Investor Education FOUNDATION

Insights: Financial Capability

July 2024

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What's inside

Does It Help to Worry?

Exploring the Association Between Worry About Investment Fraud and Investing Behavior

Summary

A number of demographic, socioeconomic, psychological, and behavioral factors have been tied to a higher risk of investment fraud victimization (Mottola & Kieffer, 2017). These findings have helped a wide range of stakeholders better understand which investors might be most vulnerable to losing money to an investment fraud and, consequently, provided insights into how best to protect investors from investment fraud. One area not often focused on is the role of worry. That is, is worrying about losing money to an investment fraud tied to investment behavior? Understanding this relationship is important because excessive worry about investment fraud may deter individuals from taking reasonable investment risks and benefiting from the capital markets. Conversely, a lack of worry may lead to overly risky investment behaviors. Using data from the Investor component of the FINRA Foundation's 2021 National Financial Capability Study, we examined whether worrying about losing money to investment fraud is associated with specific investing behaviors.

We found that worry about investment fraud was related to protective investment behaviors, including using a financial professional, naming a trusted contact on investment accounts, and checking the background of financial professionals. Somewhat counterintuitively, we also found that worry about investment fraud was related to risky investment behaviors, including trading options, investing in meme stocks[1], trading on margin, and owning crypto assets. On further investigation, we found that investors who engaged in *both* protective and risky behaviors have very high levels of worry about investment fraud, and these investors appear to be driving the relationship between worry about losing money to an investment fraud and investment behaviors. While it is unclear why investors who engage in both protective and risky investment behaviors are very worried about investment fraud, we do see that they differ substantially on several demographic and psychographic characteristics compared to other investors. In short, they tend to be young and racially/ethnically diverse, and they have little investing experience and lower levels of investing knowledge.

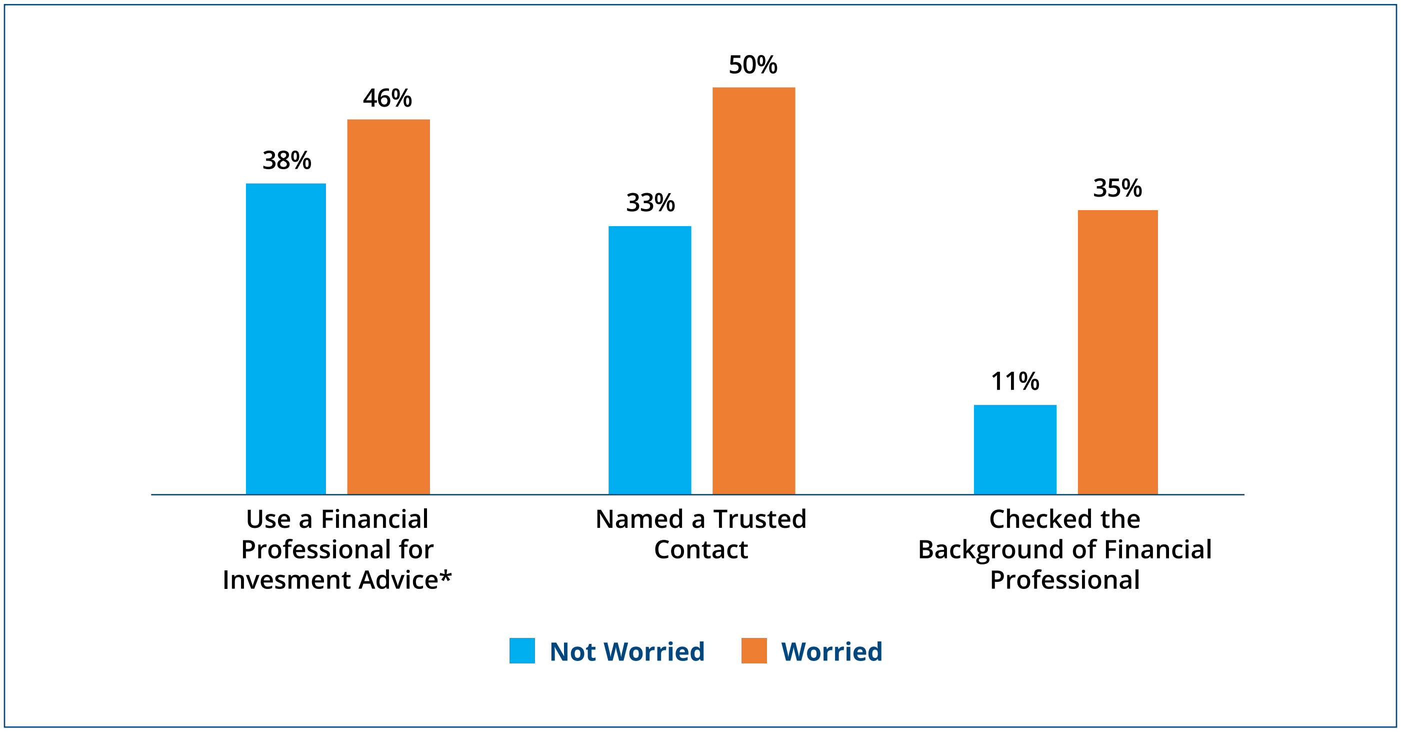
Due to the correlational nature of our data, a limitation of this study is that we cannot determine the causal nature of the relationship, if any, between worry about investment fraud and investment behaviors. That is, we do not know if worrying about losing money to an investment fraud changes investment behaviors, if investment behaviors cause investors to worry more, if causality flows in both directions, or if an unobserved third variable drives the relationships. We discuss possible explanations and implications.

Is Worrying About Investment Fraud Associated With Investing Behavior?

To measure the degree to which investors worry about investment fraud, respondents reported the extent to which they agreed with the following statement on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree): "I am worried about losing money due to investment fraud." Respondents who answered 1 – 4 were categorized as not worried and those who answered 5 – 7 were categorized as worried. Thirty-one percent of respondents indicated they were worried about investment fraud.

Investors worried about investment fraud engaged in behaviors that could reduce the probability of losing money to investment fraud—such as getting recommendations from a financial professional, naming a trusted contact, and checking the backgrounds of financial professionals—at a higher rate than investors not worried about investment fraud (Figure 1).

Figure 1. Worry About Investment Fraud and Protective Investment Behaviors

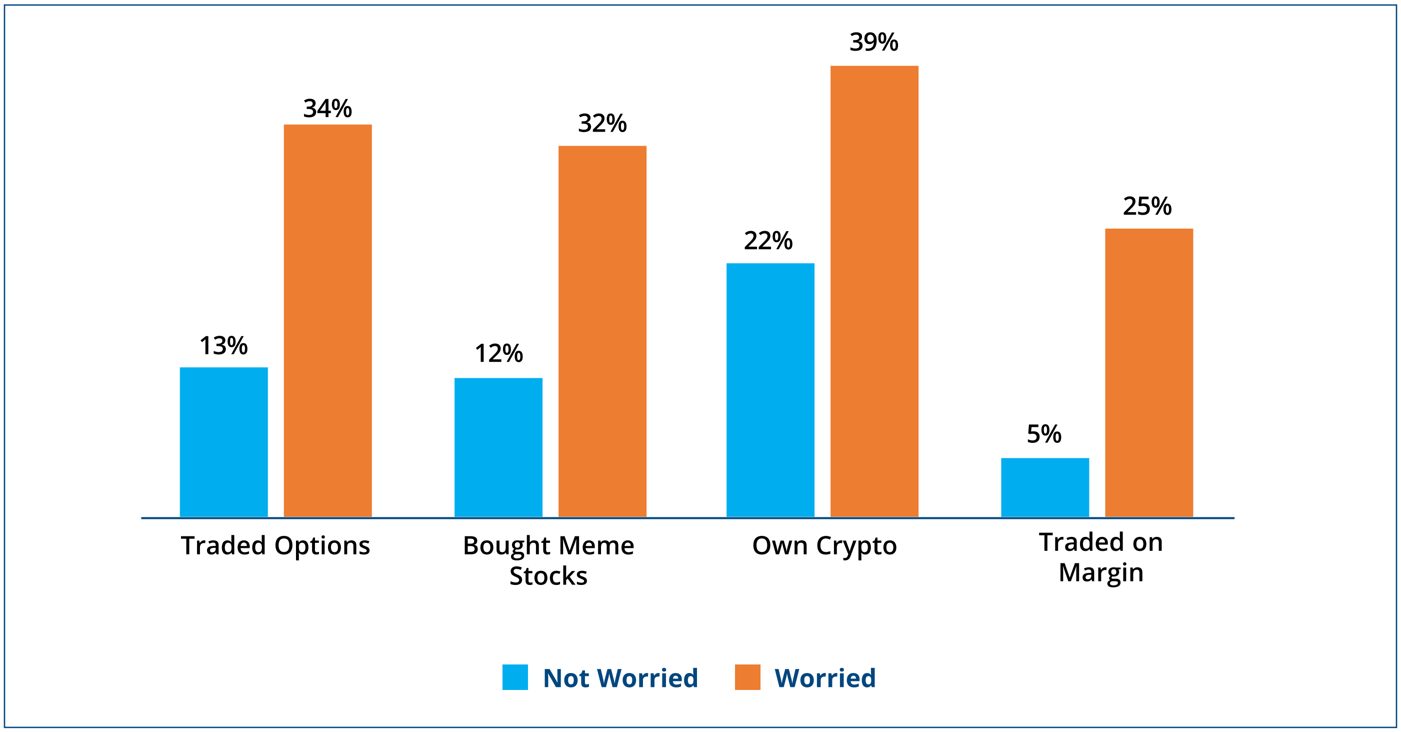


* Percentage who reported they rely on a financial professional "a great deal" when making investment decisions

Further, after controlling for age, gender, race/ethnicity, education level, income, investing experience, investment size, risk tolerance, confidence in investor protection, and objective and subjective financial knowledge, we still see strong and statistically significant relationships between worry about investment fraud and protective investing behaviors, though the effect sizes decrease. For example, 50 percent of investors worried about investment fraud reported naming a trusted contact, compared to 33 percent for those not worried about investment fraud, which is a 17-percentage point difference. However, this difference decreased to 10 percentage points after controlling for relevant variables.[2] So, in this example, worry about investment fraud is related to naming a trusted contact above and beyond the role that the demographic and psychographic variables play in this relationship.

Notably, however, worry about investment fraud was also related to risky investment behaviors. Investors worried about investment fraud engaged in risky investment behaviors at a higher rate than those not worried about investment fraud. These risky behaviors included trading options, buying meme stocks, owning crypto assets, and trading on margin (Figure 2). For example, 25 percent of investors worried about investment fraud reported trading on margin compared to five percent of those not worried about investment fraud, a five-fold difference.

Figure 2. Worry About Investment Fraud and Risky Investing Behaviors



As with protective behaviors, the relationship between worry about investment fraud and risky investment behaviors continued after controlling for relevant variables, though again, the differences decreased. For example, 34 percent of investors worried about investment fraud reported trading options compared to 13 percent for those not worried about investment fraud. This 21-percentage-point difference decreased to nine percentage points after controlling for the variables noted above.

A Closer Look at Investment Behavior and Worry about Investment Fraud

Figures 1 and 2 show that worry about investment fraud is strongly related to both protective and risky investment behaviors, but it is not clear why this would be the case. To try to better understand how worry about investment fraud is related to investment behaviors, we looked at the intersection of protective and risky behaviors. As seen in Figure 3, 23 percent of respondents engaged in at least one protective behavior and one risky behavior.

Perhaps more importantly, 57 percent of the group that engaged in protective and risky behaviors is worried about losing money to investment fraud, compared to about a quarter for the other three groups, which is over a two-fold increase (Figure 4).

Figure 3. Percentage of Respondents Engaging or Not Engaging in Risky and Protective Investment Behaviors

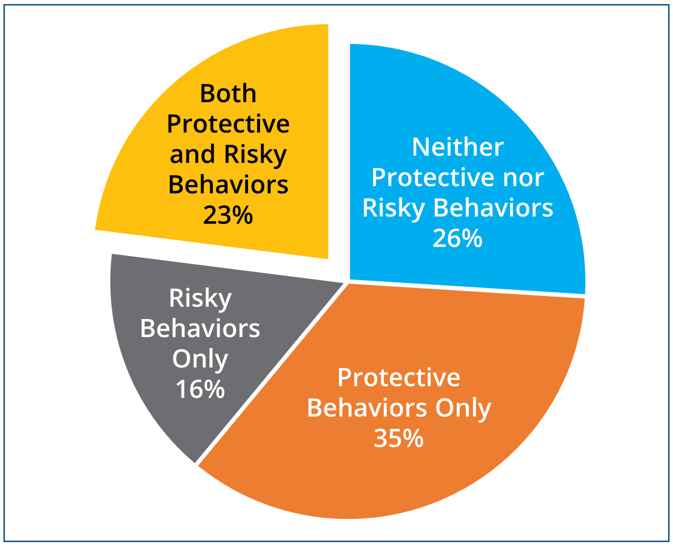
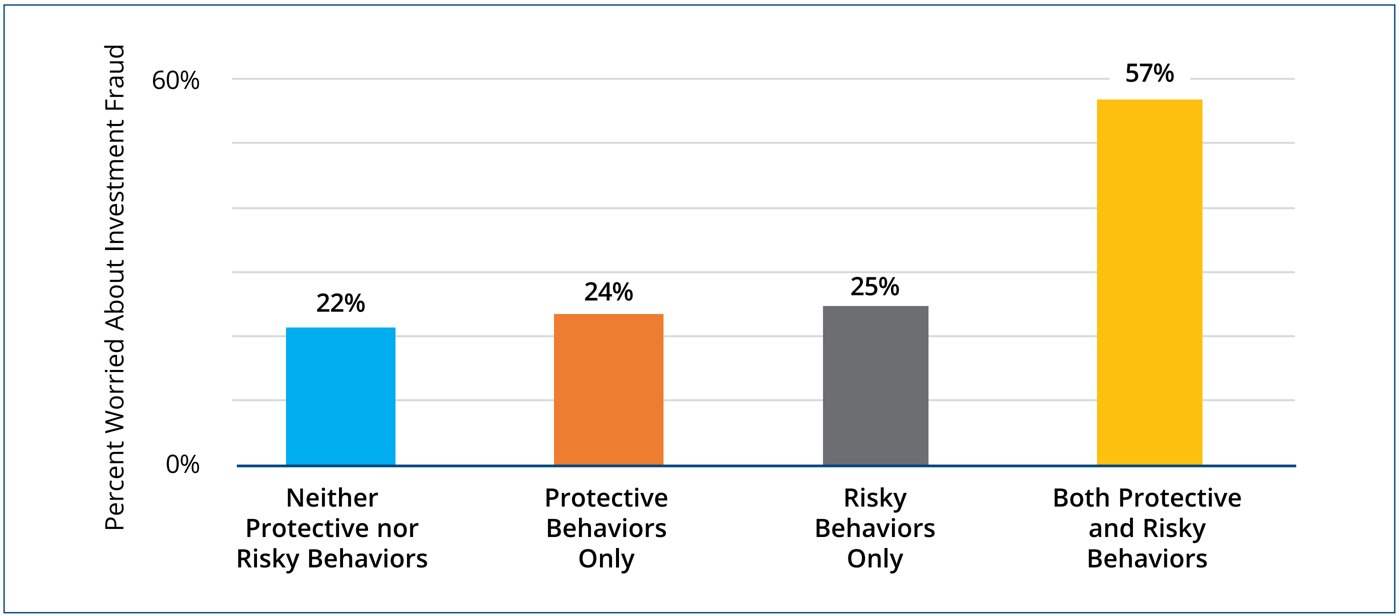


Figure 4. Percentage Worried About Investment Fraud by Investment Behavior



What is different about the respondents who engaged in both protective and risky investment behaviors relative to those who did not? They tend to be younger, non-white, male, and new to investing (Table 1). They also have lower levels of investing knowledge, though investing knowledge is low across the board, and they trade frequently. For example, 30 percent of investors who engaged in *neither* protective nor risky behaviors reported trading frequently, compared to 58 percent for the group that engaged in *both* risky and protective behaviors. It is also noteworthy that the investors who engaged in both risky and protective behaviors, and who have very high levels of worry about investment fraud, are similar demographically to the new investors who flooded into the markets during and after the pandemic (Lush et al., 2021).

Table 1. Characteristics of Investors by Protective/Risky Investment Behavior

	Characteristics of Investors					
Protective/Risky Behaviors	Under 35	Non-white	Investing LT 2 Years	Low Investment Literacy*	Trade Frequently**	Male
Neither Protective nor Risky Behaviors	18%	22%	11%	49%	30%	57%
Protective Behaviors Only	11%	15%	8%	49%	25%	53%
Risky Behaviors Only	40%	29%	15%	47%	67%	69%
Both Protective and Risky Behaviors	52%	36%	21%	57%	58%	69%
All Investors	27%	24%	13%	50%	42%	60%

* Percentage who answer fewer than five of the 11 investment quiz questions correctly
** Percentage who report making trades in their accounts four or more times a year.

In addition, their motivations for investing are different from the other groups. They are much more likely to invest for short-term gains, entertainment, and social engagement (Table 2).

Table 2. Motivation for Investing by Investor Behavior

	Motivations for Investing		
Protective/Risky Behaviors	Short Term Gains	Entertainment	Social Activity
Neither Protective nor Risky Behaviors	16%	4%	3%
Protective Behaviors Only	19%	5%	5%
Risky Behaviors Only	31%	14%	12%
Both Protective and Risky Behaviors	41%	33%	32%
All Investors	25%	13%	12%

Conclusions and Implications

Using data from the FINRA Foundation's 2021 National Financial Capability Study, we found that being worried about investment fraud is related to both protective and risky investment behaviors, and that the relationship between worry about investment fraud and investing behaviors persists after controlling for a number of relevant variables. Somewhat surprisingly, we found that there is a group of investors who engaged in both protective and risky investment behaviors, and that this group of investors has a very high level of worry about investment fraud and differs substantially on several demographic and psychographics characteristics compared to investors who do not engage in both risky and protective behaviors.

Due to the nature of our data, we cannot determine whether the relationships between worry about investment fraud and investment behaviors are causal, though several possibilities exist. More specifically, the nature of the relationship may depend on the behaviors being examined. For example, it may be more reasonable to assume engaging in risky investment behaviors leads people to worry about investment fraud than to assume that those who worry about investment fraud intentionally choose to engage in risky behaviors. For protective investment behaviors, the causality may flow in the opposite direction. That is, being worried about investment fraud could lead investors to name trusted contacts, use financial professionals, and check the background of these professionals in an attempt to protect themselves from fraud. And, of course, it is possible that an unobserved third variable could be driving some of the relationships we see in the data. For example, headlines about investment fraud could increase worry about investment fraud and change investing behaviors. Or, perhaps those worried about investment fraud differ from those not worried about investment fraud on an unobserved variable, like personality type, and it is this unobserved variable that is driving the relationship. In any event, more work is needed to better understand the causal nature, if any, between worry about investment fraud and investing behaviors. That said, given the number and strength of the relationships in the data, we believe it is unlikely that all the associations are spurious.

A second limitation is that the data and analyses do not provide insight into what might constitute a healthy level of worry about investment fraud. As noted at the outset, too much worry could dissuade people from participating in and benefiting from the markets, and too little might lead to overly risky behaviors and money lost to investment fraud. So, for example, we cannot say that young investors are too worried about investment fraud or that older investors are not worried enough. Additional research that can link worry about investment fraud to portfolio performance and/or investment fraud victimization is needed to better understand what might constitute a healthy level of worry about investment fraud. Last, this survey was administered only to investors. It is possible that worry about investment fraud may dissuade people from investing in the first place, but we cannot gauge that through this research.

As noted above, more research is needed to understand the relationship between worry about investment fraud and investing behaviors, but our findings hint at some implications. For those whose worry about investment fraud leads to overly conservative investing decisions, educators could offer information and strategies designed to highlight how to make investing decisions that are properly aligned with their objectives and investing time horizon. Conversely, investors with little or no worry about investment fraud might benefit from additional information about fraud risk, including how to identify and avoid fraud, as well as how to respond in the event they are targeted or lose money in a fraudulent investment. Financial professionals could inquire about their client's level of worry about investment fraud, which would give them insight into what investment vehicles the client would be comfortable with, above and beyond a risk tolerance analysis. This would also provide financial professionals with an opportunity to educate their clients about investment fraud. Last, all stakeholders could highlight how investors can take advantage of regulatory programs and tools to better protect themselves from fraud, including by designating a trusted contact and checking the background of financial professionals through tools such as FINRA's BrokerCheck, or checking the registration of investment offers using tools like the SEC's EDGAR database.

Methodology

The data for this study was from the FINRA Foundation's 2021 Investor Survey, a portion of the FINRA Foundation's National Financial Capability Study. The respondents in the Investor Survey were adults in the U.S. who reported owning taxable (*i.e.*, non-retirement) investment accounts. The 2021 Investor Survey data includes data from 2,824 respondents. The data is weighted to be representative of investors in the U.S. with taxable investment accounts in terms of age and education. More information on the NFCS, including data, reports, and methodological documents, can be found at FinraFoundation.org/NFCS.

References

Lush, M., Fontes, A., Zhu, M., Valdes, O., & Mottola, G. (2021). *Investing 2020: New Accounts and the People Who Opened Them*. FINRA Investor Education Foundation.

Mottola, G. & Kieffer, C. (2017). Understanding and Combating Investment Fraud. In O.S. Mitchell, B. Hammond, and S. Utkus (Eds.), *Financial Decision Making and Retirement Security in an Aging World*. London, UK: Oxford University Press.

Acknowledgements

All results, interpretations and conclusions expressed are those of the research team alone and do not necessarily represent the views of the FINRA Investor Education Foundation, FINRA, or any of its affiliated companies.

About FINRA and the FINRA Foundation

The Financial Industry Regulatory Authority (FINRA) is a not-for-profit organization dedicated to investor protection and market integrity. It regulates one critical part of the securities industry—brokerage firms doing business with the public in the United States. FINRA, overseen by the Securities and Exchange Commission, writes rules, examines for and enforces compliance with FINRA rules and federal securities laws, registers broker-dealer personnel and offers them education and training, and informs the investing public. In addition, FINRA provides surveillance and other regulatory services for equities and options markets, as well as trade reporting and other industry utilities. FINRA also administers a dispute resolution forum for investors and brokerage firms and their registered employees. For more information, visit www.FINRA.org.

The FINRA Investor Education Foundation supports innovative research and educational projects that give underserved Americans the knowledge, skills, and tools to make sound financial decisions throughout life. For more information about FINRA Foundation initiatives, visit www.FINRAFoundation.org.

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The University of Rhode Island is a diverse and dynamic community whose members are connected by a common quest for knowledge. As a major research university defined by innovation and big thinking, URI offers its undergraduate, graduate, and professional students distinctive educational opportunities designed to meet the global challenges of today's world and the rapidly evolving needs of tomorrow.

Appendix

Investor Knowledge Quiz
(correct answers in ***bold italics***)

If you buy a company's stock...
You own a part of the company
You have lent money to the company
You are liable for the company's debts
The company will return your original investment to you with interest
Don't know
In general, investments that are riskier tend to provide higher returns over time than investments with less risk.
True
False
Don't know
If you buy a company's bond...
You own a part of the company
You have lent money to the company
You are liable for the company's debts
You can vote on shareholder resolutions
Don't know
Over the last 20 years in the U.S., the best average returns have been generated by:
Stocks
Bonds
CDs
Money market accounts
Precious metals
Don't know
If a company files for bankruptcy, which of the following securities is most at risk of becoming virtually worthless?
The company's preferred stock
The company's common stock
The company's bonds
Don't know
The past performance of an investment is a good indicator of future results.
True
False
Don't know

Which of the following best explains why many municipal bonds pay lower yields than other government bonds?
Municipal bonds are lower risk
There is a greater demand for municipal bonds
Municipal bonds can be tax-free
Don't know
What is the main advantage that index funds have when compared to actively managed funds?
Index funds are generally less risky in the short term
Index funds generally have lower fees and expenses
Index funds are generally less likely to decline in value
Don't know
Which is the best definition of "selling short"?
Selling shares of a stock shortly after buying it
Selling shares of a stock before it has reached its peak
Selling shares of a stock at a loss
Selling borrowed shares of a stock
Don't know
You invest $500 to buy $1,000 worth of stock on margin. The value of the stock drops by 50 percent. You sell it. Approximately how much of your original $500 investment are you left with in the end?
$500
$250
$0
Don't know
If you own a call option with a strike price of $50 on a security that is priced at $40, and the option is expiring today, which of the following is closest to the value of that option?
$10
$0
-$10
Don't know

Endnotes

1 Given that respondents may not be familiar with the term "meme stock," the 2021 NFCS Investor Survey asked respondents directly about a few examples prominent during early 2021, specifically, GameStop, AMC, and Blackberry.

2 We controlled for relevant variables using logistic regressions. The 10 percent figure is a marginal probability from the regression. Regression output is available from the authors upon request.

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CCSD-11221—07/24