Bridging the Risk Tolerance Gap between Men and Women
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CHAPTER 1: INTRODUCTION

Women earn less (Blau & Lawrence, 2000), live longer, take longer breaks from the workforce (Xu, et al, 2010), and appear to take less investing risk than men do. This puts them at a decided disadvantage when it comes to retirement savings and the possibility of outliving their money. While the pay gap, longer lifespans and maternity leaves from employment are factors mostly beyond the control of the individual – risk tolerance is one parameter that can be changed.

This paper will focus on the topic of women's risk aversion compared to men. We'll look at the implications of this possible risk gap, and what it could mean financially to women. Several hypotheses will be proposed, and the research on the subject will be examined to determine if it supports these hypotheses. Then we'll conclude with a discussion of what this means from a marketing point of view and how we'll design a strategy to take on this predicament.

Finally, as an addendum to this paper, sample marketing materials will be developed based on the findings. These materials will be in the form of mailing pieces designed to be used in an actual marketing campaign.

Research Questions: Is there a gender gap in risk-taking that manifests in a lower investment return for women? What are the possible causes for this lower risk tolerance? How can women be encouraged (from a marketing perspective) to take on more risk in an effort to increase their portfolio returns?

CHAPTER 2: IMPLICATIONS

Women have, on average, lower lifetime earning power due to lower wages and less time in the workforce, as well as having to stretch their retirement savings over a life expectancy that's five years longer than men (World Factbook, 2012). This would be greatly exacerbated by a lower risk tolerance, since riskier assets have a higher expected return (Jianakoplos & Bernasek, 1998). These characteristics

might put a comfortable retirement in danger, but how important is the risk tolerance difference (as opposed to a longer life expectancy and lower earnings)?

Research done by Watson & McNaughton (2007) calculated the average difference in retirement plan balance between men and women to be AU$210,423 ($214,421 in U.S. dollars), though some of this is attributable to income disparity rather than the different choice of investments.

Based on survey results, Jiankoplos & Bernasek (1998) came to a similar (though hypothetical) conclusion. Using the corresponding averages from their survey, they calculated an average rate of return of 4.66% for women, while men would net 5.57% (these numbers assume the 20-year returns for stocks, bonds and Treasury bills from 1976-1995). While this variance in return seems small, compounded over long periods of time it becomes greatly magnified. If an investor put away $5,000 per year for 30 years, the difference in the two accounts, one at 4.66% and the other at 5.57%, would be almost $65,000 (the accounts would grow to $347,649 at 4.66%; and to $412,459 at 5.57%).

And neither of these first two examples assumes women invest less, just that they invest less aggressively in their choices. There is some evidence that risk aversion in women results in a lower amount invested as well, particularly among single women (Garrison & Gutter, 2010).

This is an especially challenging dilemma – women earn less, work fewer years, live longer, invest less and invest more conservatively. This builds comparatively less wealth, which in and of itself is another positively correlated variable in risk taking. Those with greater wealth are able and willing to take on more risk, but if female investors grow assets more slowly, they fall further and further behind their savings goals, resulting in a reinforcing downward spiral (Finke & Huston, 2003). In fact, Finke & Huston (2003) determined that not only does wealth allow for more risk taking, but the correlation worked both ways: "Willingness to take greater financial risk is an independently significant predictor of net worth and total financial assets…" (page 253).

CHAPTER 3: HYPOTHESES

The emphasis of this effort will be on the practical application of the findings. It is based on three hypotheses, the first two of which will be tested against the existing research findings; the third to be applied in a real-world setting. The first hypothesis to be used in this paper is:

H1: Single women exhibit less risk-taking behavior investing for retirement and this has an impact on future standards of living.

Due to a general inability to determine the specific investment decision-maker in a married couple, this paper will concentrate on single women and single men (such that when references are made to "women" or "men" unless otherwise noted, this will refer to single individuals).

The second hypothesis that we'll test against accepted research is:

H2: A major cause of this risk tolerance gap between men and women is a lack of investor confidence.

An assumption being made corollary to this hypothesis is that greater investor knowledge leads to greater investor confidence.

My third hypothesis will be tested in real-world application outside the scope of this paper. Therefore, less research will be presented to specifically address this last hypothesis; however the marketing campaign plan and materials will be based on this thesis:

H3: This lack of confidence can be overcome by a marketing effort to encourage female investors to work with an advisor and, with a coordinated education campaign, take on appropriate risk.

The underlying assumption is that this gender difference in approaching investment risk is not "hard-wired" but can be remedied. Other risk-taking activities will be examined to determine whether this third hypothesis is likely to hold up, but it will be ultimately tested by the actual marketing effort that will be enacted once the advertising plan and materials are finalized.

CHAPTER 4: LITERATURE REVIEW

The burden of financing retirement is shifting significantly from employers to employees. From 1993 to 2005, the percentage of private-industry workers covered by a defined benefit pension dropped from 32% to 21% (Costo, 2006). This shift increases the importance of selecting suitable investments and determining an appropriate risk level.

This literature review will examine current research into the link between gender and risk tolerance, and search for possible causes for this discrepancy, as well as possible remedies.

Investment Battle of the Sexes

Economic theory assumes decision-makers are entirely rational (Mankiw, 2007), which would lead one to believe that risk tolerance would be distributed mostly along an age continuum. The older an investor, the less human capital (future income streams derived from labor) available, the more risk averse a rational investor should become. When an investor is younger, most of his available capital is in the form of very low-risk human capital, and that investor can and should take on more investment risk.

The current research, however, strongly supports the idea that women take less investment risk than men (Hallahan & McKenzie, 2004; Garrison & Gutter, 2010; Jianakoplos & Bernasek, 1998; and Mittal & Vyas, 2011), even after adjusting for other variables, such as age, wealth, investing knowledge and income. Watson & McNaughton (2007) found a similar trend in Australia, while Mittal & Vyas (2011) saw the same results from their study in India, making the outcomes useful across geographic and demographic boundaries. Garrison & Gutter (2010) found that even amongst college students, there was already a difference between men and women in their views of risk.

H1: Single women exhibit less risk-taking behavior investing for retirement and this has an impact on future standards of living.

Why Are Men from High-Risk Mars and Women from Low-Risk Venus?

While there is voluminous research supporting the hypothesis that women are less risk tolerant, fewer studies explore the causes of that discrepancy. A few common trends, however, can be discerned from these investigations. Namely, that overconfidence is a predominantly male trait that shows up in some risk-taking activities, including investing. Barber & Odean (2001) take the deepest dive into this topic, using trading data from more than 37,000 households. They found that men turned over their portfolio almost half again as often as women (77% turnover rate versus 53%). In fact, this overconfident behavior actually leads to lower rates of return on similar types of investments. These results fit in well with what several other researchers found (Mittal & Vyas, 2011 and Johnson & Powell, 2001).

This gender-specific overconfidence doesn't seem to be a general behavior, but more specific to particular actions, pointedly those identified as "masculine" tasks (Deaux & Farris, 1977). This coincides with the second possible cause for gender risk-tolerance differences: issue capability. Issue capability (see Definitions above) is one of the important drivers of overconfidence. Men appear much more comfortable, showing higher issue capability, taking risk in an investment setting; while women are more sensitive to issue capability in insurance decisions (He, Inman & Mittal, 2008).

An interesting corollary to this is that men and women were found to have no difference in the quality of decisions from a management perspective (Johnson & Powell, 2001). But in gambling, and risky behaviors such as seat-belt use and blood pressure checks, men took significantly more risk (Jianakoplos & Bernasek, 1998).

H2: A major causes of this risk tolerance gap between men and women is a lack of investor confidence.

Bridging the Gap

While several companies in the investment industry have undertaken programs designed to target female investors (Bach, 2000), the current research isn't very specific in how exactly to accomplish this goal (Koco, 2006).

The first clue as to whether overcoming this gap in risk tolerance is possible comes from Johnson & Powell (2001), who found that employees that had undergone management training had a higher decision-making risk tolerance in a business setting. While this may not generalize across the investment spectrum, college-educated investors tended to be less risk averse, regardless of gender (Finke & Huston, 2003). This indicates that education and training may be one remedy to an inappropriate risk tolerance.

Women tended to make a more frequent use of social learning opportunities, so for them, this education would come from many sources other than a traditional investment advisor – specifically friends and family (Garrison & Gutter, 2010).

It also appears possible that issue capability is an attribute that can be affected by presentation of the problem: if an investment decision can be presented as an insurance decision, for example (He, Inman & Mittal, 2008). Given the different ways men and women process information, taking this into account with different messaging might be an effective way of encouraging female investors to take the risk necessary to achieve a more comfortable retirement. According to Mittal & Vyas (2011), this could be done by focusing on a variety of distinct product benefits, rather than just the rate of return; and to accentuate the collaborative aspects of working with an advisor.

H3: This lack of confidence can be overcome by a marketing effort to encourage female investors to work with an advisor and, with a coordinated education campaign, take on appropriate risk.

CHAPTER 5: CONCLUSION

Women clearly are more risk averse than men and it appears that overconfidence is responsible for a large part of this difference. The first two hypotheses are well-supported by the existing research. That leaves us to create a marketing and education plan. Theory tends to support this third hypothesis, that the risk tolerance gap can be overcome through marketing, but the research is vague on how to accomplish this.

But there are a few strands to work with: women make more frequent use of social learning opportunities; show higher levels of issue capability with insurance decisions than with investment decisions; and process information in a more holistic manner than men (who focus on investment returns much more readily).

The marketing pieces accompanying this paper will include those three concepts in an attempt to both reach and educate the target female audience. The goal will be to build up investor confidence and resources to allow for an acceptable and appropriate risk tolerance that won't cause undue anxiety during down markets, while consequently engaging them as investing clients.

The focus and content of this marketing campaign will be:

- To include an insurance-based approach that emphasizes the risk of running out of money in retirement by not investing aggressively enough;
- To present the cooperative aspect of getting multiple opinions by working with an advisor;
- To incorporate an education component, including tools to determine progress;
- To encompass the entire family, especially those with young daughters.

It is the goal of this effort to use these materials in the marketplace to increase the company's customer base of women investors. An interesting follow-up to this research would be measuring the direct effects of this marketing campaign and administering further fine-tuning of the materials.

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APPENDIX A: DEFINITIONS AND TERMS

Asset allocation – The allocating of a portfolio of investments according to levels of risk and return that achieves monetary goals and allows the investor to remain comfortable with the level of volatility. As one gets closer to an investment goal, the allocation of specific equities should decrease in risk.

Defined benefit pension – A type of company-sponsored retirement plan in which returns are based on the wages and tenure of the employee, rather than the returns of the underlying investments. Thus, in a defined benefit pension, the investment risk is borne by the employer sponsoring the plan.

Expected return – The theoretical return a type of security should deliver, given its risk level. Higher risk levels should generate higher returns to compensate for greater volatility and risk; while lower risk investments should produce correspondingly less return.

Human capital – The future income an individual can reasonably expect to earn over his or her remaining working years. Human capital is a conservative (relatively non-fluctuating) component of an investors' asset allocation that often gets overlooked. It's the reason that younger investors can and should take on more risk in their other investments – they have plenty of conservative human capital. Whereas an investor closer to retirement has much less conservative human capital, so should ratchet back the amount of risk in the monetary investments.

Information processing – The way a person absorbs information; in the context of this paper it refers to the way a person takes in a marketing messaging, specifically how women differ from men in the way they do so. Men typically zero in on self-serving messages (rate of return of the investment), while women take information in a more holistic manner.

Insurance decisions – Decisions regarding the preservation of capital.

Investment decisions – Decisions regarding the growth of capital.

Issue capability – This term refers to the extent which a decision-maker feels comfortable they have the skills and resources necessary to resolve a particular issue. In this paper, the particular issue we're referring to is making investment decisions.

Rate of return – The monetary return of an investment, measured as a compounded percentage.

Risk averse/risk aversion – The principle of attempting to avoid risk by investing conservatively. Generally, when investors think of risk aversion, they have price fluctuation in mind, however, many kinds of risk exist (market risk, inflation risk, company risk, purchasing power risk, etc.).

Risk tolerance – This is a concept expressing how much or little risk an investor (whether an individual investor or not) is willing to take on. Generally, this references price fluctuation risk, rather than other types of risk.

Social learning (opportunities) – Learning that takes place in a social context, usually from family, friends, co-workers or peers. For purposes of this research, this means learning about financial topics through discussions with and observations of the people one interacts with.

APPENDIX B: MARKETING MATERIAL SAMPLES

The sequential marketing campaign will include two postcards (available as PowerPoint files upon request), an email and a phone call. The first postcard ("Are Your Financial Goals at Risk?") is designed to capture both the insurance-based risk-taking approach and the more collegial aspect of getting multiple options before proceeding to decision-making. These attributes should increase the receptivity to female prospects.

The second postcard ("The Investing Journey") is designed with a more positive message, and is meant to convey an educational component and emphasize the tools and resources available to a prospective investor.

After these two marketing contacts have been made, an email, with links to actual tools and resources on the company website would be sent. Lastly, a follow-up phone call to the list of prospects will be made in an attempt to schedule face-to-face meetings.

This campaign will take approximately three months to complete. The first postcard will be mailed on day one of the campaign; the second will be mailed at day thirty; the email will be sent on day forty five; and the follow-up phone call is scheduled to be made between days sixty and ninety.

An acceptable measure of success will be a response rate of greater than 3% (the number of respondents from the initial list of prospects), and more than 35% of those respondents scheduling face-to-face appointments. Thus, of a list of 1000 potential customers, thirty would respond to the campaign and ten would schedule appointments. This would compare favorably to our historic response rate of 1.7% and ratio of appointments of 23%.

APPENDEX C: ANNOTATED BIBLIOGRAPHY

Bach, Deborah. (2000). Targeting investment-wary women. *American Banker, 165*,(194), 1.

This is a short article in a trade publication that highlights the need for a different communication strategy and method when marketing to women. An interesting finding from a Harris survey that this article references is that Gen X women are just as likely as previous generations to describe investing as "scary" which is different than the response of men. Although it doesn't add much data, it does help frame a marketing solution that might answer the question of how to promote more investment risk-taking among women.

Barber, B. & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics, 116*, 261-292.

Barber and Odean hypothesize that men are more overconfident in their investing ability than women, and to prove that hypothesis, they studied more than 35,000 trading accounts at an online brokerage to determine whether men trade more than women, and if so, whether this increased trading hurts or helps their returns. The results were a much greater amount of trades, on average, by men than women. Ironically, this increased trading activity caused lower portfolio performance, but it also highlighted a possible reason for gender risk tolerance differences: overconfidence. Men, being more overconfident, take more investing risk. This was a very strong study, due to its internal and external validity, and supports my hypotheses, as well as suggesting possible marketing strategies for encouraging risk-taking investment behavior amongst women.

Finske, M. & Huston, S. (2003). The brighter side of financial risk: Financial risk tolerance and wealth. *Journal of Financial and Economic Issues, 24*,(3), 233-256.

Finske and Hutton analyzed the link between wealth and risk tolerance. They found a strong correlation running both ways: those with greater wealth had a much higher risk tolerance, even after factoring age, gender and marital status. The interesting finding in this study was that the willingness to take financial risks was an accurate predictor of higher net worth. This has huge implications for women with a lower risk tolerance. Their research is significant due to the relatively large number of participants (more than 4,000) in the United States; and the authors used different and overlapping data sets to fill in for missing information and promote strong validity of the results.

Garrison, S. & Gutter, M. (2010). Gender differences in financial socialization and willingness to take financial risks. *Journal of Financial Counseling and Planning, 21*,(2), 60-72.

This was an interesting web-based study of college students that examined risk tolerance differences already existing between college-aged males and females; as well as whether social learning opportunities differed by gender; and if those learning opportunities impacted risk-taking tendencies. They confirmed existing research that risk tolerance differences already existed by the time participants reached college (this was an extensive survey – more than 15,000 participants, lending credence to their findings). One of their conclusions was that women talk more with parents and peers about investing than men, and this impacts their risk tolerance much more than educational efforts outside the home. This supports several of my own hypotheses, also reinforcing the importance of encouraging risk-taking in women – as it also impacts the next generation of female investors.

Hallahan, T., Faff, R. & McKenzie, M. (2004). An empirical investigation of personal financial risk tolerance. *Financial Services Review, 13*,(1), 57-78.

This is a foundational study that supports the widely held belief that women take less investing risk than men. The study analyzed the impact of various demographic factors on risk tolerance: age, gender, marital status, income and wealth. The authors found the same gender differences in risk tolerance as other researchers. They also concluded that age has an inverse relationship with risk (as with generally held views, the older you get the more risk adverse you become); married couples have a higher risk tolerance; as do wealthier and higher-income individuals. The strength of this study is the large sample size (more than 20,000 people were surveyed) and the fact that a third party was used to design the survey questions and analyze the data. The research, however, was conducted in Australia, casting some doubt on its applicability in the United States.

He, X., Inman, J. & Mittal, V. (2008). Gender jeopardy in financial risk taking. *Journal of Marketing Research, 45*, 414-424.

The authors studied the reasons women are more risk averse than men. Specifically, they explored issue capability (how knowledgeable and confident an investor was relating to the investment) as a determinant of risk tolerance. They found the effects of issue capability differed between genders: for men high issue capability in investing translated to more risk tolerance; for women issue capability didn't positively impact risk tolerance. A corollary they found, however, was that issue capability did impact women's risk-taking for insurance decision-making, but not for men. This was attributed primarily to agent-communion theory. I found this connection to be much more tenuous than the other conclusions made in the study, however the results do support my own hypotheses and lead to interesting possibilities in the way women can be helped to increase risk tolerance in investing decisions.

Jianakoplos, N. & Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry, 36*, 620-630.

This is the definitive research on the risk tolerance differences between genders. The authors found single women to be more risk averse than either single men or married couples. They also looked specifically at actions, rather than just a survey; and concluded that women hold fewer risky investments than single men or married couples. One of the few drawbacks of this study was that they couldn't conclude who the decision-maker was in married couples, so weren't able to use that data to verify their findings between single men and women. Other than that one weakness, this study strongly supports the conclusion that women take less risk in investing than men do. While it doesn't look at causality, it is a foundation of my own hypotheses in this area.

Johnson, J. & Powell, P. (1994). Decision making, risk and gender: Are managers different? *British Journal of Management, 5,(*2), 123-138.

Johnson and Powell conducted very useful research by comparing the decision-making and risk-taking between genders in two parameters. The first was in a gambling setting in the UK, while the second examined decision-making of college undergraduates that had been selected for, and completed, a program of three years of management training. The conclusions they drew from this comparison were that there was a risk tolerance gender difference in the first group (women bet less and took less risky bets than men), but there was not in the second. While not specifically focused on investing, this gives support to the thesis that risk aversion can be decreased through education. I found the methodology of this study to be sound and, though it was done in the United Kingdom, to be fairly applicable to an investing public in the U.S.

Koco, Linda. (2006). Battle of the sexes: what boomer advisors need to know. *National Underwriter Life & Health, 110*,(32), 47 & 52 & 56.

This article came from a trade publication, and would not be considered academic research. Its focus was on the gender risk-tolerance difference in married couples, and how advisors can manage two sets of sometimes very different investment goals within one couple. The usefulness of this paper was in taking the real-life experience of how advisors overcame these challenges from both a face-to-face aspect, as well as how to translate that same experience and using it from a marketing standpoint to encourage women to be less risk averse.

Mittal, M. & Vyas, R. (2011). A study of psychological reasons for gender differences in preferences for risk and investment decision making. *The IUP Journal of Behavioral Finance, 8*, 45-60.

Mittal and Vyas look at the investing tendencies of men and women through five different hypotheses: is there a gender difference in risk tolerance; is there a difference in the types of investments men and women prefer; is there a difference in information processing style between genders; are men more overconfident in their investing abilities; and do women and men differ in their efforts to accumulate information. Through a survey of 600 participants in the Indian city of Indore they found support for the first four hypotheses, but not the last. The ideas presented in this paper lend credence to my own efforts by examining causation for the gender risk preference differences. The small sample size and the fact that all the survey participants came from India, however, raise doubts about the external validity of the results to a larger investing population in the United States.

Watson, J. & McNaughton, M. (2007). Gender differences in risk aversion and expected retirement benefits. *Financial Analysts Journal, 63*,(4), 52-62.

This study was done in Australia and supports the existing theory that women take less financial risks in investing than men. What's unique about this paper, other than reinforcing the prevailing opinions on this topic, was that the authors quantified just how much that difference in risk tolerance translated to in retirement balances. They also took into income into account as a variable, and concluded that higher income equates to higher risk tolerance, for both men and women. While this is not a focus of my own research, it certainly paints a picture for the need to educate and encourage risk-taking, especially among lower income single females, who are most at risk to retire with small balances.