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**Fund Assortments and 401(k) Plan Participation: The Moderating Effect of Gender**  
Maureen Morrin, Susan Broniarczyk, and J. Jeffrey Inman

**Abstract:** We report the results of a decision simulation conducted among 349 adults whose task was to invest in a hypothetical 401(k) retirement plan. We varied the number of mutual funds offered for investment and observed the effects on the incidence and extent of participation. The results indicate that larger fund assortments tend to reduce participation among women, but increase it among men. Implications and suggestions for future research are discussed.

**About the Authors:** **Maureen Morrin**, an associate professor of marketing at Rutgers University, conducts research on a variety of topics that impact the consumer decision making process including branding, atmospherics (e.g., scent and touch), and financial decision making. Her dissertation, which examined the impact of brand extensions on parent brand memory retrieval, was awarded an honorable mention by the American Marketing Association and was subsequently published in the *Journal of Marketing Research*. Professor Morrin is a graduate of New York University (Ph.D.). She also is a graduate of Thunderbird, the American Graduate School of International Management (MBA), and Georgetown University (BSFS). Her corporate work experience includes five years in packaged goods advertising and brand management. **J. Jeffrey Inman** joined the faculty of the Katz School at the University of Pittsburgh in 2000. He was named the Albert Wesley Frey Professor of Marketing in 2003. Prior to joining Katz, he was on the faculties at the University of Wisconsin (1994–2000) and the University of Southern California (1991–94). He currently is on the editorial board of the *Journal of Consumer Research*, *Journal of Marketing Research*, *Journal of Marketing*, *Marketing Science*, *Journal of Consumer Psychology*, and *Journal of Retailing*. Inman's interests include investor decision making, shopper in-store decision making, and channel blurring (for example, grocery store vs. drug store). Before entering academia, he worked at General Motors as a production supervisor and Texas Instruments Inc. as a semiconductor distribution manager. **Susan M. Broniarczyk** is Professor of Marketing, McCombs School of Business, University of Texas at Austin. Her research examines consumer behavior and decision making. The Society for Consumer Psychology awarded her its first Early Career Contribution Award in 2000. Her research has appeared in numerous journals including the *Journal of Consumer Research*, *Journal of Marketing Research*, *Journal of Retailing*, *Journal of Academy of Marketing Science* and *Organizational Behavior and Human Decision Processes*. She serves as on the editorial boards at the *Journal of Marketing Research* and *Journal of Consumer Research*, where she also served as an associate editor. She received a Ph.D. in Marketing from the University of Florida.

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**Fund Assortments and 401(k) Plan Participation:  
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Employers continue to transition from offering their employees traditional pension plans, which require little or no decision making on the part of the individual, to defined contribution plans such as 401(k)s, as employees' primary retirement savings vehicle. In the process, individuals are required to take on more responsibility for their future financial security, having to decide whether or not to participate in such plans, how much money to invest, and how safe or risky those investments should be. For many, such decisions are difficult, even daunting. In one recent survey, less than one fifth of respondents believed they were successfully planning for retirement (Lusardi and Mitchell 2005). Not surprisingly, despite the importance of saving for retirement, many choose not to do so.

Part of the problem may stem from inadequate knowledge in the domain of financial investing (Morrin, Broniarczyk, Inman and Broussard 2008) or low levels of financial literacy (Rotfeld 2008) -- a problem particularly evident among women, minorities, and those without a college education (Lusardi and Mitchell 2005).

Another part of the problem may stem from the decision making context, such as how 401(k) plans are structured. For example, efforts have grown in recent years to encourage individuals to participate in defined contribution retirement plans by revamping the sign-up procedure. More employers now offer automatic enrollment or automatic savings increases in their 401(k) plans (Kristof 2007; Madrian and Shea 2001; Thaler and Benartzi 2004). Making enrollment in a firm's retirement plan the default option has indeed enhanced the level of employee participation (Kristof 2007).

Nevertheless, the majority of defined contribution plans continue to be structured as opt-in, and a significant proportion of individuals eligible to participate in such plans choose not to do so. A large-scale study conducted among over 2 million employees by the human resources consulting firm Hewitt Associates, for example, found that about a third of those eligible to participate in employers' 401(k) retirement plans chose not to do so ([http://www.401\(k\)helpcenter.com/press\\_2006/pr\\_hewitt\\_051606.html](http://www.401(k)helpcenter.com/press_2006/pr_hewitt_051606.html)). Thus, it is of critical importance to better understand the process underlying an individual's decision to invest in a retirement investment plan (Wiener and Doescher 2008).

Other aspects of a 401(k) plan's structure can impact the decision process. Research has shown that offering larger mutual fund assortments in 401(k) plans reduces overall participation rates. Iyengar, Jiang and Huberman (2004) examined data provided by Vanguard on over 700,000 employees eligible for 401(k) plans. They found that, controlling for factors such as compensation, gender, and age, every ten funds added to the fund assortment in a 401(k) plan led to a 1.5% to 2.0% drop in participation. When only two funds were offered in a plan, the average participation rate was 75%, compared to just 60% if there were 59 funds offered in the plan.

We seek to extend this seminal line of research by exploring gender as a moderator of fund assortment effects on participation in 401(k) plans. The key question we address in the current research is, compared to men, are women more likely to be negatively impacted by larger fund assortment sizes in terms of plan participation? Women's responsibilities for financial decision making are growing due to a number of converging trends including longer female versus male life spans, an increasing number of female heads of households, and a delay in the mean age of marriage. As women take

on increased responsibility for financial decision making (Enright 2006), understanding gender effects in this domain takes on increased importance.

Below we report the results of a decision simulation that explores the effects of fund assortment size on the incidence and extent of participation by gender. We manipulate the number of funds offered in the plan and observed the effects on women's and men's decisions to participate. We find, in accord with our prediction, that women, but not men, are negatively impacted by larger fund assortments in terms of the decision to participate. We also find that, among those who decide to participate, a large fund assortment causes women to invest less money than men do in the plan. We describe the study next, and then conclude with implications and ideas for future research.

## **METHOD**

### **Sample**

A sample of 349 adults was obtained by contacting the members of several non-profit organizations, as well as by approaching faculty, students and staff of a major state university in a campus center (48% female, mean age 25). Participation was obtained by offering a \$5 donation to the nonprofit organization or payment to the individual for completion of a questionnaire on retirement investing, which generally took about 15 to 20 minutes to complete.

### **Design**

The study consisted of a single factor (fund assortment size: small, medium, large) between-subjects design. Assortment size was manipulated such that the 401(k) plan offered 3, 9, or 21 mutual funds for investment (i.e., a small, medium, or large fund

assortment). The funds were listed in alphabetical order. We maintained an equal split among the number of stock funds (1/3 of total), bond funds (1/3 of total) and money market funds (1/3 of total) offered in each of the conditions. In the small assortment condition, each of the three asset classes offered a single fund for investment (one stock fund, one bond fund, and one money market fund). In the medium assortment condition, each of the asset classes offered three funds for investment. In the large assortment condition, each of the asset classes offered seven funds for investment (see Appendix).

### **Procedure**

Each respondent received a booklet that asked him/her to imagine that s/he was an employee of a firm that offered the opportunity to invest in a 401(k) plan. Respondents were exposed to information describing the plan, including descriptions about each of the funds offered for investment (e.g., investing style, historical returns, etc.). The fund descriptions were based on actual funds available at Vanguard, although Vanguard-specific brand-identifying information was removed from the stimuli.

Respondents reviewed the plan information and then decided whether they would invest in the plan (yes or no). Plan participants also decided how much they would invest in the plan (\$) and completed several closed-ended items. Because some prior research has found gender differences in risk propensity (Appicella et al. 2008; Jianakopulos and Bernasek 1998; Hinz, McCarthy and Turner 1997; Sunden and Surette 1998), we included an item to assess risk aversion. Respondents indicated the extent to which they agreed with the statement: “I like to avoid risk, even if it means getting a lower return” (on a scale from 1 = Strongly Disagree to 7 = Strongly Agree).

We also measured an aspect of respondents' levels of financial literacy with an item designed to assess perceived knowledge of investing. While this item does not tap into all the facets of financial literacy, it allows us to assess whether women perceive themselves as less knowledgeable than men in the area of financial investing. On a scale of 1 = Strongly Disagree to 7 = Strongly Agree, respondents indicated the degree to which they agreed with the statement: "Compared to most people, I know a lot about investing." Respondents also completed several demographic questions.

## **RESULTS**

### **Self-Reported Knowledge and Risk Aversion**

In accord with prior research (e.g., Lusardi and Mitchell 2005), we found that women reported being less knowledgeable about investing ( $M = 3.04$ ) than men ( $M = 4.02$ ,  $t(347) = 5.24$ ,  $p < .0001$ ). However, we did not find any differences between women's ( $M = 4.15$ ) and men's ( $4.23$ ) risk aversion levels ( $t(347) = -0.43$ ,  $p > .65$ ).

### **Participation**

In this study our primary interest was in how mutual fund assortment size affects the likelihood of participation in a 401(k) plan. We first measure participation in terms of incidence, that is, on the basis of the individuals' decisions regarding whether or not to participate in the plan. Of the 349 respondents, 249 or 71.3% chose to participate. This level of participation is on par with that reported in analyses of actual benefit plan data (e.g., a 71% average participation rate reported by Huberman, Iyengar and Jiang 2007).

We conducted a binary logistic regression on participation (yes/no) as a function of fund assortment size, gender, and all possible interactions, with covariates included for

age, household income, risk aversion and self-reported knowledge. Since neither risk aversion ( $p > .30$ ) nor self-reported knowledge ( $p > .60$ ) were significant, they are excluded from the model. Fund assortment size was coded as a dummy variable, so as not to assume a linear relationship between participation and assortment size. Thus, the baseline assortment size was small, with dummy variables included for the medium (1/0) and large assortment sizes (1/0). See table 1 for a summary of the regression results.

TABLE 1.

*Logistic Regression Results for Plan Participation Incidence*

<b>Variable</b>	<b>B</b>	<b>s.e.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
<b>Medium Asst Size</b>	-1.219	.484	6.350	1	.012	0.295
<b>Large Asst Size</b>	-1.401	.483	8.414	1	.004	0.246
<b>Gender*</b>	-1.457	.478	9.279	1	.002	0.233
<b>Gender X Medium Asst Size</b>	1.725	.634	7.403	1	.007	5.614
<b>Gender X Large Asst Size</b>	2.189	.638	11.762	1	.001	8.926
<b>Household Income</b>	0.218	.094	5.356	1	.021	1.244
<b>Age</b>	0.334	.109	9.301	1	.002	1.396
<b>Constant</b>	0.669	.473	2.003	1	.157	1.952

\*Gender coding 0 = female, 1 = male.

Participation in the plan increased as a function of income and age, as might be expected. That is, wealthier and older respondents were more likely to participate. Women were also slightly more likely to invest (71.6% versus 71.1%, Wald (1) = 9.279,  $p < .005$ ), a result that echoes prior research showing slightly higher female participation rates in 401(k)s (Huberman, Iyengar and Jiang 2003).

As expected, participation declined when larger fund assortments were offered for investment (medium assortment size: Wald (1) = 6.350,  $p < .05$ ; large assortment size: Wald (1) = 8.414,  $p < .005$ ). Total participation fell from 73.5% in the small assortment condition to 70.8% in the large assortment condition. This result, about a 3 point drop with the addition of 18 funds to the assortment, is on par with the patterns noted by Iyengar, Jiang and Huberman (2004).

These main effects are qualified by the interactions between gender and assortment size, however (gender by medium assortment size: Wald (1) = 7.403,  $p < .01$ ; gender by large assortment size: Wald (1) = 11.762,  $p < .001$ ). In support of our predictions, the negative effects of the larger fund assortments were evident for women but not for men.

Women's participation in the plan fell as fund assortment increased, from 86.0% when choosing from the small assortment condition to 66.1% when choosing from the medium assortment condition (Chi-square (1) = 6.148,  $p < .05$ ), and to 62.5% when choosing from the large assortment condition (Chi-square (1) = 8.15,  $p < .01$ ). The difference between the medium and large assortment conditions was not significant (Chi-square (1) = 0.15,  $p > .65$ ).

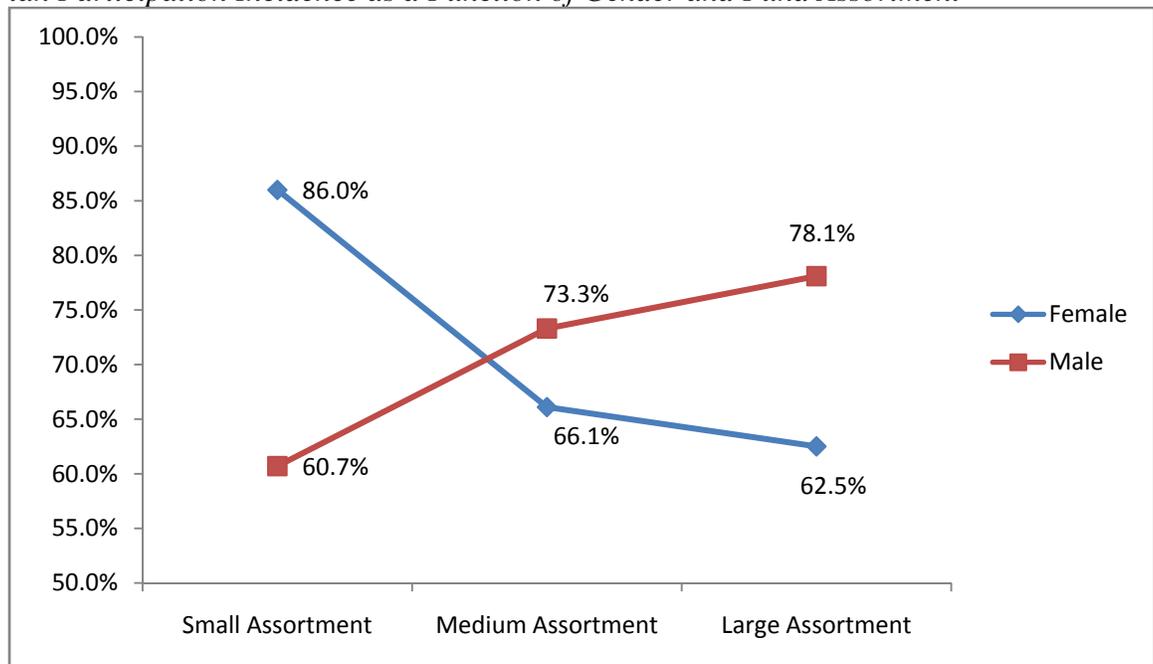
TABLE 2.

*Mean Plan Participation Incidence as a Function of Gender and Fund Assortment*

		Did Not Invest	Did Invest	Row Total
<b>Females</b>	Small Assortment (3 funds)	8 (14.0%)	49 (86.0%)	57 (100.0%)
	Medium Assortment (9 funds)	19 (33.9%)	37 (66.1%)	56 (100.0%)
	Large Assortment (21 funds)	21 (37.5%)	35 (62.5%)	56 (100.0%)
	Total Females	48 (28.4%)	121 (71.6%)	169 (100.0%)
	<b>Males</b>	Small Assortment (3 funds)	22 (39.3%)	34 (60.7%)
	Medium Assortment (9 funds)	16 (26.7%)	44 (73.3%)	60 (100.0%)
	Large Assortment (21 funds)	14 (21.9%)	50 (78.1%)	64 (100.0%)
	Total Males	52 (28.9%)	128 (71.1%)	180 (100.0%)

FIGURE 1.

*Mean Plan Participation Incidence as a Function of Gender and Fund Assortment*



Men's participation, on the other hand, did not fall as fund assortment size increased. In fact, men's participation rates rose from 60.7% in the small fund assortment size to 78.1% in the large fund assortment size (Chi-square (1) = 4.311,  $p < .05$ ). The differences between the small (60.7%) and medium (73.3%) assortment sizes (Chi-square (1) = 2.094,  $p > .10$ ) and medium (73.3%) and large (78.1%) assortment sizes (Chi-square (1) = 0.38,  $p > .50$ ) were not significant.

In terms of comparing participation rates between men and women by fund assortment size, a significantly larger proportion of women participated in the plan than men when a small assortment was offered (86.0% versus 60.7%, Chi-Square (1) = 9.24,  $p < .005$ ); there was no difference when a medium assortment was offered (66.1% versus 73.3%, Chi-Square (1) = 0.72,  $p > .35$ ); and a directionally smaller proportion of women invested in the plan than men when a large assortment was offered (62.5% versus 78.1%, Chi-Square (1) = 3.53,  $p < .10$ ).

### **Dollars Invested in the Plan**

We next measured participation in terms of the extent of monetary investment in the plan among those who chose to participate. We conducted a stepwise regression on dollars invested as a function of fund assortment size (dummy coded, as described previously), gender, and all possible interactions, with covariates included for age, household income, risk aversion and self-reported knowledge.

The only significant effect was the interaction of gender with large assortment size ( $t = 2.15$ ,  $p < .05$ ). When choosing from the small fund assortment, the amount invested by men (\$7,657) and women (\$7,530) did not differ ( $t(84) = -0.15$ ,  $p > .85$ ). Similarly, when choosing from the medium fund assortment, the amount invested by men

(\$7,735) and women (\$6,708) did not differ ( $t(84) = -1.27, p > .20$ ). However, when choosing from the large fund assortment, the amount invested by men (\$8,444) was greater than that invested by women (\$6,843;  $t(87) = -2.15, p < .05$ ; see figure 2; Note: the differences within gender were not significant). Thus, we see that among those who chose to participate in the plan, the large fund assortment size created a discrepancy in the participation of women relative to men, as measured by dollar investment level.

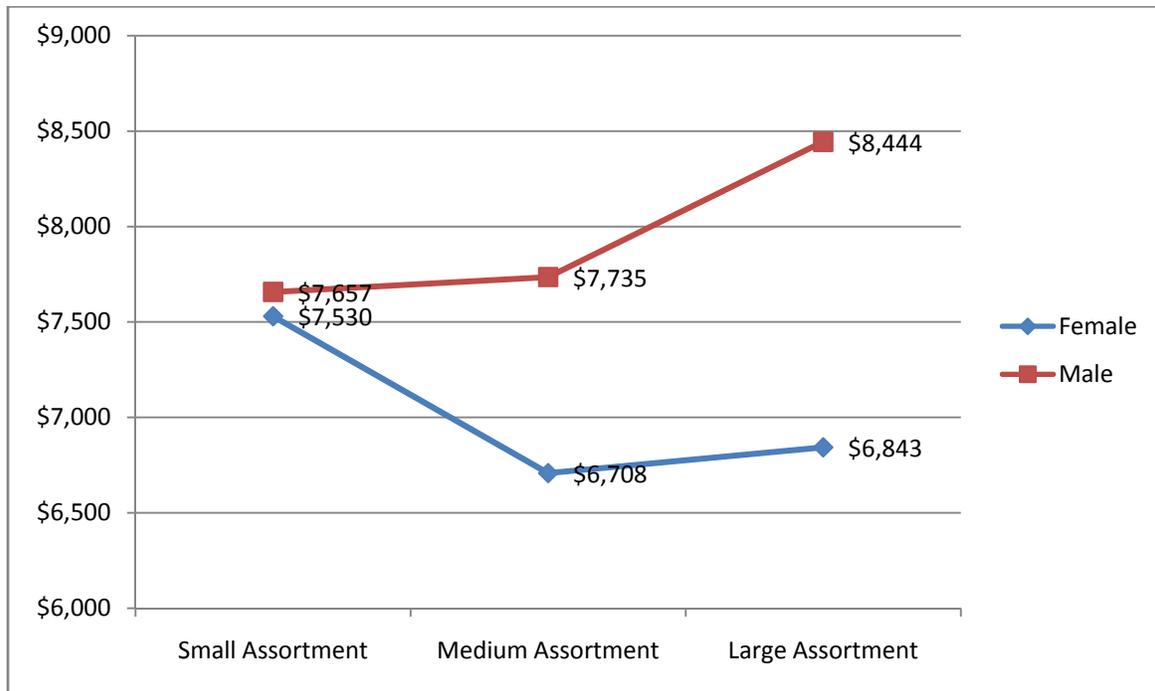
TABLE 3.

*Mean Dollars Invested by Participants as a Function of Gender and Fund Assortment*

		Dollars Invested
<b>Females</b>	Small Assortment (3 funds)	\$7,530
	Medium Assortment (9 funds)	\$6,708
	Large Assortment (21 funds)	\$6,843
<b>Males</b>	Small Assortment (3 funds)	\$7,657
	Medium Assortment (9 funds)	\$7,735
	Large Assortment (21 funds)	\$8,444

FIGURE 2.

*Mean Dollars Invested by Participants as a Function of Gender and Fund Assortment*



## DISCUSSION

The results reported here show that individual difference factors, such as gender, and contextual or plan structure factors, such as number of mutual funds offered in a 401(k) plan, can interact to influence both the incidence and extent of participation in defined contribution retirement investment plans. Iyengar, Jiang and Huberman (2004) found that participation rates declined by 1.5% to 2.0% for each ten additional fund added to the choice assortment in 401(k) plans. Here, we found that the reduced participation in retirement plans that can result from increased fund assortment size was moderated by gender, with the negative effect of larger assortments on participation evident among women, but not among men. We also measure participation in two ways: a) incidence (i.e., yes/no) and b) extent (\$ conditional on incidence = yes).

More specifically, we found that women are less likely to participate in the 401(k) when larger mutual fund assortments are offered. In contrast, the evidence suggests that men may be more likely to participate when larger assortments are offered. We also found that among those who decided to participate in the plan, the large fund assortment caused women to invest fewer dollars compared to men.

Those responsible for formulating 401(k) plan structures should be aware of potential differences in plan participation based on gender, and more broadly, on differing levels of financial literacy. We found that women reported being less knowledgeable (although not less risk taking) than men, suggesting a potential explanation for why larger fund assortments may be demotivating for women but motivating for men. Investors who feel they do not possess adequate knowledge to make such weighty decisions, may be easily overwhelmed by larger choice assortments of funds. This result likely applies not only to women, but also to minorities, the less educated, and perhaps immigrant populations in the U.S. Those with greater knowledge levels, conversely, may be motivated to participate by larger assortments.

Thus, it may be a disservice for employers to simply decide to pare down fund offerings in 401(k) plans. The results instead suggest to those responsible for structuring retirement plans for the employees need to consider tailoring such plans as a function of individual financial literacy level (e.g., offering more options to those with greater knowledge, and fewer options or simpler choice menus to those with less knowledge; see Botti and Iyengar 2006).

Future research could investigate the underlying reasons why larger assortments may have more negative effects on women than on men. It seems likely that women's

lower financial literacy levels make them more likely to feel overwhelmed by larger fund assortments. Women's methods of processing information may further contribute to this effect. Studies in the area of consumer behavior have investigated how men and women differ in terms of the ways they process information. Meyers-Levy and Maheswaran (1991; see also Iacobucci and Ostrum 1993; Kempf, Laczniak and Smith 2006; Meyers-Levy 1989) showed that men tend to process messages with a more heuristic or schema-based approach, while women tend to process information in a more detailed or piecemeal fashion. If women tend to examine more information than men and in a more detailed manner, when presented with more funds to choose from in a 401(k) decision context, they may be more likely than men to experience information overload and feel overwhelmed by the task, which will be behaviorally evident in the decision not to participate in the plan.

Future research could also explore what other aspects of 401(k) plan structures have similar effects on participation as well as satisfaction among lower financial literacy segments of the population. For example, certain types of decision aids, such as graphical displays (Kozup, Howlett, and Pazano 2008) could backfire for women, if they have the effect of increasing the amount of information processing required. This and other questions offer many fruitful areas for further exploration.

## APPENDIX

### Small, Medium and Large Fund Assortments Used in Study

#### Small Fund Assortment (3 funds):

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%
Federal Money Market Fund	Invests primarily in short-term securities that are issued by U.S. government agencies.	1.0%	2.7%	4.4%
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%

Medium Fund Assortment (9 funds):

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%

Large Fund Assortment (21 funds):

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%
Admiral Treasury Money Market Fund	Invests solely in direct government obligations, such as U.S. Treasury bills and other short-term securities backed by the full faith and credit of the U.S. government. This fund's expenses are low because of its high minimum investment.	1.1%	2.7%	4.3%
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%
Growth Equity Stock Fund	Seeks long-term capital growth by investing in the stocks of midsize and large companies with strong earnings prospects, and selling those whose earnings prospects are deteriorating. This fund's adviser evaluates these earnings prospects through a blend of computer-driven and fundamental (company, industry, and economic) analysis.	28.6%	-23.6%	7.4%
Health Care Stock Fund	Seeks long-term capital growth by investing in U.S. and foreign companies that develop, produce, or distribute products and services related to health care. These include pharmaceutical firms, medical supply companies, companies that operate health care facilities, and companies engaged in research. To discourage short-term trading, the fund assesses a 1% redemption fee on shares held less than five years.	16.0%	0.6%	19.6%
High-Yield Tax-Exempt Bond Fund	Seeks high current income exempt from federal tax by investing primarily in medium-quality municipal securities with an average maturity of 15 to 25 years. This fund offers the highest yields but is subject to the highest risk of principal fluctuation.	6.6%	7.0%	5.7%

Fund Name	Fund Objective	Average Annual Total Returns		
		1 Year	3 Years	10 Years
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%
Intermediate-Term Bond Index Fund	Seeks to track the performance of a market-weighted bond index with an intermediate-term dollar-weighted average value.	7.5%	10.4%	---
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%
NJ Tax-Exempt Money Market Fund	Invests primarily in high-quality New Jersey municipal money market securities. This fund provides income that is exempt from both federal and New Jersey personal income taxes.	0.9%	1.8%	2.7%
PA Tax-Exempt Money Market Fund	Invests primarily in high-quality Pennsylvania municipal money market securities. This fund provides income that is exempt from both federal and Pennsylvania personal income taxes.	0.9%	1.9%	2.9%
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%
Short-Term Tax-Exempt Bond Fund	Seeks current income exempt from federal tax by investing primarily in high-quality municipal securities with an average maturity of 1 to 2 years. This fund pursues a higher level of income than that provided by comparable funds.	2.3%	3.8%	3.8%
Short-Term Treasury Bond Fund	Seeks current income by investing primarily in direct government obligations, such as U.S. Treasury notes and other securities backed by the full faith and credit of the U.S. government, with an average maturity of 1 to 3 years. This fund pursues a higher level of income than that provided by comparable funds.	2.7%	7.1%	5.8%

Fund Name	Fund Objective	Average Annual Total Returns		
		1 Year	3 Years	10 Years
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%
Treasury Money Market Fund	Invests solely in direct government obligations, such as U.S. Treasury bills and other short-term securities backed by the full faith and credit of the U.S. government. This fund offers the highest credit quality available.	0.9%	2.6%	4.1%
Value Index Stock Fund	The fund seeks to track the performance of a benchmark index that measures the investment return of large-capitalization value stocks.	23.8%	-6.3%	9.6%
Windsor Stock Fund	Seeks long-term capital growth and current income by investing primarily in the stocks of large and midsize companies believed by the advisers to have superior return potential not reflected in their current prices. This fund's advisers use both fundamental (company, industry, and economic research) and quantitative (computer modeling) analysis to identify those out-of-favor securities that will outperform the market over time.	30.7%	2.2%	10.6%

## REFERENCES

- Appicella, Corin L., Anna Dreber, Benjamin Campbell, Peter B. Gray, Moshe Hoffman, and Anthony C. Little. 2008. Testosterone and Financial Risk Preferences. *Evolution and Human Behavior*, 29(6): 384-390.
- Botti, Simona and Sheena Iyengar. 2006. The Dark Side of Choice: When Choice Impairs Social Welfare. *Journal of Public Policy & Marketing*, 25(1): 24-38.
- Enright, Allison. 2006. In Friends She Trusts: Seek to Build Relationships With Women Investors. *Marketing News*, April 15: 16-17.
- Hinz, R.P., D. D. McCarthy, and J. A. Turner. 1997. Are Women Conservative Investors? Gender Differences in Participant-Directed Pension Investments, in M.S. Gordon, O.S. Mitchell, and M.M. Twinney (Eds.), *Positioning Pensions for the Twenty-first Century*, (pp. 91-106), Philadelphia: University of Pennsylvania Press.
- Huberman, Gur, Sheena S. Iyengar and Wei Jiang. 2007. Defined Contribution Pension Plans: Determinants of Participation and Contribution Rates. *Journal of Financial Services Research*, 31(1): 1-32.
- Huberman, Gur, Sheena S. Iyengar, and Wei Jiang. 2003. Defined Contribution Pension Plans: Determinants of Participation and Contribution Rates. Working Paper, Columbia Business School.
- Huberman, Gur and Wei Jiang. 2006. Offering vs. Choice in 401(k) Plans: Equity Exposure and Number of Funds. *Journal of Finance*, 61(2): 763-801.
- Iacobucci, Dawn and Amy Ostrum. 1993. Gender Differences in the Impact of Core and Relational Aspects of Services on the Evaluation of Service Encounters. *Journal of Consumer Psychology*, 2(3): 257-286.
- Iyengar, Sheena S., Wei Jiang, and Gur Huberman. 2004. How Much Choice Is Too Much: Determinants of Individual Contributions in 401(k) Retirement Plans, in *Pension Design and Structure: New Lessons from Behavioral Finance*, Olivia S. Mitchell and Steve Utkus, eds. Oxford: Oxford University Press: 83-97.
- Jianakopulos, Nancy Ammon and Alexandra Bernasek. 1998. Are Women More Risk Averse? *Economic Inquiry*, 36(4): 620-30.
- Kempf, DeAnna, Russell Lacznia, and Robert Smith. 2006. The Effects of Gender on Processing Advertising and Product Trial Information. *Marketing Letters*, 17(1): 5-16.

- Kozup, John, Elizabeth Howlett, and Michael Pagano. 2008. The Effects of Summary Information on Consumer Perceptions of Mutual Fund Characteristics. *Journal of Consumer Affairs*, 42(1): 37-59.
- Kristof, Kathy M. 2007. This 401(k) Plan Hums Along on Autopilot. *Los Angeles Times*, July 22: page C4 (Also available at: <http://articles.latimes.com/2007/jul/22/business/fi-perfin22>).
- Lusardi, Annamaria and Olivia S. Mitchell. 2005. Financial Literacy and Planning: Implications for Retirement Wellbeing. *Michigan Retirement Research Center Research Paper* No. WP 2005-108.
- Madrian, Brigitte C. and Dennis F. Shea. 2001. The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior. *Quarterly Journal of Economics*, 116(4): 1149-87.
- Meyers-Levy, Joan. 1989. Gender Differences in Information Processing, in P. Cafferata and A. Tybout (Eds.) *Cognitive and Affective Responses to Advertising* (pp. 219-260) MA: Lexington Books.
- Meyers-Levy, Joan and Durairaj Maheswaran. 1991. Exploring Differences in Males' and Females' Processing Strategies. *Journal of Consumer Research*, 18(1): 63-70.
- Morrin, Maureen, Susan Broniarczyk, J. Jeffrey Inman and John Broussard. 2008. Saving for Retirement: The Effects of Fund Assortment Size and Investor Knowledge on Asset Allocation Strategies. *Journal of Consumer Affairs*, 42(2): 206-222.
- Rotfeld, Herbert. 2008. Financial Aliteracy. *Journal of Consumer Affairs*, 42(2): 306-307.
- Sunden, Annika E. and Brian J. Surette. 1998. Gender Differences in the Allocation of Assets in Retirement Savings Plans. *American Economic Review*, 88(2): 207-11.
- Thaler, Richard and Shlomo Benartzi. 2004. Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy*, 112 (1, part 2): S164-S187.
- Wiener, Josh and Tabitha Doescher. 2008. A Framework for Promoting Retirement Savings. *Journal of Consumer Affairs*, 42(2): 137-164.