Loss-Chasing & Status Quo
How Information, Skewness, and Framing Shape the Dynamics of Risk-Taking

Jinwoo Kim, Alex Imas, and Chris Olivola
Introduction

Risk Aversion

- People tend to avoid risk.
  - Bell (1983)
  - Friend & Blume (1975)
  - Harrison, List, & Towe (2007)
  - Thaler & Rabin (2001)
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Loss-Chasing

• The tendency to take on *more risk* in response to *a loss.*
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Loss-Chasing

• The tendency to take on more risk in response to a loss.
Loss-Chasing

• Loss-chasing occurs in a variety of domains.

Barings Bank
1762–1995

End-of-Day Effect
Ali (1977), McGlothlin (1956)
Theoretical Framework

Overview

**Mathematical Model**
- Cumulative Prospect Theory
- Mental Accounting

*Close* a mental account *“in the black”*
## Theoretical Framework

### Overview

<table>
<thead>
<tr>
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Study 1 | Study 2
## Theoretical Framework

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# Experiments Summary

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<th>Title</th>
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All studies are *pre-registered* ($N_{\text{target}} = 150/\text{condition}$)
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Predictions & Studies

**Basic Paradigm**

- $0.3 + Investment Returns $\rightarrow$ *Incentive-Compatible*

- Lottery $0.25$ / round

  Investment: $X$
Predictions & Studies

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- $0.3 + Investment Returns $\rightarrow$ *Incentive-Compatible*

- Lottery
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  - 1 Success # $\rightarrow$ Win: $6X$
  - 5 Other #s $\rightarrow$ Lose: 0
Basic Paradigm

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- Lottery
  - $0.25/round
  - Investment: X
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- 4 Rounds
Predictions 2: *Hiding the End* Mitigates Loss-Chasing

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**End-of-Day Effect**
Ali (1977), McGlothlin (1956)

**Week-End Effect**
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- **Hiding** the total number of investment opportunities
Study 2: Number of Investment Periods

- **Known End**

  “The experiment consists of 4 successive rounds of investment decisions. You will have a total of $1.00 to invest with as you see fit.”
Study 2: Number of Investment Periods

• **Known End**
  - “The experiment consists of **4 successive rounds** of investment decisions. You will have **a total of $1.00** to invest with as you see fit.”

• **Unknown End**
  - “The experiment consists of **several rounds** of investment decisions. You will have **$0.25** to invest with **each round** as you see fit.”
Study 2: Number of Investment Periods

- Accumulated earnings reminder after every round

Losers by Round 3
Predictions & Studies

**Study 2: Number of Investment Periods**

- Accumulated earnings reminder after every round

**Losers by Round 3**

- Known End: 7 Losers, 57 Winners, 87 Zero-ers
- Unknown End: 5 Losers, 59 Winners, 87 Zero-ers

**Loss-Chasing**

- $0.10 \rightarrow $0.15
- $0.10 \rightarrow $0.05

Carnegie Mellon University
Study 2: Number of Investment Periods

- The *unknown end* condition suppresses loss-chasing.

```
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<tr>
<th>Change in Investment</th>
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R4 – R3

Loss-Chasing

*: p < .10, **: p < .05, ***: p < .01
Study 2: Number of Investment Periods

- The *unknown end* condition suppresses loss-chasing.

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Predictions & Studies

Predictions 4: *Divestment Frame* Increases Risk-Taking

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- Form of Endowment: Cash vs. Lottery
Predictions & Studies

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• Form of Endowment: Cash vs. Lottery

How much money to *invest in* the lottery
Predictions & Studies

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- Form of Endowment: Cash vs. Lottery

How much money to **invest in** the lottery vs. How much investment in the lottery to **sell**

$10 vs. $0.25
Predictions & Studies

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### Status Quo & Overall Risk-Taking

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- **Form of Endowment: Cash vs. Lottery**

  - **Employee Stock Option**
    - Giving stocks as wages
  - **Stock Dividends**
    - Giving stocks as dividends
Predictions & Studies

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- Divestment frame changes the status quo.
- Increase risk tolerance
  - Endowment Effect
  - Status Quo Bias
  - Investing in the Lottery: Action vs. Inaction
Predictions & Studies

Study 4: Divestment Frame

- **Investment Frame (Standard)**: Deciding how much to invest in the lottery
  - “You will have a total of $1.00 that you can keep or invest in 4 lotteries, as you see fit.”
Predictions & Studies

Study 4: Divestment Frame

• *Investment Frame (Standard)*: Deciding how much to *invest* in the lottery
  - “You will have a total of $1.00 that you can *keep or invest in 4 lotteries*, as you see fit.”

• *Divestment Frame*: Deciding how much investment in the lottery to *sell*
  - “You will have a total of $1.00 *invested in 4 lotteries*, and you can *keep or sell your investments* in these lotteries, as you see fit.”
Study 4: Divestment Frame

- Framing investing in the lottery as the default increases overall risk-taking.

Average Investment Amount

Overall Risk-Taking

*: p < .10, **: p < .05, ***: p < .01

Investment Frame (Standard) | Divestment Frame
---|---
Investment Amount | Overall Risk-Taking
Average Investment Amount | 15c
14c | 13c
12c | 11c
9c
Study 4: Divestment Frame

- Framing investing in the *lottery* as the *default* increases overall risk-taking.
Study 4: Divestment Frame

- Framing investing in the *lottery* as the *default* increases overall risk-taking.
Predictions & Studies

Other Studies

Study 1

Positive Skew  Negative Skew

Change in Investment (R4 - R3)

N = 79  N = 48

Study 3

Average Investment Amount

Loss Frame (Standard)  No-Gain Frame

*: p < .10, **: p < .05, ***: p < .01
Discussion

Implications

- **Loss-chasing**: Negatively skewed prospects & Knowledge of the total investment periods

- **Status Quo & Overall Risk-Taking**: No-gain frame & Divestment frame
Thank You!

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