THE MODERATING ROLE OF ADVISOR BIG FIVE PERSONALITY ON THE ASSOCIATION BETWEEN FINANCIAL ADVICE AND INVESTOR TRADING: EVIDENCE FROM THE CHINESE FUTURES MARKET

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We examined how a psychological characteristic, namely advisor Big five personality moderate the influence of financial advice on investor futures trading. This research tested the hypotheses based on the unique data set collected from 408 investor-advisor dyads in Chinese futures market. Our results provide empirical evidence that the use of financial advice leads investors to trade more futures contracts when advisor personality tends to be openness, conscientiousness, and extraversion. On the other hand, financial advice negatively affects futures trading when the personality of advisors is likely to be neurotic. This research posits that retail investors trade differently if their advisors have a specific personality and therefore the investor trading patterns could be partly explained by exogenous supply-side factors. We suggest that the psychological characteristics of advisors can be relevant factors for policymakers in the financial services industry in order to improve their business.

Key words: financial advice, futures trading, the Big Five personality, Chinese futures market

INTRODUCTION

Arguably, one of the most important purposes of brokerage firms is to generate revenue which is ultimately achieved through the immediate selling of securities to broker clients. In the rapidly changing financial services industry, brokers are required to deal with investors in a way that facilitates sales of securities through a dyadic interpersonal relationship. The majority of investors regard brokers as their key source of information in trading decisions and seek personal advice from them so as to reduce
search costs and information asymmetries as well as risks associated with investments (see e.g., Clark-Murphy & Soutar, 2008; Lewellen et al., 1977). Consequently, brokers of financial market need to act more as professional advisors than those in the other markets. Ghiselli (1969) argued that a broker of the financial market acts more like a financial advisor than a salesperson. Investors need a professional consultation with brokers or market makers in respect of their investment plans so as to increase their confidence in investment decisions (Yang et al., 2012). Therefore, compared with other markets, the trading behavior of investors in futures markets tends to depend more on advisors.

Financial advisors may influence investor trading behavior in two opposite directions. Financial professionals can prevent investors from overtrading, as they are less likely to suffer from investment biases such as overconfidence bias (Shapira & Venezia, 2001). Conversely, the fact that financial advisors are salespeople and have incentives to earn higher trading commissions, may drive advisors to increase the trading frequency of their clients (Haigh & List, 2005; List, 2003). If financial advisors have such a clear influence on investor trading, then we should look more closely at the characteristics of advisors to try to understand specifically how they influence investor trading. One of such characteristics is the advisors’ personality. Although various disciplines, such as marketing and organizational behavior, have attempted to discuss some of the psychological characteristics of advisors that may impact customer buying behavior (see e.g., Furnham & Fudge, 2008; Flanagan et al., 2005; Lee, 2000) there is still a lack of literature in the specific context of financial decision making that investigates the influence of advisor psychological characteristics on investor trading behavior.

Our research has built a different conceptual framework with insights taken from yet another psychological discipline: personality psychology as shown in Fig. 1. We postulate that the association between financial advice and investor futures trading is moderated by a psychological characteristic of advisors, namely advisor personality. In other words, the variations in futures trading, due to the different frequencies at which financial advice is obtained by investors, are influenced by the Big Five advisor personality traits. To fulfill the purpose of this study, we tested the research hypotheses based upon the unique dataset obtained from 408 investor-advisor dyads in the Chinese futures market. We provide empirical evidence that the use of financial advice leads investors to trade more futures when advisor personality tends to be openness, conscientiousness, and extraversion. On the other hand, financial advice negatively affects futures trading when the personality of advisors is likely to be neurotic.

In most recent studies, it has already been established that the Big Five investor’s personality traits have a significant influence on the association between financial advice and trading behavior (see Tauni, Fang, & Iqbal, 2017; Tauni et al., 2015; Tauni, Rao, Fang, & Gao, 2017; Tauni, Rao, Fang, Mirza, et al., 2017). However, in this research, we intend to investigate that the association between financial advice and securities trading is also influenced by the financial advisor’s personality. The conceptual framework of this research is based on the descriptive model of behavioral finance theory. The descriptive
model, the decision-making model used in psychology, implies how investors actually behave in the real world. The model states that human cannot perceive all related information since human behavior is affected by various psychological processes. These psychological processes include either “affective reactions” such as emotion, feelings, and mood, or “cognitive reactions” such as distraction and influence by common information available. Individuals, on the other hand, also use the so-called “heuristics,” i.e., rules of thumb, to make decisions in a limited time frame in order to reduce complexity in a given situation (Pitters & Oberlechner, 2014). The behavioral finance theory further suggests that investors tend to make non-rational financial decisions when they are influenced by various psychological factors. As opposed to the descriptive model, the normative model of traditional finance theory suggests that investors are perfectly rational and thus are not influenced by the psychological process such as affect, cognition, and heuristics (e.g., Campbell, 2006; Goetzmann & Kumar, 2008; Polkovnichenko, 2005). This study relates to the descriptive model of behavioral finance theory and intends to establish that investors while interpreting financial advice, are influenced by the psychological characteristics of financial advisors and therefore tend to make non-rational futures trading decisions.

To the best knowledge of the researchers, this is the first study conducted in the context of financial decision making that examines how advisor personality influences the relationship between investor usage of financial advice and trading behavior. No such research has been carried out until now in the Chinese futures market and hence our study tries to fill the research gap.
Financial Advice and Investor Trading Behavior

Financial advisors are able to influence the trading activity of investors. Fischer and Gerhardt (2007) suggested that financial advice increases investor trading because it helps investors to develop a better assessment of their techniques and thus results in more accurate investments. Shapira and Venezia (2001) found that the number of different stocks and stock transactions per year increases when investors obtain professional advice. Using data from a German bank, Gerhardt and Hackethal (2009) examined the influence of financial advisors on households’ trading and found a negative relationship between professional advice and trading. These findings were confirmed by Karabulut (2013) who also showed the negative association between financial advice and trading frequency. On the other hand, Hackethal et al. (2012), while studying German investors from internet brokerage firm, found that investor trading is increased when investors consult financial advisors. Kramer (2012) also found similar evidence while examining Dutch investors and determined that after consultation investors would trade more than those who trade on their own. Mullainathan et al. (2012) documented that investors who receive financial advice are more likely to invest in riskier assets such as equity and property related assets. Zhang (2014) reconfirmed these findings, showing a positive relationship between financial advice and the extent of equity exposure. On the contrary, Kramer (2012) challenged the findings of Mullainathan et al. (2012) in terms of the level of equity exposure and found that individual investors trade significantly more in fixed income securities when they seek financial advice. Abreu and Mendes (2012) found that individual investors trade stocks more intensively when they acquire information via professional sources such as financial advisors. They postulated that more frequent trading of individual investors is justified by the creditability of the information collected and the thorough examination of stock market conducted by advisors.

Advisor Characteristics and Investor Trading Behavior

The practice of financial advisory services involves the interaction between sellers and buyers. The seller is called ‘broker’ and the service is marketed as ‘financial advice.’ The ultimate purpose of any broker-client interaction is to convert this interaction into actual sales which in turn generates income for the firm. Literature from the perspective of sales and marketing management provide suggestions on how buying behavior of customers for products including cosmetics, clothes, books and even automobiles is guided by salespersons’ psychological characteristics. But a review of the studies about the financial products (such as loan and investment) indicates that there is relatively a lack of research on how advisor psychological characteristics influence advisor-client relationship. Researchers such as Joiner and Leveson (2006), Knights et al. (2001) and Swinyard (1995) argued that trust and creditability of financial advisors significantly affect the decisions of customers to buy financial products. Bergeron and Vachon (2008) claimed that using humor, advisors may influence customer purchase intentions, customer satisfaction and how they perceive service quality. East (2006) showed that the positive moods of advisors may decrease customer skepticism whereas the negative moods of advisors can increase customer skepticism. Söderberg (2013) also found
similar evidence in an experimental study by displaying the photographs of advisors along with the financial advice to customers. He suggested that customers are more willing to follow advice when the photographs of smiling advisors were shown than those of frowning advisors. Analyzing the investor-traders dyads in Taiwanese futures market, Yang et al. (2012) indicated that brokers with extraversion as well as conscientiousness personality inspire trust and confidence in investors which consequently lead investors to trade more futures contracts. The seemingly insufficient research on the impact of advisor psychological characteristics upon investor perceptions to trade in securities stresses the necessity of conducting further researches on possible methods through which such characteristics may impact the significant aspects of financial advisory services. For this purpose, we formulated the following hypotheses in this study.

**Prediction of This Study**

General researches concerning the Big Five expects individuals with openness trait to be inquisitive, creative, and open-minded (Costa & McCrae, 1992). These individuals intend to be more flexible and are more able to adapt their decision making under various situations (e.g., Judge et al., 1999; LePine et al., 2000). Therefore, open-minded advisors are more able to devise new sales techniques or adapt their existing selling techniques to changing market conditions and to a broader range of clients (Thoresen et al., 2004). Consequently, if the personality of advisors tends to be open, the financial advisor is more likely to increase investor trading in futures contracts. Moreover, open-minded individuals tend to be inquisitive and have problem-solving approaches, resulting in a positive attitude towards learning and motivation to make the most of their learning experiences (Barrick & Mount, 1991). Therefore, salespeople with the openness trait learn from their experiences and show positive sales performance which can be translated into more trading by their clients, and hence we hypothesize that if the personality of advisors tends to be open, their clients tend to trade more futures contracts after they consult these advisors.

Hypothesis 1: Openness trait of an advisor strengthens the association between the use of financial advice and investor futures trading.

Extraverts are generally sociable, gregarious, talkative and assertive (Costa & McCrae, 1992). The significant portion of sociable brokers’ job forms a successful interaction with others, therefore they are able to collect more diverse information from their increasing social network (Totterdell et al., 2008). Extraverted advisors also have higher energy levels, dominance, and exhibitionism, and therefore tend to be more responsive and comfortable in dealing with clients (Furnham & Miller, 1997). If extraverted advisors can get relatively accurate investment information from their social network, they may raise the confidence of their clients by sharing this information with them, which may further increase investors’ probability to make trading decisions. Moreover, extraverted salespeople are motivated to obtain status and rewards at work (Barrick et al., 2002) and consequently are able to increase the clients’ trading.
Therefore, we hypothesize that if traders’ personality tends to be extraversion, their clients intend to increase futures trading when they consult these advisors.

Hypothesis 2: Extraversion trait of an advisor strengthens the association between the use of financial advice and investor futures trading.

Conscientiousness trait is associated with individuals who tend to be organized, responsible, persistent and exhibit strong sense of purpose (Costa & McCrae, 1992). Highly persistent brokers show a strong motivation to work towards success and are able to gather more accurate information for their clients for investment decisions (Heinström, 2003). Conscientious advisors are more likely to work hard to trade futures contracts for their clients at the highest possibility to gain the best trading outcomes (see e.g., Karz & Wagner, 2006; Wagner & Banks, 1992). By doing so, conscientious advisors are expected to boost their clients’ confidence which in turn may lead to more trading by the clients (Mills & Moshavi, 1999). Hence, we hypothesize that investors are expected to increase futures trading when they obtain information from advisors with conscientiousness trait.

Hypothesis 3: Conscientiousness trait of an advisor strengthens the association between the use of financial advice and investor futures trading.

The personality trait of agreeableness is concerned with the tendencies towards trustworthiness, kindness, and unselfishness (Costa & McCrae, 1992). People with agreeableness trait show compassion and strive for harmony in social relations with others, rather than having conflicts with them (Barrick et al., 2002). Agreeable advisors have the ability to achieve greater successes because they are more able to maintain a trustworthy relationship with their clients. In fact, a meta-analysis of the sales performance literature has suggested that there exists a positive association between clients’ perceptions of trust and salesperson performance (Swan et al., 1999). As compared to others, advisors with agreeableness trait are more concerned about the welfare of others and, therefore, are more likely to solve the problems of their clients. In making futures investment decisions, agreeable advisors may help their clients by gathering relevant investment information, and the advisor’s quality of being compassionate may act as a driving force to inspire trust in their clients which consequently leads to more trading by the clients. Therefore, we hypothesize that investors tend to make adjustments more frequently to their own portfolios when they obtain information from agreeable advisors.

Hypothesis 4: Agreeableness trait of an advisor strengthens the association between financial advice and futures investor trading behavior.

Individuals of neuroticism personality trait are described as depressed, insecure, hostile, and are more likely to experience negative emotions (Costa & McCrae, 1992). Less emotionally stable individuals are less likely to show high performance in most professions than those who are more neurotic. Similarly, advisors with neuroticism personality trait are unlikely to show positive performance because they tend to be anxious, tense and emotionally unstable, which is likely to inhibit the accomplishment of work (Furnham & Fudge, 2008). Highly neurotic traders are susceptible to stimuli from the external environment and therefore might overreact to common market situations.
(Durand et al., 2008). They are worried about the results of the clients’ trading results, which in turn increases their nervousness. They feel insecure because of uncertain happenings, such as the loss of businesses with their clients, and as a result, they are unable to devise appropriate trading strategies for their clients. Therefore, we hypothesize that investors would less likely increase futures trades when they obtain information from neurotic advisors.

Hypothesis 5: Neuroticism trait of an advisor dampens the association between the use of financial advice and investor futures trading.

INSTITUTIONAL BACKGROUND

China ranks as the second biggest economy in the world. The trading of commodity futures in China started in the 1990s when the Zhengzhou Commodity Exchange (ZCE) was established. China has earned the title of the world’s biggest commodity futures market in 2010. The Chinese futures market is gaining increasing importance to affect global prices for commodities. Currently, there are three commodity futures exchanges in China: the Dalian Commodity Exchange (DCE), the ZCE and the Shanghai Futures Exchange (SFE). The DCE and ZCE predominantly trade in agricultural and chemical futures whereas the SFE is specialized in metal-related futures. According to the Future Industry Association (FIA), these exchanges ranked in the top 20 derivatives in term of their trading volume in 2016. China Securities Regulations Commissions (CSRC) issues investment advisory licenses to futures brokers to provide risk management and hedging solutions to investors. Regulators, along with organizations in the futures industry, organize training programs to prepare professionals to become investment advisors. Presently there are 129 futures brokers dealing with 49 tradable products.

The Chinese futures market is hugely distinct compared with its counterparts around the world. As opposed to the US futures market, which is already well established, the Chinese futures market is relatively young and does not have a strong linkage with the real economy. The Chinese financial markets are highly speculative. Most trading in China is based on speculation and government actions, thus Chinese investors are less concerned about economic fundamentals. Due to the tighter regulatory interference in the Chinese stock market, the futures market has become attractive to speculators recently which is also indicated by high trading volume. Although in other countries, governments interfere and support the financial markets, yet the Chinese government plays an instrumental role in controlling market activities. Unlike the futures market in the US, most futures investors in China are unsophisticated individual investors who gamble on the futures prices rather than making investments of long term. In comparison with other main futures markets around the globe, merely a small number of foreign investors trade futures contracts in the Chinese futures market.

The aforementioned characteristics existing in the Chinese futures market might provide different theoretical insights into investor behavior in the Chinese context that are distinct from both futures markets of developed economies and those in emerging
economies. The extensive amount of academic studies concentrating on the securities trading behavior of investors has already been carried out in developed countries, yet there exists a little knowledge regarding this topic in developing countries such as China. Existing studies on the Chinese futures market predominantly focus on the price linkages and information transmission mechanism across markets but research on the investment behavior of retail futures investors is far less extensive. The lack of research in this domain is mainly due to the rather unavailable micro-level data related to the investor trading patterns in the Chinese futures market. Therefore, it is essential to investigate the factors influencing the futures trading of the Chinese investors, which might contribute to explaining the whole mechanism of the Chinese financial markets.

Research Methods

Data Source and Participants

The research population of this study is sales representatives and investors in China who have business to consumer relationship. Due to the dyadic nature of the study, the selection of the sample began with futures brokers. For this purpose, different brokerage firms from the Chinese futures market were contacted to participate in the study. The data for the current study was collected via multiple sources.

Our main data source is the actual trading data of futures investors that we obtained directly from futures brokerage firms. The trading data includes the number of futures contracts that an investor bought or sold through his/her futures broker. In order to fully investigate the impact of brokers’ personality on investor trading behavior, it was plausible to choose those investors who had some experience in dealing with their brokers. Therefore, all the investors chosen in the current study had their accounts with their brokers for a period of at least one year. Trading data of futures investors were obtained through a mutual understanding and cooperation between the authors’ institute and different brokerage firms in China that participated in the study.

The second phase of this research was accomplished through an online sampling technique using a web-based survey. We constructed two types of online questionnaires for our sample subjects including one of the two questionnaires for futures brokers and one for their clients. We also attached a cover letter with each questionnaire to provide a brief explanation of the study objectives and to obtain the consent from the participants that the information they are going to provide will only be used for academic purposes. We distributed the link of an online questionnaire to the investors whose trading records have been obtained from their respective brokers. Investors filled out the questionnaire measuring their demographic and socio-economic characteristics, self-reported risk aversion, the level of financial knowledge, the level of confidence and the use of financial advice by the investors for futures trading. A separate link of an online questionnaire was also sent among futures brokers who completed the questionnaire that included items measuring the Big Five personality traits. The online sampling technique was regarded as a suitable methodology to collect information from respondents as it is less likely to suffer from the impacts of social desirability on responses because of the lack of the presence of interviewers (Duffy et al., 2005).

Our database has the trading record of 1,160 investors that we obtained from various brokerage firms, therefore, we distributed 1,160 paired online questionnaires. However, some investors as well as traders did not fill out the questionnaire or left the questionnaire incomplete and therefore could not be considered for analysis. After the exclusion of invalid responses, 408 effective paired responses were used in the final analysis. Osborne and Costello (2004) indicated that there exist no specific criteria determining the adequate size of the sample in behavior related studies. They examined that one-sixth of the behavior related studies used a 2:1 respondent-to-item ratio while roughly one-fifth of such studies had lower than a 5:1 respondent-to-item ratio to conduct the analysis. Considering 408 paired responses in this study, the respondent-to-item ratio in our sample was much better than the above-mentioned ratio. Therefore, the sample size of 408 was regarded as appropriate to conduct the analysis. The cross-sectional design of this
study may be perceived as a failure to capture the changes in respondent behavior over a long period of time. The limitations of this design were minimized by sampling respondents in four distinct regions of China including Shanghai, Dalian, Hangzhou, and Beijing.

**Instrument**

Before distributing the online questionnaire, we undertook the pre-testing to evaluate its various aspects. Since this study was carried out in China, it might seem more reasonable to translate the online questionnaire from English to Mandarin so that the respondents could get a more comprehensive understanding of the questions. We adopted “Back-translation technique” (Brislin, 1970) to assure a more accurate and reliable translation.

**Measurement**

The dependent variable in this study is the trading behavior. The trading data of futures investors was obtained directly from futures brokerage firms. It was adopted from Abreu and Mendes (2012) and Durand et al. (2008). The variable was measured as “the frequency of trading” which is denoted by the number of futures contracts that an investor traded through his/her futures broker in the last one year.

The independent variable of our model is the frequency of obtaining financial advice by investors from their future brokers. Based upon discussion with various financial researchers and industry practitioners, we found that broker advice is the most commonly used source by the Chinese futures investors to get information regarding futures markets. The measure of financial advice was taken from the work of Abreu and Mendes (2012). Investors were asked: “How frequently do you consult your futures broker when you want to get information regarding futures market?” Answers were coded on five-point Likert scale ranging from 1 to 5 as “1 = Not at all,” “2 = rarely,” “3 = sometimes,” “4 = often,” “5 = every time.”

There are five moderating variables in our study, namely the Big Five advisor personality traits: Openness, Conscientiousness, Extraversion, Neuroticism, and Agreeableness. The five measures were taken from the Big Five theory (Costa & McCrae, 1992) and were operationalized using NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1989). Measures of the personality traits that we used in our study have been frequently cited in the literature of management and psychology. We measured each item of the advisor personality traits using five-point Likert scale that ranged from 1 to 5 as ‘1 = strongly disagree,’ ‘2 = disagree,’ ‘3 = neutral,’ ‘4 = agree,’ ‘5 = strongly agree.’ To avoid biased responses, we reverse-scored numerous items of personality constructs.

Based on previous studies (see e.g., Barber & Odean, 2001; Dorn & Huberman, 2005; Peress, 2004; Yao & Xu, 2015), various demographic and socio-economic characteristics of investors, including gender, marital status, age, income, education, trading experience, wealth, risk aversion and financial literacy, were controlled for in our model in order to analyze potential alternative explanations. One can argue that people with more resources or wealth are more likely to trade securities. Based on the study of Yao and Xu (2015) on the Chinese households’ security market participants, we have taken the value of the residential property as the proxy for investors’ wealth. We created a dummy variable to know whether or not the value of investors’ residential property was greater than 500,000 RMB. We postulated that investors with a higher value of residential property, and thus more wealth, are likely to trade more.

Following the previous researches, we have also controlled for the level of investor risk aversion in our model since it might directly affect investor trading in futures (e.g., Dorn & Huberman, 2005; Peress, 2004; Verrecchia, 1982). Peress (2004) argued that investors of higher risk aversion might not make investment decisions despite they possess accurate financial information. Dorn and Huberman (2005) postulated that investors with more propensity to take risks are likely to increase trading. The level of risk aversion was measured based on the study of Abreu and Mendes (2012) by asking the respondents a question: “How do you consider yourself on the scale from 1–5 regarding the risk of investment in futures market: risk-averse (1), risk lover (5).”

Finally, financial literacy has also been taken into consideration to analyze its effects on investors trading behavior. It can be argued that the frequency of trading by investors who are more financially literate may be differentiated from those with less financial knowledge. Dorn and Huberman (2005) indicated that investors with actual financial knowledge tend to increase portfolio turnover. From the work of Lusardi and Mitchell (2011), we measured the level of actual financial knowledge by asking investors
questions concerning compound interest, inflation, and diversification of risk. We evaluated the investors’ responses on the scale from “0 = all incorrect answers” to “3 = all correct answers.” A higher value represents better financial knowledge.

**Analysis and Findings**

**Descriptive Statistics**

Table 1 shows the demographic characteristics of futures investors and advisors. The investors’ characteristics are displayed in Panel A of Table 1 which indicates that male investors (72.1%) and married investors (70.3%) make up the largest proportion of the sample. The majority of the investors were from 25 to 40 years old (47.1%). Most investors had undergraduate degrees (43.9%), with a monthly income level (30.1%) from 30,000 RMB to 40,000 RMB and trading experience (42.9%) of 5–8 years. The advisors’ characteristics are presented in Panel B of Table 1 which illustrates that male advisors (64.3%) and advisors between 25 years and 40 years account for the largest portion of the sample. Most advisors hold undergraduate degrees (43.6%) and advising experience (39.7%) of 5–8 years. Descriptive statistics and correlations among the variables of study are shown in Table 2.

**Validity of Advisor Personality Constructs**

We determined the validity of advisor personality constructs with the help of standard psychometric procedure. First, we conducted the exploratory factor analysis (EFA) to identify the underlying factor structure of the data. The factor analysis of advisor personality reflected five-factor solution that accounted for 66.573% variation in the data. The ‘Principal Axis Factoring’ and ‘Varimax Rotation Method’ was used for the factor analysis. Second, we conducted a confirmatory factor analysis (CFA) to evaluate the goodness-of-fit of advisor Big Five personality model with the data. We redesigned the measurement model by deleting items with relatively low standardized factor loading from each personality construct as shown in Table 3.

Convergent validity is determined if the items have high loadings on their factors. Using the factor loading threshold of 0.50, we determined whether or not the factor has sufficient loading. The average variance extracted (AVE) of all personality constructs was above the required level of .5 (Fornell & Larcker, 1981). To establish discriminant validity, we first checked if there were no cross-loadings of items on more than one factor. Furthermore, we examined the correlation between latent factors. The correlation between latent factors should not exceed .7. We found the evidence of discriminant validity as there were no cross-loadings of items other than their own factors and there was a low correlation among all advisor personality factors. Finally, the composite reliability (CR) for each advisor personality factor ranged from .77 to .87, which were considerably higher than the value of .60 as recommended by Bagozzi and Yi (1988). The final measurement model using the maximum likelihood method showed acceptable fit using various fitness tests such as CMIN/df = 1.62, comparative fit index (CFI) =
Table 1. Demographic Characteristics of Futures Investors and Advisors

Panel A: Futures investors (N = 408)

| Gender | Frequency | %  | Marital Status | Frequency | %  |
|--------|-----------|----|----------------|-----------|----|
| Male   | 294       | 72.1% | Single         | 121       | 29.6% |
| Female | 114       | 27.9% | Married        | 287       | 70.3% |

| Age    | Education Level | Frequency | %  |
|--------|-----------------|-----------|----|
| < 25 years | < High School | 79        | 19.3% |
| 25–40 years | High School | 192       | 47.1% |
| 40–60 years | Undergraduate | 103       | 25.3% |
| > 60 years | Master or > | 34        | 8.3%  |

| Income Level (Monthly) | Trading Experience | Frequency | %  |
|------------------------|---------------------|-----------|----|
| < 10,000 RMB           | < 2 years           | 26        | 6.4% |
| 10,000–20,000 RMB      | 2–5 years           | 87        | 21.3% |
| 20,000–30,000 RMB      | 5–8 years           | 119       | 29.2% |
| 30,000–40,000 RMB      | 8–10 years          | 123       | 30.1% |
| > 40,000 RMB           | > 10 years          | 53        | 13.0% |

Panel B: Futures advisors (N = 408)

| Gender | Frequency | %  | Age            | Frequency | %  |
|--------|-----------|----|----------------|-----------|----|
| Male   | 351       | 64.3% | < 25 years     | 25        | 11.5% |
| Female | 57        | 35.7% | 25–40 years    | 40        | 50.6% |
|         |           |     | 40–60 years    | 60        | 21.3% |
|         |           |     | > 60 years     | 60        | 16.6% |

| Education Level | Advising Experience | Frequency | %  |
|-----------------|---------------------|-----------|----|
| < High School   | < 5 years           | 0         | 0% |
| High School     | 5–8 years           | 14        | 19.2% |
| Undergraduate   | 8–10 years          | 236       | 43.6% |
| Master or >     | > 10 years          | 158       | 28.5% |

Note. Table 1 reports the demographic characteristics for futures investors and advisors. These characteristics are based upon the sample of 408 futures investor-advisor dyads. Panel A contains information related to futures investors including gender, marital status, age in years, education level, monthly income level in RMB, and the level of trading experience in years. Panel B contains the information related to futures advisors including gender, age in years, education level, and advising experience in years.
Table 2. Descriptive Statistics and Correlations of Study Variables

| Variable                            | M   | SD  | Min | Max | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| **Panel A**                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Futures investors                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.Gender                           | —   | —   | 0   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 2.Marital Status                   | —   | —   | 0   | 1   | .096|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3.Age                              | —   | —   | 1   | 4   | -.010| .204**|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.Income                           | —   | —   | 1   | 5   | .049| .159**| .015|     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.Education                        | —   | —   | 1   | 4   | .042| -.017| .084| .028|     |     |     |     |     |     |     |     |     |     |     |     |
| 6.Experience                       | —   | —   | 1   | 5   | .081| .322**| .133**| .276**| -.061|     |     |     |     |     |     |     |     |     |     |     |
| 7.Wealth                           | —   | —   | 0   | 1   | .056| .069*| .033| .009| .063**| .036|     |     |     |     |     |     |     |     |     |     |
| 8.Risk Aversion                    | 2.70| 1.204| 1   | 5   | -.001| .209**| -.063| .026| -.059| .100*| -.010|     |     |     |     |     |     |     |     |     |
| 9. Financial Literacy              | 1.53| 1.300| 0   | 3   | .012| .092| .087*| .78  | .051*| .112| .032| .032**|     |     |     |     |     |     |     |     |
| 10.Financial Advice                | 3.28| 1.350| 1   | 5   | -.091| -.129**| .012| .055| -.018| .121*| -.003| .108| .073**|     |     |     |     |     |     |     |
| 11.Trading Frequency               | 18.15| 4.243| 1   | 232| -.164**| .011| .116| .165**| -.070| .242**| -.168**| .116**| -.169**| .245**|     |     |     |     |     |
| **Panel B**                        |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Futures advisors                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 12.Openness                        | 2.31| 0.598| 0.71| 3.56| .091| .114*| -.013| -.132**| -.135**| -.201**| -.117*| .058| -.067| -.085| -.130**|     |     |     |     |
| 13.Extraversion                    | 2.60| 0.748| 0.77| 3.86| .102*| .117*| .069| -.105*| .212**| -.004| -.134**| .096*| -.196**| -.064| -.073| .492**|     |     |     |
| 14.Conscientiousness               | 2.33| 0.583| 0.72| 3.62| .162**| .090| .051| .059| -.001| .075| .039| .101*| -.101*| .006| -.063| .015| .235**|     |     |
| 15.Agreeableness                   | 2.31| 0.593| 0.89| 3.49| .073| .010| .067| -.152**| .106*| .030| .030| -.125**| .183**| .018| -.088| .071| .264**| .322**|     |
| 16.Neuroticism                     | 1.84| 0.766| 0.74| 3.68| .008| -.021| -.057| .154**| -.208**| .155**| .156**| .123**| .158**| .229**| .277**| -.432**| -.449**| -.258**| -.335**|

Note. Table 2 reports the descriptive statistics and correlation for the characteristics of futures advisors and their clients. These characteristics are based upon the sample of 408 futures investor-advisor dyads. Panel A contains investor-related information including variables gender, marital status, age, income level, education level, trading experience, wealth, level of risk aversion, level of financial literacy, and frequency of financial advice. Panel B contains information related to the advisor Big five personality traits including Openness, Extraversion, Conscientiousness, Agreeableness, and Neuroticism.  
N = 408 futures investors, 408 futures brokers; M = Mean; SD = Standard Deviation.  
**Correlation is significant at the 0.01 level (2-tailed).  *Correlation is significant at the 0.05 level (2-tailed).
Table 3. The Measurement Model for the Big Five Advisor Personality

| Construct                      | SL  | CR | AVE |
|--------------------------------|-----|----|-----|
| 1. Openness                    |     |    |     |
| I often try new and foreign foods. | .718 |    |     |
| I often enjoy playing with theories or abstract ideas. | .636 | .77 | .54 |
| I experience wide range of emotions and feelings. | .613 |    |     |
| I have a lot of intellectual curiosity. | .565 |    |     |
| I am intrigued by the patterns I find in art and nature. | .518 |    |     |
| 2. Extraversion                |     |    |     |
| I really enjoy talking to people. | .869 |    |     |
| I try to avoid crowds.          | .854 | .79 | .63 |
| I am very active person.        | .737 |    |     |
| I am not interested in leading others. | .682 |    |     |
| I often feel as if I’m bursting with energy. | .552 |    |     |
| I am cheerful, high-spirited person. | .531 |    |     |
| 3. Conscientiousness           |     |    |     |
| I keep my belongings neat and clean. | .864 |    |     |
| Sometimes I’m not as dependable or reliable as I should be. | .822 |    |     |
| I waste a lot of time before settling down to work. | .753 | .84 | .64 |
| I never seem to be able to get organized. | .678 |    |     |
| I strive for excellence in everything I do. | .538 |    |     |
| I’m pretty good about pacing myself so as to get things done on time. | .512 |    |     |
| 4. Neuroticism                 |     |    |     |
| Sometimes I completely feel worthless. | .824 |    |     |
| I often feel tense and jittery. | .725 |    |     |
| I am not a worrier.            | .635 | .80 | .57 |
| I am seldom sad or depressed.  | .628 |    |     |
| I often feel inferior to others. | .521 |    |     |
| When I’m under a great deal of stress, sometimes I feel like I’m going to pieces. | .505 |    |     |
| 5. Agreeableness               |     |    |     |
| I generally try to be thoughtful and considerate. | .896 |    |     |
| Some people think of me as cold and calculating. | .787 |    |     |
| I try to give help to anyone I need. | .632 | .87 | .70 |
| Some people think I’m selfish and egotistical. | .614 |    |     |
| I often get into arguments with my family and co-workers. | .508 |    |     |

Note. All items use five-point Likert scales anchoring at 1 = strongly disagree and 5 = strongly disagree. SL = Standardized loading, CR = Composite Reliability, AVE = Average Variance Extracted.
0.95, goodness-of-fit index (GFI) = 0.94, adjusted goodness-of-fit index (AGFI) = 0.90, root-mean-square error of approximation (RMSEA) = 0.04, Tucker-Lewis index (TLI) = 0.94, normed fit index (NFI) = 0.91, and incremental fit index (IFI) = 0.96. All the values of these fitness test fulfilled the criteria laid down by various researchers (see e.g., Bentler & Bonett, 1980; Byrne, 1994; Hu & Bentler, 1999; Kline, 2005; Thompson, 2004).

Financial Advice and Futures Trading

‘The number of transactions per year,’ our dependent variable in this study is a discrete variable that only assumes non-negative integer and within which all values are in a meaningful order. This means that count data modes, such as the ordered probit regression, would be a more appropriate choice for estimation purposes. We started the analysis by investigating how the financial advice obtained by the Chinese futures investors is associated with their futures trades as illustrated in Table 4. Table 4 indicates that there exists a positive relationship between the usage of financial advice and futures trading, meaning that the more investors obtain financial advice, the more they intend to trade in futures contracts. Our findings are consistent with those of Abreu and Mendes (2012) and Fischer and Gerhardt (2007), who showed that trading frequency is increased if investors acquire information from a trustworthy source, such as from a financial advisor, as it helps investors to improve the assessment of their investment skills. The information acquired from finance professionals may also justify more trading because of the finance professionals’ deeper analysis of the futures market. These findings are also consistent with a view that sales representatives such as futures brokers tend to increase the futures trading of retail investors since brokers earn higher commission with more trading for the clients (Gerhardt & Hackethal, 2009; Karabulut, 2013; Shapira & Venezia, 2001).

Table 4 also shows the positive relationship between financial advice and futures trading holds when we control for the various individual investors’ demographic and socio-economic characteristics mentioned in section 4. Using the results of our analysis, we found that as compared to other investors, male and younger investors tend to trade more futures contracts. Such findings are consistent with the view that male and younger investors are more willing to take risks than other investors, therefore, are more likely to trade in futures (Barber & Odean, 2001; Dorn & Huberman, 2005; Haliasos & Bertaut, 1995; Jianakoplos & Bernasek, 1998; Sunden & Surette, 1998). Furthermore, our results showed that investors with high income and wealth trade more in futures, which is in accordance with the argument that investors with more resources are more likely to trade securities (Yao & Xu, 2015). However, the study found that investors with higher degrees and more experience tend to trade less. These findings are in line with the view that sophisticated investors are less likely to churn their portfolios (Dorn & Huberman, 2005). We also found that risk-averse investors trade fewer futures contracts (Dorn & Huberman, 2005; Vissing-Jørgensen & Attanasio, 2003). Finally, our study confirmed the prior findings that more financially knowledgeable investors tend to trade more futures contracts (Dorn & Huberman, 2005).
Table 4. Financial Advice and Trading Behavior

| Predictors                  | Estimate | Std. Error |
|-----------------------------|----------|------------|
| Female                      | -0.637** | 0.194      |
| Not Married                 | -0.364   | 0.211      |
| Age < 25 years              | 0.123**  | 0.424      |
| Age 25–40 years             | 0.080    | 0.402      |
| Age 40–60 years             | 0.055    | 0.417      |
| Below High School           | 0.502    | 0.315      |
| High School                 | 0.114    | 0.271      |
| Graduate                    | -0.311** | 0.231      |
| Income < 10,000 RMB         | -0.878** | 0.385      |
| Income 10,000–20,000 RMB    | -0.424   | 0.369      |
| Income 20,000–30,000 RMB    | -0.325   | 0.379      |
| Income 30,000–40,000 RMB    | -0.204   | 0.413      |
| Experience < 2 years        | 0.095    | 0.336      |
| Experience 2–5 years        | -0.022   | 0.301      |
| Experience 5–8 years        | -0.575** | 0.299      |
| Experience 8–10 years       | -1.218***| 0.354      |
| Wealth                      | 0.156**  | 0.086      |
| Risk Aversion               | -0.246** | 0.078      |
| Financial Literacy          | 0.168**  | 0.096      |
| Financial Advice            | 0.141*** | 0.066      |

Pseudo $R^2$           .314
$\chi^2$                84.969***
Observations           408

Note. Table 4 presents the impact of financial advice on trading behavior. Results are computed using ordered probit regression. The dependent variable is “the frequency of trading.” Gender, marital status, age, education, income, and experience are dummy variable with male, married, age > 60 years, post-graduate, experience > 10 years, income > 40,000 RMB as base categories respectively. The model includes a constant as well.

***Denote significance at $p < 1%$. **Denote significance at $p < 5%$. *Denote significance at $p < 10%$.

Moderating Influence of Advisor Personality on the Relationship Between Financial Advice and Investor Futures Trading

The moderating influence of advisor Big Five personality traits on the association of financial advice and futures trading was checked based on the conceptual framework of
the study. We computed the five interaction terms of financial advice and advisor personality and entered into the regression model as shown in Table 5. To control for alternative explanations in our results, the model included the controls of Table 4. However, these controls were not shown in the interest of space. Apart from the probit estimation, the results of ordinary least square (OLS) estimation have also been presented for robustness purpose.

The first hypothesis in this study postulated that the advisor personality of openness has a positive moderating influence on the relationship of financial advice with investors’ futures trades. We checked this hypothesis in Table 5. The coefficient for the interaction term Openness × Advice with futures trading was positive and significant, which suggested that the openness trait of advisors positively affects the association between financial advice and investor trading in futures and thus we accepted H1.

We tested the second hypothesis of the study in Table 5, suggesting that the relationship of information acquired from a financial advisor with his/her clients trading is strengthened if the advisor personality tend to be extraversion. The interaction term Extraversion × Advice produced a significant positive association with futures trades, showing that extraverted advisors exert positive moderating influence on the relationship of financial advice and investor futures trades, thereby supporting H2.

The third hypothesis of our research posited that conscientious advisors strengthen the positive influence of financial advice on investors’ trading in such a manner that at the higher level of conscientiousness, the positive impact of financial advice on investor futures trading increases. This hypothesis was tested in Table 5. Regarding conscientiousness, the coefficient of the interaction term Conscientiousness × Advice explained a positive association with investor trading, which proved that conscientious advisor has a positive influence on the relationship of financial advice with futures trades of investor and thus H3 was accepted.

The fourth hypothesis in our research suggested that the association between financial advice and investor futures trading becomes stronger if the advisor possesses agreeableness personality trait. We added the interaction term Agreeableness × Advice to the regression model Table 5 to test this hypothesis. As is indicated by the coefficient of interaction term Agreeableness × Advice, we found no significant moderating influence of the advisor personality of agreeableness on the relationship of financial advice with investor trading and therefore H4 was not accepted. One explanation for these findings, as suggested by Furnham and Fudge (2008), might be that high agreeable futures brokers do not have the ability to overcome the feelings of rejection when their clients decide not to follow advisor trading suggestions. This ability is regarded as a key to success in sales but agreeable advisors may take these rejections personally and lose confidence accordingly and therefore may not increase the trading of their clients. Another explanation might be that possessing a character that overly strives towards harmony with others may be detrimental to sales performance. Advisors who possess the agreeableness trait to a high degree are perceived as overly nice or false by clients, as a result, clients may not follow the trading suggestion of the advisor. Further studies in the future are recommended to explore this relationship.
Finally, we checked the last hypotheses of this research in Table 5 concerning the interaction term of financial advice and the advisor personality of neuroticism. We argued that the relationship between financial and investor trading in futures is dampened by neuroticism. As illustrated in Table 5, the coefficient of the interaction term Neuroticism × Advice proved negative and significant, which indicated that neurotic advisors have a negative moderating impact on the relationship between financial advice and investor futures trading, thus supporting H5.

**CONCLUSION AND IMPLICATIONS**

The characteristics of financial advisor play a significant role in the retail financial services industry, however, they have not been investigated in-depth. Therefore, the aim of this study was to examine how a psychological characteristic, namely advisor personality, influences the futures investors trading when they obtain financial
information from the advisors. The study adopted the Big Five personality framework from Costa and McCrae (1992) to measure the advisor personality traits. We tested the research hypotheses based upon the unique dataset obtained from 408 investor-advisor dyads in the Chinese futures market. We performed “Ordered Probit estimation” to investigate the moderating influence of advisor personality traits on the relationship between financial advice and futures trades. We also conducted several robustness tests to confirm the validity of our key results. We conclude that the use of financial advice leads investors to trade more futures when advisor personality tends to be open, conscientious and extraverted. On the other hand, financial advice negatively affects futures trading when the personality of the advisor is likely to be neurotic.

A review of previous studies in the context of finance shows that various studies have investigated the financial phenomena based on investors’ psychology variables (Conlin et al., 2015; Durand et al., 2008, 2013; Pompian & Longo, 2004; Tauni, Fang, & Iqbal, 2017; Tauni et al., 2015; Tauni, Rao, Fang, & Gao, 2017; Tauni, Rao, Fang, Mirza, et al., 2017; van Witteloostuijn & Muehlfeld, 2008) but there seems to be relatively a lack of research on investment advisors as the main source of information and on how advisors’ psychological characteristics, such as their personality, may influence investor trading behavior. Although various disciplines such as marketing (e.g., Furnham & Fudge, 2008; Lee, 2000) and organizational behavior (Flanagan et al., 2005) have provided implications as how advisors’ characteristics may influence investors’ trading decisions, but this topic has become significantly important among scholars of behavioral finance as well as policymakers in financial markets. In this study we proposed a new framework which seeks to explain that, when acquiring financial advice, the advisor Big Five personality traits may affect the way investors interpret signals from financial advisors, thus influencing investors’ decisions in futures trading.

From the practical perspective, the present study responses to the demand for more knowledge of the characteristics of financial advisors and their influence on investors’ financial decision taking because these factors may influence the practice of financial advisory services. This research posits that retail investors trade differently if their advisors have a specific personality and therefore the investor trading patterns could be partly explained by exogenous supply-side factors. In today’s competitive environment, firms in the financial services industry are required to hold an intimate understanding of how various characteristics of advisors can help the firms generate revenues. The interaction between salespeople and clients is complex which involves a wide range of theoretical processes. The results of this interaction may lead to gain (loss) of sales and satisfied (dissatisfied) customer. We argue that the ability of salespeople to manage this complex interpersonal sales relationship may depend upon their psychological characteristics. Therefore, considering that the personality profiles of advisors may help policymakers attempting to enhance their business performance in the retail investor services industry. Financial consulting firms may adopt the Big Five personality profiles, in addition to the other traditional factors such as gender, education, experience and so on, to hire their employees. Moreover, the human resource managers of investment management firms can also develop training programs to educate their current employees on how the
personality characteristics of advisors can affect their relationship with their clients.

The study has some of its limitations. The Chinese futures market is relatively new and its society has fewer connections with the outside world. Investors in the Chinese financial markets are less familiar with how financial markets work. Investors in China mostly rely on government policies which are often made in favor of some specific market participants and therefore such policies promote speculative investment behavior in investors. Given this, future researches should also be conducted in other emerging economies as well as in developed economies to validate the results of this study. This study is only limited to the Big Five personality of advisors but the results of the study may also be influenced by the personality traits of investors. For instance, one can argue that investor with a specific personality trait may be more willing to accept the advice of a financial advisor whose personality trait matches with their own. Therefore, future researches can also focus on the interaction of the Big Five personality of traits of advisors as well as investors while investigating the impact of financial advice on trading. Another limitation of this study is that we cannot rule out the possibility that the personality traits of advisors may affect the contents of advice provided by them, which in turn may affect the quality of trade decisions by the investors. Therefore, future studies should also be conducted to investigate the relationship between personality traits of advisors and the content of financial advice.

AUTHOR’S CONTRIBUTION

M.Z.T. contributed to idea conceptualization, theory development, data analysis. He also wrote the first and the revised drafts of the manuscript. F.A. mainly contributed to data collection, data curation, and data analysis of this study. S.Y. contributed to idea conceptualization and theory development of this research. H.A.S. contributed to data collection of this study. Z.R.R. contributed to theory development and assisted in writing the revised drafts of the manuscript.

DECLARATION OF INTEREST

The authors have contributed significantly and agree to the content of the manuscript. To the best of our knowledge, no parties have any conflict of interest, financial or otherwise.

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