

Preregistration

Mental Models of the Stock Market

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Abstract: We explore the mental models of the stock market among different groups of economic agents. Do they believe in efficient stock markets, in temporary under- or overreaction, or are they partial equilibrium thinkers who do not take endogenous price adjustments in financial markets into account? We conduct large-scale surveys with the general population, different classes of investors, and academic experts and provide rich data on respondents' reasoning.

JEL-Codes: D83, D84, G11, G12, G41, G51.

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1 Introduction

In this preregistration plan, we describe our sampling plan, the survey design, and our main research questions.

2 Survey

In our surveys, we present participants with different hypothetical scenarios describing news about the future earnings stream of a company. For example, in the *Nike good news* case, we ask respondents to consider the following two scenarios.

Nike maintains supplier partnership

Four weeks ago, on [date], Nike Inc. announced the continuation of its partnership with major polyester supplier Toray Industries Inc., in a move aimed at retaining its current supply chain. The continuation of the partnership is expected to maintain

the company's current cost structure. Industry experts were not surprised by the announcement, as continuity in supplier relationships is a common practice in the industry.

Nike secures cost-saving partnership

Four weeks ago, on [date], Nike Inc. announced a new strategic partnership with leading recycled polyester supplier Unifi Inc., aimed at slashing raw material costs by 20%. The deal is expected to have a significant impact on Nike's bottom line, making its products more price-competitive. Industry experts were pleasantly surprised by the news and dubbed it an "unexpected success" for the company. They projected the move to significantly enhance Nike's market position in the sports apparel industry.

In both scenarios, the announcement was made four weeks ago and received a lot of attention by stock market traders.

Afterwards, we ask the following questions.

1. Prediction: In which scenario is the future expected return of an investment in the stock over the next year higher?
2. Open-ended explanation of prediction (*not for Bundesbank Online Panel*)
3. Prediction of future expected return difference for the years 2–5 (*not among academic experts / in Bundesbank Online Panel*)
4. Prediction of future return uncertainty, factor exposure, and earnings for the years 1–5 (*for academic experts / Bundesbank Online Panel: only year 1*)
5. Quantitative first- and second-order predictions for both scenarios for year 1 (*not among academic experts / in Bundesbank Online Panel*)
6. Structured question about the reasoning behind respondents' prediction
7. Various background characteristics (*precise questions can differ across samples*)

The full instructions of the general population survey are available in the separate instructions document.

Variations

Across samples, we vary the following elements:

Scenarios In the general population sample, we use ten different cases: six individual company vignettes and four aggregate vignettes. The full instructions are available in the separate instructions document.

For the Bundesbank Online Panel, we create “hypothesized” versions of the scenarios. That is, we talk about fictional firms with fictional names but keep all other features of the scenarios constant.

Short version for academic experts We run a shorter, streamlined version of the survey with the sample of academic experts.

Short version for Bundesbank Online Panel We run a shorter, streamlined version of the survey with the Bundesbank Online Panel.

3 Sample

Table 1 provides an overview of the sampling plan.

Table 1 Overview of sampling plan

Population	Recruitment	<i>n</i>	What?
General population (US)	Dynata	2,400	Full descriptive survey. All prediction cases (6 individual stocks, 4 aggregate cases). 200 respondents per case, except for the two Nike cases, for which we plan to collect 400 respondents each.
Financial advisors (US)	CloudResearch	200	Full descriptive survey. Two cases: <i>Nike good news</i> , <i>Nike bad news</i> . Case selected randomly with equal chance.
Financial professionals (US)	CloudResearch	200	Full descriptive survey. Two cases: <i>Nike good news</i> , <i>Nike bad news</i> . Case selected randomly with equal chance.
Academic experts (global)	Invited via email	150*	Streamlined, short version of survey. Two cases: <i>Nike good news</i> , <i>Nike bad news</i> . Case selected randomly with equal chance.
General population (Germany)	Bundesbank Online Panel	4,350**	Streamlined, short version of survey. All six individual stock prediction cases. The scenarios are “hypothesized”, that is, we talk about fictional firms with fictional names but keep all other features of the scenarios constant. Case selected randomly with equal chance.

*Sample size is approximate/aspirational because we cannot perfectly predict the response rate. We collected about 3,000 email addresses and expect a response rate of about 5%.

**Sample size estimated by Bundesbank Online Panel team.

With the exception of the expert sample for which we plan to consider all data, we plan to work only with complete responses, and we will exclude both extreme 1% tails in the response duration. In the (typically very rare) case that a respondent submits multiple responses, we only count the first response.

In the general population sample, the financial advisors sample, and the financial professional sample, respondents can only start with the survey if they pass an attention screener. Moreover, they can only proceed with the survey if they pass a comprehension quiz that tests their understanding of the scenarios (multiple attempts are allowed).

4 Research questions

The scenarios describe shocks to the future earnings stream of companies. The news are several weeks old and “stale”: the stock market had time to respond to the news.

We explore whether investors still believe that the old news are relevant for future returns and why they think or do not think so. Moreover, we explore how investors’ beliefs differ across the different investor classes.

The survey data will allow us to investigate investors’ return expectations and the reasoning behind their expectations. In particular, we will investigate whether their reasoning is in line with a belief in efficient stock markets, a belief in temporary under- or overreaction, or a partial or full “failure” to think of the equilibrium adjustments in financial markets.

In large parts, the analysis is descriptive and explorative. In particular:

- Do agents believe that old news are relevant for future return differences?

Do we obtain qualitatively similar results across the different cases and for both individual stock cases as well as the aggregate cases?

We analyse this also for the years 2–5.

How do the predictions differ across samples?

- How do investors explain their predictions? We analyze and classify the open-text data, and we analyze responses to the structured question on reasoning.

How does the reasoning differ across samples?

- Can expectations about return uncertainty, factor exposure, or earnings statistically predict respondents’ return forecasts?