Carnegie Mellon University
Tepper School of Business

Loss-Chasing & Status Quo

How Information, Skewness, and Framing Shape the Dynamics of Risk-Taking

Jinwoo Kim, Alex Imas, and Chris Olivola

Risk Aversion

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

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

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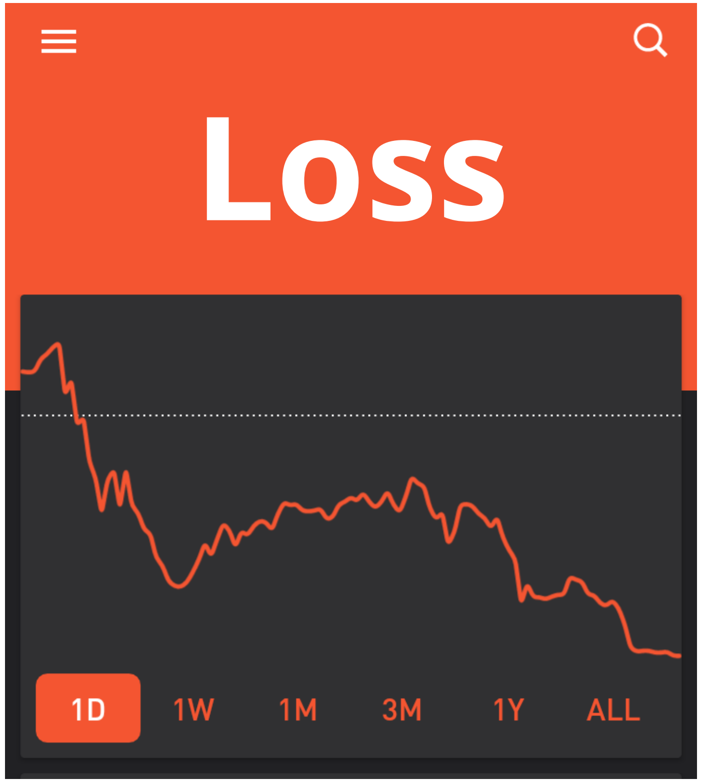

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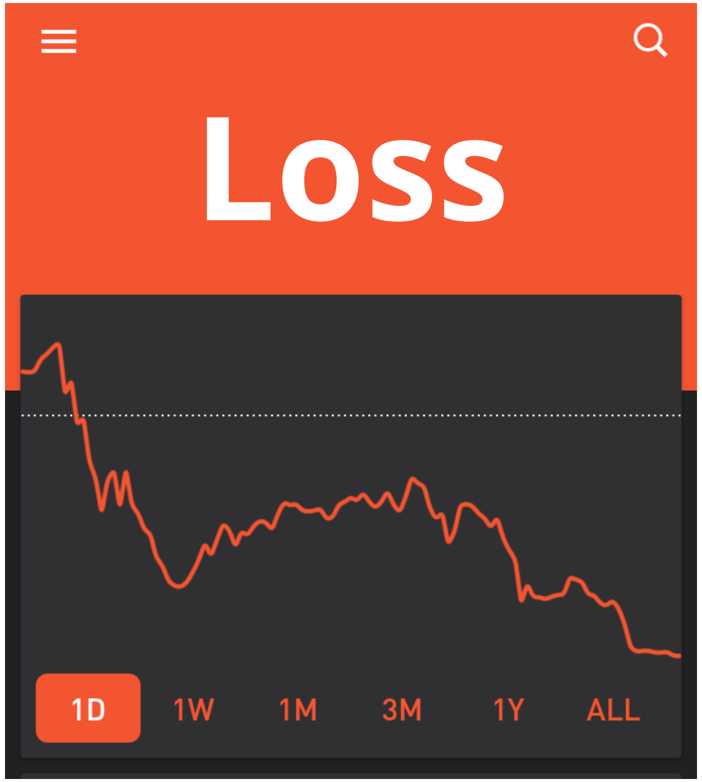

Loss-Chasing

- Loss-chasing occurs in a variety of domains.


48p
Monday
February 27
1995
Published in London and Manchester

The Guardian

Receivers called in after £500m goes walkabout ☐ Mayhem feared in markets

Barings Bank goes bust

Taking Barings

Barings Bank
1762–1995

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

Overview

Mathematical Model

Cumulative Prospect Theory

Mental Accounting

Close a mental account “***in the black***”

Overview

Mathematical Model

Cumulative Prospect Theory

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Loss-Chasing

(i.e., Risk-taking ***after a loss***)

Study 1

Study 2

Overview

Mathematical Model

Cumulative Prospect Theory

Mental Accounting

Loss-Chasing
(i.e., Risk-taking ***after a loss***)

Study 1

Study 2

Overall Risk-Taking
(i.e., ***Average*** risk-taking)

Study 3

Study 4

Experiments Summary

Title	*N*	Manipulation
Study 1	302	Positive vs. Negative Skew
Study 2	302	Hiding vs. Revealing the Number of Investment Periods
Study 3	302	Loss vs. No-Gain Frame
Study 4	299	Investment vs. Divestment Frame

All studies are ***pre-registered*** (N_{target} = 150/condition)

Experiments Summary

Title	N	Manipulation
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Study 2	302	Hiding vs. Revealing the Number of Investment Periods
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Study 4	299	Investment vs. Divestment Frame

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Basic Paradigm

- $0.3 + Investment Returns → *Incentive-Compatible*

- Lottery

$0.25/round

Investment: X

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- 4 Rounds

Predictions 2: *Hiding the End* Mitigates Loss-Chasing

Loss Chasing	
# of Investment Opportunities	Hiding < Revealing

- Erase losses before closing an account

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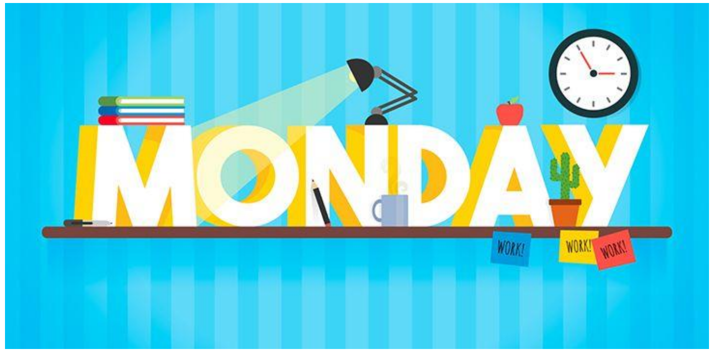

vs.

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

Week-End Effect
Cross (1973), Jaffe & Westerfield (1985), Kling & Gao (2005)

Predictions 2: *Hiding the End* Mitigates Loss-Chasing

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# of Investment Opportunities	Hiding < Revealing

- *Revealing* the total number of investment opportunities

Predictions 2: *Hiding the End* Mitigates Loss-Chasing

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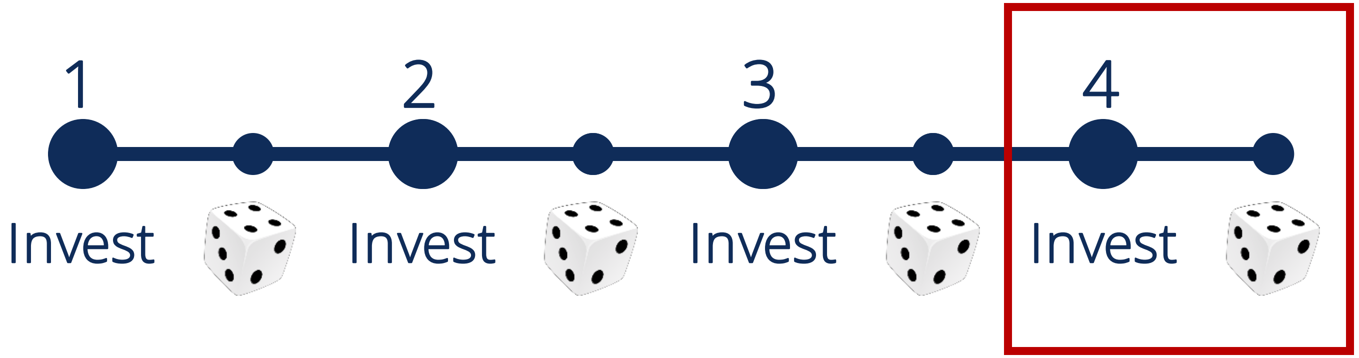

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Loss Chasing	
# of Investment Opportunities	Hiding < Revealing

- *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.”

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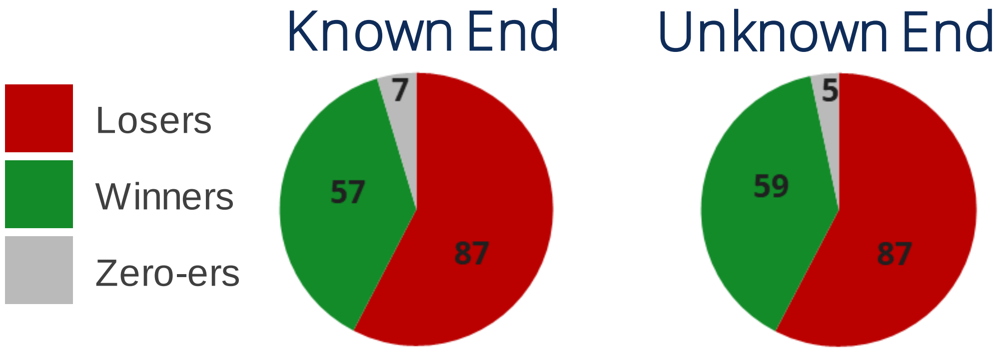
- *Known End*
  - "The experiment consists of *4 successive rounds* of investment decisions. You will have *a total of $1.00* to invest with as you see fit."

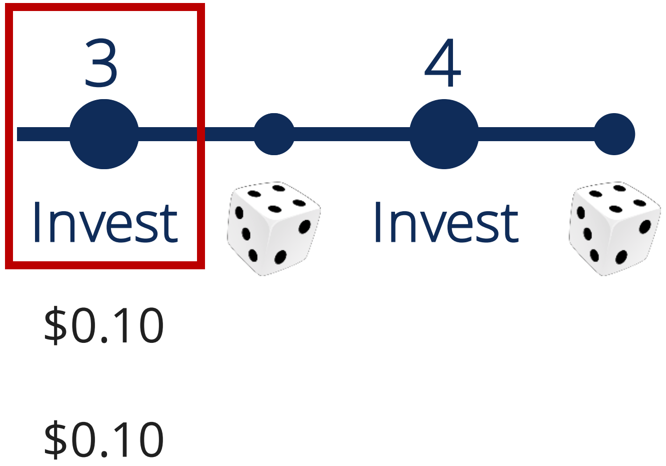
- *Unknown End*
  - "The experiment consists of *several rounds* of investment decisions. You will have *$0.25* to invest with *each round* as you see fit."

Study 2: Number of Investment Periods

- Accumulated earnings reminder after every round

Losers by Round 3





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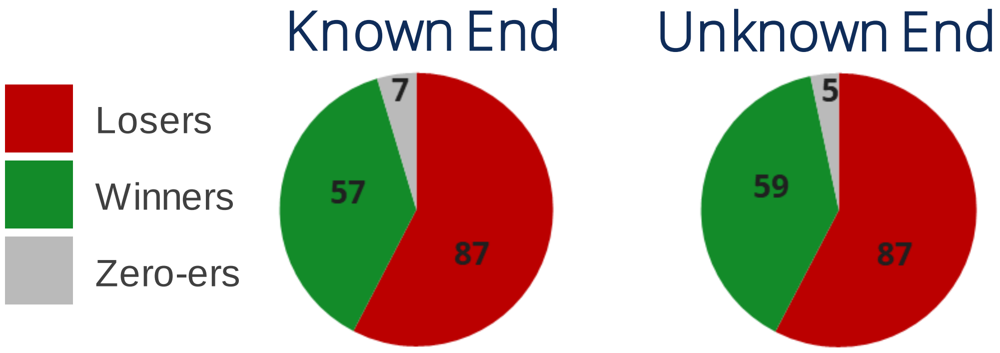
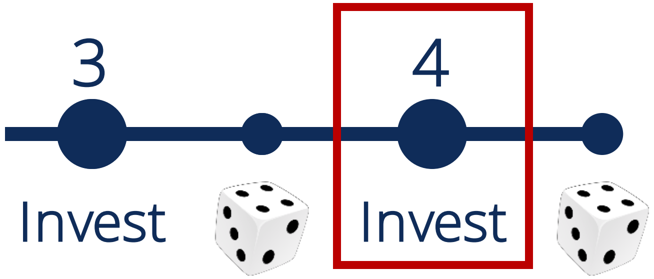
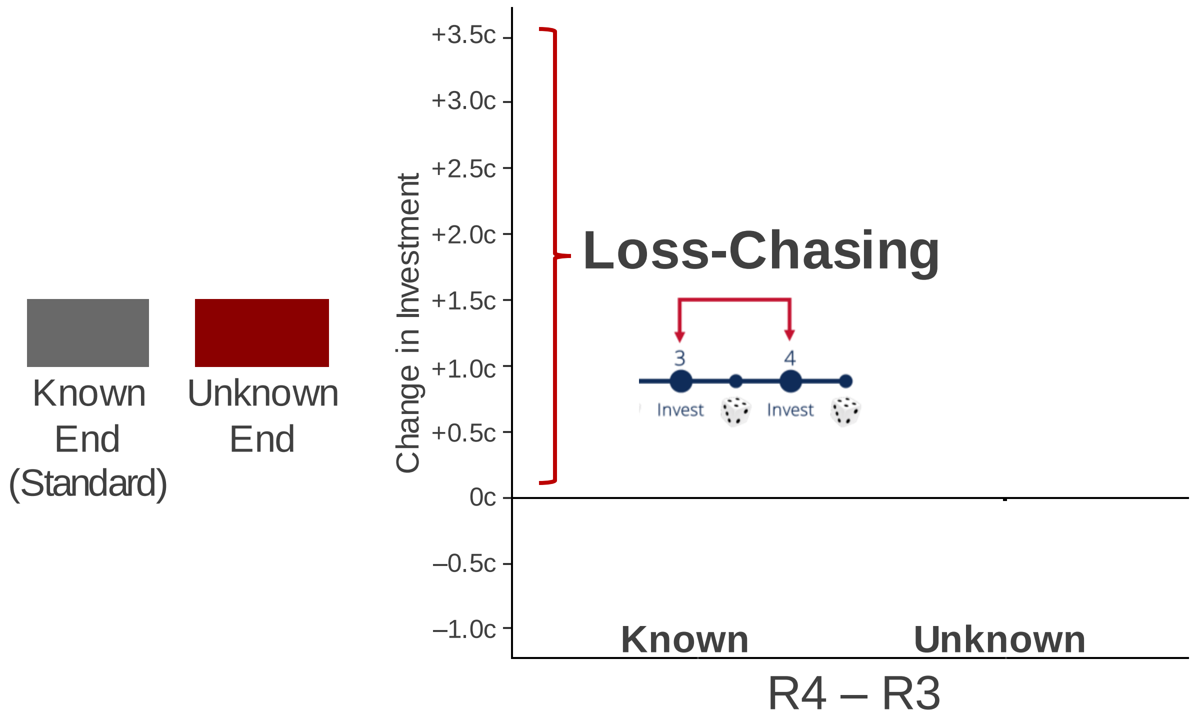




\$0.10	→	\$0.15	=	**Loss-Chasing**
\$0.10	→	\$0.05	=	X

Study 2: Number of Investment Periods

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



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

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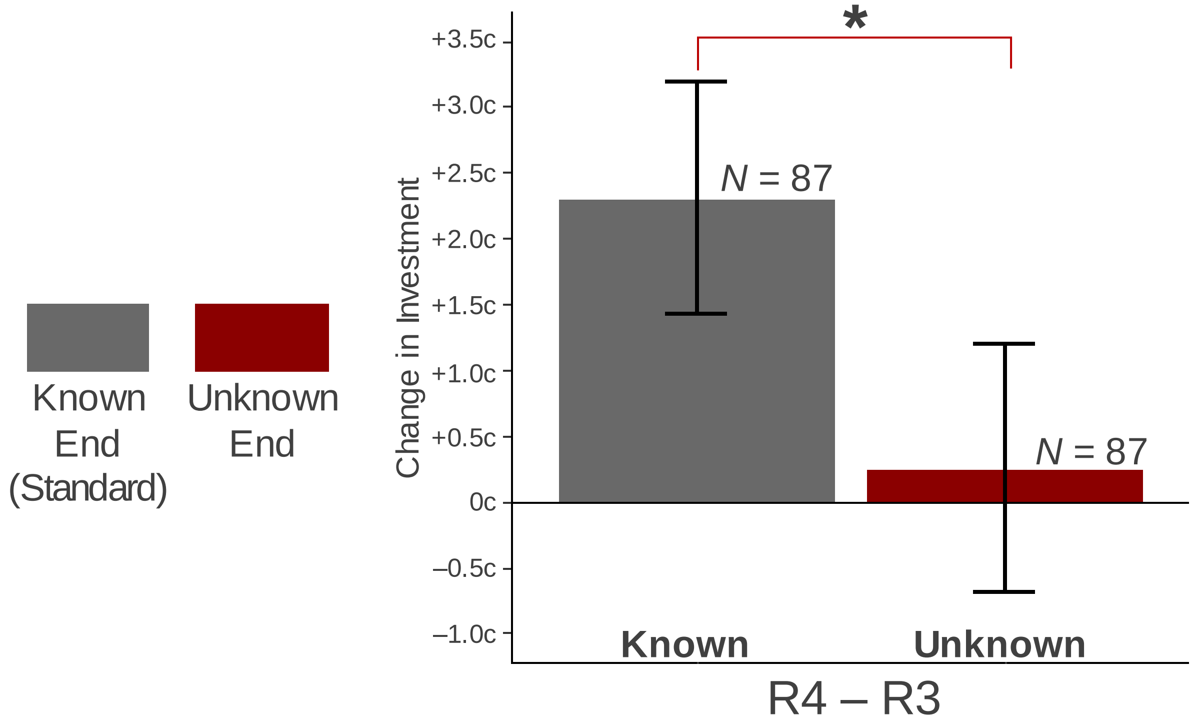

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Predictions 4: *Divestment Frame* Increases Risk-Taking

Status Quo & Overall Risk-Taking	
Default Framing	Investment < Divestment

- Form of Endowment: Cash vs. Lottery

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How much money to *invest in* the lottery

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How much money to *invest in* the lottery

vs.

$0.25

How much investment in the lottery to *sell*

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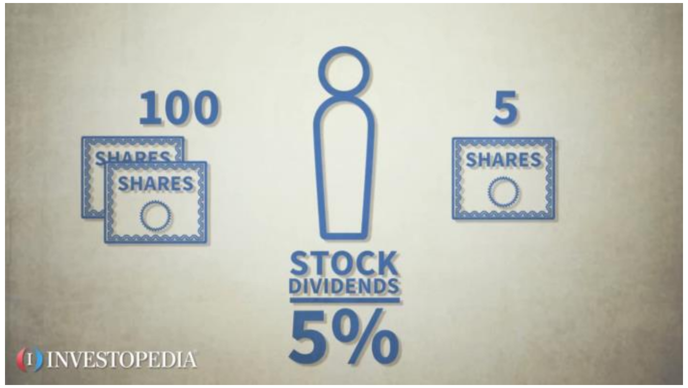
Employee Stock Option
Giving stocks as wages



Stock Dividends
Giving stocks as dividends

Predictions 4: *Divestment Frame* Increases Risk-Taking

Status Quo & Overall Risk-Taking	
Default Framing	Investment < Divestment

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

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.*"

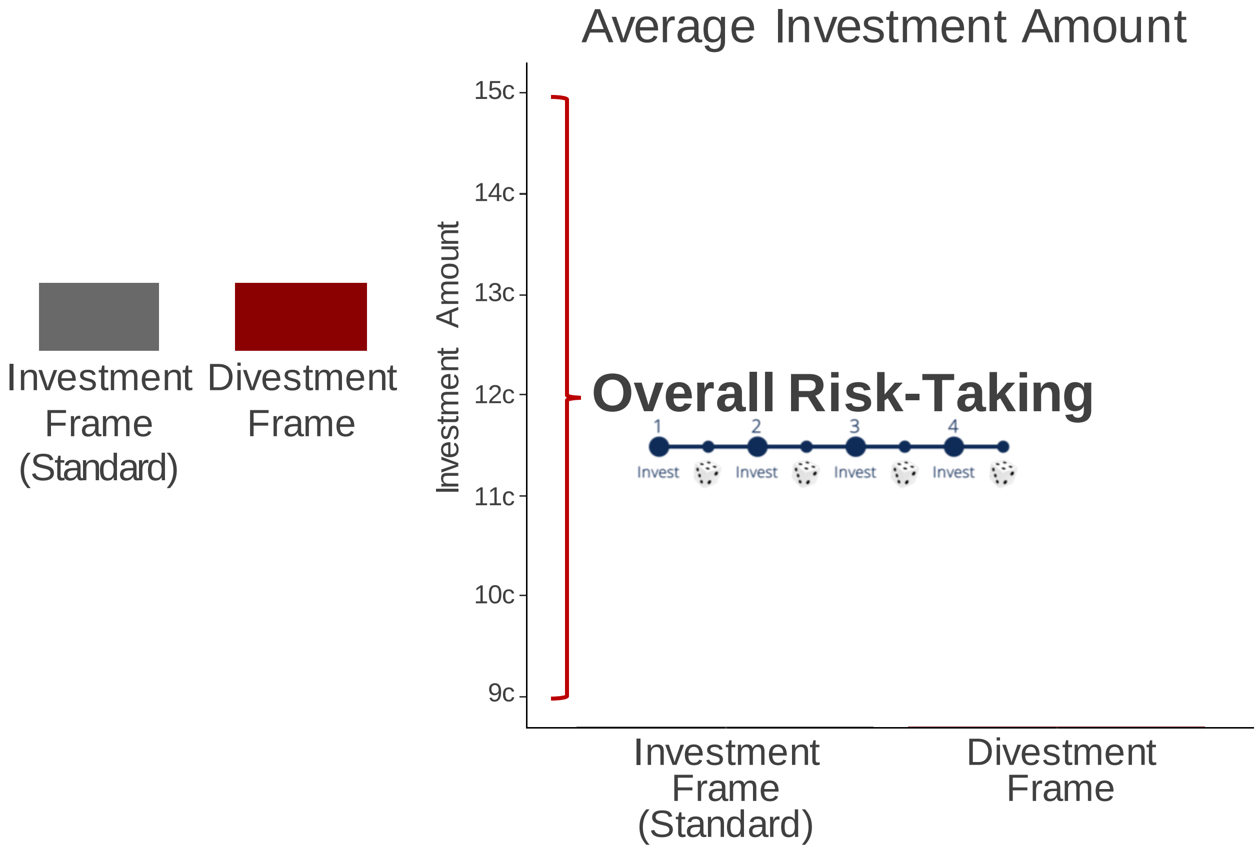
Study 4: Divestment Frame

- *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.



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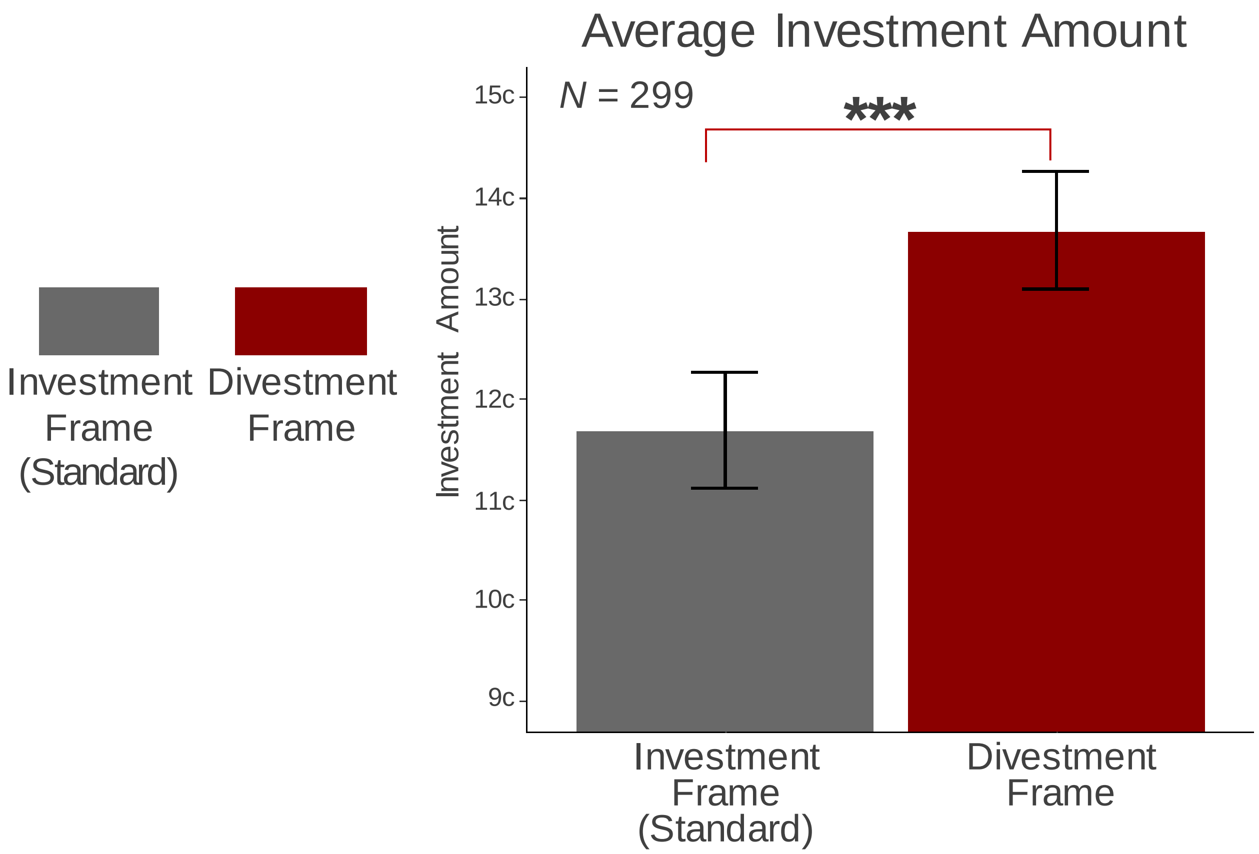

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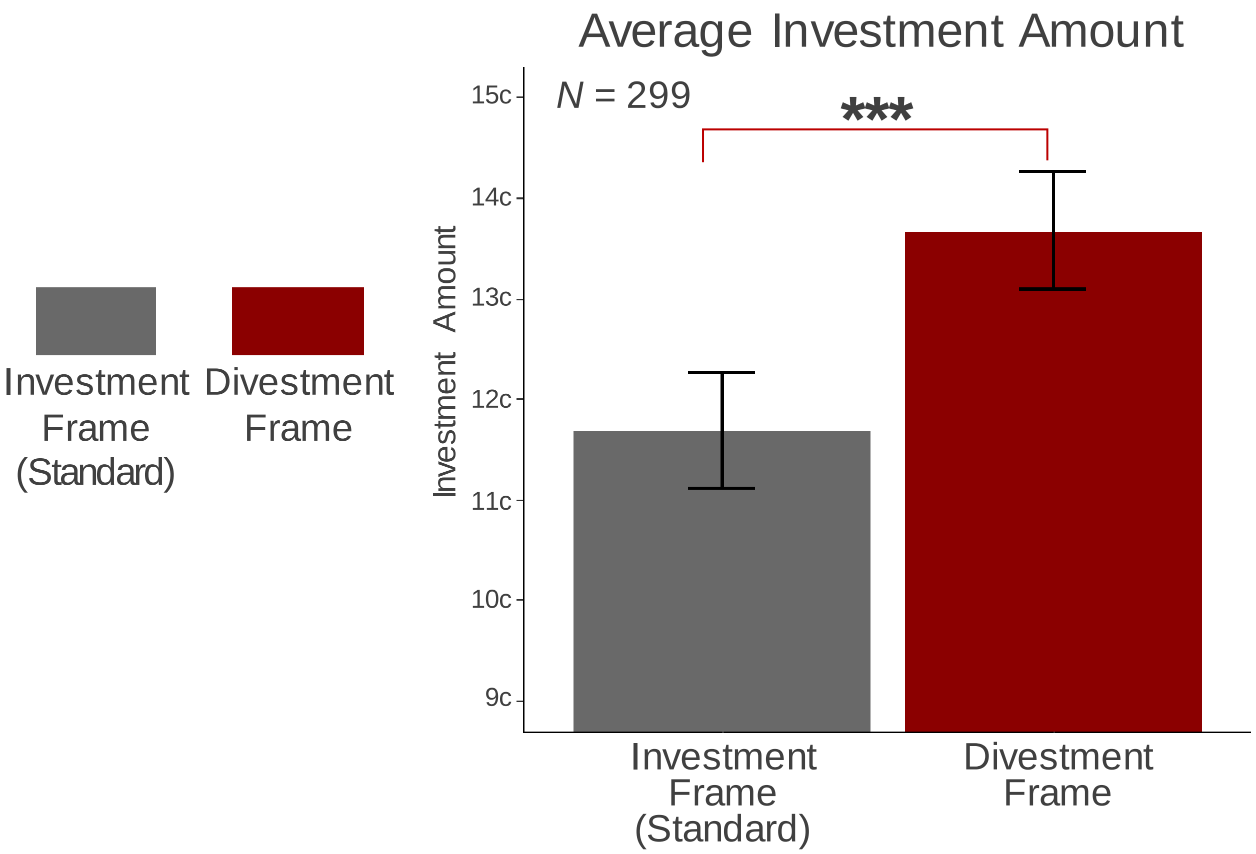

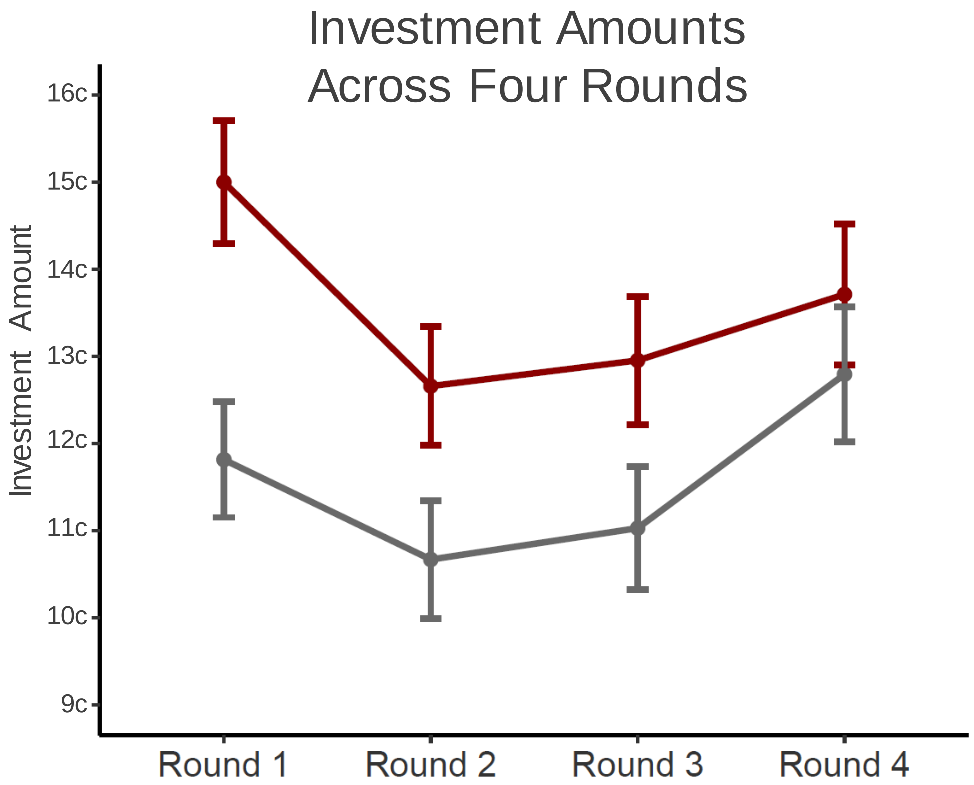

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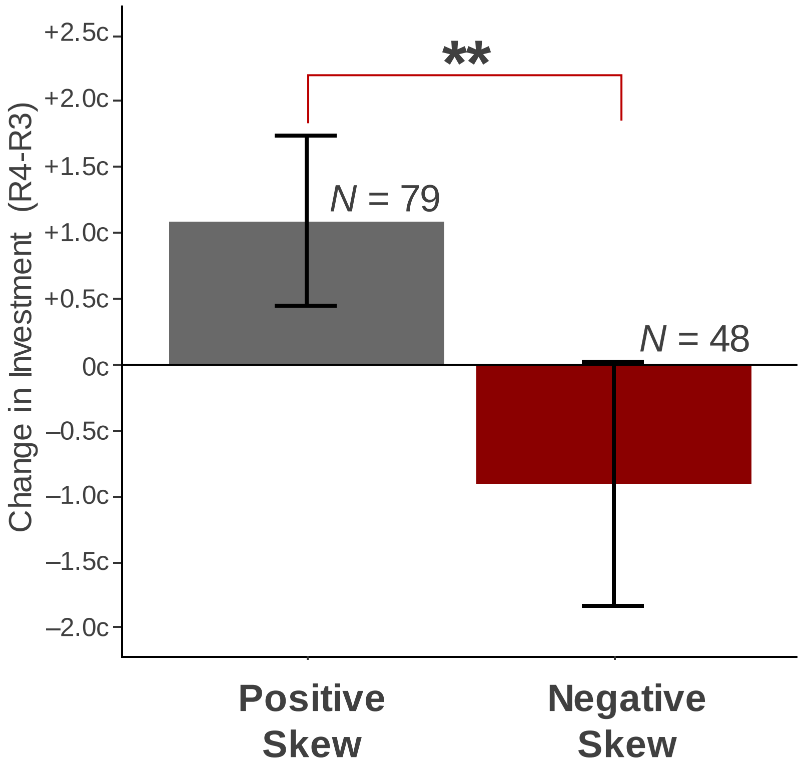
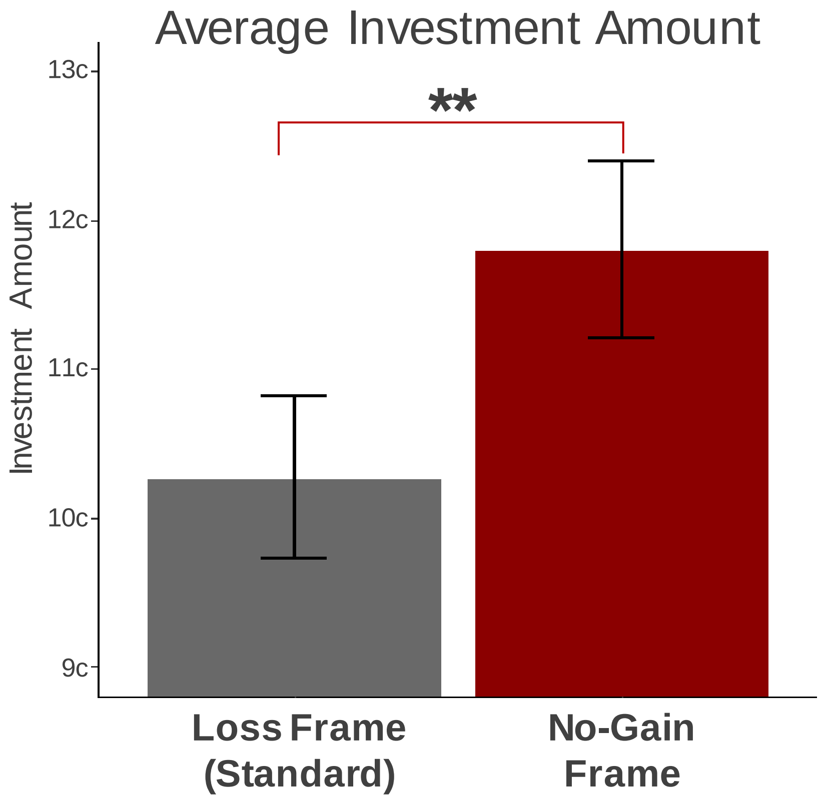
Other Studies

Study 1



Study 3



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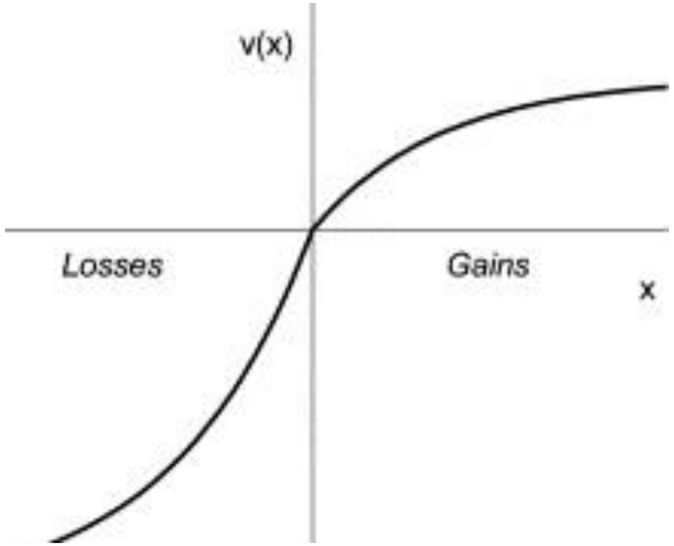
Implications

- Theoretical & Mathematical Model of Dynamic Risk-Taking

    - *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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