What Makes Investors Optimistic?
What Makes Them Afraid?

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❖ Objectives and motivations of the study

Central determinants of individual investors' trading and risk-taking behavior = **Optimism & Fear**

➔ what makes investors optimistic or afraid?

Central determinants of investor behavior:

- return expectations = expression of optimism
- risk tolerance = expression of fear
- risk perceptions = expression of fear

Changes in these variables drive key aspects of trading and risk-taking behavior: trading frequency, turnover, and the buy-sell ratio

How investors update their optimism (return expectations) and fear (risk tolerance and risk perceptions) as a function of their individually-experienced past returns and past risk?

Objective: estimating the effect of investors' past portfolio risk and returns on the formation of optimism and fear

❖ Data used

A unique combination of brokerage records of 1,510 clients and matching monthly survey measurements of a sample of individual investors from the Netherlands for the period April 2008 through March 2009 (exclude accounts of minors + average portfolio value of less than €250 + professional traders top 1% leaving 1,376 accounts)

Brokerage records: investors who completed at least one survey during the sample period

A "record" consists of

- an identification number
- a transaction date and time
- a buy/sell indicator
- the type of asset traded
- the gross transaction value
- transaction commissions

❖ Indicators, Methods, Models used

Examine the **impact of past portfolio returns + past portfolio risk** on subsequent changes in investors' return expectations, risk tolerance, and risk perceptions

Hypotheses for Optimism: Impact on return expectations

Impact of past returns

- H_{1a}: *Past returns are* ***negatively*** *related to investors' subsequent return expectations*
- H_{1b}: *Past returns are* ***positively*** *related to investors' subsequent return expectations*

Impact of past risk

- H_2: *Past risk is* ***negatively*** *related to investors' subsequent return expectations*

Representativeness = they expect **high returns from safe stocks** and **low returns from risky stocks**

Hypotheses for Fear: Impact on risk tolerance and risk perceptions

Fear consisting of two components: risk tolerance and risk perceptions

Impact of past returns

- H_3: *Past returns are* ***positively*** *related to investors' subsequent risk tolerance*

Expect individuals to display an increased risk tolerance after experiencing a gain

- H_{4a}: *Past returns are* ***positively*** *related to investors' subsequent risk perceptions*
- H_{4b}: *Past returns are* ***negatively*** *related to investors' subsequent risk perceptions*

Risk perceptions: increase after investors experience positive returns
Representativeness = a negative relationship between past returns and subsequent risk perceptions

Impact of past risk

- H_5: *Past risk is related to investors' subsequent risk tolerance*

Individuals often expose themselves to risk because they misjudge the odds

- H_6: *Past risk is* ***positively*** *related to investors' subsequent risk perceptions*

Individuals believe that market trends will continue

At the end of each month between April 2008 and March 2009, we conducted an online survey among a panel of the broker's clients

- ➔ Panel A = All Brokerage Accounts (all investors for whom brokerage records are available)
- ➔ Panel B = Survey Respondents (the subset of investors who responded to the survey in each respective month)
- ➔ Return expectations = investors' optimism about the returns of their investment portfolio
- ➔ Risk tolerance = investors' general predisposition toward financial risk (like or dislike of risky situations)
- ➔ Risk perception = investors' interpretation of the riskiness of the stock market

Survey Questions

Survey Variable	Answer Categories
Return Expectation (1 = low/pessimistic, 7 = high/optimistic)	
Next month, I expect my investments to do less well than desired.	1 (totally agree)–7 (totally disagree)
For the next month, I have a positive feeling about my financial future.*	1 (totally agree)–7 (totally disagree)
Next month, my investments will have a worse performance than those of most other investors.	1 (totally agree)–7 (totally disagree)
Next month, it is unlikely that my investment behavior will lead to positive returns.	1 (totally agree)–7 (totally disagree)
For the next month, the future of my investment portfolio looks good.*	1 (totally agree)–7 (totally disagree)
Risk Tolerance (1 = low risk tolerance, 7 = high risk tolerance)	
Next month, I prefer certainty over uncertainty when investing.	1 (totally agree)–7 (totally disagree)
Next month, I avoid risks when investing.	1 (totally agree)–7 (totally disagree)
Next month, I do not like to take financial risks.	1 (totally agree)–7 (totally disagree)
Next month, I do not like to "play it safe" when investing.*	1 (totally agree)–7 (totally disagree)
Risk Perception (1 = low perceived risk, 7 = high perceived risk)	
I consider investing to be very risky next month.*	1 (totally agree)–7 (totally disagree)
I consider investing to be safe next month.	1 (totally agree)–7 (totally disagree)
I consider investing to be dangerous next month.*	1 (totally agree)–7 (totally disagree)
I consider investing to have little risk next month.	1 (totally agree)–7 (totally disagree)

Test of Hypotheses → Run a series of panel regressions:

- changes in return expectations, risk tolerance, or risk perception as **dependent variables**
- investors' past portfolio returns, changes in past portfolio returns, past portfolio risk, and changes in past portfolio risk as **explanatory variables**

Goal = Study the **impact of individual investors' *personally experienced* returns and risks**

❖ Robustness

Impact of investment experience and financial sophistication?

- → Investors who are **more experienced** (longer account tenure) and **more sophisticated** (higher income quintile) form their return expectations, risk tolerance, and risk perceptions more cautiously and are less prone to looking at past returns alone
- → Past risk matters for more experienced investors: older investors and those with longer account tenure increase their risk perception after experiencing more risk or greater changes in past risk

Investor Overconfidence? Women are less likely to engage in overconfident investment behavior

- → female investors = **less risk tolerant** after experiencing a greater change in past risk
- → female investors react **more rationally** to experiencing higher risk than do male investors

Signal Salience? Expect the impact of past returns to be stronger when an investor achieved a return that exceeds a highly salient benchmark

- → Achieving returns that exceed a highly salient benchmark increases investors' return expectations more than does just achieving high returns
- → Investors rely more on past return than past risk because it's easily available

Asymmetric Effects of Positive and Negative Returns? "Ostrich effect" = investors are more likely to watch their portfolio holdings in a rising market than in a falling one

→ Achieving a positive return = larger increase in return expectations than the decrease in return expectations that results from a negative return of the same size

Alternative Time Horizons? Impact of last month's return and risk on next month's change in optimism and fear **+ Alternative Performance and Risk Measure?**

→ Past returns = important predictor of investors' optimism and fear & past risk is not

Investors' lack of awareness of past risk is related to the complexity of standard risk measures, sophistication, and the salience of return signals

The tendency to look primarily at past returns is especially pronounced among less experienced and sophisticated, and more overconfident, investors. These investors seem to find it difficult to evaluate and interpret portfolio risk, and use portfolio returns as a more easily available and salient performance metric.

Results

- Investor optimism (expressed by their return expectations) moves in line with their returns
- Changes in return expectation tend to follow changes in past returns
- Changes in investors' return expectations reflect a belief in the persistence of their individual past performance
- Improving returns make individual investors more risk tolerant + perceive less risk
- Risk associated with improving returns does not seem to influence investors' fear
- Investors become more risk tolerant after experiencing positive returns

Past returns:

→ positively impact return expectations H_{1b} and risk tolerance H_3
→ negatively impact risk perceptions H_{4b}
→ strongest impact on return expectations, then risk perceptions, finally risk tolerance

Past risk:

→ not effectuate changes in investors' return expectations, risk tolerance, or risk perception
→ not impact optimism and fear = no empirical support for H_2, H_5, H_6

Conclusion:

→ past returns have a strong momentum-like impact on subsequent changes in investors' return expectations, risk tolerance, and risk perception, while the risk associated with these returns plays no role
→ individual investors care mainly about the returns they achieve, and consider risk, after it is realized, to be irrelevant