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OIAD Research Brief

How Should I Know? Lack of Confidence Biases Stock Market Expectations Toward Zero

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The entire research paper can be found at the following link: https://www.sciencedirect.com/science/article/abs/pii/S0167268124004402

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Key Takeaways

- Many nationally representative surveys ask people to report their beliefs about the probability (ranging from 0% to 100%) of a stock market increase.
- Lack of confidence in one's perceived ability to forecast the stock market causes these reported probabilities to be biased downward—toward 0%.
- This bias toward 0% occurs regardless of question wording, leading to a significant gap (10 percentage points) in the implied probability of a stock market increase when comparing questions about market "increases" versus "decreases."
- When confidence in forecasting ability is experimentally affected, the bias toward 0% diminishes, confirming the causal link between confidence and reported expectations.

Every year, multiple nationally representative surveys try to capture consumers' expectations about the stock market. For example, the Federal Reserve Bank of New York's Survey of Consumer Expectations asks, "What do you think is the percent chance that 12 months from now, on average, stock prices in the U.S. stock market will be higher than they are now?" with responses from 0% to 100%. Responses to these questions predict consumer behavior: individuals who report more optimistic stock market expectations are more likely to hold stock market assets, maintain a higher proportion of stocks in their portfolios, and buy stocks in the next few years.[1]

Despite the value of measuring stock market expectations, there is a puzzling pattern in how people report these values: Even though information on stock market movements is publicly available and easily accessible, U.S. households consistently report *pessimistic* expectations about future market performance when compared to historical trends.[2] That is, reported expectations are considerably lower than the typical likelihood of stock market growth.

Our research reveals that apparent market pessimism stems from a more fundamental factor: lack of confidence in one's stock market forecasting ability. We demonstrate that, when people lack confidence in their ability to predict market movements, they systematically report lower probabilities—closer to 0%—when asked to report their expectations. This bias can be distinguished from pessimism (more negative beliefs about future stock market movements) because it occurs even when people are asked about market *decreases*. Because most nationally representative surveys have asked about stock market increases, a bias towards 0% means that consumers generally appear pessimistic about stock market movements.

WHAT WE DID AND KEY FINDINGS

We conducted three interrelated studies examining the relationship between confidence and expectations of stock market movements.

STUDY 1 — Stock market expectations are more pessimistic than warranted

We analyzed 10 years of data from the Federal Reserve Bank of New York's Survey of Consumer Expectations (52,941 forecasts from 10,560 individuals) to compare reported probabilities against actual market performance. We found that investors consistently underestimated the likelihood of market increases over the next year. While the S&P 500 increased following 74.1% of survey dates, average reported probabilities for a stock market increase were only 40%.

STUDY 2 — Reported probabilities are biased toward 0%, when asking either about stock market increases or decreases

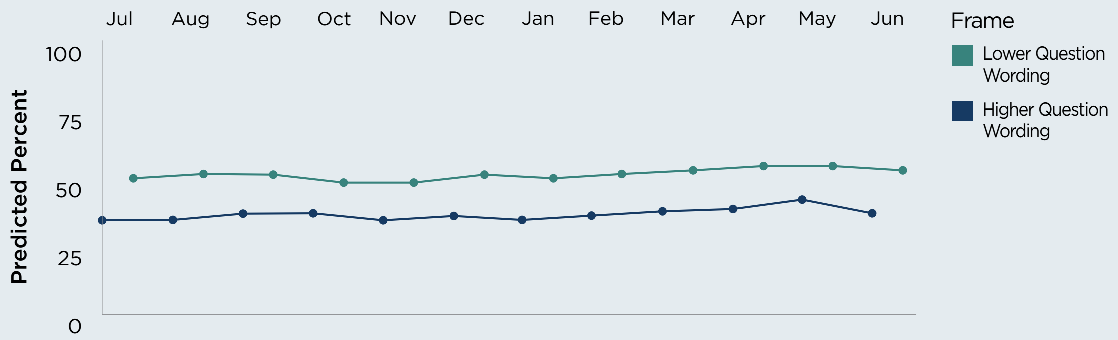
Using a longitudinal survey collected by the SEC (21,670 responses from 4,613 individuals across 12 months), we examined how reported expectations varied across two types of questions: those that asked about the market moving "higher," and those that asked about the market moving "lower." Participants consistently reported low probabilities regardless of which question they were asked.

> The persistent bias toward 0% in probability responses, regardless of question wording, suggests that apparent market pessimism may actually reflect a broader pattern of low confidence in forecasting ability.

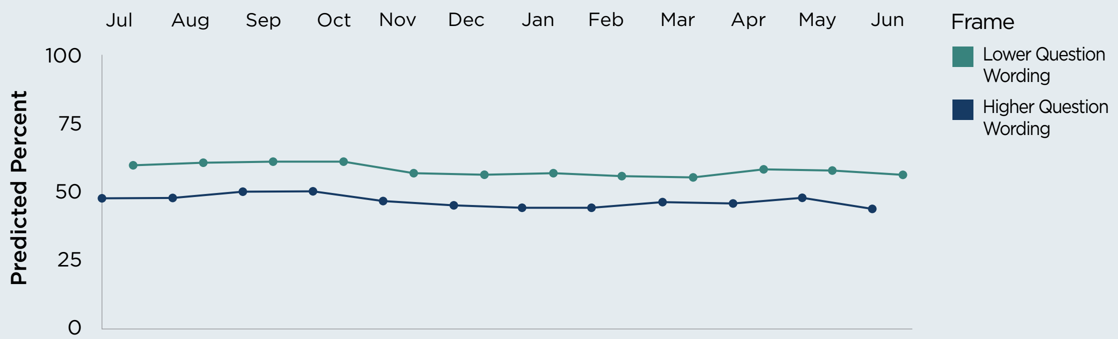
Figure 1 shows the implied expectations for a stock market increase each wave, calculated by taking the raw values in the "higher" question wording and 100% minus the reported probabilities in the "lower" wording. The graph shows a persistent gap across 12 survey waves—with the "lower" wording respondents appearing approximately 15 percentage points more optimistic about a future stock market increase. For example, in the July wave, respondents who saw the question with the "higher" wording reported a 39.3% chance of an increase, on average, versus a 54.8% chance with the "lower" wording.

Figure 1: Monthly Expectations by Question Wording.

Expectation for a Stock Market Increase Over the Next Month



Expectation for a Stock Market Increase Over the Next Year



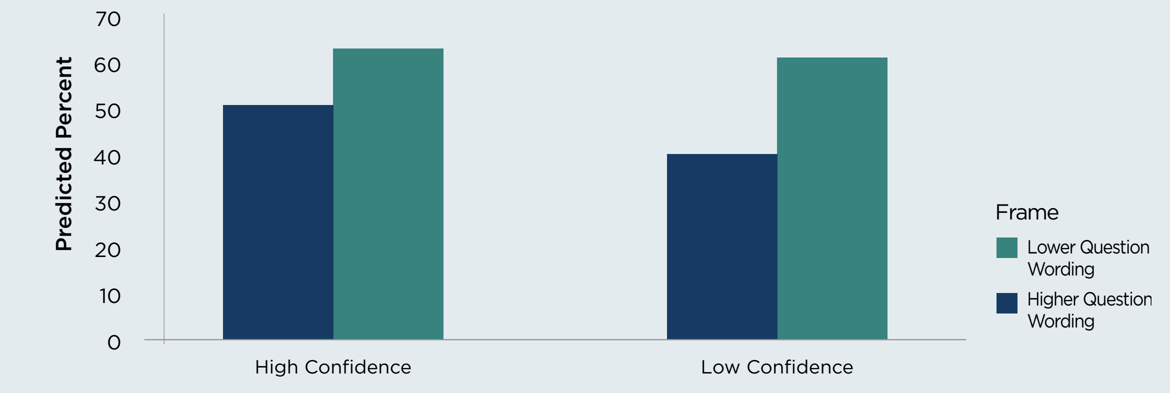
This figure demonstrates the consistent gap in reported probabilities between "higher" and "lower" question wordings across survey waves.

STUDY 3 Confidence in one's forecasting ability affects reported expectations

We conducted an experimental study (1,002 responses) to test whether manipulating participants' confidence about their forecasting ability would affect the gap between questions asking about stock market increases versus decreases. We randomly assigned participants to read text that would give them higher or lower confidence in their forecasting ability.

We found that experimentally increasing confidence reduced the bias toward low probability expectations. In particular, high-confidence participants showed a smaller gap between questions asking about the market moving "higher" and "lower," as shown in Figure 2.

Figure 2: Expectation of a stock market increase by confidence manipulation and frame.



Policy Implications

Our analysis revealed a systematic pattern of how confidence shapes reported stock market expectations. These findings have several important implications for policy and practice:

- Current methods for measuring market expectations may need to account for confidence effects.
- Survey design should carefully consider how question wording interacts with confidence.
- Financial education programs might benefit from addressing consumers' knowledge about the stock market and appropriate levels of confidence in stock market forecasts.
- Greater emphasis could be placed on long-run changes in major stock market indexes (e.g., annual vs. monthly movements), where consumers appear more optimistic about stock market increases, to encourage financial market participation among non-investors.

Study Limitations

While our findings demonstrate a clear link between confidence and market expectations, several important limitations should be considered. The mechanisms underlying this relationship deserve further study, as we cannot fully explain how confidence shapes probability judgments. Additionally, we must be careful about broad application of these findings, as promoting overconfidence could potentially harm investors in specific situations.

About the Office of Investor Research, Office of the Investor Advocate (OIAD)

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Endnotes

1 Jeff Dominitz, Charles F. Manski (2007), *Expected equity returns and portfolio choice: evidence from the health and retirement study*, Journal of the European Economic Association, No. 5 (2007): 369–379; Vissing-Jorgensen, A., 2003. *Perspectives on behavioral finance: does "irrationality" disappear with wealth? Evidence from expectations and actions*. NBER Macroecon. Annu. 18, 139–194; and Hurd, M.D., van Rooij, M., Winter, J., 2011. *Stock market expectations of Dutch households*. J. Appl. Econ. 26 (3), 416–436.

2 See Hurd, M.D., 2009. *Subjective probabilities in household surveys. Annu. Rev. Econom*. 1, 543–564 and Kézdi, G., Willis, R.J., 2009. *Stock market expectations and portfolio choice of American households*. Unpublished manuscript.