

Investor Behavior During Periods of Crises: The Chinese Funds Market During the 2020 Pandemic

Rob Kim Marjerison*
Wenzhou-Kean University

Leqi Han
Wenzhou-Kean University,

Jingjing Chen
Wenzhou-Kean University,

— *Review of* —
**Integrative
Business &
Economics**
— *Research* —

ABSTRACT

This study seeks to contribute to the body of research on economic sustainability during periods of crisis by examining investor behavior in China during the COVID-19 pandemic in 2020. Economic conditions in China during 2020 can be separated into the first half of the year, a period of extreme economic uncertainty, and the second half of the year when there was almost no COVID and was a period of relative economic stability. Unexpectedly, Chinese funds showed consistent, strong growth throughout all of 2020. This study applies behavioral finance theory to interpret data gathered through an online survey to examine several factors in the psychology of investors during these two periods. Factors included; risk avoidance, heuristic, prospect, and herding. The heuristic factor was further divided into: representativeness, anchoring, overconfidence, gambler fallacy, and availability bias. The prospect factor included loss aversion and regret aversion. The analysis indicates that low-risk funds' investments grew significantly during the first half of the year due to risk avoidance behavior. During the second half of 2020, as the level of uncertainty and risk in China was considerably reduced, investment in low-risk funds continued with robust activity and growth due to the investment psychology of the herding effect. The findings contribute to the body of knowledge on investor behavior and market resiliency during periods of crisis.

Keywords: behavioral finance; investor behavior; economic crises.

Received 15 May 2021 | Revised 5 June 2022 | Accepted 9 August 2022.

1. INTRODUCTION

The resiliency of investment activity and financial institutions during crises such as the first half of 2020 (FH20) in China are critical factors in economic stability. The role of stable and trusted financial institutions as a precursor to economic development is well established in the existing literature (Marjerison et al., 2021; Wang & Li, 2022).

Funds are an investment designed for investors with capital and the desire to invest but with limited time and knowledge (Rahadi et al., 2021). Funds are typically lower risk than

stocks. This study focuses on how the funds market in China was affected by a period of high uncertainty and crisis in FH20 compared to the second half of 2020 (SH20) when economic conditions were relatively stable, and to explain changes in investor activity by applying risk aversion and behavioral finance theories.

The efficient market hypothesis (EMH) was developed by Eugene Fama (2021) and has dominated financial theory for the past three decades (Malkiel, 2005). The EMH holds that in a well-regulated, well-functioning, highly transparent, and fully competitive stock market, all valuable information has been timely, accurate, and fully reflected in stock price movements (Malkiel, 1989), that investors trade rationally and make investment decisions based on a systematic evaluation of the market. In the presence of irrational investors, the market mechanism will always be able to quickly correct any mispricing by intelligent and rational investors, who are considered arbitrageurs. Traditional finance assumes that investors are rational, and thus markets are always rational (Konstantinidis et al., 2012; Malkiel, 1989).

Behavioral finance is an emerging discipline that studies financial markets using narrower models than those based on Von Neuman-Morgenstern's expected utility theory and arbitrage hypothesis. Specifically, behavioral finance has two components: cognitive psychology and the limits of arbitrage (Goldberg et al., 2001; Ritter, 2003). This study will focus on the cognitive component, which refers to how people think and whether they make systematic mistakes in thinking that lead to irrational decisions (Rachman & Shafran, 1999).

In FH20 China forced a strict lockdown policy which had a massive negative impact on China's economy. According to the China National Bureau of Statistics, China's GDP in FH20 was nearly 400 billion yuan lower than in the prior year. As a result of these economic conditions, the Chinese stock market experienced a considerable decline in performance (Yan, 2020). However, during SH20, after the initial 100-day period of strict lockdown, China experienced almost no further cases of COVID-19 and entered a period of relative economic stability. Imports were affected by strict testing protocols for imported goods, and exports to economies that were intermittently experiencing lockdown policies were reduced (K. Liu, 2021). However, the internal commercial activity, a considerable part of the Chinese economy (Poncet, 2005), was largely uninterrupted (K. Liu, 2021).

Evidence suggests that people may be more risk-averse during crises in China (Bo et al., 2014) and worldwide (Balakrishnan et al., 2016; Gatto & Sadik-Zada, 2021), suggesting that investors would likely tend to invest less in financial markets. However, the funds market in China grew in 2020 (He et al., 2020). In 2018 and 2019, the gross net growth rate of China's fund market was 12%-14%, however, in 2020, it grew 34.7%. In contrast to prior years, in FH20, as investor confidence in the stock market decreased (Naseem et al., 2021), the funds market showed high growth, in contrast to the low or even negative growth of the fund's net value in the first half of 2019 (Falato et al., 2021).

This study aims to determine what cognitive biases affected investors during the Pandemic. This study divides the Pandemic's impact into FH20 and SH20. For FH20, the focus is on why China's fund market grew even as investors lost confidence in the stock market. In examining SH20, the focus is on what cognitive biases affect investors as they continued to invest in funds.

2. LITERATURE REVIEW

2.1. Behavioral Finance

Unlike traditional finance, behavioral finance does not consider investors to be rational. Instead, it suggests that cognitive biases exist while making investment decisions (Ritter, 2003), and those biases lead to irrational investment decisions (Ahmad et al., 2017; Jain et al., 2015). According to Luong & Ha (2011), the cognition biases can be divided into herding effect, heuristic theory, and prospect theory.

2.2. Herding effect

People tend to follow others' decisions and choices because it is easier than processing the information independently. This behavior is called herding (Javed et al., 2017). If applied to investing, it means that investors tend to follow the choices of other investors. In seeking to get better returns, low-ability investors have a greater possibility of imitating the investment behavior of professional investors (Le Luong & Thi Thu Ha, 2011).

In a developing market, herding effects are more likely to occur (Philippas et al., 2013) because investors see the new market as promising and less affected by scandals. Research on the Shanghai stock market indicates that when the market is on the upswing of the normal cycle, with rising market values and higher trading volumes, the A-share market, which Chinese investors dominate, has more herding effect than the B-share market, which tends to be dominated by foreign investors (Tan et al., 2008).

2.3. Heuristic Theory

2.3.1 Representativeness

Representativeness refers to making decisions based on stereotypes (Habbe, 2017). Investors divide things into several categories of representative characteristics and then make decisions based on existing models. When evaluating the options, it puts excessive emphasis on the importance of these categories and ignores other things. This is the same as using an insufficiently large sample to draw conclusions about a population. Therefore, investors affected by representativeness may consider that historically high returns can be replicated, though it is improbable (Habbe, 2017).

Representativeness may result in biases, including "insensitivity to the probability of outcomes, insensitivity to sample size, misconception of chance, insensitivity to predictability, the illusion of validity and misconception of regression (Alkhars et al., 2019).

2.3.2 Anchoring

Anchoring refers to a situation where people make a decision, relying heavily on information received very recently, even though that information may be wrong or irrelevant to the decision. Individual investors have shown the anchoring effect in financial markets in the case of inaccurate estimates of essential variables (Costa et al., 2017). When investors cling to new information and ignore other more accurate but less recent information, bad investment decisions may occur due to the poor estimation of risks (Jain et al., 2015). There is evidence in the existing literature that investors with more knowledge of investing are less likely to be affected by the anchoring effect (Kaustia et al., 2008).

2.3.3 Availability bias

Investors tend to consider the probability of an event that is easy to recall as greater than that of something hard to understand (Sadi et al., 2011). According to Barber and Odean (2008), investors tend to buy stocks that have been reported in the news, stocks with unusually high trading volume, and stocks with very high daily returns. Investors tend to buy after unexpected significant gains and sell when they suffer unexpected big losses (Frieder, 2003).

2.3.4 Overconfidence

Overestimation of abilities and overconfidence occurs frequently, most often when investors believe they are well informed (Cude et al., 2021). Experienced investors are more likely to be overconfident, resulting in bad investment decisions (Areiqat et al., 2019), and reduced awareness of risk (Arifin & Soleha, 2019). Investors that are overconfident regarding their knowledge and future expectations tend to invest in higher risk investments, resulting in the increased likelihood of poor performance (Mushinada & Veluri, 2018).

Chinese investors may be more overconfident than other investors (G. Chen et al., 2007). Chinese culture includes the social collective paradigm (Kim & Nofsinger, 2008). Hofstede (1984) pointed out that the collective-oriented culture may lead to overconfidence at the individual level. Therefore, Chinese investors are more likely to trade excessively and hold high expectations for their market returns.

2.3.5 Gambler Fallacy

A belief that particular random events would be less likely to happen if they had already happened once or many times is illogical because the probability of events in the past and the future are separate and irrelevant (Khoshnood & Khoshnood, 2011). When this fallacy is applied to investor behaviors, they conclude that their future investment will be influenced by previous attempts, especially when they make uncertain predictions of investment risk (Jahanzeb, 2012). Investors tend to be more risk-seeking if they had suffered losses in the previous period and less risk-seeking if they had experienced high returns in the past, which can be explained by the gambler fallacy theory (Xue et al., 2011).

In addition, it is interesting that individual Asian investors are often regarded as more likely to engage in "gambling" investment style activity (Kim & Nofsinger, 2008). The gambler fallacy theory appears to apply to the Chinese fund market in which investors anticipate market returns based on their experience.

2.4 Prospect Theory

2.4.1 Loss Aversion

The phenomenon that people are more reluctant to accept loss than to accept the same amount of gains is called loss aversion bias (Tom et al., 2007). According to Khan (2017), to some extent, financial knowledge helps to mitigate loss aversion as it is easier for people to accept low returns with known risks than with unknown risks. Moreover, there is credible evidence to suggest that crises add to the loss aversion of investors, though they are influenced by loss aversion both before and after the crisis (Rauf, 2014).

2.4.2 Regret Aversion

Compared with the upside of realizing a profit, the pain of suffering a loss is reported to have a higher level of intensity because of the unconscious realization that the upside is actually an error that happens when we miss a greater opportunity (Pisani & Russo, 2021) while suffering

a loss happens due to an error or erroneous behaviors that we consciously choose (Jain et al., 2015). Often, investors choose to follow the herd and buy ascending value investments or frequently traded funds as they want to avoid the pain received later when their decision is proven incorrect, and few people share in the pain of loss. In this situation, the pain they feel will be mitigated if they lose the same amount of money on investments in a frequently traded fund which ultimately results in losses for many people. This situation would not make them feel regret, or they would feel less regret.

2.5 China Fund Market in 2020

After the outbreak of the Pandemic, the China fund market experienced a dramatic increase in fund-related activity as firms needed to raise more funds in order to match their sudden need for higher liquidity (Gopalakrishnan et al., 2021). Since 2013, Internet money fund products like Yu'e Bao of Alipay have been created in China and have drawn many investors due to their high accessibility and convenience. The Internet money fund applications quickly became popular platforms on which Chinese investors are likely to buy funds. However, in 2020, for the first time, the Internet money funds' return rate fell to previously unknown low levels (C. Xu, 2021). For example, the 7-day annualized yield of the popular Tianhong Fund in Yu'e Bao had its first significant drop, at one point as low as 1.855%, since it was founded. Although the return rate of the internet money funds was lower, according to the Asset Management Association of China, the gross net growth rate of the China fund market experienced a giant leap from 2019 to 2020, growing from 13.29% to 34.7%. Due to the volatility in the fund market, the dynamic interaction between investors and mutual funds during that period has become a topic well worthy of exploration.

2.6 Behavioral Factors in China

It has been reported in the existing research that individual investors in China are more likely to have overconfidence bias than those in the US, frequently leading to poor investment decisions (G. Chen et al., 2007). Such behavioral biases result from Chinese culture, which led people to be more collective-oriented (Kim & Nofsinger, 2008). According to Matters (2008), the Chinese are the most willing to take risks among 22 countries with different cultures. Much of the existing research on Chinese investors has focused on the relationship between investment behavior and the Chinese culture (X. Xu et al., 2022).

Apart from Chinese culture, another factor contributing to Chinese investment behavior is investors' focus. There is a pattern where the fund's sensitivity to risk exposure in China is likely to be far more than that of the fund manager's ability (Cornell et al., 2020). Chinese investors tend to focus more on fund styles and risk exposure than on fund manager ability, leading to herding behavior, further exacerbating the market's volatility. Many Chinese investors may lack financial proficiency and may not fully understand the risks in the fund market, exacerbating irrational investment behaviors (Cornell et al., 2020).

In addition to the internal factors, external factors like problems in government regulation of financial systems also account for investors' irrational behaviors. Due to the immaturity of the capital market in China, some financial risks and other issues are not addressed (Zheng et al., 2019). These financial risks affect investment decisions.

2.7 Behaviors in Risk

It has been demonstrated that perceived risk is a critical factor in online financial activity (C. Chen & Lai, 2023; Shih, 2023). The behavior motivation theory is supported in the existing research, indicating that higher risk results in more protective behavior (Brewer et al., 2004). This explains why people tend to take action to reduce perceived risks to protect themselves during a crisis. Research behavior can be predicted by examining differing attitudes towards perceived risks (Breuer et al., 2017). Additionally, the willingness to take risks differs at the individual and group levels because of different degrees of cultural influence. When this theory is applied during a crisis, we can predict that individuals would display different risk behaviors if they made investment decisions not by themselves independently but as part of a group, as explained by collectivism.

After reviewing the literature, several research questions are raised;

RQ1: What are investors' preferences for the first half of 2020 when influenced by the economic uncertainty caused by the Pandemic?

In FH20, the outbreak of COVID-19 in China had a specific impact on the Chinese financial markets and indirectly changed peoples' investment behaviors. In response to the perceived risk in the Chinese fund market, investors' preferences for investment changed as their attitude towards the financial markets were affected by the increased level of uncertainty and risk brought by the Pandemic. To ascertain how people's attitudes towards risk changed, it is necessary to determine investors' preferences in FH20, and then to explore the reasons for their continuing investment behavior in SH20. Therefore, research question 2 becomes:

RQ2: What are the behavioral factors supporting investors' decisions in the second half of 2020 when being continuously and strongly influenced by the Pandemic?

Andrieş et al. (2021) reported that the Pandemic had increased economic uncertainty and brought heightened potential global economic risks, including bond risk. So, it is not readily apparent why Chinese investors still chose to invest in bonds after the pandemic crisis. Psychological behavioral factors may explain this. It has been shown that financial risk tolerance has a significant mediating effect on investment behavior (Heo et al., 2016). Under conditions brought about by the Pandemic, an obvious question is how the increased financial risk influenced investors' investment behaviors through behavioral factors.

RQ3: What is the relationship between Chinese investors' perception of risks during the Pandemic and the behavioral factors?

After determining the behavioral factors of Chinese investors during the crisis, which factors strongly impact investors' behaviors concerning risk, and how those factors may change their investment behaviors can be investigated. Since the behavior of Chinese investors in the fund market outperformed the projections since the Pandemic, it can be inferred that the behavioral factors will change as individual investors' perception of risk levels changes. For example, how much influence the behavioral factors have had since the crisis. Is the influence greater or less since the Pandemic? Since the crisis, do investors tend to be more or less affected by these behavioral factors?

3. THEORETICAL FRAMEWORK—HYPOTHESIS

The China funds market experienced unexpected growth in 2020 despite the uncertain market conditions present in FH 2020. The funds market did not perform well from the perspective of share value, but the market size and total value grew dramatically (Z. Liu et al., 2021). There are various possible reasons behind this phenomenon (Y. Chen et al., 2020).

The Pandemic has had a negative effect on the Chinese stock market, and investors are more likely to be risk-averse during periods of crisis (Naseem et al., 2021). Amid the economic crisis caused by the Pandemic, investors were less inclined to invest in stocks which in turn led to a decline in stock prices. Funds are a safer investment option.

According to the China Securities Association, the net value growth rate of China's fund market in the FH20 was 14%, 10% higher than the growth rate in 2019.

In SH20, the total lockdown had ended in China, and the economy began to function relatively normally. According to the China Securities Association, China's fund market also saw faster growth in the second half of 2020 than in previous years.

With consideration of the gap in the existing literature, and the investment preference of investors during the Pandemic period, the study proposes to test the following Hypothesis.

Hypothesis 1a (H1a) Increased fund purchasing activity in the first half of 2020 resulted from heightened risk aversion due to uncertainty caused by the Pandemic.

Hypothesis 1b (H1b) Increased fund purchasing activity in the second half of 2020 resulted from behavioral factors.

Behavioral finance factors can be divided into three main areas: heuristic, prospect, and herding (Le Luong & Thi Thu Ha, 2011). The heuristic factor can be further divided into the following factors: representativeness, anchoring, overconfidence, gambler fallacy, and availability bias. The prospect factor includes loss aversion and regret aversion. The three factors could influence investors' decision-making process, making it possible to influence investors' abnormal behavior in the 2020 China fund market.

Considering various behavioral finance factors affecting investors' decisions, this study proposes the following hypotheses:

Hypothesis 2a (H2a): Individual behavioral factors influenced Chinese investors' investment decisions in the funds market in the second half of 2020.

Hypothesis 2b (H2b): Interactions between behavioral factors influenced Chinese investors' investment decisions in the funds market in the second half of 2020.

Given that Chinese funds market grew fast in 2020, it is not unreasonable to assume a connection between the Pandemic and funds investing and further to assume that the Pandemic encouraged people to buy funds. If some investors turn to funds because funds are less risky than stock, those investors can be defined as demonstrating a higher level of risk aversion during FH20. Yuan (2015) indicated that when investors sense the risk, they will pay more attention to the market and reduce stock positions by selling some stocks or purchasing some mutual fund shares. Therefore, knowing that investors' risk perception of stocks and funds will lead to an increased likelihood of risk-averse behaviors, including shifting their investment strategies towards increasing the level of funds in their investment portfolios and turning to the funds market to reduce buying pressure. It can also be assumed that Investors' tolerance of risks will also change their investment behaviors which are affected by behavioral factors. Thus,

based on behavioral factors, we can infer a relationship between investors' risk-averse attitude and their unusual behaviors.

Hypothesis 3 (H3). Risk-averse behaviors in the first half of 2020 will be related to behavioral factors in the second half of 2020.

With these five hypotheses put forth for testing, the Theoretical Framework of this study is indicated in Figure 1. The known change in investor behavior between the first and second half of 2020 could be explained by the relationship between risk aversion, Behaviour Factors, and possibly by a combination of behavioral factors.

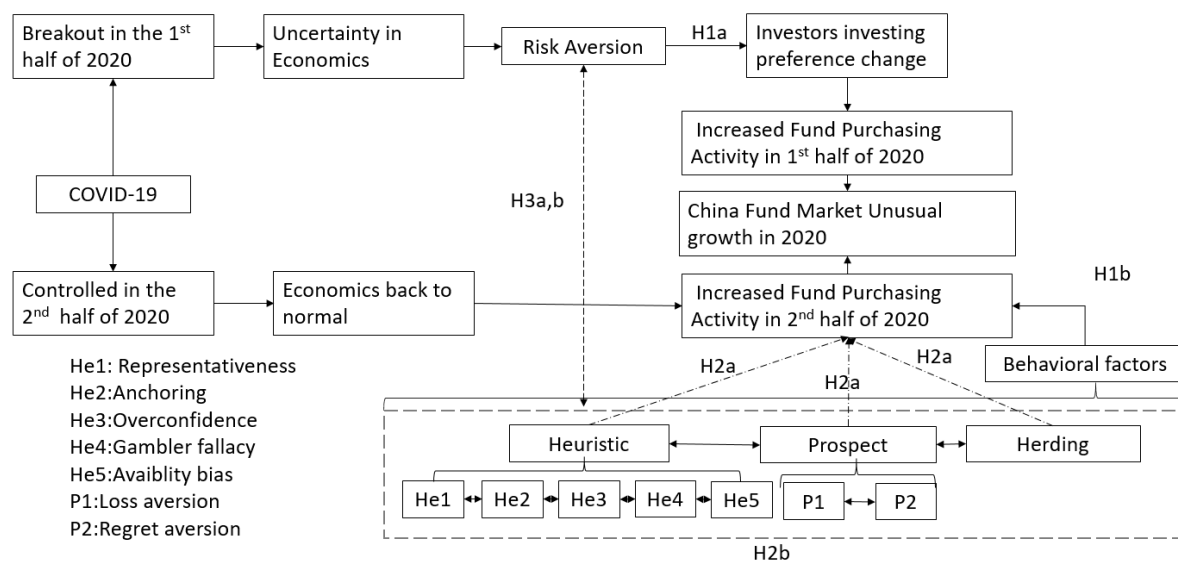


Figure 1 Theoretical Framework

In summary, the conceptual framework shown in Figure 1 presents the constructs of the possible reasons behind the unexpected behavior exhibited by investors in the Chinese funds market in 2020.

4. METHODOLOGY

4.1. Sample and Data Collection

This study adopted the quantitative research method to use data gathered through the online survey platform "Wenjuanxing." The survey was published and spread through WeChat, China's largest social media platform.

The survey was voluntary; participants self-selected and remained anonymous. A total of 431 responses were collected; 13 were discarded as unusable, primarily due to incomplete entries, while 418 were valid.

The demographic information of subjects who completed the survey is shown in Table 1. Of the 418 valid completed surveys, there were 218 women and 200 men. Nearly half of the participants were in the 18-35 age range. The investment behaviors and perceptions of this age group are very important as they are more educated, well-informed, and are more likely to engage in online investment activities, including investing in funds, than older investors who are more likely to engage in less formal investment activity (Marjerison et al., 2021). Further

support for the relative importance of this age group is the likelihood that they will be influential in the financial and investment decisions for a large amount of wealth that has been created in the Chinese economy (Marjerison & Pan, 2022). The monthly income of the subjects was evenly distributed, with the most significant number (36.8%) between 5,000RMB and 10,000RMB. Among the subjects, the number of people who completed 4-years college was the largest.

Table 1. Demographics

	Level	Count	Total	Proportion	p
Gender	Female	200	418	0.478	0.406
	Male	218	418	0.522	0.406
Age	19-25	131	418	0.313	< .001
	26-35	99	418	0.237	< .001
	36-50	107	418	0.256	< .001
	51-60	59	418	0.141	< .001
	60+	22	418	0.053	< .001
Monthly Income (RMB)	1,000-5,000	101	418	0.242	< .001
	5,000-10,000	154	418	0.368	< .001
	10,000-20,000	80	418	0.191	< .001
	20,000-30,000	65	418	0.156	< .001
	Above 30,000	18	418	0.043	< .001
Education Level	High School	72	418	0.172	< .001
	Vocational	125	418	0.299	< .001
	Univ/College	171	418	0.409	< .001
	Masters	50	418	0.12	< .001

Information about subjects' investments is shown in Table 2. There were 24.2% of participants with investment experience of less than one year. Most participants' investment experience is more than one but less than three years.

Table 2. Investment Background

	Level	Count	Total	Proportion	p
Investment Experience in Funds	One year	101	418	0.242	< .001
	1-3 years	142	418	0.34	< .001
	3-5 years	80	418	0.191	< .001
	5-10 years	75	418	0.179	< .001
	Ten+ years	20	418	0.048	< .001

Note. H_a is proportion $\neq 0.5$

4.2 Instrumentation

Data for all variables was collected using a survey instrument based on previously used and validated scales and adapted for context. The variables were measured using a 6-point Likert scale ranging from "1" (strongly disagree) to "6" (strongly agree). The rationale for choosing the 6-point Likert scale was to avoid subjects choosing the median (Le Luong & Thi Thu Ha, 2011).

4.3. Survey Questions on Changes in Investment Preferences during in the first half of 2020

Changes in investment preferences were adapted from a previously validated research design (Hoffmann et al., 2013), including the following five aspects.

- Financial Certainty Preference

- Risk Avoidance
- Financial Risk Aversion
- Conservatism
- Risk Consideration (for Fund& Stocks)

This scale was used to investigate the change in investors' investment preference in the financial crisis of 2008-2009 and can better reflect the change in investors' investment psychology under the present crisis. In FH20, China experienced a financial crisis similar to that of 2008, and while the causes were substantially different, the crisis level was arguably similar. Therefore, the scale has reference value for the change in investment psychology of Chinese investors in FH20.

4.4. Survey Questions on behavioral factors that influenced Chinese investors in the second half of 2020

Behavioral factors can be divided into heuristic, prospect, and herding. The heuristic can be further divided into five factors: representation, overconfidence, anchoring, gambler fallacy, and availability bias. The prospect factor is subdivided into two factors: loss aversion and regret aversion.

The measurement for behavioral factors adapts a former survey developed by Luong & Ha (2011) to determine the factors influencing investment behaviors.

Each behavioral factor is tested with four or more questions to judge the degree of influence of these factors on investors' investment decisions.

5. RESULTS

The difference between individuals' risk preferences is shown in Table 3.

Table 3 Descriptive of Differences in FCP, RA, FRA, Consv, RC & Pref

	Mean	SD	Min	Max
FCP diff	2.28	1.56	-2	5
RA diff	1.17	1.94	-2	5
FRA diff	1.34	1.73	-2	5
Consv diff	1.11	1.80	-5	5
RC diff	1.31	1.90	-2	5
Pref diff	1.40	1.96	-2	5

Note: FCP (financial certainty preference), RA (risk avoidance), FRA (financial risk aversion), Consv (conservatism), RC (risk consideration), Pref (preference in fund vs. stock)

If the mean is above 0, it indicates that this preference has decreased after the Pandemic. As indicated in Table 3, investors tend to be less risk tolerant during the Pandemic, but they are more likely to tolerate risk after the initial 100 days of the Pandemic.

Table 4. One-Sample T-Test of FCP, RA, FRA, Consv, RC & Pref

One-Sample T-Test		Statistic	df	p
FCP diff	Student's t	29.9	417	< .001
RA diff	Student's t	12.3	417	< .001
FRA diff	Student's t	15.9	417	< .001

Consv diff	Student's t	12.7	417	< .001
RC diff	Student's t	14.2	417	< .001
Pref diff	Student's t	14.7	417	< .001

Note: Rep (representativeness), Overcf (overconfidence), Anchor (anchoring), GF (gambler's fallacy), AB (ability bias), RA (regret aversion), LA (loss aversion), H (herding).

One sample T-Test is used to test if a population mean differs from a specific value. According to one sample T-Test in Table 4, p is < 0.001, so H1a is accepted, meaning there is a significant difference in investor preferences between FH20 and SH20. In the FH20, investors preferred investing in funds because they were more risk-averse, resulting in increased fund purchasing activity.

Table 5. Descriptive of Behavioral Factors

	Mean	SD
Rep1 diff	0.1316	1.27
Rep2 diff	0.0455	1.3
Overcf diff	0.1005	1.23
Anchor1 diff	0.0144	1.29
Anchor2 diff	0.1316	1.19
GF diff	0.1364	1.29
AB diff	0.0742	1.28
RA1 diff	0.1794	1.29
RA2 diff	0.012	1.25
LA1 diff	0.0407	1.28
LA2 diff	0.1627	1.31
H1 diff	0.4234	2.24
H2 diff	-0.5407	1.53
H3 diff	-0.3852	1.82
H4 diff	-0.1938	1.59

Similarly, the difference in behavioral factors comes from the behavioral factors in FH20 minus behavioral factors in SH20. Table 3 shows the positive mean difference in the values of Rep, Overcf, Anchor, GF, AB, RA, and LA. This indicates that in FH20, investors were less influenced by the heuristic effect and prospect effect than during SH20. However, Table 5 shows that investors' herding behavior significantly increased during SH20. Although the mean of H1 diff gives a positive value that is inconsistent with the other three H indicators, it can be explained by the large standard deviation. Indications are that in SH20, investors were less affected by behavioral variables, including heuristic and prospect factors, while they were more affected by the herding factor. Investors were more risk-averse during FH20. Thus,

H1a is supported.

Increased fund purchasing activity in SH20 is partly due to the herding effect, one of the three behavioral factors. Thus,

H1b is supported.

Before testing hypotheses 2 and 3 through quantitative analysis, the normality and validity of the data was checked. For before, "b", and for after, "a" was used in the analysis.

For example, Rep1b means representativeness before the Pandemic.

Table 6. Normality Test

Descriptive Statistics								
	N	Mean	Std. Dev.	Variance	Skewness	Std. Error of Skewness	of Kurtosis	Std. Error of Kurtosis
Rep1b	418	4.33	1.659	2.753	-0.718	0.119	-0.738	0.238
Rep1a	418	4.20	1.458	2.124	-0.629	0.119	-0.396	0.238
Rep2b	418	4.27	1.649	2.718	-0.659	0.119	-0.753	0.238
Rep2a	418	4.22	1.464	2.143	-0.552	0.119	-0.485	0.238
Overcf1b	418	4.42	1.564	2.446	-0.826	0.119	-0.349	0.238
Overcf1a	418	4.32	1.383	1.911	-0.715	0.119	-0.117	0.238
Anchor1b	418	4.34	1.621	2.628	-0.700	0.119	-0.651	0.238
Anchor1a	418	4.33	1.438	2.067	-0.647	0.119	-0.363	0.238
Anchor2b	418	4.41	1.591	2.531	-0.745	0.119	-0.578	0.238
Anchor2a	418	4.28	1.469	2.159	-0.652	0.119	-0.470	0.238
GF1b	418	4.21	1.689	2.851	-0.627	0.119	-0.843	0.238
GF1a	418	4.07	1.500	2.249	-0.522	0.119	-0.584	0.238
AB1b	418	4.40	1.674	2.802	-0.700	0.119	-0.801	0.238
AB1a	418	4.33	1.477	2.182	-0.672	0.119	-0.431	0.238
LA1b	418	4.45	1.683	2.834	-0.880	0.119	-0.458	0.238
LA1a	418	4.28	1.342	1.802	-0.602	0.119	-0.171	0.238
LA2b	418	4.22	1.732	2.998	-0.664	0.119	-0.862	0.238
LA2a	418	4.21	1.459	2.128	-0.509	0.119	-0.638	0.238
RA1b	418	4.41	1.663	2.765	-0.768	0.119	-0.669	0.238
RA1a	418	4.37	1.445	2.089	-0.676	0.119	-0.329	0.238
RA2b	418	4.51	1.657	2.744	-0.940	0.119	-0.387	0.238
RA2a	418	4.35	1.377	1.897	-0.729	0.119	0.033	0.238
H1b	418	4.20	1.668	2.782	-0.532	0.119	-0.982	0.238
H1a	418	3.77	1.815	3.294	-0.443	0.119	-1.220	0.238
H2b	418	3.39	1.931	3.729	0.069	0.119	-1.550	0.238
H2a	418	3.93	1.722	2.966	-0.394	0.119	-1.132	0.238
H3b	418	3.47	1.822	3.319	0.064	0.119	-1.427	0.238
H3a	418	3.85	1.882	3.541	-0.331	0.119	-1.354	0.238
H4b	418	3.72	1.743	3.039	-0.098	0.119	-1.345	0.238
H4a	418	3.91	1.906	3.632	-0.427	0.119	-1.309	0.238

Note: Rep (representativeness), Overcf (overconfidence), Anchor (anchoring), GF (gambler’s fallacy), AB (ability bias), RA (regret aversion), LA (loss aversion), H (herding).

According to Guthaus (2006), a dataset is deemed normal if the value for skewness is between -2 and +2 and the kurtosis value is between -7 and +7. Therefore, all behavioral factor items of the questionnaire are normally distributed.

Table 7. Rotated Component Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13
H4a	0.803												
H2a	0.763												
H1a	0.755												
H3a	0.746												
H2b	0.691												
H4b	0.636												
H3b	0.590												
LA2a		0.914											
LA2b		0.912											
AB1a			0.909										

AB1b		0.902									
GF1a			0.909								
GF1b			0.904								
Anchor2a				0.915							
Anchor2b				0.914							
Rep1b					0.906						
Rep1a					0.905						
RA1a						0.906					
RA1b						0.903					
LA1b							0.904				
LA1a							0.900				
Rep2b								0.900			
Rep2a								0.894			
RA2a									0.902		
RA2b									0.889		
Anchor1a										0.902	
Anchor1b										0.901	
Overcf1a											0.912
Overcf1b											0.892
H1b											0.938

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

According to Pallant, a Cronbach's Alpha value higher than 0.60 should be considered of high reliability (Pallant, 2020). Following this standard, the overall reliability value is 0.606, indicating that the test results are reliable.

The point 6-Likert scale was used to measure the impact of various behavioral factors on investors. The evaluation criteria are as follows:

- A mean of less than two would be considered to have little impact.
- A mean between 2 and 3 would be considered to have a low impact.
- A mean of 3-4 would be considered to have a moderate impact.
- A mean of 4-5 would be considered high impact.
- A mean greater than five would be considered a significant impact.

Table 8. Reliability Statistics

		Mean		Std. Deviation		Cronbach's Alpha
		Before	After	Before	After	
Heuristic	Rep1	4.33	4.20	1.659	1.458	0.800
	Rep2	4.27	4.22	1.649	1.464	0.791
	Overcf	4.42	4.32	1.564	1.383	0.788
	Anchor1	4.34	4.33	1.621	1.438	0.785
	Anchor2	4.41	4.28	1.591	1.469	0.823
	AB	4.40	4.33	1.674	1.477	0.802
Prospect	LA1	4.45	4.28	1.683	1.342	0.781
	LA2	4.22	4.21	1.732	1.459	0.820
	RA1	4.41	4.37	1.663	1.445	0.797
	RA2	4.51	4.35	1.657	1.377	0.774
Herding	H2	3.39	3.93	1.931	1.722	0.789
	H3	3.47	3.85	1.822	1.882	0.682
	H4	3.72	3.91	1.743	1.916	0.766

Note: Rep (representativeness), Overcf (overconfidence), Anchor (anchoring), GF (gambler’s fallacy), AB (ability bias), RA (regret aversion), LA (loss aversion), H (herding).

Table 8 shows that the mean of heuristic and prospect factors all decreased in SH20. That means investors become less heuristic during SH20 due to representativeness, overconfidence, anchoring, gambler's fallacy, and availability bias psychology, but these factors still have a high impact on their decision-making since the means are all above 4. In addition, investors show less prospect as they become less sensitive to loss aversion and regret aversion. Herding behavior increased during SH20. Thus, Chinese investors were strongly influenced by individual behavioral factors, specifically herding behavior, in SH20. Thus, H2a is supported.

Table 9. Correlations During SH20

Spearman's rho		RepA	Overcf A	Anchor A	GFA	ABA	LAA	RAA	HA
RepA	Correlation	1.000	0.044	0.000	0.089	-0.007	0.067	-0.059	-0.013
	Coefficient								
OvercfA	Sig. (2-tailed)		0.375	0.993	0.068	0.879	0.172	0.229	0.784
	Correlation	0.044	1.000	0.045	-0.033	0.025	0.045	0.034	0.040
AnchorA	Coefficient								
	Sig. (2-tailed)	0.375	-	0.355	0.501	0.616	0.357	0.483	0.419
GFA	Correlation	0.000	0.045	1.000	0.056	-0.010	-0.030	-0.047	0.053
	Coefficient								
ABA	Sig. (2-tailed)	0.993	0.355	-	0.254	0.837	0.543	0.341	0.281
	Correlation	0.089	-0.033	0.056	1.000	0.001	-0.070	0.035	0.018
LAA	Coefficient								
	Sig. (2-tailed)	0.068	0.501	0.254	-	0.991	0.151	0.474	0.707
RAA	Correlation	-0.007	0.025	-0.010	0.001	1.000	-0.004	-0.030	-0.015
	Coefficient								
HA	Sig. (2-tailed)	0.879	0.616	0.837	0.991	-	0.936	0.537	0.763
	Correlation	0.067	0.045	-0.030	-0.070	-0.004	1.000	0.032	-0.052
RepA	Coefficient								
	Sig. (2-tailed)	0.172	0.357	0.543	0.151	0.936	-	0.517	0.291
OvercfA	Correlation	-0.059	0.034	-0.047	0.035	-0.030	0.032	1.000	0.092
	Coefficient								
AnchorA	Sig. (2-tailed)	0.229	0.483	0.341	0.474	0.537	0.517	-	0.061
	Correlation	-0.013	0.040	0.053	0.018	-0.015	-0.052	0.092	1.000
GFA	Coefficient								
	Sig. (2-tailed)	0.784	0.419	0.281	0.707	0.763	0.291	0.061	-

As shown in Table 9, no correlation exists between any two behavioral factors in SH20. So, there is no interaction between these behavioral factors in the funds market in SH20. Thus, H2b is rejected.

Table 10. Correlation Matrix between Behavioral Factors and Risk Avoidance Indicators

		FCP (b-a)	RA (b-a)	Consv (b-a)	FRA (b-a)	RC (b-a)	Pref (b-a)
Rep1 diff	Spearman's rho	0.038	-0.039	-0.022	0.048	-0.115	0.029
	p-value	0.435	0.425	0.659	0.323	0.019	0.559
Rep2 diff	Spearman's rho	0.083	0.048	-0.042	-0.037	0.108	-0.047
	p-value	0.09	0.331	0.395	0.45	0.028	0.343
Overcf diff	Spearman's rho	0.109	0.006	-0.034	-0.006	0.082	-0.06
	p-value	0.025	0.91	0.494	0.909	0.093	0.221
Anchor1 diff	Spearman's rho	0.036	-0.132	-0.049	-0.088	0.016	0.066
	p-value	0.464	0.007	0.322	0.071	0.741	0.18
Anchor2 diff	Spearman's rho	0.07	-0.016	-0.041	0.07	0.034	0.003

	p-value	0.154	0.749	0.398	0.155	0.484	0.953
GF diff	Spearman's rho	0.007	0.048	-0.005	-0.007	-0.019	-0.005
	p-value	0.892	0.332	0.915	0.891	0.694	0.922
AB diff	Spearman's rho	0.073	-0.005	-0.095	-0.027	0.088	0.017
	p-value	0.134	0.923	0.052	0.581	0.073	0.724
RA1 diff	Spearman's rho	-0.064	0.013	-0.013	0.068	-0.033	-0.067
	p-value	0.189	0.796	0.784	0.162	0.495	0.174
RA2 diff	Spearman's rho	0.053	-0.032	0.002	0.066	-0.004	-0.025
	p-value	0.277	0.52	0.969	0.176	0.939	0.615
LA1 diff	Spearman's rho	-0.023	0.017	0.049	0.13	-0.019	0.033
	p-value	0.644	0.731	0.317	0.008	0.704	0.495
LA2 diff	Spearman's rho	-0.005	-0.055	-0.084	-0.038	0.04	-0.042
	p-value	0.919	0.264	0.086	0.44	0.409	0.392
H2 diff	Spearman's rho	-0.069	-0.076	-0.023	-0.061	-0.01	-0.032
	p-value	0.158	0.122	0.646	0.214	0.832	0.509
H3 diff	Spearman's rho	-0.039	-0.047	0.008	-0.045	0.038	0.065
	p-value	0.424	0.338	0.867	0.363	0.434	0.183
H4 diff	Spearman's rho	-0.03	0.011	-0.014	-0.024	0.028	0.011
	p-value	0.537	0.821	0.77	0.625	0.569	0.822

As indicated in Table 10, most of the spearman's rho between indicators and factors are small, suggesting no correlation between them, thus indicating that investors who changed their investment preferences more in FH20 did not show more significant behavioral bias when investing in funds in SH20. However, the rho difference between Anchoring and RA is -0.132, which suggests a weak correlation between them, the same as the difference between; RC & Representativeness 1 (rho=-0.115), the difference between RC & Representativeness 2 (rho=0.108), the difference between Overconfidence & FCP (rho=0.109) the and difference of Loss Aversion 1 & FRA (rho=0.13). Table 10 shows that investors' risk avoidance preferences in the first half of the year are weakly positively correlated with some behavioral factors in SH20 but does not achieve statistical significance. Therefore, H3 is not supported.

Table 11. Hypothesis Summary

Hypothesis	Status
H1a: Increased fund purchasing activity in the first half of 2020 resulted from heightened risk aversion due to uncertainty caused by the Pandemic.	Supported
H1b: Increased fund purchasing activity in the second half of 2020 resulted from behavioral factors.	Supported
H2a: Individual behavioral factors influenced Chinese investors' investment decisions in the funds market in the second half of 2020.	Supported
H2b: Interactions between behavioral factors influence Chinese investors' investment decisions in the funds market in the second half of 2020.	Not Supported
H3: Risk-averse behaviors in the first half of 2020 will be related to behavioral Factors in the second half of 2020.	Not Supported

6. FINDINGS AND IMPLICATIONS

This study examined the causes of fund investment activity during two distinct periods of differing economic stability. The empirical analysis tested the investment preferences and influencing factors of Chinese investors, and the results indicate that due to the elevated level of risk associated with the uncertainty caused by COVID-19, investors moved towards

investments perceived as having lower risks. The Pandemic resulted in investors showing a preference to invest in funds over stocks in the first half of 2020 due to an increased level of risk aversion during the Pandemic. In addition, investors' decisions to invest in funds in the second half of 2020 appear to be slightly influenced by the behavioral factors of representativeness and risk aversion and, to a significant extent, by herding behavior. However, there is not a strong relationship between investors' risk aversion indicators. It was determined that behavioral factors and investors' financial risk aversion indicators do not have strong correlations.

The findings suggest that investors' risk aversion in the first half of 2020 is related to the extent that investors are influenced by the bias of behavioral factors in the second half of 2020. This pattern has implications for financial institutions' future reactions to periods of elevated risk and uncertainty brought on by crises.

6.1 Theoretical Contribution

Differing from traditional finance, in behavioral finance, it is assumed that investors have bounded rationality and that in actual market activity, investors' decisions will be influenced by cognitive biases resulting in investors not making the theoretical best decisions. Investors can also be influenced by limited information and loss aversion, which may lead to an increased likelihood of poorly developed investment decisions. Behavioral finance is a valuable tool for analysing investors' decisions because it considers the influence of individual psychological factors on investment decisions.

This study concluded that cognitive biases affect investors. Demonstrating that behavioral factors influence Chinese investors may provide insights for investors and financial practitioners. For investors, it can reduce the poor decisions caused by limited information and cognitive bias when making investment decisions, such as reducing the influence of representativeness in making more rational investment decisions.

6.2 Practical Contribution

For financial practitioners, the study of behavioral finance can help investors understand their own bias-based mistakes and the mistakes of others, understand the causes of mistakes, and reduce or avoid them. It can also help in the designing of new financial services products. Financial practitioners can investigate investors' psychological accounts and develop and classify financial products according to investors' different risk preferences. The results of this study can help financial practitioners judge the psychological changes of investors after periods of crisis and serve as a reference for the work of financial practitioners in future crises.

7. LIMITATIONS AND FUTURE RESEARCH

Some limitations of this study stand out, and further investigation is warranted to verify the findings. Firstly, the sample data collected in this study is limited and concentrated in the Zhejiang Province of China, which cannot fully explain the investment behavior of Chinese investors in the funds market in 2020. Secondly, as the online survey was completed independently and anonymously, there is always some doubt that the subjects completed the survey truthfully, and there may be a bias in self-cognition and self-selection. There are other

possible explanations for the anomalies in China's fund market in 2020, such as the development of investment financing software and the influence of social media on investors' behavior. How behavioral finance factors affect the investment performance of investors is also a topic worthy of further exploration. In the future, research can be carried out to explore how behavioral factors affect investors' investment decisions, which type of investors are most susceptible to influence, and the relationship between the depth of influence and investors' investment experience and education level.

REFERENCES

- [1] Ahmad, Z., Ibrahim, H., & Tuyon, J. (2017). Institutional investor behavioral biases: Syntheses of theory and evidence. *Management Research Review*.
- [2] Alkhars, M., Evangelopoulos, N., Pavur, R., & Kulkarni, S. (2019). Cognitive biases resulting from the representativeness heuristic in operations management: An experimental investigation. *Psychology Research and Behavior Management*, 12, 263.
- [3] Andrieş, A. M., Ongena, S., & Sprincean, N. (2021). The COVID-19 pandemic and sovereign bond risk. *The North American Journal of Economics and Finance*, 58, 101527.
- [4] Areiqat, A. Y., Abu-Rumman, A., Al-Alani, Y. S., & Alhorani, A. (2019). Impact of behavioral finance on stock investment decisions applied study on a sample of investors at Amman stock exchange. *Academy of Accounting and Financial Studies Journal*, 23(2), 1–17.
- [5] Arifin, Z., & Soleha, E. (2019). Overconfidence, attitude toward risk, and financial literacy: A case in Indonesia stock exchange. *Review of Integrative Business and Economics Research*, 8, 144–152.
- [6] Balakrishnan, K., Watts, R., & Zuo, L. (2016). The effect of accounting conservatism on corporate investment during the global financial crisis. *Journal of Business Finance & Accounting*, 43(5–6), 513–542.
- [7] Barber, B. M., & Odean, T. (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *The Review of Financial Studies*, 21(2), 785–818.
- [8] Bo, H., Driver, C., & Lin, H.-C. M. (2014). Corporate investment during the financial crisis: Evidence from China. *International Review of Financial Analysis*, 35, 1–12.
- [9] Breuer, W., Kollath, J. A., Salzmann, A. J., & Nitzsch, R. von. (2017). The assessment of risk behavior: A cross-cultural analysis using the DOSPERT scale. In *Behavioral Finance: WHERE DO INVESTORS'BIASES COME FROM?* (pp. 159–180). World Scientific.
- [10] Brewer, N. T., Weinstein, N. D., Cuite, C. L., & Herrington, J. E. (2004). Risk perceptions and their relation to risk behavior. *Annals of Behavioral Medicine*, 27(2), 125–130.
- [11] Chen, C., & Lai, W. (2023). *Exploring the Impact of Perceived Risk on User's Mobile Payment Adoption*. 12(1), 20.

- [12] Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of Behavioral Decision Making*, 20(4), 425–451.
- [13] Chen, Y., Zhao, H., Li, Z., & Lu, J. (2020). A dynamic analysis of the relationship between investor sentiment and stock market realized volatility: Evidence from China. *PloS One*, 15(12), e0243080.
- [14] Cornell, B., Hsu, J., Kiefer, P., & Wool, P. (2020). Assessing mutual fund performance in China. *The Journal of Portfolio Management*, 46(5), 118–127.
- [15] Costa, D. F., de Melo Carvalho, F., de Melo Moreira, B. C., & do Prado, J. W. (2017). Bibliometric analysis on the association between behavioral finance and decision making with cognitive biases such as overconfidence, anchoring effect and confirmation bias. *Scientometrics*, 111(3), 1775–1799.
- [16] Cude, B. J., Chatterjee, S., & Tavosi, J. (2021). *Investment Strategies, Personality Traits, and Overconfidence: Evidence from Iran*. 10(3), 25.
- [17] Falato, A., Goldstein, I., & Hortaçsu, A. (2021). Financial fragility in the COVID-19 crisis: The case of investment funds in corporate bond markets. *Journal of Monetary Economics*, 123, 35–52.
- [18] Fama, E. F. (2021). *Market efficiency, long-term returns, and behavioral finance*. University of Chicago Press.
- [19] Frieder, L. (2003). Evidence on behavioral biases in trading activity. Available at SSRN 479983.
- [20] Gatto, A., & Sadik-Zada, E. R. (2021). Revisiting the East Asian Financial Crises: Lessons from Ethics and Development Patterns. In *Economic Growth and Financial Development* (pp. 23–31). Springer.
- [21] Goldberg, J., Von Nitzsch, R., & Morris, A. (2001). *Behavioral finance*. John Wiley Chichester.
- [22] Gopalakrishnan, B., Jacob, J., & Mohapatra, S. (2021). *Government responses, business continuity, and management sentiment: Impact on debt financing during COVID-19*. Indian Institute of Management Ahmedabad, Research and Publication Department.
- [23] Guthaus, M. R., Sylvester, D., & Brown, R. B. (2006). *Process-induced skew reduction in nominal zero-skew clock trees*. 84–89.
- [24] Habbe, A. H. (2017). Estimation error of earnings information: A test of representativeness and anchoring-adjustment heuristic. *International Journal of Economics and Financial Issues*, 7(1).
- [25] He, P., Sun, Y., Zhang, Y., & Li, T. (2020). COVID–19’s impact on stock prices across different sectors—An event study based on the Chinese stock market. *Emerging Markets Finance and Trade*, 56(10), 2198–2212.
- [26] Heo, W., Nobre, L. H. N., Grable, J. E., & Ruiz-Menjivar, J. (2016). What role does financial risk tolerance play in mediating investing behavior? *Journal of Financial Service Professionals*, 70(5).
- [27] Hirshleifer, D. (2015). Behavioral finance. *Annual Review of Financial Economics*, 7, 133–159.

- [28] Hoffmann, A. O., Post, T., & Pennings, J. M. (2013). Individual investor perceptions and behavior during the financial crisis. *Journal of Banking & Finance*, 37(1), 60–74.
- [29] Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). sage.
- [30] Jain, R., Jain, P., & Jain, C. (2015). Behavioral biases in the decision making of individual investors. *IUP Journal of Management Research*, 14(3), 7.
- [31] Javed, H., Bagh, T., & Razzaq, S. (2017). Herding effects, over confidence, availability bias and representativeness as behavioral determinants of perceived investment performance: An empirical evidence from Pakistan stock exchange (PSX). *Journal of Global Economics*, 6(01), 1–13.
- [32] Kaustia, M., Alho, E., & Puttonen, V. (2008). How much does expertise reduce behavioral biases? The case of anchoring effects in stock return estimates. *Financial Management*, 37(3), 391–412.
- [33] Khan, M. Z. U. (2017). Impact of availability bias and loss aversion bias on investment decision making, moderating role of risk perception. *Management & Administration (IMPACT: JMDGMA)*, 1(1), 17–28.
- [34] Khoshnood, M., & Khoshnood, Z. (2011). *Behavioral finance: A new paradigm in finance*. 21(1), 96–100.
- [35] Kim, K. A., & Nofsinger, J. R. (2008). Behavioral finance in Asia. *Pacific-Basin Finance Journal*, 16(1–2), 1–7.
- [36] Konstantinidis, A., Katarachia, A., Borovas, G., & Voutsas, M. E. (2012). From efficient market hypothesis to behavioural finance: Can behavioural finance be the new dominant model for investing. *Scientific Bulletin–Economic Sciences*, 11(2), 16–26.
- [37] Le Luong, P., & Thi Thu Ha, D. (2011). *Behavioral factors influencing individual investors' decision-making and performance.: A survey at the Ho Chi Minh Stock Exchange*.
- [38] Liu, K. (2021). COVID-19 and the Chinese economy: Impacts, policy responses and implications. *International Review of Applied Economics*, 35(2), 308–330.
<https://doi.org/10.1080/02692171.2021.1876641>
- [39] Liu, Z., Huynh, T. L. D., & Dai, P.-F. (2021). The impact of COVID-19 on the stock market crash risk in China. *Research in International Business and Finance*, 57, 101419.
- [40] Malkiel, B. G. (1989). Efficient market hypothesis. In *Finance* (pp. 127–134). Springer.
- [41] Malkiel, B. G. (2005). Reflections on the efficient market hypothesis: 30 years later. *Financial Review*, 40(1), 1–9.
- [42] Marjerison, R. K., Chae, C., & Li, S. (2021). Investor Activity in Chinese Financial Institutions: A Precursor to Economic Sustainability. *Sustainability*, 13(21), 12267.
- [43] Marjerison, R. K., & Pan, J. (2022). Decision-Making Styles of the Next Generation of Chinese Business Leaders. In *Handbook of Research on Emerging Business Models and the New World Economic Order* (pp. 365–386). IGI Global.
- [44] Matters, C. R. (2008). *Countries and culture in behavioral finance*. 25(3), 38–44.
- [45] Mushinada, V. N. C., & Veluri, V. S. S. (2018). Investors overconfidence behaviour at Bombay stock exchange. *International Journal of Managerial Finance*.

- [46] Naseem, S., Mohsin, M., Hui, W., Liyan, G., & Penglai, K. (2021). The investor psychology and stock market behavior during the initial era of COVID-19: A study of China, Japan, and the United States. *Frontiers in Psychology, 12*, 16.
- [47] Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.
- [48] Philippas, N., Economou, F., Babalos, V., & Kostakis, A. (2013). Herding behavior in REITs: Novel tests and the role of financial crisis. *International Review of Financial Analysis, 29*, 166–174.
- [49] Pisani, F., & Russo, G. (2021). Sustainable Finance and COVID-19: The Reaction of ESG Funds to the 2020 Crisis. *Sustainability, 13*(23), 13253. <https://doi.org/10.3390/su132313253>
- [50] Poncet, S. (2005). A Fragmented China: Measure and Determinants of Chinese Domestic Market Disintegration. *Review of International Economics, 13*(3), 409–430. <https://doi.org/10.1111/j.1467-9396.2005.00514.x>
- [51] Rachman, S., & Shafran, R. (1999). Cognitive distortions: Thought–action fusion. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice, 6*(2), 80–85.
- [52] Rahadi, R. A., Dewi, E. K., Damayanti, S. M., Afgani, K. F., Murtaqi, I., & Rahmawati, D. (2021). *Adoption Analysis of Online Mutual Fund Investment Platform for Millennials in Indonesia. 10*(1), 8.
- [53] Rauf, A. L. A. (2014). Individual investor behaviour: Pre and post crisis study on Bahrain. *Journal of Emerging Trends in Economics and Management Sciences, 5*(5), 457–464.
- [54] Ritter, J. R. (2003). Behavioral finance. *Pacific-Basin Finance Journal, 11*(4), 429–437.
- [55] Sadi, R., Asl, H. G., Rostami, M. R., Gholipour, A., & Gholipour, F. (2011). Behavioral finance: The explanation of investors' personality and perceptual biases effects on financial decisions. *International Journal of Economics and Finance, 3*(5), 234–241.
- [56] Shih, W. (2023). *Analysis of the Purchase Intension of Bitcoin by Applying the Technology Acceptance Model. 12*(1), 19.
- [57] Tan, L., Chiang, T. C., Mason, J. R., & Nelling, E. (2008). Herding behavior in Chinese stock markets: An examination of A and B shares. *Pacific-Basin Finance Journal, 16*(1–2), 61–77.
- [58] Tom, S. M., Fox, C. R., Trepel, C., & Poldrack, R. A. (2007). The neural basis of loss aversion in decision-making under risk. *Science, 315*(5811), 515–518.
- [59] Wang, X., & Li, M. (2022). Determinants of Regional Economic Resilience to Economic Crisis: Evidence from Chinese Economies. *Sustainability, 14*(2), 809. <https://doi.org/10.3390/su14020809>
- [60] Xu, C. (2021). *Analysis and Research of VAR Listed Monetary Fund Based on Big Data. 266–269*.
- [61] Xu, X., Xie, Y., Xiong, F., & Li, Y. (2022). The Impact of COVID-19 on Investors' Investment Intention of Sustainability-Related Investment: Evidence from China. *Sustainability, 14*(9), 5325. <https://doi.org/10.3390/su14095325>

- [62] Xue, G., Lu, Z., Levin, I. P., & Bechara, A. (2011). An fMRI study of risk-taking following wins and losses: Implications for the gambler's fallacy. *Human Brain Mapping, 32*(2), 271–281.
- [63] Yan, C. (2020). COVID-19 Outbreak and stock prices: Evidence from China. *Available at SSRN 3574374*.
- [64] Yuan, Y. (2015). Market-wide attention, trading, and stock returns. *Journal of Financial Economics, 116*(3), 548–564.
- [65] Zheng, Z.-L., Gao, X., & Ruan, X.-L. (2019). Does economic financialization lead to the alienation of enterprise investment behavior? Evidence from China. *Physica A: Statistical Mechanics and Its Applications, 536*, 120858.