

# Fund Assortments and 401(k) Plan Participation: The Moderating Effect of Gender



Maureen Morrin, Rutgers University, Camden  
Susan Broniarczyk, University of Texas, Austin  
J. Jeffrey Inman, University of Pittsburgh



# Employers Have Shifted to 401(k) as Primary Retirement Vehicle

SHOULD I PARTICIPATE IN THE PLAN?

HOW DO I ALLOCATE MY DOLLARS?

*Issues of willpower/self control/confidence/expertise*

- Currently:
  - 401(k) balances are down and employers are reducing match
  - Confidence about having a comfortable retirement is lowest in 7 years (EBRI Brief)





## Plan Participation

- 1/5 to 1/3 of those eligible choose not to participate in 401(k)s
- Use of automatic enrollment, default contributions, and deferral increases are growing due to Pension Protection Act of 2006, but majority (2/3) of plans remain opt-in
- Offering more funds reduces participation (Iyengar, Jiang and Huberman 2004)
  - Each additional 10 funds reduces participation 1.5% to 2.0%



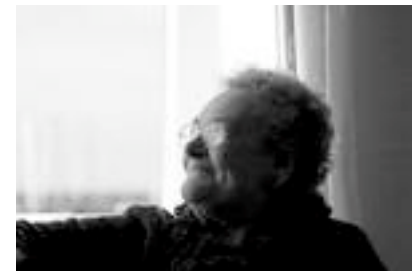
## Our FINRA-Supported Studies Completed to Date Show:

- Less knowledgeable investors are more susceptible to menu effects in 401(k) plans, with % invested in stocks increasing as fund assortment grows (Morrin, Broniarczyk, Inman and Broussard 2008 JCA).
- Decision maximizers may feel the psychological pain of larger fund assortments in 401(k) plans more: they take more time, read more information, consider more funds, and find the task more difficult, compared to decision satisficers (Nenkov, Morrin, Ward, Schwartz, and Hulland 2008 JDM).
- Thinking about the both the potential upside and downsides (EPO) of your retirement investment reduces your vulnerability to presentation biases (Nenkov, Inman, Hulland and Morrin, forthcoming JMR).



# The Issue of Gender: Women Taking on Increased Responsibility for Financial Decision Making

- More women are working
- Mean age of marriage delayed
- More female heads of households
- Women are living longer





## Core Question:

- Are women more negatively impacted by larger fund assortments in 401(k) plans?
  - Plan participation rate
  - Among those who participate, dollars invested

The screenshot shows the Vanguard website's 'All Vanguard funds' page. The page includes a navigation menu, a search bar, and a table of fund performance data. The table columns include Name, Ticker, Asset Class, YTD as of 04/13/2009, and Average Annual Returns for 1 Year, 5 Year, and 10 Year periods, along with Inception Date.

Name	Ticker	Asset Class	YTD as of 04/13/2009	Average Annual Returns as of 03/31/2009			Since Inception	Inception Date
				1 Year	5 Year	10 Year		
500 Index	VFINX	Stock - General	-4.13%	-38.09%	-4.86%	-3.08%	9.56%	08/31/1976
Admiral Treasury Money Market	VUSXX	Money Market - Taxable	0.16%	1.43%	3.12%	3.21%	3.79%	12/14/1992
Asset Allocation	VAAPX	Balanced	-4.35%	-37.02%	-4.28%	-0.93%	7.58%	11/03/1988
Balanced Index	VBINX	Balanced	-1.30%	-23.11%	-0.78%	1.25%	6.34%	11/09/1992
California Intermediate-Term Tax-Exempt	VCAIX	Bond - Tax-Exempt	2.98%	0.66%	2.27%	3.89%	4.84%	03/04/1994
California Long-Term Tax-Exempt	VCITX	Bond - Tax-Exempt	3.90%	-2.01%	1.94%	3.88%	6.07%	04/07/1986



# Study Design

- Small Assortment ( 3 funds)
- Medium Assortment (9 funds)
- Large Assortment (21 funds)
- Funds in alphabetical order
- 1/3 stocks, 1/3 bonds, 1/3 money market
- Descriptions and returns based on Vanguard funds but no brand names revealed

## Medium Assortment:

Fund Name	Fund Objective	Average Annual Total Returns		
		1 Year	3 Years	10 Years
500 Index Stock Fund	The fund seeks to track the performance of a benchmark index that measures the investment return of large-capitalization stocks.	20.6%	-10.2%	10.4%
Explorer Stock Fund	Seeks long-term capital growth by investing primarily in the stocks of smaller companies. This fund's advisers use both fundamental (company, industry, and economic research) and quantitative (computer modeling) analysis to select stocks that have significant growth potential based on the advisers' judgments about companies' financial prospects.	41.6%	-3.2%	10.8%
Federal Money Market Fund	Invests primarily in short-term securities that are issued by U.S. government agencies.	1.0%	2.7%	4.4%
GNMA Bond Fund	Seeks current income by investing primarily in Government National Mortgage Association ("Ginnie Mae") securities, which are backed by the U.S. government to provide timely payment of principal and interest (yield and share price are not guaranteed).	2.7%	7.7%	6.8%
International Growth Stock Fund	Seeks long-term capital growth by investing in the stocks of foreign companies believed by its investment advisers to exhibit above-average growth potential. To maintain geographic diversity, the fund's advisers invest in a number of international stock markets; most investments are made in Europe and in the Pacific region. To discourage short-term trading, the fund assesses a 2.0% fee on redemptions of shares purchased on or after June 27, 2003, and held less than two months. The fee is paid directly to the fund and therefore is not considered a load.	25.1%	-8.2%	5.2%
Long-Term Corporate Bond Fund	Seeks current income by investing primarily in high-quality corporate bonds with an average maturity of 15 to 25 years. The fund's expense advantage allows it to pursue a higher level of income with less risk than comparable funds.	9.8%	11.4%	7.3%
Prime Money Market Fund	Invests in a combination of commercial paper, certificates of deposit, bankers' acceptances, and U.S. government securities. This fund typically offers the highest yield of our money market funds.	1.0%	2.7%	4.4%
Short-Term Corporate Bond Fund	Seeks current income by investing primarily in high-quality corporate bonds with an average maturity of 1 to 3 years. This fund's expense advantage allows it to pursue a higher level of income with less risk than comparable funds.	5.2%	6.6%	5.9%
Tax-Exempt Money Market Fund	Invests in high-quality municipal securities issued by state and local governments across the United States. This fund provides income that is exempt from federal tax.	1.0%	2.0%	2.9%



## Method

- N = 349
- Participants: members of non-profit organizations, faculty, staff, graduate students. \$5 donation or direct payment for participation.
- 15-20 minutes to complete
- Decision simulation: Decide whether to participate, which funds to invest in, how much.
- Complete measures of:
  - Risk propensity (“I like to avoid risk, even if it means getting a lower return” 1 = strongly disagree to 7 = strongly agree)
  - Financial literacy (“Compared to most people, I know a lot about investing” 1 = strongly disagree to 7 = strongly agree)



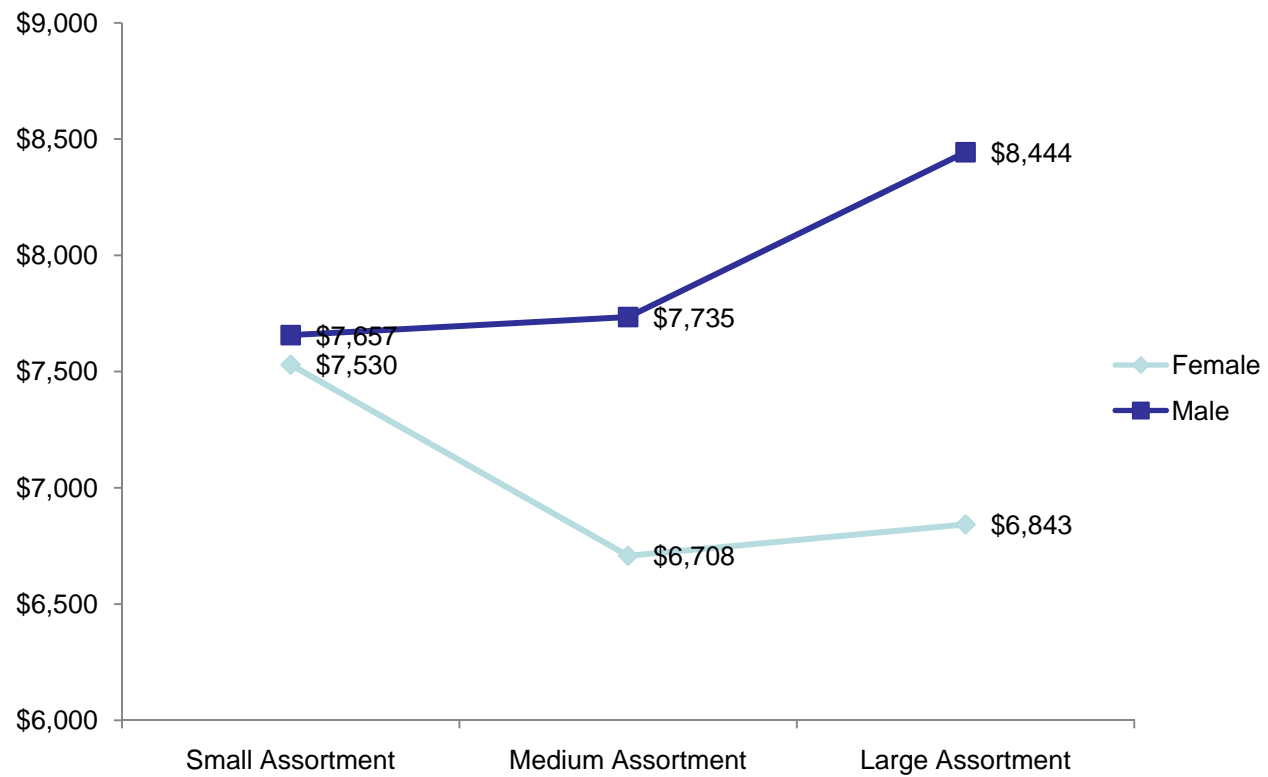
## Study 1 Results

<b>MEASURE</b>	<b>WOMEN</b>	<b>MEN</b>
<b>Knowledge</b>	3.04**	4.02
<b>Participation</b>		
<b>Small Asst</b>	86.0%**	60.7%
<b>Medium Asst</b>	66.1%	73.3%
<b>Large Asst</b>	62.5%*	78.1%
<b>Dollars Invested</b>		
<b>Small Asst</b>	\$7,530	\$7,657
<b>Medium Asst</b>	\$6,708	\$7,735
<b>Large Asst</b>	\$6,843**	\$8,444





# Dollars Invested



\*



## Conclusion

- Women seem to be negatively affected by larger fund assortment sizes; men do not.

## Policy Implications

- This does not necessarily imply that plans should offer smaller “one size fits all” fund menus
  - The number of funds offered in plans seems to be leveling off, likely in response to aggregate findings
  - Men were found here to invest more and be more likely to participate with larger assortments
  - Financial research suggests that plans offering 4 or fewer funds rarely offer enough to maximize return/risk ratios, only 54% of those offering 7 or more funds do so, 14 or more funds needed to do so adequately (Elton, Gruber, and Blake 2006)
  - Do we need an automatic allocation default?
    - Life-cycle funds have not captured a large share despite being offered by 44% of firms
  - A tailored menu as a function of literacy level?



## Research in Progress

Is choosing from larger fund assortments cognitively depleting, which leads to reliance on allocation heuristics such as  $1/n$  (Morrin, Inman and Broniarczyk, under review)?

Are women's investment decisions more malleable in terms of influence from decision aids such as Morningstar boxes, stars (Morrin, Broniarczyk, and Inman, in progress)?

How do feelings of hope and hopefulness impact decisions regarding investing for retirement (Nenkov, MacInnis, and Morrin, in progress)?