

# MENTAL ACCOUNTING AND FINANCIAL CHOICES

A Presentation to the  
SLC Estate Planning Council

18 November 2020

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## Mental Accounting



**Individuals do not behave as if money is fungible. They treat money as if it belongs to different mental accounts that they evaluate separately**

- Budget categories: food, entertainment, gifts, etc.
- Spending vs. saving
  - Small windfalls → "spending"
  - Large windfalls → "savings"

**It is possible to impact the type of mental accounting individuals use and change financial choices/outcomes**

Source: Thaler and Shefrin (1981)

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# MENTAL ACCOUNTING AND SAVING: STUDY #1

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## Helping Individuals Save

Savings experiment

- India—low income country
- Cash wage low-skilled, low-income laborers

**What will  
help them save?**



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## What Will Help People Save More?



or



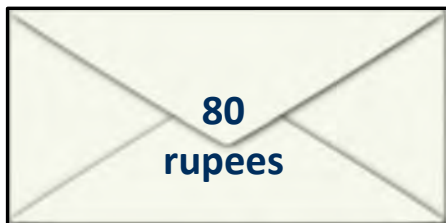
A low savings target ...

...or a high savings target

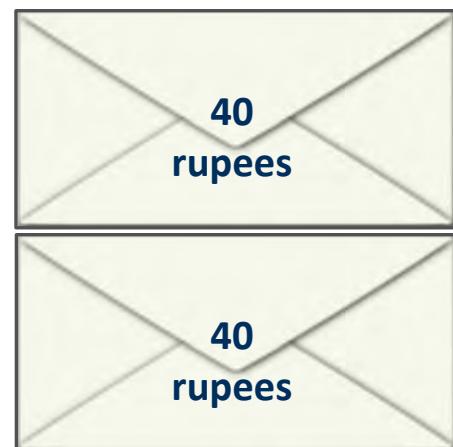
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## What Will Help People Save More?



or

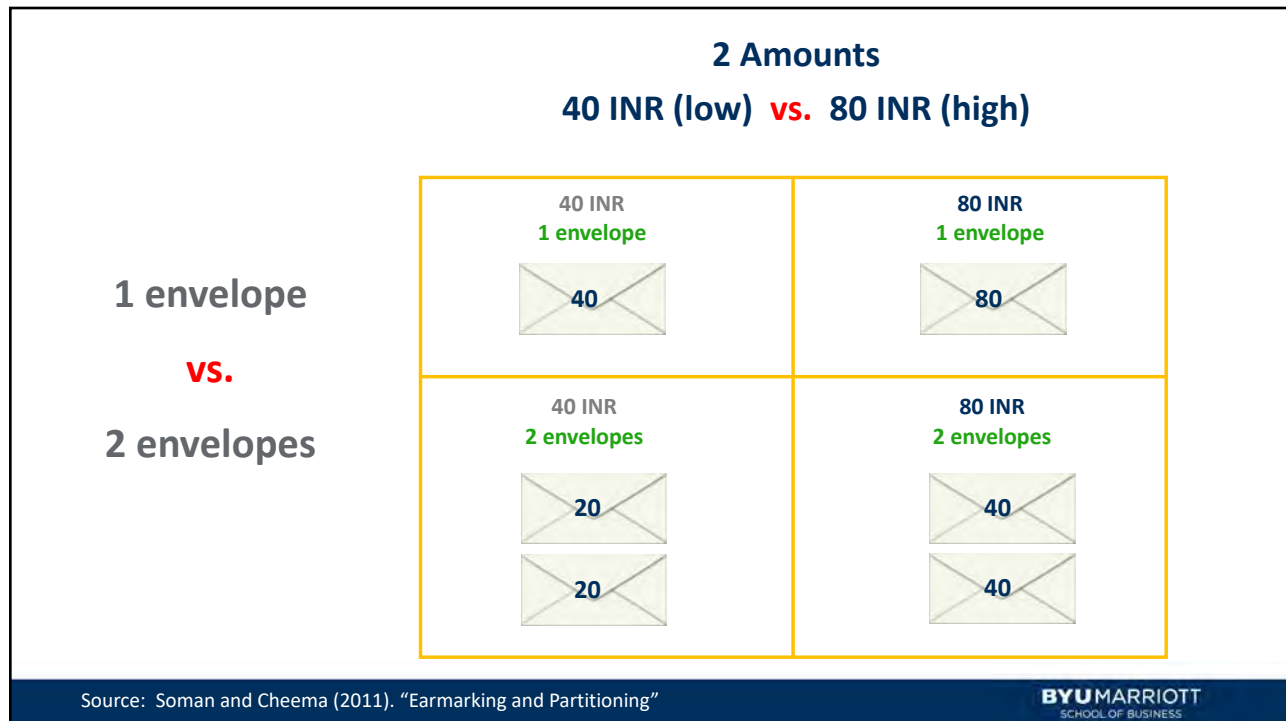


A single "account"

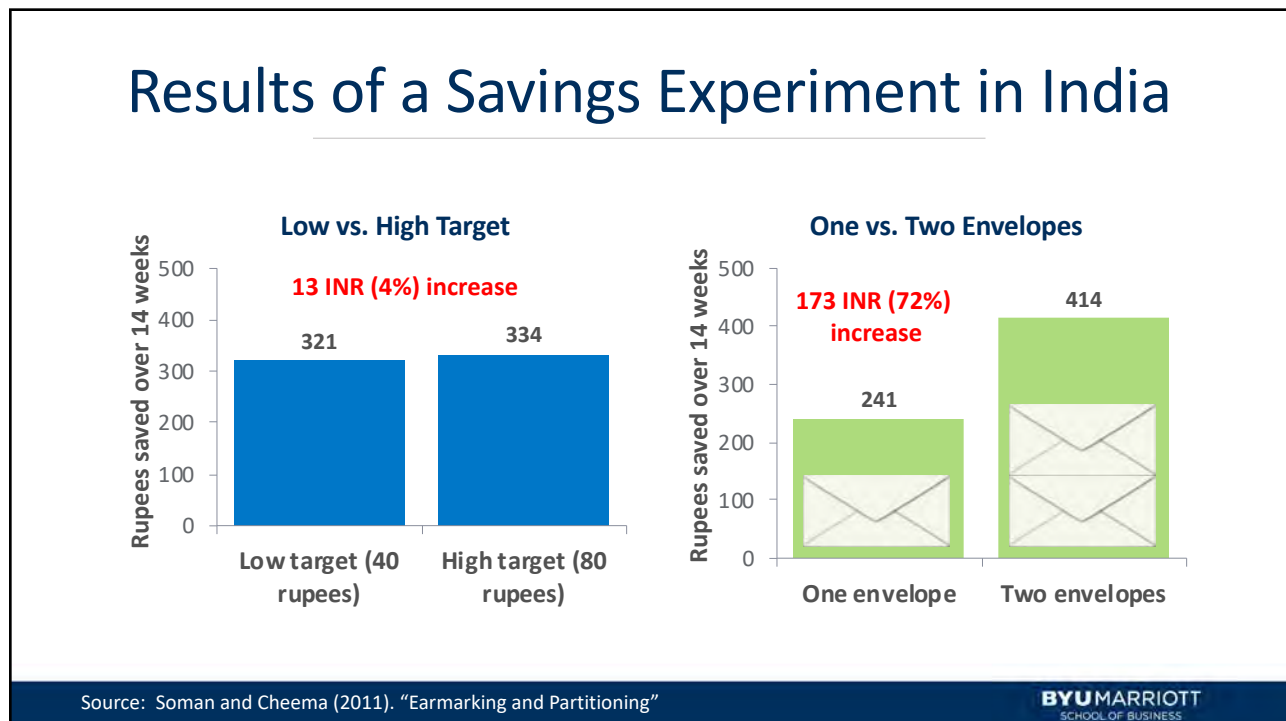
...two separate "accounts"

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## Likelihood of Opening Each Envelope

		40 INR (low) vs. 80 INR (high)		
1 envelope  vs.  2 envelopes	40 INR 1 envelope		80 INR 1 envelope	
	40 INR 2 envelopes	 	80 INR 2 envelopes	 

Source: Soman and Cheema (2011). "Earmarking and Partitioning"

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## MENTAL ACCOUNTING AND SAVING: STUDY #2

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## Meet Jack and Cindy: How Much Should They Save for Retirement?



- Both 30 years old
- Two kids
- Jack earns \$100K
- Cindy is a SAHM
- They currently rent
- Little outside savings (\$5K)
- Plan to do all savings in Jack's 401(k)
- Goal: maintain standard of living in retirement

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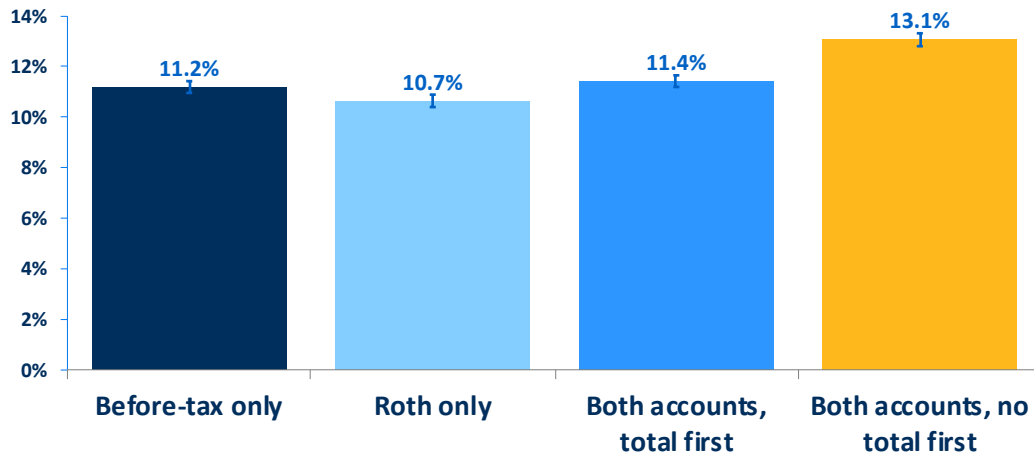
## How Much Should They Save? Asked Four Different Ways

Jack has <b>only one</b> way to save		Jack has <b>two</b> ways to save	
<b>One option:</b> Fraction of pay to save in a <b>Pre-tax account</b>	<b>One option:</b> Fraction of pay to save in a <b>Roth account</b>	<b>Two options:</b> (1) Fraction of pay to save in a pre-tax account <b>and</b> (2) Fraction of pay to save in a Roth account	<b>Two options:</b> (1) Fraction of pay to save across both accounts (2) How to divide total across a pre-tax and a Roth account

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## Average Total Contribution Rate Recommendations

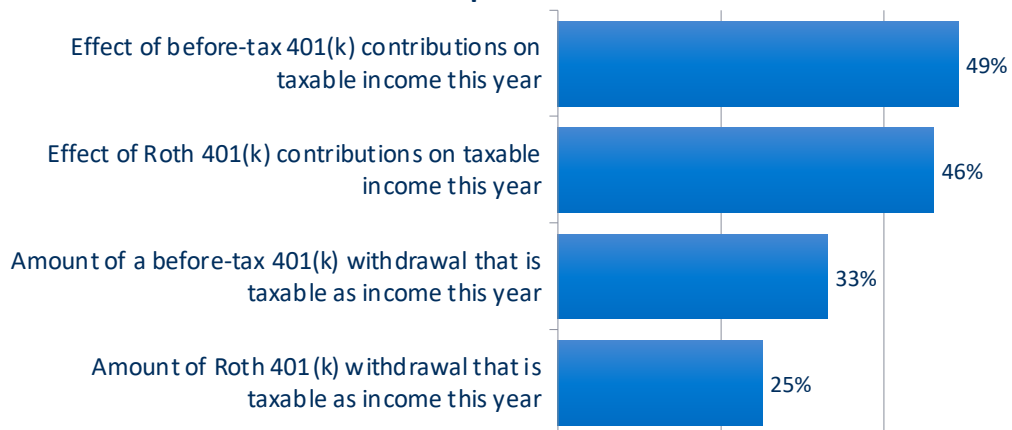


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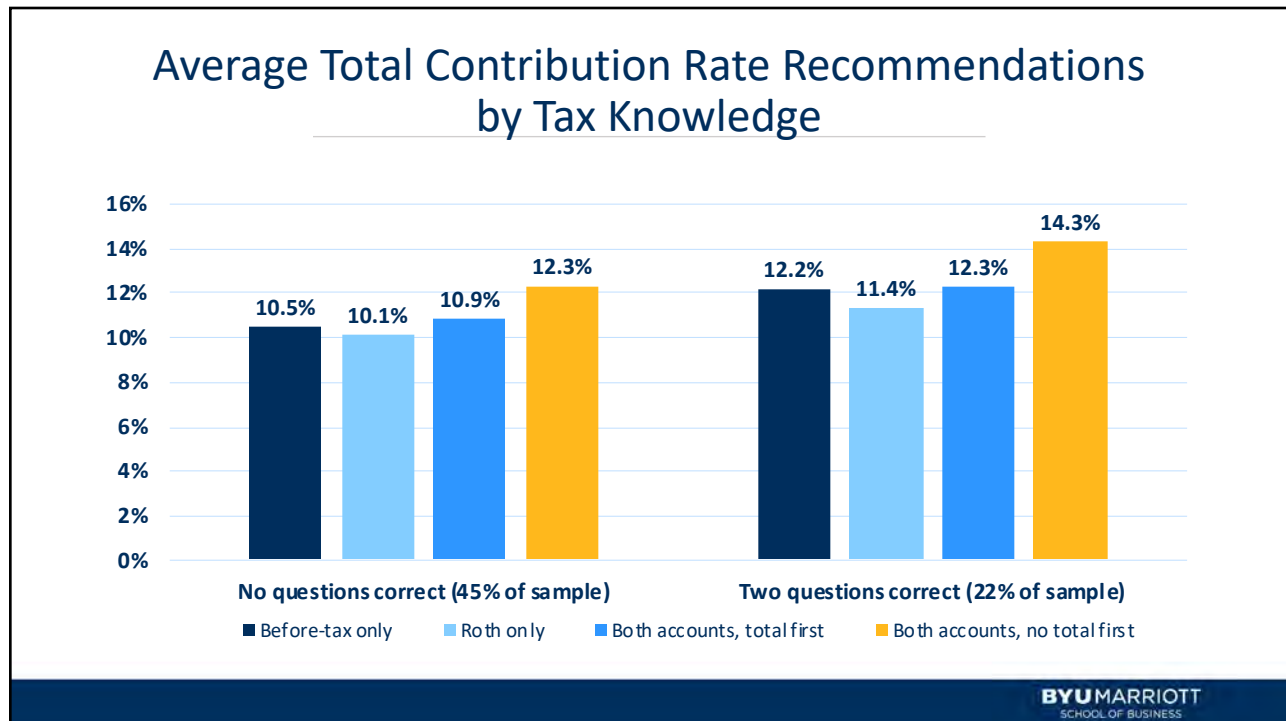
## Knowledge of 401(k) Tax Rules

### Fraction of Respondents with Correct Answer



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## Partition Dependence

- Tendency for choices to be biased towards equal allocation across all categories offered (Fox, Ratner and Lieb, 2005)
- Implications in this context:
  - More current consumption with two options:
    - Before-tax savings contribution
    - Current consumption
  - ...than with three options
    - Before-tax savings contribution
    - Roth savings contribution
    - Current consumption

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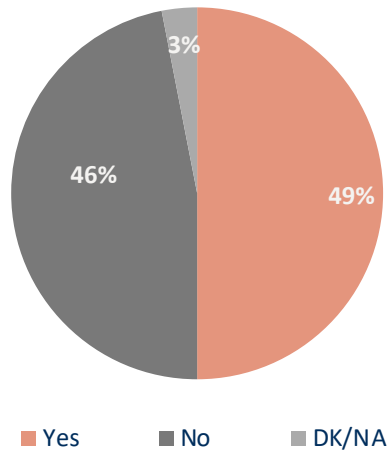


# PUBLIC POLICY APPLICATION

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**Have you set aside emergency or rainy-day funds that would cover your expenses for three months?**

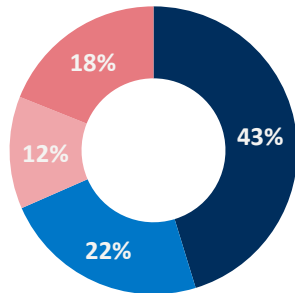


Source: National Financial Capability Study, 2018

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## How confident are you that you could come up with \$2K if an unexpected need arose within the next month?



- I am certain I could come up with the full \$2000
- I could probably come up with \$2000
- I could probably not come up with \$2000
- I am certain I could not come up with \$2000

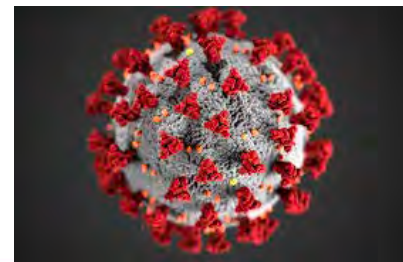


Source: National Financial Capability Study, 2018

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## Life Happens....



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## Parallel Accounts

**Retirement  
Account**

**Rainy Day  
Account**

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## Parallel Retirement and Rainy-day Savings Account Proposal

- **Automatic enrollment**
- **Mental accounting: two separate accounts**
  - Create a psychological barrier to using the “retirement” account for purposes other than retirement
  - Limit the “budget” available for rainy day expenditures
- **Separate but integrated**
  - Contributions divided across the two accounts based on account balance in the rainy-day account
  - Division between the two accounts adjusts automatically depending on the balance in the rainy-day fund
  - All contributions allocated to the retirement account once a target balance in the rainy-day fund is met (e.g., 3 months income)

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## Measuring the Impact



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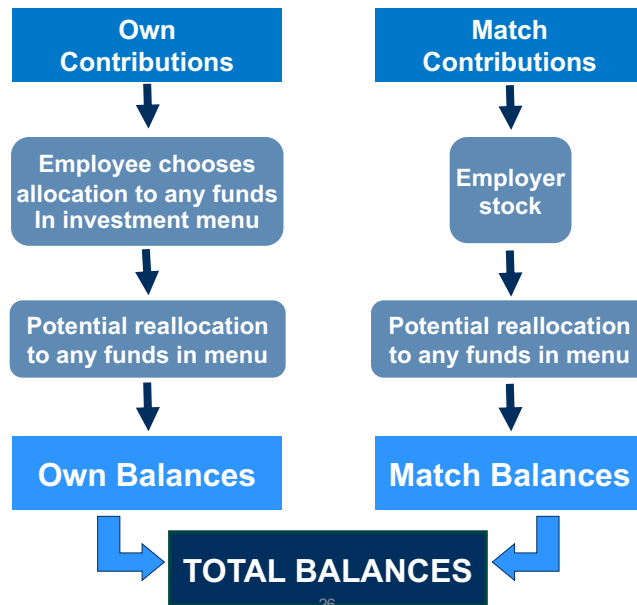
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## MENTAL ACCOUNTING AND ASSET ALLOCATION STUDY #1

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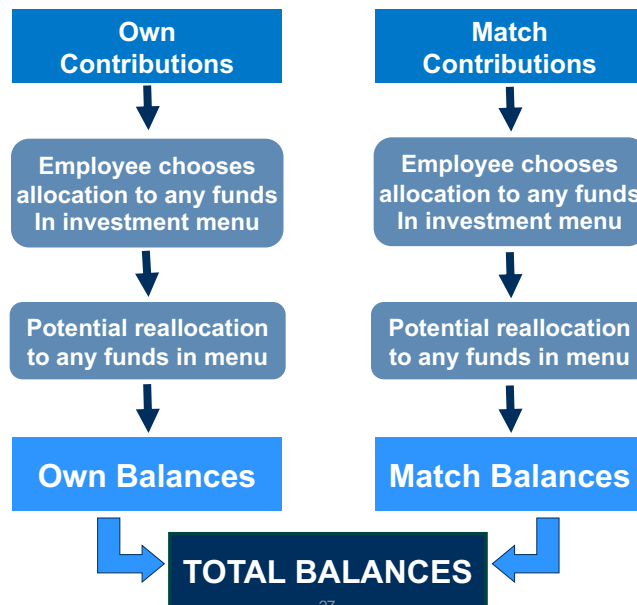
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### BEFORE: Match Defaulted to Employer Stock



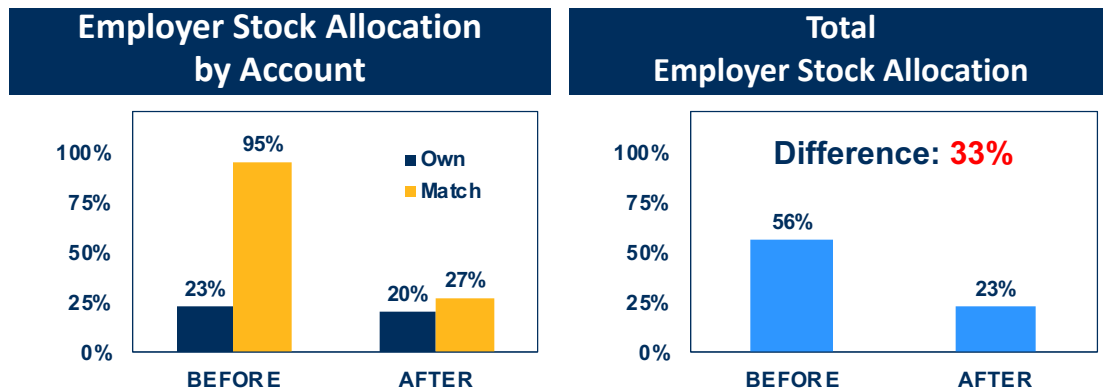
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### AFTER: Employee Chooses Match Allocation



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## The Impact of Changing the Default Match Allocation from Employer Stock to the Employee's Choice



**Investors do not take into account the asset allocation in their employer match account when making the asset allocation choice for their own contributions**

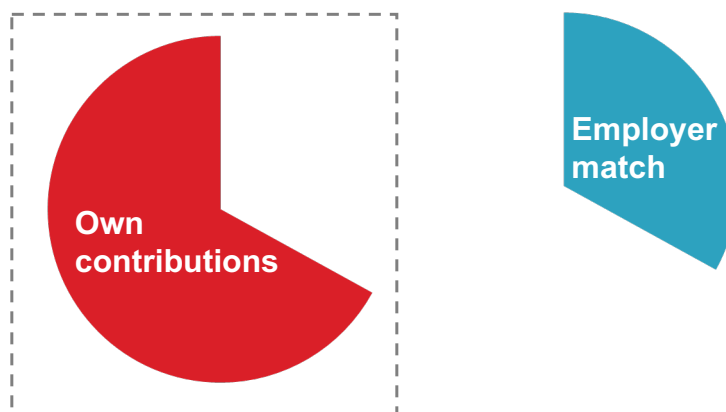
Source: Choi, Laibson and Madrian (2009)

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## Mental accounting

**Before March 2003**



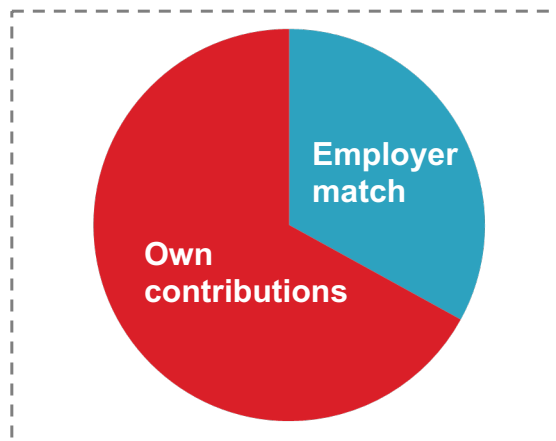
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# Mental accounting

Starting March 2003



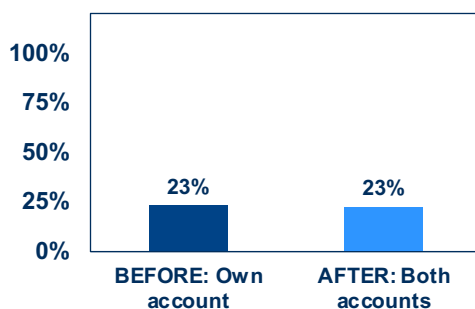
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## Investors Pay Attention to What Is In Their Immediate Control

### Allocation to Employer Stock



Employees choose to allocate about the same fraction (23%) of the assets they perceive as being under their control to employer stock, regardless of the asset allocation for investments over which they perceive less control.

Source: Choi, Laibson and Madrian (2009)

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## Takeaways from Employer Stock Study

- Individuals use mental accounting when thinking about their assets
  - They make decisions about specific assets in isolation of other parts of their portfolio
  - They do a poor job of integrating asset allocation decisions across different accounts
- Individuals pay more attention to things that they perceive as being in their control (even if the things about which they have less control should impact their decisions in other domains)

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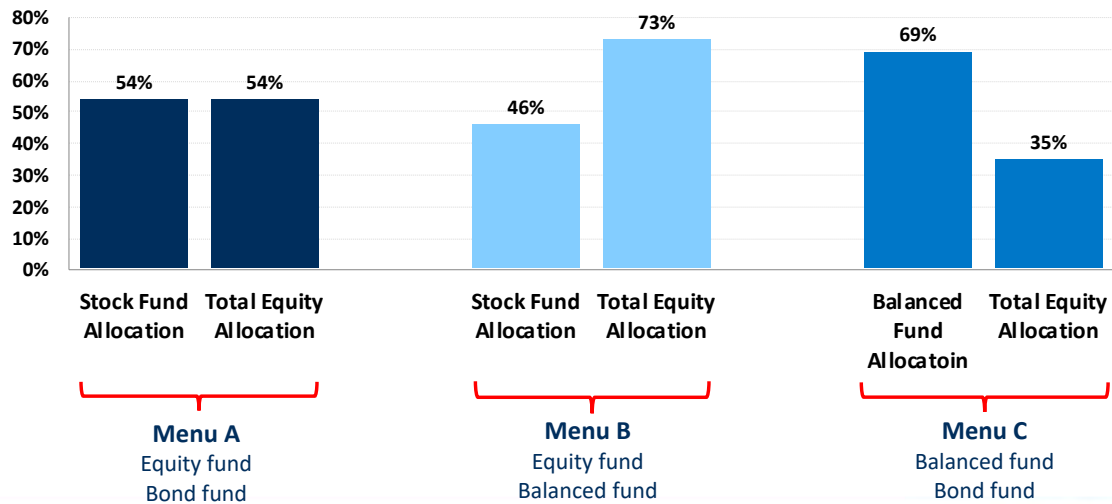
## MENTAL ACCOUNTING AND ASSET ALLOCATION STUDY #2

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## The Impact of the Fund Menu on Equity Allocation: Experimental Outcomes



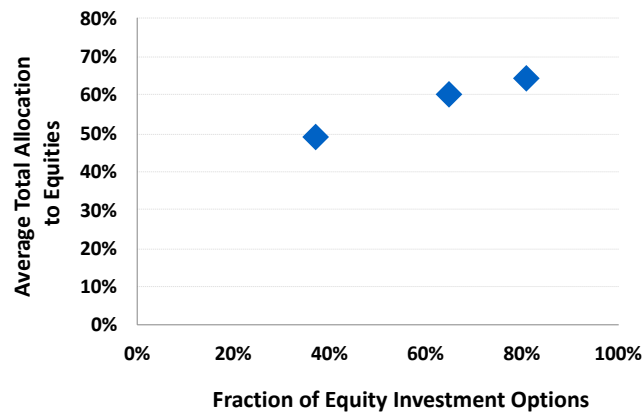
Source: Benartzi and Thaler (2001)

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## The Impact of the Fund Menu on Equity Allocation: 401(k) Plans



The overall allocation to equities increases as the number of equity options in the savings plan increases

Source: Benartzi and Thaler (2001)

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# MENTAL ACCOUNTING AND CONSUMPTION

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## What Do Consumers Buy When Using a Discount Coupon? (\$10 Off Anything)



- Compare customer grocery purchases
  - No coupon
  - \$10 off anything coupon
- With coupon, consumers spend \$1.59 more
- What do they spend it on?
- Additional spending almost entirely allocated to **high-cost items consumers have never purchased before**
- Coupon allocated to separate mental account for “splurge” spending

Source: Milkman and Beshears (2009)

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## What Happens to Gas Purchases When Oil Prices Increase?



- Oil price shocks increase the price of ALL types of gasoline
- What happens to the type of gasoline consumers purchase?
- Consumers shift from higher octane to lower octane fuel
- Mental accounting for gasoline spending—adjust gasoline quality to keep spending fixed

Source: Hastings and Shapiro (2013)

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## MENTAL ACCOUNTING AND DEBT REPAYMENT

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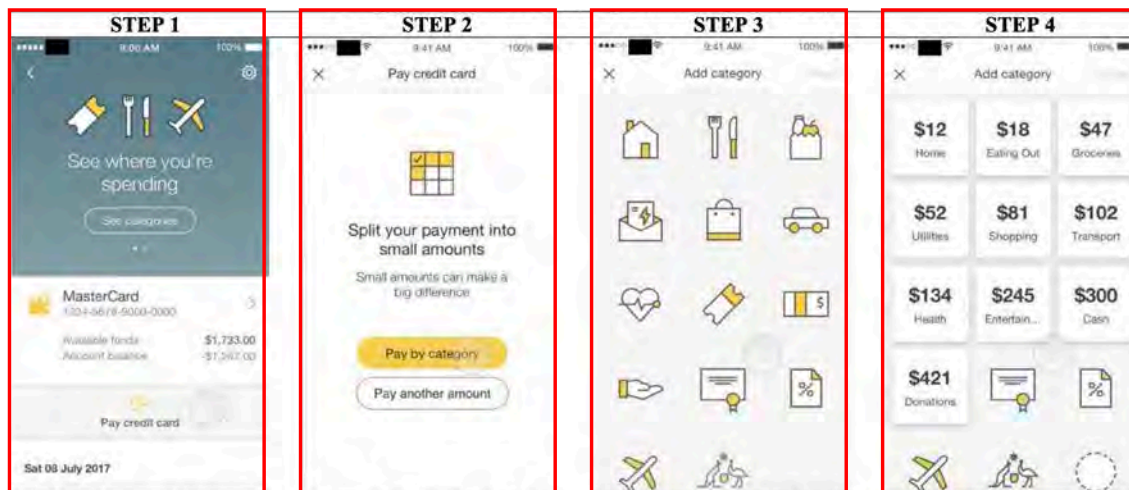
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## Two Approaches to Credit Card Repayment



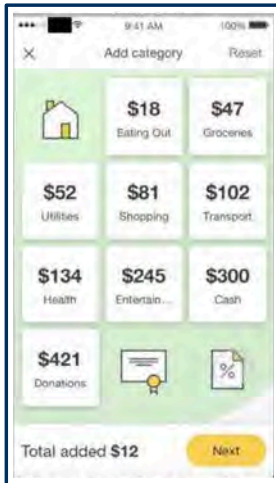
- Business as usual
  - See total amount due on your statement
  - Choose to pay the total, the minimum, or some amount in between
- Repayment-by-purchase
  - See total amount due by expenditure category
  - Choose mount to pay by expenditure category

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## Impact of Repayment by Purchase Option



- Repayment by purchase increases the fraction of the total owed amount paid by 12%
- Consumers pay off cash, interest and fees before other categories
- Consumers are more likely to make payments toward shopping, transport, and entertainment than other categories
- Increases awareness of spending patterns
- Reduces future credit card spending

Source: Donnelly, Lamberton, Bush, Chance, Norton (2020)

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# CONCLUSIONS

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## Main Take-Aways

- Mental accounting impacts a variety of financial outcomes
  - How much to save vs. spend
  - Asset allocation
  - Consumption allocation
  - Debt repayment
- Understanding mental accounting can help us better predict how individuals will make decision in certain situations
- Choice architecture can be used to shape the way that individuals use mental accounting and thereby impact financial choices
  - One versus two savings accounts
  - Aggregated versus disaggregated choices

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# Thank You!