintains clients and does not sell, the expected return will remain largely unchanged, while new sales are a better measure of the effort put in by the financial manager each month, i.e. the sales for the month measure the extra 'effort' put in by the financial manager for that month.

In summary, while client-level sales of rigid financial products do not cover all aspects of financial manager performance, they do represent a more appropriate measure for the purposes of our study.

As can be seen from the summary statistics of the variables (Table 1), on average, each customer purchased 755,000 RMB of rigid financial products per month (with their corresponding financial manager), but the standard deviation of this variable was large at 3,765,000 RMB. For 44% of the clients in the sample - monthly purchases of rigid financial products were zero.

In the robustness tests, we also use the change in the client's average monthly net financial assets (log difference) in the current month relative to the previous month as a proxy measure for financial manager sales. Compared to a measure that focuses only on the sales build of rigid financial products, this net change in financial assets, while it encompasses all financial assets (including all financial assets such as rigid financial products, savings, capital and government bonds), it also has certain measurement biases. Specifically, the sources of change in total assets include not only new purchases or withdrawals by clients, but also changes in the net value of assets as a result of changes in earnings. The increase in average monthly assets may be due to clients making more net purchases than net withdrawals, or to an appreciation in financial assets, but the appreciation in financial assets should not vary with the stress of the financial experience. This measured noise would theoretically attenuate our regression correlation, but if the empirical test yields a robust and significant result, it would demonstrate that the true effect of this paper's hypothesis should be stronger.

#### 4.2.3 Moral hazard

**Net sales of inferior products (log).** Based on the purchase and sale records of each of our clients' rigid financial products and information about the corresponding financial products (mainly risk rating, expected return and maturity), we measure moral hazard using the amount of the 'worst' financial product (logarithm plus one) sold by the financial manager to each client per month. The 'bad' product is the product with the worst return for the same risk level and term. A total of 166 rigid financial products

were sold during the sample period, of which 164 had a risk rating of 2 and the remaining two had a risk rating of 3, consistent with the inherently lower risk profile of rigid financial products. The average investment term for these products ranges from one month to three years, with an average of 7.1 months, and the expected annual return varies according to the investment term. Each financial product is only publicly available for sale at certain times of the year. On average, a customer can choose from around 10 financial products of the same risk and maturity at the same time, with a minimum of 1 and a maximum of 19. As can be seen from Table 1, the average financial manager sold 558,000 RMB of poor quality products per customer per month, with the average monthly sales of poor quality financial products accounting for approximately 36% of the financial products sold.

As a proxy variable for moral hazard, we also use sales of poor quality financial products as a percentage of total sales of rigid financial products, a measure that logically provides a more intuitive representation of the 'share' of unethical behaviour in the extra effort put in by financial managers due to pressure, but its main drawback is that 44% of customers in the specified month did not purchase any rigid financial products. Therefore, the numerator and denominator are both zero when calculating the percentage, which creates some measurement bias given that the financial manager did not make a 'sale' (or failed to make a sale) in this case, and therefore cannot determine whether 'unethical sales' were made. In this paper, the percentage of sales of poor quality products in this case is defined as zero and is used for robustness testing only.

As a placebo variable for moral hazard, we further test whether the moral hazard hypothesis holds by using sales of premium products, i.e. the amount (in logarithm terms) of financial products with the highest expected returns of the same risk and maturity purchased by customers.

#### 4.2.4 Controls

Our panel regressions first control for multidimensional fixed effects to exclude the effects of the time and individual dimensions. In the financial manager-month regressions, we control for financial manager fixed effects and month fixed effects, and

in the client-month regressions, we control for client fixed effects and month fixed effects. Since the one-to-one relationship between client and financial manager does not vary in our sample interval, the client fixed effects are also known as client-financial manager fixed effects. These fixed effects absorb the effects that individual-level variables, such as gender, age, etc., bring to bear on the results. We additionally control for control variables that change over time.

First, a possible concern is that the peer pressure measure we construct shows some correlation with individual performance, capturing pressure on individual performance rather than pressure to compete with peers, and we therefore control for the financial manager's expected return in the previous month (log plus one) to partially exclude the effect of individual performance pressure. The reason we did not directly control for completion rates is that completion rates are correlated with either the median distance or the ranking decile from the principles of the construct, while running regressions produced some covariance, but financial manager expected returns are less correlated with either the median distance or the ranking decile because they do not take into account the financial manager's ranking target. We believe that the expected return of the financial manager is a reasonable measure to capture the individual performance of the financial manager, controlling for the wealth manager and monthly fixed effects.

Secondly, we control the stock of loans to individual clients and businesses in the name of our financial managers (average daily stock within a month, taking the logarithm plus one). Although the core business of a financial manager is the sale of financial assets, as loans are a major part of the traditional bank's business, financial managers also receive clients for loans and are therefore rewarded with a performance bonus. In the sample bank's system, loan assignments at branch level are paid out as dividends and bonuses in the form of breakdowns, i.e. loan performance completed by the branch will be calculated as a percentage of the financial manager's performance. This part of the business does not pose peer pressure on the financial manager, but it may influence the financial manager's level of effort as it affects the financial manager's income. To exclude this effect, we control the amount of client loans and corporate loans in the name of the wealth manager separately.

## 5 Peer pressure, KPI and moral hazard

### 5.1 Effect of peer pressure on KPI-induced performance

We first examine whether peer pressure from the previous month will induce the financial manager to put in extra effort to improve performance this month. We use a multidimensional fixed effects model based on a panel of financial manager-months data to examine the following regressions:

$$\begin{aligned} \text{Completion rate growth}_{it} = & \alpha + \beta \times \text{Peer pressure}_{it-1} + \gamma_1 \times \mathbf{X}_{it-1} + \text{advisor}_i + \\ & \text{month}_t + \varepsilon_{it} \end{aligned} \tag{1}$$

Where  $i$  represents the financial manager and  $t$  represents the month. Completion rate growth represents the difference between this month's expected return relative to that of the previous month's financial manager (normalised using the target return for their level as the denominator). Peer pressure represents last month's peer pressure, measured by median distance and ranking decile, where median distance represents the difference between the median completion rate of all financial managers at the financial manager's level and the actual completion rate of the financial manager; ranking decile represents the ranking decile of the financial manager's completion rate among financial managers at the same level, and takes a value between 1 and 10.  $X$  represents a vector of control variables, including the expected return of the financial manager in the previous month (log plus one), the total number of client loans in his or her name (log plus one), and the business loans in his or her name (log plus one). The regressions control for financial manager fixed effects and month fixed effects to absorb the effects of financial manager characteristics that do not vary over time as well as public shocks to all financial managers in the time dimension. The standard errors of the regressions are clustered at the financial manager level. The sample contains 463 financial managers with a sample interval of June 2019 to June 2020.

[Insert Table 2 about here]



Table 2 reports the regression results of equation (1), which explores whether and how the key performance indicators of financial managers are affected by peer pressure. The proxy variable for peer pressure in column (1)(2) is the distance between the financial manager and the median performance. According to the regression results in column (1), the regression coefficient of incremental financial manager performance completion rate on peer pressure is 0.659, which is significant at the 1% level of significance. This indicates that assuming the difference between the previous month's performance completion rate and the median performance completion rate for the same level increases by 1 unit (i.e. the manager's own completion rate differs by 100% from the median completion rate), the manager's performance completion rate for the month will increase by 65.9% compared to the previous month. The median distance standard error for financial managers is 0.51 and the standard error for performance growth is 0.26. A coefficient of 0.659 implies that for every standard error that a financial manager lags behind the median peer completion rate, performance for the month will increase by 1.29 standard errors, which equates to a 33.54% increase in completion rate. As can be seen from Table 1, the average monthly increase in completion rate for the sample is 0. It is clear that the effect of peer pressure on key performance indicators is statistically significant. Column (2) still has a significantly positive coefficient on the median distance after the inclusion of the control variables, and the magnitude and economic significance of the coefficients on the three control variables are less clear, demonstrating the robustness of the results.

Columns (3) and (4) show the results of regressions with rank decile as a proxy variable for peer pressure, and the results do not change much for whether or not control variables are included. The regression results in column (4) with control variables show that there is a significant impact of a financial manager's ranking in the previous month on the incremental performance completion rate in the following month, being that each decile lower in the financial manager's ranking will result in 9% increased performance completion in the following month relative to the target return, and the positive impact of peer pressure on financial manager performance is robust.

We next switch to the client-month level to examine the true sales performance of financial managers, with the following regression equation:

$$\text{Net sales of bail-out products } (\log)_{ijt-1} = a + \beta \times \text{Peer pressure}_{it-1} + \gamma_1 \times \mathbf{X}_{it-1} + \text{advisor-client}_{ij} + \text{month}_t + \varepsilon_{ijt} \quad (2)$$

Where  $j$  represents the client,  $i$  represents the financial manager and  $t$  represents the month. In our sample, the correspondence between clients and financial managers is fixed. The dependent variable is sales of rigid financial products (log plus one) and the explanatory variable is peer pressure on financial managers, as defined in the explanatory paragraph of equation (1). Regressions control for financial manager-client fixed effects and month fixed effects to absorb the effects of client, financial manager, and client-financial manager relationship characteristics that do not vary over time, as well as public shocks to all clients in the time dimension. The standard errors of the regressions are clustered at the financial manager-client level. The sample contains 5,518 clients corresponding to 463 financial managers, with a sample interval of June 2019 to June 2020.

[Insert Table 3 about here]

Table 3 reports the regression results for equation (2). Columns (1) and (2) use distance from the median as a proxy variable for peer pressure, where column (1) does not include a control variable and column (2) controls for the performance of the financial manager in the previous month, and for private and public lending. The regression results show that for every 100% increase in the distance of the median financial manager, the amount of financial products purchased per client under their name increases by 29.2%, which is equivalent to an additional 220,000 RMB of rigid financial products per client per month on a mean basis. Columns (3) and (4) uses decile group ranking as a proxy variable for peer pressure. A drop of one decile in the ranking of a financial manager will result in each client under his or her name purchasing 3.3% more wealth management products in that month, equivalent to an additional 24,900 RMB in rigid financial management products per client per month.

Combining the results in Tables 2 and 3, peer pressure on financial managers significantly enhances the performance progress of financial managers, as evidenced by more financial products sold to clients, and Hypothesis 1 holds.

We replace the explanatory variable in equation (2) with the change in net financial assets (log-difference) in additional Table 1, and the resultant representation shows that the average daily net asset value of clients increases by 14.8% for every 1 unit increase in the distance between the adviser and the median performance, and robust results are also obtained using the ranking decile as a proxy variable for peer pressure.

## 5.2 Effect of peer pressure on moral hazard

In the previous section we demonstrated that peer-induced competitive pressure makes financial managers put in extra effort to sell to clients, thereby improving short-term performance. We propose the hypothesis that financial managers may sell less cost-effective financial products to their clients in order to improve their performance, i.e. exhibiting moral hazard issues. We measure moral hazard using sales of inferior products (log plus one) by the following regression formula:

$$\begin{aligned} \text{Net sales of inferior products (log)}_{ijt-1} = & \alpha + \beta \times \text{Peer pressure}_{it-1} + \gamma_1 \times \mathbf{X}_{it-1} + \\ & \text{advisor-client}_{ij} + \text{month}_t + \varepsilon_{ijt} \end{aligned} \tag{3}$$

Where j represents the client, i represents the financial manager and t represents the month. In our sample, the correspondence between clients and financial managers is fixed. The predicted variable is the amount of poor quality products sold by financial manager i to client j in month t (log plus one). The explanatory variable is peer pressure on the financial manager, as defined in the explanatory paragraph of equation (1). Regressions control for financial manager-client fixed effects and month fixed effects to absorb the effects of client, financial manager, and client-financial manager relationship characteristics that do not vary over time, as well as public shocks to all clients in the time dimension. The standard errors of the regressions are clustered at the financial manager-client level. The sample contains 5,518 clients corresponding to 463 wealth managers, with a sample interval of June 2019 to June 2020.

[Insert Table 4 about here]

Table 4 reports the results of the regressions with the amount of poor quality financial products (Panel A) and the amount of quality financial products (as a percentage) (Panel B) as the dependent variables respectively. In Panel A, the regression coefficient for the explanatory variable in column (2) is 0.314, which is significant at the 1% level of significance. It shows that for every 100% increase in the distance between the performance completion rate of a financial manager and the median for the same level, the amount of poor quality financial products purchased by their clients per month rises by 31.0%, which is equivalent to purchasing an additional 173,000 poor quality products on a mean value basis. Regression analysis using ranked deciles showed similar results, with financial managers selling significantly more poor quality financial products to each client as the peer pressure applied upon them rose. In Appendix Table 2, we calculate the percentage of poor quality financial products purchased per client per month and find that for every 100 per cent decrease in the distance of a financial manager's performance completion rate from the peer group median, the percentage of poor quality financial products purchased by their clients per month relative to rigid financial products increases by 3.6 per cent, which is significant at the 1 per cent level, but as this measure suffers from measurement bias due to the amount sold (denominator) being zero, it is not used as a primary measure.

To further argue for peer pressure and moral hazard, in a placebo experiment in Panel B, we tested whether peer pressure could enhance customers' purchases of quality financial products. The results show that peer pressure on financial managers does not significantly affect the proportion of quality financial products purchased by their clients.

In summary, Table 4 shows in aggregate that when financial managers face greater peer pressure, there is a significant increase in the purchase of poor quality financial products by their clients and no significant change in quality financial products. This suggests that under peer pressure, financial managers will ignore the interests of their clients to sell more poor quality financial products and there is a clear issue of moral hazard. In addition, in Appendix Table 1 we perform robustness tests with proxy variables for peer pressure and obtain consistent findings.

### 5.3 Peer effects among top and weak advisors

Financial managers in the 'upper middle' performance range (with completion rates above the average for their peer group) and those in the 'lower middle' range are likely to feel peer pressure of varying intensity. Upper-middle level financial managers are under less pressure to survive in the short term and are likely to be more focused on developing long-term client trust, thus exhibiting less unethical selling, while lower-middle level financial managers are under more competitive pressure and are likely to have a greater incentive to sell poor quality financial products. We therefore divided the data sample into two samples of upper and lower middle managers according to the median performance of the same level of financial managers in each month for examination. Table 4 in the Appendix reports the statistics on performance and moral hazard at the financial manager-client-month level for both groups of financial managers. As can be seen from the statistics returned in this table, the volume of financial manager clients in the upper middle group is 2.9 times higher than that of financial managers in the lower middle group (52364/17901), and in terms of the amount of rigid products purchased per client, etc., the average monthly client purchase of financial products in the upper middle level financial manager group is 792,900, while the average monthly purchase of wealth management products by clients in the lower middle level wealth management manager group was 680,800. It is clear that the upper-middle group of financial managers are both high performers in terms of client volume and sales, so they may be subject to different peer pressure and need to be considered separately.

Our research methodology is to replicate regressions (2) and (3) using two separate samples of upper-middle and lower-middle financial managers. To save space, we mainly report regression results using median distances as a measure of peer pressure, while the results for the ranking decile are robust.

[Insert Table 5 about here]

The regression results are reported in Table 5, with columns (1)-(3) showing the regression results in the upper-middle financial manager sample and columns (4)-(6)

showing the regression results in the lower-middle financial manager sample. Column (1) reports the effect of peer pressure on upper-middle financial managers on their clients' wealth management product sales with an explanatory variable coefficient of 0.173, which is significant at the 10% level of significance and corresponds to a 17.3% increase in the amount of wealth management products purchased per client in their name for every 100% decrease in the distance of the median financial manager, which at mean value corresponds to an additional purchase of 137,000 RMB per client per month million (792,000 RMB \* 17.3%) of rigid financial products. In contrast, column (4) reports the effect of peer pressure on the sales of financial products to their clients for lower middle financial managers, with an explanatory variable coefficient of 0.602, 3.5 times the coefficient for the upper middle group, which is significant at the 1% level of significance, equivalent to a 60.2% increase in the amount of financial products purchased per client in their name for every 100% decrease in the distance of the median financial manager. This equates to an additional 365,300 RMB (606,800 RMB \* 60.2%) of rigid financial products purchased per client per month, significantly higher than the upper middle group, showing that the lower performing financial managers are indeed affected by greater peer pressure.

Columns (2) and (5) compare the moral hazard of the upper and lower middle groups of financial managers. The coefficient of the median distance of the lower middle group of financial managers group is 2.35 times higher than that of the upper middle group. Estimated at the mean, for every 100% decrease in the median distance of financial managers, the upper middle group of financial managers sell 98,000 RMB (588,000 RMB \* 16.6%) more poor quality products. The lower middle group of financial managers sell 195,000 RMB (501,000 RMB \* 39.0%) of inferior products. It is evident that financial managers in the lower and middle groups will engage in more unethical sales practices for performance. Columns (3) and (6) examine sales to premium products and no significant differences were found.

Overall, the results were as expected, with both groups of financial managers putting in extra effort for equal changes in stress values. However, peer pressure had a much greater impact on the lower-middle group of financial managers than the upper-middle group, as evidenced by a higher amount of sales of wealth management products and a

surge in sales of poor quality products. This suggests that peer pressure does encourage employees to work hard, but that poorer performers in particular exhibit performance pressure and moral hazard, which may be due to poor performers having insufficient capacity or resources to improve their performance through normal efforts.

## **6 Moderators**

To further argue for the validity of our research hypothesis, two moderating variables were selected to explore the conditions under which the effect of peer pressure on moral hazard arises.

### **6.1 Complaints**

Customer complaints are a key focus of the bank's performance appraisal. In the event of a customer complaint, performance appraisal points will be deducted from the financial manager and his/her branch as appropriate, affecting the performance pay income of all staff in the branch. As a result, over-selling and moral hazard behaviour by financial managers may be significantly restrained when complaints relating to wealth management sales are recorded. We obtained information on customer complaints at each branch and divided the sample into two categories, those with and those without financial sales complaints, to test whether financial sales complaints would constrain the effect of peer pressure.

[Insert Table 6 about here]

The impact of customer complaints is reported in Table 6. We split the full sample into two groups, i.e. branches with no customer complaints about financial products in the previous month (columns (1) and (2)), and branches with complaints about financial products in the previous month (columns (3) and (4)). The regression model is consistent with the baseline regression model, i.e. columns (2) and (4) in Table 3. From the results, it is clear that financial managers over-sell, and in particular over-sell poor quality financial products, due to peer pressure only in the absence of customer complaints. The magnitude of the regression coefficients is similar to columns (2) and

(4) in Table 3, while the results of peer pressure on both performance and moral hazard disappear after customer complaints, indicating the monitoring role of customer complaints.

## **6.2 Branch size**

Our full-sample regression considers the wealth managers of the 64 branch banks in Beijing in the same pool and assumes that the comparable peers of the financial managers are all the same level of wealth managers in Beijing as their peers. The reason for this is that many of the ranking comparisons are cross-bank and financial managers do come under peer pressure from across the board. However, it is reasonable to assume that a large part of the peer pressure on financial managers comes directly from their peers in their branch bank. On the one hand, there is a certain performance assessment ranking within the branch bank, thus causing direct peer pressure, and on the other hand, as we all work in a branch bank and see each other frequently, the pressure from peers is more intuitive, even if there is no ranking comparison, and the larger the branch bank, i.e. the more peers there are, the more pressure the financial manager is under. This section examines the study of the relationship between branch volume on peer pressure and moral hazard for financial managers.

Of the 64 branches in Beijing sampled for this article, the top 4 branches in terms of the size of their financial managers have an average of 165 people, with the total number fluctuating between 115 and 190. The remaining branches have an average of 28 financial managers, with the total number lying between 1 and 78, which shows a clear discontinuity at branch level, with the number of financial managers above and below 100. We therefore define the four branches with more than 100 financial managers as large branches and the remaining 60 branches with less than 100 financial managers as small branches. Similar to the previous section, our research approach is to repeat the baseline regression models, i.e. columns (2) and (4) of Table 3, for the large and small branches respectively.

[Insert Table 7 about here]



Table 7 compares the role of peer pressure in branches with different numbers of financial managers by size. Columns (1) and (2) demonstrate the role of peer pressure in small branches, and columns (3) and (4) demonstrate the role of peer pressure in large branch structures. It is clear from the results that the effect of peer pressure on performance and moral hazard is only present in branches with large volumes, and the regression coefficients for the effect are similar to the benchmark results in columns (2) and (4) of Table 3. In contrast, in the small branch sample, the effect of peer pressure on total customer sales of financial products and sales of poor quality financial products was not significant, indicating that in branches with a small number of financial managers, financial managers do not engage in unethical sales practices in order to improve performance due to peer pressure.

## **7 Advisor-client match**

### **7.1 Gender**

It has been shown that there are large differences between women and men in terms of perceived stress; on the one hand, men facing stress have a more radical spirit of protest (Niederle and Vesterlund, 2011; De Paola, Gioia, and Scoppa, 2014) and thus may be more motivated to improve their performance; but on the other hand, men exhibit greater overconfidence (Barber and Odean, 2001) and thus may not be affected by peer pressure. There are also gender differences in customer buying behaviour, with consumer-related research showing that women are generally more likely to make irrational purchases (Coley and Burgess, 2003), but that women are more careful and display more cautious buying behaviour when purchasing investment products (Byder, Agudelo, and Arango, 2019), and are therefore less likely to be 'fooled' by financial managers. We believe that gender differences are interesting and worthy of further exploration as a topic in our research framework, both from the perspective of performance pressure on financial managers and from the perspective of clients' buying behaviour.

Similar to the approach in the previous section, we made a distinction between the sample of financial managers or the sample of clients by gender and repeated the

benchmark regressions separately (columns (2) and (4) of Table 3). The results are presented in Table 8.

[Insert Table 8 about here]

In Panel A of Table 8, columns (1) and (2) show the role of peer pressure on female financial managers and columns (3) and (4) show the role of peer pressure on male financial managers.<sup>13</sup> The regression results show that only female financial managers will exhibit efforts to improve sales performance and moral hazard behaviour due to peer pressure, with the coefficient size of the effect being slightly higher than in the benchmark regression. Whereas the effect of peer pressure was not significant in the sample of male financial managers, it is evident that in the context of financial managers, the data is more supportive of the hypothesis that women are sensitive and vulnerable to pressure, while men are overconfident. However, it is worth noting that in the workplace people are likely to be more influenced by competitors from the same sex (Sutter et al., 2009), e.g. female staff will naturally see their female peers as direct competitors and less influenced by their male peers, so it is necessary to consider the sample size of female and male financial managers in the sample. In the financial manager profession, there are usually far more female advisers than male advisers. This is supported by the statistics in this paper, where the number of female financial managers is 70% and at the same time the proportion of female financial managers in management is only 52%, meaning that female financial managers are less likely than male financial managers to be promoted. Therefore, the results of our regression, that peer pressure exists only for female financial managers, may also be due to the fact that female financial managers face a greater number of same-gender competitors and are less likely to be promoted.

In Panel B of Table 8, we divide the sample into male and female customer groups

---

<sup>13</sup> The average monthly sales size of female financial managers was 763,000 RMB, the average monthly sales size of poor quality financial products was 564,000 RMB, and the proportion of poor quality financial products sold was 36%; the average monthly sales size of male financial managers was 703,000 RMB, the average monthly sales size of poor quality financial products was 520,000 RMB, and the proportion of poor quality financial products sold was 35%. The sales scale of female wealth managers and the scale of sales of poor quality products were both higher than that of males.

according to the gender of the customer, and examine whether they would be "fooled" into buying more poor quality financial products if their corresponding financial managers were pressured to sell. Columns (1) and (2) demonstrate the effect of peer pressure on female clients by financial managers and columns (3) and (4) demonstrate the effect of peer pressure on male clients by financial managers. The regression results show that only male customers are more likely to buy products from peer-pressured financial managers, and the coefficient of their effect is twice as high as in the benchmark regression. The results support the hypothesis that women are cautious and men are willing to take more risks. A more interesting question is what does gender-matched sales look like for financial managers-clients? That is, are financial managers influenced by peer pressure to target sales to clients of the same or opposite sex? Or is there a specific combination of gender pairings? To answer the above questions, we examined the gender matching of financial manager-clients by dividing the matched sample into four groups, namely female financial manager-female client group, female financial manager-male client group, male financial manager-female client group, and male financial manager-male client group, and repeating the baseline regressions in columns (2) and (4) of Table 3, respectively.

[Insert Table 9 about here]

The results are presented in Table 9. As can be seen from the results, the effect of peer pressure on performance and moral hazard is only present in the female financial manager-male client group and the coefficient of the regression results exceeds the benchmark regression by more than a factor of two. This result is not only consistent with the findings in Table 8, but also seems to imply that female financial managers are relatively easiest to sell to male clients.

## **7.2 Experience**

Another interesting perspective we see on the financial manager-client match is the issue of experience on both sides. In our context, experience for financial managers refers specifically to their experience in the profession, measured in terms of time in the bank (months), as can be seen in Table 1, where the sample financial managers have

been in the profession for between 22 and 475 months (1.8 and 39.6 years), with an average of 140 months (11.6 years) and a median of 126 months (10.5 years). Experience for clients refers specifically to their investment experience, measured by the length of time they have had an account with the Bank, which, as can be seen in Table 1, ranges from 0 to 212 months (0 to 17.7 years), with an average of 53 months (4.4 years) and a median of 54 months (4.5 years).

We suspect that financial managers with more experience in the field should generally have better short-term performance reconciliation and be better able to maintain long-term client relationships, thus exhibiting less speculative sales behaviour, while those with less experience in the field are more likely to chase short-term performance and engage in moral hazard. From the client's perspective, clients with extensive investment experience should usually have more access to investment information and be better able to recognise the quality of financial products, and are therefore less likely to buy poor quality products marketed by their financial managers.

[Insert Table 10 about here]

In Panel A of Table 10, we divide the financial managers into experienced and novice groups<sup>14</sup> according to the median time in the business (126 months) and repeat the benchmark regression in columns (2) and (4) of Table 3, which shows that while both groups of financial managers are subject to peer pressure to push up short-term performance and sell inferior products, the regression coefficient is higher for the novice financial managers group compared to the experienced group, with the novice group experiencing 1.73 (0.525/0.303) times higher sales growth than the experienced group and 1.83 (0.360/0.196) times higher sales growth for the experienced group, indicating that novice managers are indeed more likely to be influenced by peer pressure to engage in moral hazard behaviour.

---

<sup>14</sup> 27.4% of male financial managers in the novice group, with an average monthly sales size of 672,000 RMB in financial products and 34% of sales of poor quality products; 31.4% of male financial managers in the experienced group, with an average monthly sales size of 845,000 RMB in financial products and 39% of sales of poor quality financial products.

In Panel B of Table 10, we divide customers into experienced and novice groups according to the median time of account opening with the bank (54 months) and repeat the benchmark regressions in columns (2) and (4) of Table 3. The regressions show that only novice customers buy more financial products, especially poor quality ones, due to peer pressure from their financial managers, indicating that investment experience does improve investors' financial literacy and helps them make rational investments.

Table 11 further matches financial manager-clients by experience into four groups: novice financial manager-novice client, novice financial manager-experienced client, experienced financial manager-novice client and experienced financial manager-experienced client, in order to examine the issue of gaming experience on both sides at the time of sale.

[Insert Table 11 about here]

The results in Table 11 show that short-term performance surges and poor quality product sales behaviour under peer pressure occur only in the novice manager to novice client and experienced manager to successive client groups, and that the effect of peer pressure, in terms of regression coefficients, occurs particularly in the novice manager-novice client group, where the magnitude of the coefficient is nearly twice as large as in the benchmark regression. Taken together, the results in Tables 10 and 11 support our hypothesis that novice financial managers are more susceptible to moral hazard from peer pressure to sell to inexperienced novice clients, while at the same time, experienced financial managers appear to take advantage of novice clients' lack of financial literacy and show strong moral hazard by targeting them with poor quality financial products.

## **8 Conclusion**

Drawing on data from a sample of accounts at a large commercial bank in China, this paper finds that peer pressure on financial managers significantly exacerbates moral hazard problems while enhancing performance. Using indicators such as distance from median performance and ranking decile as proxies for peer pressure, our empirical

study found that for every one unit increase in the difference between the manager and median performance, sales of financial products increased by 29.2%, but sales of ‘high risk-low return’ poor quality financial products increased by 31.0%, while sales of ‘low risk-high return’ quality financial products did not change significantly. Unethical sales behaviour triggered by peer pressure is particularly pronounced in the group of financial managers with poorer performance, and the paper's conclusions are robust to the use of other proxies for peer pressure such as the ranking decile.

We tested the validity of the research hypothesis from the perspectives of both customer complaints and branch bank volume. Customer complaints directly deduct financial manager performance income, and we find that there is a significant reduction in the occurrence of unethical behaviour by financial managers following the occurrence of customer complaints, i.e. customer complaints effectively reduce the moral hazard problem of financial managers. We found that the positive effect of peer pressure on sales of financial products and poor quality financial products was only found in large branches with more than 100 financial managers, while the sales behaviour of financial managers in small branches was not significantly affected by peer pressure.

In addition, we have analysed the heterogeneity of unethical behaviour of financial managers based on the one-to-one correspondence between financial managers and clients. An analysis of heterogeneity based on gender differences between men and women shows that peer pressure triggers unethical behaviour mainly among female financial managers and causes loss of earnings mainly among male clients, with moral hazard problems occurring mainly between female financial managers and male clients. An analysis of heterogeneity in relation to investment experience shows that peer pressure causes less experienced financial managers to behave more unethically and cause loss of returns to less experienced clients, with moral hazard problems occurring mainly between less experienced financial managers and less experienced clients.

## References

- Akerlof, G.A. and Shiller, R.J., 2015. Phishing for phools. In *Phishing for Phools*. Princeton University Press.
- Anagol, S., Cole, S. and Sarkar, S., 2017. Understanding the advice of commissions-motivated agents: Evidence from the Indian life insurance market. *Review of Economics and Statistics*, 99(1), pp.1-15.
- Barber, B. M., and T. Odean., 2001. Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. *Quarterly Journal of Economics* 116(1), pp.261–92.
- Barron, John M., and Kathy Paulson Gjerde., 1997. Peer Pressure in an Agency Relationship. *Journal of Labor Economics* 15(2), pp.234–54.
- Bandiera, O., Barankay, I. and Rasul, I., 2010. Social incentives in the workplace. *The review of economic studies*, 77(2), pp.417-458.
- Bergstresser, D., Chalmers, J. and Tufano, P., 2009. Assessing the Costs and Benefits of Brokers.
- Bronnenberg, B.J., Dubé, J.P., Gentzkow, M. and Shapiro, J.M., 2015. Do pharmacists buy Bayer? Informed shoppers and the brand premium. *The Quarterly Journal of Economics*, 130(4), pp.1669-1726.
- Bursztyjn, Leonardo, and Robert Jensen., 2015. How Does Peer Pressure Affect Educational Investments? *Quarterly Journal of Economics* 130(3), pp.1329–67.
- Byder, James, Diego A. Agudelo, and Ignacio Arango., 2019. Gender Matters Most. The Impact on Short-Term Risk Aversion Following a Financial Crash.” *Review of Financial Economics* 37(1), pp.106–17.
- Célérier, C. and Vallée, B., 2017. Catering to investors through security design: Headline rate and complexity. *The Quarterly Journal of Economics*, 132(3), pp.1469-1508.
- Chan, D.C., 2016. Teamwork and moral hazard: evidence from the emergency department. *Journal of Political Economy*, 124(3), pp.734-770.
- Chan, D.C., 2018. The efficiency of slacking off: Evidence from the emergency department. *Econometrica*, 86(3), pp.997-1030.
- Chan, T.Y., Li, J. and Pierce, L., 2014. Compensation and peer effects in competing sales teams. *Management Science*, 60(8), pp.1965-1984.
- Cheng, H., Raina, S. and Xiong, W., 2013. *Wall Street and the housing bubble* (No. w18904). National Bureau of Economic Research.
- Christoffersen, S.E., Evans, R. and Musto, D.K., 2013. What do consumers’ fund flows maximize? Evidence from their brokers’ incentives. *The Journal of Finance*, 68(1), pp.201-235.
- Coley, Amanda, and Brigitte Burgess., 2003. Gender Differences in Cognitive and Affective Impulse Buying. *Journal of Fashion Marketing and Management* 7(3), pp.282–95.
- Cornelissen, T., Dustmann, C. and Schönberg, U., 2017. Peer effects in the workplace. *American Economic Review*, 107(2), pp.425-56.
- De Paola, Maria, Francesca Gioia, and Vincenzo Scoppa., 2014. Overconfidence, Omens and Gender Heterogeneity: Results from a Field Experiment. *Journal of Economic Psychology* 45, pp.237–52.
- Dimmock, Stephen G., William C. Gerken, and Nathaniel P. Graham., 2018. Is Fraud Contagious? Coworker Influence on Misconduct by Financial Advisors. *Journal of Finance* 73(3), pp.1417–50.
- Dvorak, T. and Norbu, J., 2013. Do mutual fund companies eat their own cooking?. *The Journal of Retirement*, 1(2), pp.91-100.

- Dvorak, T., 2015. Do 401k plan advisors take their own advice?. *Journal of Pension Economics & Finance*, 14(1), pp.55-75.
- Egan, M., Matvos, G. and Seru, A., 2017. *When Harry fired Sally: The double standard in punishing misconduct* (No. w23242). National Bureau of Economic Research.
- Egan, M., 2019. Brokers versus retail investors: Conflicting interests and dominated products. *The Journal of Finance*, 74(3), pp.1217-1260.
- Egan, M., Matvos, G. and Seru, A., 2019. The market for financial adviser misconduct. *Journal of Political Economy*, 127(1), pp.233-295.
- Falk, A. and Ichino, A., 2006. Clean evidence on peer effects. *Journal of Labor Economics*, 24(1), pp.39-57.
- Fama, E.F. and Jensen, M.C., 1983. Separation of ownership and control. *The Journal of Law and Economics*, 26(2), pp.301-325.
- Gaudecker, H.M.V., 2015. How does household portfolio diversification vary with financial literacy and financial advice?. *The Journal of Finance*, 70(2), pp.489-507.
- Gaynor, M., Haas-Wilson, D. and Vogt, W.B., 2000. Are invisible hands good hands? Moral hazard, competition, and the second-best in health care markets. *Journal of Political Economy*, 108(5), pp.992-1005.
- Gaynor, M., Rebitzer, J.B. and Taylor, L.J., 2004. Physician incentives in health maintenance organizations. *Journal of Political Economy*, 112(4), pp.915-931.
- Gelman, M., Khan, Z., Shoham, A. and Tarba, S.Y., 2021. Does local competition and firm market power affect investment adviser misconduct?. *Journal of Corporate Finance*, 66, p.101810.
- Gneezy, U., Niederle, M. and Rustichini, A., 2003. Performance in competitive environments: Gender differences. *The quarterly journal of economics*, 118(3), pp.1049-1074.
- Gould, E.D. and Winter, E., 2009. Interactions between workers and the technology of production: Evidence from professional baseball. *The Review of Economics and Statistics*, 91(1), pp.188-200.
- Guryan, J., Kroft, K. and Notowidigdo, M.J., 2009. Peer effects in the workplace: Evidence from random groupings in professional golf tournaments. *American Economic Journal: Applied Economics*, 1(4), pp.34-68.
- Hansen, R.G., 1987. A theory for the choice of exchange medium in mergers and acquisitions. *Journal of Business*, pp.75-95.
- Hartzell, J.C., Ofek, E. and Yermack, D., 2004. What's in it for me? CEOs whose firms are acquired. *The Review of Financial Studies*, 17(1), pp.37-61
- Holmstrom, B., 1982. Design of incentive schemes and the new Soviet incentive model. *European Economic Review*, 17(2), pp.127-148.
- Ichino, A. and Maggi, G., 2000. Work environment and individual background: Explaining regional shirking differentials in a large Italian firm. *The Quarterly Journal of Economics*, 115(3), pp.1057-1090.
- Inderst, R. and Ottaviani, M., 2009. Misselling through agents. *American Economic Review*, 99(3), pp.883-908.
- Inderst, R. and Ottaviani, M., 2012. Financial advice. *Journal of Economic Literature*, 50(2), pp.494-512.
- Kandel, E. and Lazear, E.P., 1992. Peer pressure and partnerships. *Journal of political Economy*, 100(4), pp.801-817.
- Kaur, S., Kremer, M. and Mullainathan, S., 2010. Self-control and the development of work arrangements. *American Economic Review*, 100(2), pp.624-28.



- Levitt, S.D. and Syverson, C., 2008. Market distortions when agents are better informed: The value of information in real estate transactions. *The Review of Economics and Statistics*, 90(4), pp.599-611.
- Lindquist, M.J., Sauermann, J. and Zenou, Y., 2015. Network effects on worker productivity.
- Linnainmaa, J.T., Melzer, B.T. and Previtro, A., 2021. The misguided beliefs of financial advisors. *The Journal of Finance*, 76(2), pp.587-621.
- Mas, A. and Moretti, E., 2009. Peers at work. *American Economic Review*, 99(1), pp.112-45.
- Mullainathan, S., Noeth, M. and Schoar, A., 2012. *The market for financial advice: An audit study* (No. w17929). National Bureau of Economic Research.
- Niederle, M. and Vesterlund, L., 2007. Do women shy away from competition? Do men compete too much?. *The quarterly journal of economics*, 122(3), pp.1067-1101.
- Niederle, Muriel, and Lise Vesterlund., 2011. "Gender and Competition." *Annual Review of Economics*, 3: 601–30.
- Pool, V.K., Sialm, C. and Stefanescu, I., 2016. It pays to set the menu: Mutual fund investment options in 401 (k) plans. *The Journal of Finance*, 71(4), pp.1779-1812.
- Rud, O.A., Rabanal, J.P. and Horowitz, J., 2018. Does competition aggravate moral hazard? A Multi-Principal-Agent experiment. *Journal of Financial Intermediation*, 33, pp.115-121.
- Sala-i-Martin, X.X., 1996. The classical approach to convergence analysis. *The Economic Journal*, pp.1019-1036.
- Serafinelli, M., 2019. Good firms, worker flows and productivity. *Journal of Labor Economics*, 37(3), pp.747-792.
- Sutter, Matthias, Ronald Bosman, Martin G. Kocher, and Frans van Winden., 2009. "Gender Pairing and Bargaining-Beware the Same Sex!" *Experimental Economics* 12(3): 318–31.
- Waldinger, F., 2012. Peer Effects in Science: Evidence from the Dismissal of Scientists in Nazi Germany. *Review of Economic Studies*, 79(2), pp. 838-861.

# Tables

## Table 1 Summary Statistics

	N	Mean	Std. Dev.	Min	Median	Max
<i>advisor-month</i>						
Expected profits (in 1,000 yuan)	6015	854.82	1028.56	0	630.29	10225.14
Target profits (in 1,000 yuan)	6015	763.60	668.90	0	780.00	2210.00
Completion rate (expected profits/target profits)	6015	0.96	0.51	0	1.02	4.63
Distance to median	6015	0.08	0.51	-3.62	0	1.28
Rank decile	6015	5.45	2.87	1.00	5.00	10.00
Completion rate growth	5550	-0.00	0.26	-2.74	0	2.90
Client loan (in 1,000 yuan)	6015	9867.66	25654.94	0	87.00	397830.84
Firm loan (in 1,000,000 yuan)	6015	28.28	129.45	0	0	1851.10
Adviser experience (month)	6015	139.65	68.27	22.00	126.00	475.00
<i>client-advisor-month</i>						
Net sales of bail-out products (in 1,000 yuan)	71722	754.77	3765.35	0	77.00	228064.98
Net sales of bail-out products (log)	71722	7.25	6.53	0	11.25	19.25
Asset value growth (log difference)	66204	0.06	1.17	-15.70	0	17.77
Net sales of inferior products (in 1,000 yuan)	71722	558.36	3530.04	0	0	227564.98
Net sales of inferior products (log)	71722	6.08	6.44	0	0	19.24
Inferior product %	71722	0.36	0.42	0	0	1.00
Net sales of superior products (in 1,000 yuan)	71722	493.70	3482.53	0	0	227576.00
Net sales of superior products (log)	71722	5.11	6.28	0	0	19.24
Distance to median	71722	-0.08	0.45	-3.62	-0.16	1.28
Rank decile	71722	4.13	2.77	1.00	3.00	10.00
Deficit distance to median	71722	0.13	0.33	0	0	1.28
Excess distance to median	71722	-0.21	0.21	-3.62	-0.16	0.00
Branch allegation	71722	0.17	0.38	0	0	1.00
Big branch	71722	0.82	0.38	0	1.00	1.00
Client experience (month)	71722	52.91	36.67	0	54.00	212.00
<i>advisor</i>						
Adviser gender	463	0.30	0.46	0	0	1.00
<i>client</i>						
Client gender	5438	0.44	0.50	0	0	1.00

**Table 2. The effect of peer pressure on KPI-induced performance, advisor level**

This table examines the effect of peer pressure on KPI-induced performance. The regressions are performed at advisor-month level, covering 463 advisors from June 2019 to June 2020. The dependent variable, *Completion rate growth*, refers to the difference of the advisor's completion rate between current and last month, with the completion rate defined as the advisor's expected profit scaled by the target profit. The retail advisors in the bank are divided into six levels, each sharing a common monthly target profit set by the bank. *Distance to median* and *Rank decile* are proxy for peer pressure. The *Distance to median* refers to the difference of the advisor's completion rate and the median completion rate among advisors of the same level. The *Rank decile* refers to the advisor's completion rate rank measured at decile (1-10) among advisors of the same level. Both measures of peer pressure are lagged for one month. The column (2) and (4) further incorporate controls variables including the lagged advisor's expected profit (log), the lagged size of retail client loan (log) and the lagged size of firm loan (log) under the advisor's account. In all columns, advisor and month fixed effects are controlled. The standard-errors are clustered at advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Completion rate growth <sub>i,t</sub>			
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.659*** (0.013)	0.852*** (0.014)		
Rank decile <sub>i,t-1</sub>			0.090*** (0.001)	0.098*** (0.001)
Expected profits(log) <sub>i,t-1</sub>		0.050*** (0.001)		0.019*** (0.001)
Client loan(log) <sub>i,t-1</sub>		-0.003*** (0.001)		-0.002** (0.001)
Firm loan(log) <sub>i,t-1</sub>		-0.002*** (0.001)		-0.000 (0.001)
Constant	0.048*** (0.001)	-0.469*** (0.015)	-0.374*** (0.004)	-0.615*** (0.010)
Advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	66,198	66,198	66,198	66,198
Adjusted R-squared	0.301	0.350	0.250	0.259

**Table 3. The effect of peer pressure on performance, client-advisor level**

This table examines the effect of peer pressure on performance at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020. Each client is in charged by one advisor and during the sample period, there are no changes of client-advisor match. The dependent variable, *Net sales of guaranteed products(log)*, refers to the logarithm of net selling amount of guaranteed products by advisor  $i$  to his/her client  $j$  in month  $t$ . *Distance to median* and *Rank decile* are proxy for peer pressure. The *Distance to median* refers to the difference of the advisor's completion rate and the median completion rate among advisors of the same level. The *Rank decile* refers to the advisor's completion rate rank measured at decile (1-10) among advisors of the same level. Both measures of peer pressure are lagged for one month. The controls variables in column (2) and (4) are identical to Table 2. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Net sales of guaranteed products(log) <sub>i,t</sub>			
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.292*** (0.077)	0.361*** (0.087)		
Rank decile <sub>i,t-1</sub>			0.033*** (0.010)	0.034*** (0.010)
Expected profits(log) <sub>i,t-1</sub>		0.018 (0.016)		0.001 (0.014)
Client loan(log) <sub>i,t-1</sub>		-0.020 (0.021)		-0.019 (0.021)
Firm loan(log) <sub>i,t-1</sub>		0.037** (0.018)		0.038** (0.018)
Constant	7.663*** (0.006)	7.539*** (0.192)	7.504*** (0.041)	7.549*** (0.199)
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	66,198	66,198	66,198	66,198
Adjusted R-squared	0.799	0.799	0.799	0.799

**Table 4. Peer pressure and moral hazard**

This table examines the effect of peer pressure on moral hazard. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020. Panel A examines the peer pressure and the selling of inferior product. The dependent variable, *Net sales of inferior products(log)*, refers to the logarithm of net selling amount of inferior products by advisor  $i$  to his client  $j$  in month  $t$ , where inferior products are those products with the lowest guaranteed return among products with the same maturity-risk level. Panel B is a placebo test which examines the peer pressure and the selling of superior product. *Net sales of superior products(log)* refers to the logarithm of net selling amount of superior products by advisor  $i$  to his/her client  $j$  in month  $t$ , where superior products are those products with the highest guaranteed return among products with the same maturity-risk level. The explanatory variables, *Distance to median* and *Rank decile*, as well as the control variables in column (2) and (4), are identical to Table 2. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

Panel A. Inferior product	Net sales of inferior products(log) <sub>i,j,t</sub>			
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.310*** (0.075)	0.253*** (0.088)		
Rank decile <sub>i,t-1</sub>			0.036*** (0.010)	0.025** (0.011)
Expected profits(log) <sub>i,t-1</sub>		-0.015 (0.015)		-0.026* (0.013)
Client loan(log) <sub>i,t-1</sub>		-0.015 (0.022)		-0.014 (0.022)
Firm loan(log) <sub>i,t-1</sub>		0.038** (0.019)		0.038** (0.019)
Constant	6.416*** (0.006)	6.616*** (0.187)	6.243*** (0.041)	6.615*** (0.196)
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	66,198	66,198	66,198	66,198
Adjusted R-squared	0.786	0.786	0.786	0.786
Panel B. Superior product	Net sales of superior products (log) <sub>i,j,t</sub>			
	(1)	(2)	(3)	(4)
Distance to median <sub>t-1</sub>	0.115 (0.074)	-0.016 (0.084)		
Rank decile <sub>t-1</sub>			0.007 (0.010)	-0.010 (0.010)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	66,198	66,198	66,198	66,198
Adjusted R-squared	0.786	0.786	0.786	0.786

**Table 5. Above-median and below-median advisors**

This table examines the effect of peer pressure on performance and moral hazard while dividing the advisor sample in to above- and below-median groups. Above- (below-) advisors are those advisors whose last month completion rate was above (below) the median completion rate among the advisors of the same level. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020. On average, the number of clients managed by the above-median advisors are 2.9 times to the number of clients managed by below-median advisors. Columns (1)-(3) correspond to the sub-sample of top advisors and columns (4)-(6) correspond to the sub-sample of weak advisors. Columns (1) and (4) replicate the column (2) of Table 3. Columns (2) and (5) replicate the column (2) of Panel A, Table 4. Columns (3) and (6) replicates the column (2) of Panel B, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Above-median advisors			Below-median advisors		
	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>	Net sales of superior products (log) <sub>i,j,t</sub>	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>	Net sales of superior products (log) <sub>i,j,t</sub>
	(1)	(2)	(3)	(4)	(5)	(6)
Distance to median <sub>i,t-1</sub>	0.173*	0.166*	-0.063	0.602***	0.390**	0.056
	(0.092)	(0.100)	(0.095)	(0.165)	(0.155)	(0.156)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	48,146	48,146	48,146	15,914	15,914	15,914
Adjusted R-squared	0.800	0.787	0.787	0.804	0.793	0.795

**Table 6. Client allegation**

This table examines role of client allegation in moderating the impact of peer pressure on performance and moral hazard. The regression sample (at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020) is divided into “No allegation” and “With allegation” groups depending on whether the bank branch where the advisor works received client allegations pertaining to retail-investment topics last month. Columns (1) and (2) correspond to “No allegation” sub-sample and columns (3) and (4) correspond to the “With allegation” sub-sample. Column (1) and (3) examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2) and (4) examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	No allegation		With allegation	
	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.373*** (0.096)	0.227** (0.094)	0.163 (0.166)	0.175 (0.176)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	55,014	55,014	10,319	10,319
Adjusted R-squared	0.797	0.784	0.853	0.848

**Table 7. Bank branch size**

This table examines role of bank branch size in moderating the impact of peer pressure on performance and moral hazard. The regression sample (at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020) is divided into “Big branch” and “Small branch” groups depending on whether the bank branch has more than 100 advisors (in reality). There are 4 “big” branches and 60 “small” branches. Columns (1) and (2) correspond to “Big branch” sub-sample and columns (3) and (4) correspond to the “Small branch” sub-sample. Column (1) and (3) examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2) and (4) examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Big branch		Small branch	
	Net sales of guaranteed products (log) <sub>i,j,t</sub> (1)	Net sales of inferior products (log) <sub>i,j,t</sub> (2)	Net sales of guaranteed products (log) <sub>i,j,t</sub> (3)	Net sales of inferior products (log) <sub>i,j,t</sub> (4)
Distance to median <sub>i,t-1</sub>	0.424*** (0.100)	0.319*** (0.099)	-0.026 (0.173)	-0.117 (0.186)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	54,582	54,582	11,616	11,616
Adjusted R-squared	0.795	0.781	0.821	0.810



**Table 8. Gender**

This table examines the heterogenous impact of peer pressure on performance and moral hazard by advisor and client gender. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020). Panel A divides the sample into female-advisor (columns (1) and (2)) and male-advisor groups (column (3) and (4)) depending on the advisors' gender. Panel B divides the sample into female-client (columns (1) and (2)) and male-client (column (3) and (4)) groups depending on the clients' gender. Column (1) and (3) in both panels examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2) and (4) in both panels examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

Panel A. Advisor	Female		Male	
	Net sales of guaranteed products (log) <sub>i,j,t</sub> (1)	Net sales of inferior products (log) <sub>i,j,t</sub> (2)	Net sales of guaranteed products (log) <sub>i,j,t</sub> (3)	Net sales of inferior products (log) <sub>i,j,t</sub> (4)
Distance to median <sub>i,t-1</sub>	0.460*** (0.103)	0.304*** (0.105)	0.037 (0.145)	0.078 (0.142)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	57,474	57,474	8,724	8,724
Adjusted R-squared	0.795	0.784	0.825	0.799
Panel B. Client	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.107 (0.114)	-0.060 (0.112)	0.704*** (0.136)	0.632*** (0.138)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	36,465	36,465	28,773	28,773
Adjusted R-squared	0.795	0.781	0.805	0.792

**Table 9. Advisor-client gender match**

This table examines the heterogeneous impact of peer pressure on performance and moral hazard by advisor-client gender match. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020). The sample is divided into four groups: female advisor-female client (columns (1) and (2)), female advisor-male client (columns (3) and (4)), male advisor-female client (columns (5) and (6)), and male advisor-male client (columns (7) and (8)). Column (1), (3), (5) and (7) examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2), (4), (6) and (8) examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Female advisor – Female client		Female advisor – Male client		Male advisor – Female client		Male advisor – Male client	
	Net sales. guaranteed.	Net sales. inferior.	Net sales. guaranteed.	Net sales. inferior.	Net sales. guaranteed.	Net sales. inferior.	Net sales. guaranteed.	Net sales. inferior.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Distance to median <sub>i,t-1</sub>	0.194 (0.134)	-0.068 (0.133)	0.849*** (0.161)	0.787*** (0.166)	-0.224 (0.187)	-0.035 (0.191)	0.275 (0.220)	0.130 (0.212)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	31,920	31,920	24,738	24,738	4,545	4,545	4,035	4,035
R-squared	0.791	0.780	0.800	0.790	0.816	0.789	0.836	0.809

**Table 10. Experiences**

This table examines the heterogenous impact of peer pressure on performance and moral hazard by advisor and client working/investment experiences. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020). An advisor is defined as “green hand” (“experienced”) if his/her working month in the bank is lower (higher) than the full advisor sample median (126 months). A client is defined as a(n) “new hand” (“experienced”) investor if he/she is a(n) new (old) client to the bank, or whether his/her account existence time is shorter(longer) then the full client sample median (54 months). Panel A shows the results of new-hand-advisors subsample (columns (1) and (2)) and of experienced-advisors sub-sample (column (3) and (4)). Panel B shows the results of new-hand-clients subsample (columns (1) and (2)) and of experienced-clients sub-sample (column (3) and (4)). Column (1) and (3) in both panels examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2) and (4) in both panels examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

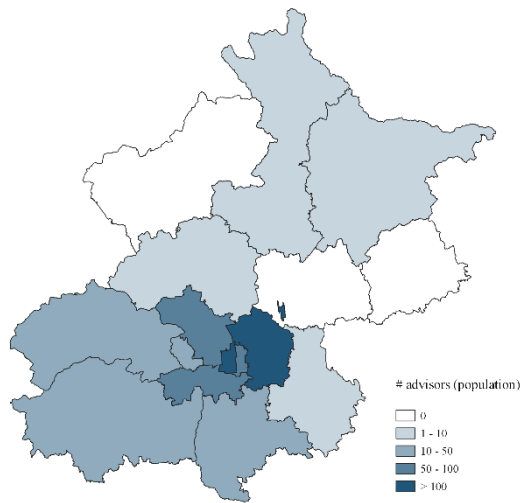
Panel A. Advisor	Green hand		Experienced	
	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>	Net sales of guaranteed products (log) <sub>i,j,t</sub>	Net sales of inferior products (log) <sub>i,j,t</sub>
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.525*** (0.154)	0.360** (0.150)	0.303*** (0.110)	0.196* (0.112)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	33,879	33,879	32,316	32,316
Adjusted R-squared	0.795	0.786	0.830	0.818
Panel B. Client	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.468*** (0.128)	0.375*** (0.128)	0.085 (0.110)	-0.016 (0.112)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	32,529	32,529	33,615	33,615
Adjusted R-squared	0.772	0.765	0.834	0.816

**Table 11. Advisor-client working/investment experience match**

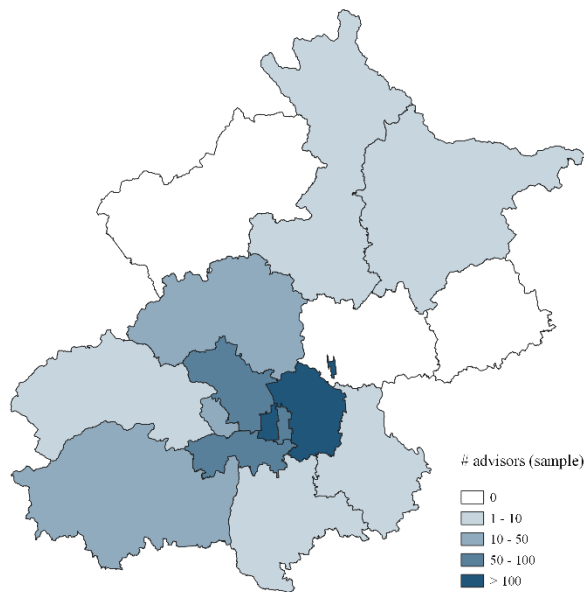
This table examines the heterogenous impact of peer pressure on performance and moral hazard by advisor-client experience match. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020). The sample is divided in to four groups: green hand advisor- green hand client (columns (1) and (2)), green hand advisor-experienced client (columns (3) and (4)), experienced advisor- green hand client (columns (5) and (6)), and experienced advisor- experienced client (columns (7) and (8)). Column (1), (3), (5) and (7) examine the effect of peer pressure on performance by replicating the column (2) of Table 3. Column (2), (4), (6) and (8) examine the effect of peer pressure on moral hazard by replicating the column (2) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Green hand advisor – Green hand client		Green hand advisor – Experienced client		Experienced advisor – Green hand client		Experienced advisor – Experienced client	
	Net sales.	Inferior sales.	Net sales.	Inferior sales.	Net sales.	Inferior sales.	Net sales.	Inferior sales.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Distance to median <sub>i,t-1</sub>	0.798*** (0.243)	0.461* (0.237)	0.073 (0.169)	0.128 (0.171)	0.293* (0.153)	0.251 (0.156)	0.160 (0.151)	-0.016 (0.153)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	16,649	16,649	17,195	17,195	15,868	15,868	16,409	16,409
R-squared	0.767	0.765	0.828	0.812	0.802	0.794	0.863	0.847

## Appendix



Panel A. Population



Panel B. Random draw sample (regression sample)

**Figure A1. Distribution of advisors.** The figures depict the distribution of number of advisors in Beijing using the population (panel A) and random draw sample, i.e. the regression sample (panel B).

**Table A1. Alternative measure of advisor performance**

This table examines the effect of peer pressure on advisor performance using alternative measure of performance. The dependent variable, *Asset value growth (log difference)*, is defined as the log difference of total asset value between the current and last month of all clients under the advisor's account. The regressions are performed at advisor-month level, covering 463 advisors from June 2019 to June 2020. Column (1) replicates the column (2) of Table 2 and column (2) replicates the column (4) of Table 2. In all columns, advisor and month fixed effects are controlled. The standard-errors are clustered at advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Asset value growth (log difference) <sub>i,t</sub>	
	(1)	(2)
Distance to median <sub>i,t-1</sub>	0.148*** (0.028)	
Rank decile <sub>i,t-1</sub>		0.016*** (0.004)
Controls	Yes	Yes
Client-advisor FE	Yes	Yes
Month FE	Yes	Yes
Observations	66,198	66,198
Adjusted R-squared	-0.024	-0.024

**Table A2. Alternative measure of moral hazard**

This table examines the effect of peer pressure on advisor moral hazard using alternative measure of moral hazard. The dependent variable, *Inferior product %*, is defined as the ratio between *Net sales of inferior products* and *Net sales of guaranteed products* by advisor *i* to client *j* in month *t-1*. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020. Column (1) replicates the column (2) of Panel A, Table 3 and column (2) replicates the column (4) of Panel A, Table 3. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Inferior product % <sub>i,j,t</sub>	
	(1)	(2)
Distance to median <sub>i,t-1</sub>	0.026*** (0.006)	
Rank decile <sub>i,t-1</sub>		0.002*** (0.001)
Controls	Yes	Yes
Client-advisor FE	Yes	Yes
Month FE	Yes	Yes
Observations	66,198	66,198
Adjusted R-squared	0.724	0.724

### Table A3. Excluding Spring Festival

This table examines the effect of peer pressure on advisor performance and moral hazard excluding the spring festival of 2020. The regressions are performed at client-advisor-month level, covering 5518 clients matching to 463 advisors from June 2019 to June 2020. Column (1) and (2) examine the effect of peer pressure on performance by replicating the columns (2) and (4) of Table 3. Column (3) and (4) examine the effect of peer pressure on moral hazard by replicating the columns (2) and (4) of Panel A, Table 4. In all columns, client-advisor pair and month fixed effects are controlled. The standard-errors are clustered at client-advisor level. \*\*\*, \*\* and \* indicate significant levels at the 1%, 5% and 10% levels respectively.

	Net sales of guaranteed products (log) <sub>i,j,t</sub>		Net sales of inferior products (log) <sub>i,j,t</sub>	
	(1)	(2)	(3)	(4)
Distance to median <sub>i,t-1</sub>	0.384*** (0.098)		0.247** (0.097)	
Rank decile <sub>i,t-1</sub>		0.036*** (0.011)		0.025** (0.012)
Controls	Yes	Yes	Yes	Yes
Client-advisor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Observations	55,174	55,174	55,174	55,174
R-squared	0.784	0.783	0.769	0.769



**Table A4. Summary statistics by above- and below- median advisors**

	N	Mean	Std. Dev.	Min	Median	Max
Above median advisors						
Net sales of guaranteed products(in 1,000 yuan)	52364	792.93	4095.39	0	100.00	228064.98
Net sales of guaranteed products (log)	52364	7.49	6.50	0	11.51	19.25
Net sales of inferior products(in 1,000 yuan)	52364	588.13	3878.92	0	0	227564.98
Net sales of inferior products (log)	52364	6.28	6.45	0	0	19.24
Inferior product %	52364	0.37	0.42	0	0	1.00
Below median advisors						
Net sales of guaranteed products(in 1,000 yuan)	17901	680.77	2771.93	0	30.00	59088.00
Net sales of guaranteed products (log)	17901	6.66	6.57	0	10.31	17.89
Net sales of inferior products(in 1,000 yuan)	17901	500.73	2424.23	0	0	54088.00
Net sales of inferior products (log)	17901	5.60	6.41	0	0	17.81
Inferior product %	17901	0.34	0.42	0	0	1.00

**Table A5. Summary statistics by female and male advisors**

	N	Mean	Std. Dev.	Min	Median	Max
Female advisor						
Net sales of guaranteed products(in 1,000 yuan)	62266	762.61	3867.48	0	80.00	228064.98
Net sales of guaranteed products (log)	62266	7.30	6.52	0	11.29	19.25
Net sales of inferior products(in 1,000 yuan)	62266	564.12	3643.42	0	0	227564.98
Net sales of inferior products (log)	62266	6.11	6.44	0	0	19.24
Inferior product %	62266	0.36	0.42	0	0	1.00
Male advisor						
Net sales of guaranteed products(in 1,000 yuan)	9456	703.09	3007.06	0	56.00	59088.00
Net sales of guaranteed products (log)	9456	6.90	6.57	0	10.93	17.89
Net sales of inferior products(in 1,000 yuan)	9456	520.46	2665.43	0	0	54088.00
Net sales of inferior products (log)	9456	5.88	6.44	0	0	17.81
Inferior product %	9456	0.35	0.42	0	0	1.00

**Table A6. Summary statistics by green hand and experienced advisors**

	N	Mean	Std. Dev.	Min	Median	Max
Green hand advisor						
Net sales of guaranteed products(in 1,000 yuan)	37341	671.61	3611.74	0	35.00	193084.98
Net sales of guaranteed products (log)	37341	6.66	6.54	0	10.46	19.08
Net sales of inferior products(in 1,000 yuan)	37341	505.83	3427.22	0	0	192584.98
Net sales of inferior products (log)	37341	5.54	6.37	0	0	19.08
Inferior product %	37341	0.34	0.42	0	0	1.00
Experienced advisor						
Net sales of guaranteed products(in 1,000 yuan)	34381	845.08	3923.44	0	111.00	228064.98
Net sales of guaranteed products (log)	34381	7.89	6.45	0	11.62	19.25
Net sales of inferior products(in 1,000 yuan)	34381	615.41	3637.60	0	36.00	227564.98
Net sales of inferior products (log)	34381	6.67	6.46	0	10.49	19.24
Inferior product %	34381	0.39	0.42	0	0.22	1.00