Preregistration: Mental Models of the Stock Market

Detection Study

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In addition to the existing preregistration plan, we preregister the Detection Study.

Study parameters

- Sample size: 1,200 (about 400 per treatment)
- Sample type: Prolific sample (no quotas)
- Start of data collection: June 15, 2023 (after preregistration)
- Number of treatments: 3
- Randomization method: Computerized via Qualtrics
- We plan to work with all complete responses. In the (typically very rare) case that a respondent submits multiple responses, we only count the first response.
- 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).

Study design The control condition of the study is a shorter version of the main descriptive survey for households (see full instructions of the main survey). We only consider the *Nike good news* case. The shortened version contains the following questions:

- Prediction: In which scenario is the future expected return of an investment in the stock over the next year higher?
- Open-ended explanation of prediction
- Structured question about the reasoning behind respondents' prediction
- Background characteristics

The study involves the following experimental conditions.

Control Participants make their return prediction on the standard prediction screen.

Detect risk-based reasoning On the prediction screen, before participants make their return prediction, we ask them to assume that there are no differences in the investment-relevant uncertainty between the two scenarios.

Detect over-/underreaction-based reasoning On the prediction screen, before participants make their return prediction, we ask them to assume that the current stock price fully and correctly reflects Nike's future business prospects in both scenarios.

The precise instructions of the prediction screen are attached below.

Research question Do individuals believe that the four-week-old news is relevant for future return differences because they believe ...

1. ... that the news shifted the risk properties of an investment in Nike?
2. ... in a temporary under- or overreaction of the stock market in response to the news?

In comparison to the control condition, the detection conditions explicitly rule out either the risk-based or the under-/overreaction-based mechanism. Individuals who understand these mechanisms and would consciously base their return predictions on them in the control condition should not do so in the respective detection treatments.

We test whether the detection treatments affect individuals' return expectations and the reasoning behind their expectations.

Prediction screen in the *Control* condition

Your prediction

Review the two scenarios *(click to open detailed description)*

▸ **Scenario 1: Nike maintains supplier partnership**

▸ **Scenario 2: Nike secures cost-saving partnership**

The announcements were made four weeks ago and received a lot of attention.

Imagine that you invest $1,000 in Nike stocks today, **four weeks after the announcement was made in the two scenarios**. Imagine that you sell these stocks in twelve months from now.

What would you expect?
In which scenario would the return of this investment in Nike stocks be higher?

Your prediction

	The expected return would be …		
	higher in scenario 1	**similar in both scenarios**	**higher in scenario 2**
Return of investment over the next twelve months Invest $1,000 in Nike stocks today, *four weeks after the announcement*. Sell these stocks one year from now.	○	○	○

"Similar in both scenarios" means that the difference in returns is smaller than or equal to 0.5 percentage points.

How confident are you in your above prediction? Please answer on a scale from 1 (Not confident at all) to 6 (Very confident).

Not confident at all **1**	**2**	**3**	**4**	**5**	Very confident **6**

Prediction screen in the *Detect risk-based reasoning* cond.

Your prediction

Review the two scenarios *(click to open detailed description)*

▸ **Scenario 1: Nike maintains supplier partnership**

▸ **Scenario 2: Nike secures cost-saving partnership**

The announcements were made four weeks ago and received a lot of attention.

Imagine that you invest $1,000 in Nike stocks today, **four weeks after the announcement was made in the two scenarios**. Imagine that you sell these stocks in twelve months from now.

What would you expect?
In which scenario would the return of this investment in Nike stocks be higher?

Important for your prediction
Please assume that there are no differences in the investment-relevant uncertainty between the two scenarios. In particular, this means

- **identical volatility**: while deviations from the best forecast for the future return of Nike stock are possible, the possible deviations are equally sizeable and equally likely in both scenarios,
- **identical protection against general developments that are deemed unfavorable by investors**: in both scenarios, an investment in Nike stock provides the same degree of protection against general developments that are deemed unfavorable by investors, such as the risk that the economy as a whole performs poorly.

Click here to confirm that you have read this information.

Your prediction

	The expected return would be …		
	higher in scenario 1	**similar in both scenarios**	**higher in scenario 2**
Return of investment over the next twelve months Invest $1,000 in Nike stocks today, *four weeks after the announcement*. Sell these stocks one year from now.	○	○	○

"Similar in both scenarios" means that the difference in returns is smaller than or equal to 0.5 percentage points.

How confident are you in your above prediction? Please answer on a scale from 1 (Not confident at all) to 6 (Very confident).

Not confident at all **1**	**2**	**3**	**4**	**5**	Very confident **6**

Prediction screen in the *Detect over-/underreaction-based reasoning* condition

Your prediction

Review the two scenarios *(click to open detailed description)*

▸ **Scenario 1: Nike maintains supplier partnership**

▸ **Scenario 2: Nike secures cost-saving partnership**

The announcements were made four weeks ago and received a lot of attention.

Imagine that you invest $1,000 in Nike stocks today, **four weeks after the announcement was made in the two scenarios**. Imagine that you sell these stocks in twelve months from now.

What would you expect?

In which scenario would the return of this investment in Nike stocks be higher?

Important for your prediction

Please assume that the stock price of Nike has changed over the last four weeks since the announcements. The stock price responded to what the announcements revealed about Nike's future business prospects. Please assume that the current stock price fully and correctly reflects Nike's future business prospects in both scenarios.

Click here to confirm that you have read this information.

Your prediction

	The expected return would be ...		
	higher in scenario 1	**similar in both scenarios**	**higher in scenario 2**
Return of investment over the next twelve months Invest $1,000 in Nike stocks today, *four weeks after the announcement*. Sell these stocks one year from now.	○	○	○

"Similar in both scenarios" means that the difference in returns is smaller than or equal to 0.5 percentage points.

How confident are you in your above prediction? Please answer on a scale from 1 (Not confident at all) to 6 (Very confident).

Not confident at all **1**	**2**	**3**	**4**	**5**	Very confident **6**