Financial Risk Tolerance, Sensation Seeking, and Locus of Control Among Pre-Retiree Baby Boomers

Abed G. Rabbani,[a] ● *Zheying Yao,[b]* *Christina Wang,[c]* ● *and John E . Grable[d]*

Financial risk tolerance is an important personal characteristic that is widely used by financial professionals to guide the development and presentation of client-centered recommendations. As more baby boomers enter retirement, research on how these individuals perceive their willingness to take financial risks has gained importance, particularly as the focus of investment portfolios changes from capital accumulation to capital preservation in retirement. This study examined the role of sensation seeking and locus of control on financial risk tolerance for a pre-retiree baby boomer sample using the 2014 wave of the National Longitudinal Survey of Youth 1979. Findings from three ordinary least square (OLS) regression models showed that baby boomers who were not sensation seekers, and those who displayed an external locus of control orientation were more likely to exhibit a low tolerance for financial risk. Furthermore, those who engaged in sensation-seeking behavior were more likely to have an internal locus of control orientation and a high tolerance for risk.

Keywords: financial risk tolerance, locus of control, pre-retiree baby boomers, sensation seeking

Financial risk tolerance is an important personal characteristic that helps financial professionals conceptualize, develop, and implement financial product and service recommendations for clients. Risk tolerance is generally defined as a person's willingness to take part in a behavior in which one or more outcomes are both uncertain and potentially negative (Grable & Joo, 2004; Kuzniak et al., 2015). When working with clients, it is important for financial professionals to assess and evaluate a client's financial risk tolerance. In many circumstances, financial professionals are required by statute or regulatory guidelines to assess a client's financial risk tolerance before making transactions, recommending investments, or providing other types of financial advice (Financial Industry Regulatory Authority, 2012). Aside from the investment management process, financial risk tolerance also has practical significance in describing everyday money matters. For example, a client's financial risk tolerance can be used by a financial professional to determine the appropriate mortgage or credit card to recommend or as a guide when making life, health, disability, and property insurance recommendations.

Over the last three decades, researchers have taken steps to better understand the determinants of risk-taking attitudes and behaviors. A key step in this regard occurred in 1993. This was the year Irwin presented a model of risk-taking that classified predisposing factors—variables that are associated with risk-taking attitudes—into two categories: environmental and biopsychosocial characteristics. Examples of environmental factors include socioeconomic status, family situation, and social transitions. Examples of biopsychosocial factors include age, gender, sensation seeking, locus of control, and ethnicity. Irwin's work helped researchers refine models of financial risk tolerance.

[a] *Assistant Professor, Department of Personal Financial Planning, University of Missouri, 239 E Stanley Hall, Columbia, MO 65211. E-mail: rabbania@missouri.edu*
[b] *Assistant Professor, School of Finance, Zhejiang Gongshang University, No.18, Xuezheng Street, Qiantang Xinqu, Xiasha, Hangzhou, Zhejiang 310018, China. E-mail: zheyingyao@163.com*
[c] *PhD Student, LeBow College of Business Department of Finance, Drexel University, Gerri C. LeBow Hall 1133, 3220 Market Street, Philadelphia, PA 19104. E-mail: christina.hong.wang@drexel.edu*
[d] *Professor, Department of Financial Planning, Housing and Consumer Economics, University of Georgia, 124 Barrow Hall, 115 DW Brooks Dr., Athens, GA 30602. E-mail: grable@uga.edu*

Some of the most important environmental and biopsychosocial factors reported in the literature include gender (Bannier & Neubert, 2016; Fisher & Yao, 2017), age (Gilliam et al., 2010; Sahm, 2012), education level (Ryack, 2011; Sahm, 2012), income and wealth levels (Bernheim et al., 2001; Yao et al., 2011), and marital status (Anbar & Eker, 2010; Neelakantan, 2010). Among the large variety of biopsychosocial factors, two personality traits—sensation seeking and locus of control—have been the focus of numerous risk-tolerance studies. Wong and Carducci (2016) noted that, intuitively, there should be some relationship between financial risk tolerance, sensation seeking, and locus of control because these constructs have uncertainty in common. Other biopsychosocial factors identified in the literature include one or more of the Big Five personality traits (i.e., extraversion, conscientiousness, agreeableness, emotional stability, and openness) (Rabbani et al., 2019; Wong & Carducci, 2013) and self-control (Strömbäck et al., 2017). Some have argued that personality traits have a stronger relationship with financial behavior than do demographic variables (Chitra & Sreedevi, 2011; Grable & Joo, 2004; Soane et al., 2010).

The current study employed data from the National Longitudinal Survey of Youth 1979 (NLSY79) to weigh in on previous research that has described associations among sensation seeking, locus of control, and financial risk tolerance. A goal associated with this study was to contribute to the financial counseling and financial planning profession's understanding of personality-driven risk attitudes. Rather than rely on a sample of convenience (e.g., using samples of college students or online panels), the models in this study were estimated with data from a nationally representative dataset. Additionally, the sample used in this study included only individuals who were the most likely adopters of financial counseling and financial planning services.

Of particular interest to financial professionals is the segment of older Americans who are approaching retirement. Baby boomers are of particular importance. The baby boomer generation consists of all individuals born in the United States between 1946 and 1964 (Colby & Ortman, 2014). Whereas the older half of this generation may already be in retirement, the younger half comprises a large pre-retiree population. The present study was designed to examine how sensation seeking and locus of control are associated with financial risk tolerance among this group. Specifically, the following research questions were used to guide the study:

1 Do pre-retiree baby boomers who engage in sensation-seeking behavior exhibit higher financial risk tolerance?
2 Do pre-retiree baby boomers with an internal locus of control orientation exhibit higher financial risk tolerance?

Literature Review and Hypotheses
Sensation Seeking
Sensation seeking can be conceptualized as the need for varied, novel, and complex sensations and experiences and the willingness to take physical or social risks for the sake of such experiences (Corter & Chen, 2006). Sensation seeking is thought to be a precursor to engaging in various risky behavior. For instance, Nicholson et al. (2005) found that one particular facet of the extraversion trait—sensation seeking—surfaced as a primary predictor of a person's willingness to take a risk. Based on their results, Nicholson et al. proposed three nonexclusive types of risk-takers: (a) stimulation seekers for whom risks are intrinsically gratifying, (b) goal achievers who bare significant risk due to their drive for gain, and (c) risk adaptors who are drawn to roles that involve risk due to their skills and interests. The first group consists primarily of individuals who score very high in sensation seeking; this group comprises a significant proportion in society.

A more recent study provided strong support for a direct link between sensation seeking and financial risk tolerance. In a population of university students, Wong and Carducci (2016) found that the direct relationship between these two constructs existed even after controlling for the effects of gender, age, academic achievement, or college academic standing. On the other hand, Corter and Chen (2006) reported nonsignificant correlations between scores on their risk-tolerance questionnaire and a measure of sensation seeking. Data and findings from Corter and Chen, however, may not be as generalizable since data from only 63 graduate students studying business were analyzed. Even so, one conclusion emerges from previous studies and a broader review of the sensation-seeking and risk-tolerance literature: literature describing the relationship between sensation

seeking and financial risk tolerance is inconsistent and based in large part on the use of convenience samples from college students. The following hypothesis was tested in the current study:

> **H1:** Pre-retiree baby boomer financial risk tolerance will be positively associated with engagement in sensation-seeking behavior.

Locus of Control

Locus of control refers to a person's belief about whether events in their life are a result of personal behavior (described as internal locus of control) or outside factors such as luck, chance, and fate (described as external locus of control). The literature suggests that the more someone believes they have control over life outcomes, the more risk tolerant the person will be (Wong & Carducci, 2016). In other words, people with an internal locus of control orientation tend to be more aggressive when making financial decisions.

Internal locus of control is generally thought to be a determinant of investments in human capital accumulation (Coleman & DeLeire, 2003), financial wellness (Prawitz & Cohart, 2016), and life satisfaction (Buddelmeyer & Powdthavee, 2016). Each of these behaviors is known to have an observed association with financial risk tolerance. Increased investment in human capital accumulation means those with an internal locus of control orientation should be more likely to seek out more formal education, where education has been shown to be positively related to financial risk tolerance (Chang et al., 2004; Grable & Joo, 2004; Sung & Hanna, 1996). Those who are more financially stable or satisfied with their financial situation may also be more likely to possess the capacity to take on more risk. Buddelmeyer and Powdthavee (2016) noted that individuals with an internal locus of control orientation were psychologically insured against multiple adverse life events that may contribute to being more willing to take financial risks.

In some studies, locus of control has been used as a predictor of financial risk taking. Salamanca et al. (2016) showed, for example, that household heads who exhibited an internal locus of control orientation were more likely to hold portfolios with more risk. Buddelmeyer and Powdthavee (2016) noted that individuals with an internal locus of control orientation were more likely to take financial risks with

an expectation of receiving substantial returns. Wong and Carducci (2016) reported a gender difference, with only the male group's risk tolerance being directly affected by locus of control.

There is consensus in the literature that locus of control is, among other factors, significantly associated with financial risk tolerance and that locus of control can enhance the level of explained variance in models designed to describe financial risk-tolerance attitudes and risk-taking behaviors. Based on the literature discussed above, the following hypothesis was tested in the current study:

> **H2:** Pre-retiree baby boomer financial risk tolerance will be higher among those who exhibit an internal locus of control orientation.

Methods

Dataset

The present study used data from the NLSY79, which is a longitudinal panel project that covers a nationally representative sample of 12,686 American youth born between 1957 and 1965 (ages 54–62 in 2019). Respondents were between the ages of 14–22 when first interviewed in 1979. The survey interviewed those in the sample annually through 1994. From that point onward, participants have been interviewed every 2 years. Questions asked to cover multiple topics and significant life events. Although the primary focus of the survey is labor force behavior, the survey includes detailed questions on educational attainment, training, investments, income, and assets, health conditions, workplace injuries, insurance coverage, alcohol and substance abuse, sexual activity, and marital and fertility histories. Additional labor force information includes hours worked, earnings, occupation, industry, benefits, and other specific job characteristics. Even though the NLSY79 is a longitudinal project, the present study used data from the 2014 wave, as both financial risk tolerance and locus of control variables were measured only in 2014. The total sample size for 2014 was 7,070. This study was delimited to include only baby boomers (i.e., respondents who were born between 1957 and 1964). As such, the final sample size was 4,162.

Demographers divide the baby boomer generation into three segments (Wellner, 2000), two of which are relevant to the investigation of pre-retirees and the NLSY79 sample. "Core Boomers" are defined as being born between 1951

and 1959. In the 2014 NLSY79, the core boomer sample runs from 1957 to 1959. "Trailing Boomers" are individuals born between 1960 and 1964. The oldest segment of the baby boomer generation, "Leading Boomers," were born from 1946 to 1950 and are outside the scope of this investigation. In this study, results apply only to the pre-retiree core and trailing boomers.

Measures

Dependent Variable. In this study, financial risk tolerance was the outcome variable of interest. The survey question used to assess financial risk tolerance was as follows: "People can behave differently in different situations. How would you rate your willingness to take risks in financial matters? Rate your willingness from 0 to 10," where 0 means "unwilling to take any risks," and 10 means "fully prepared to take risks." A higher score was interpreted to mean that the respondent considered herself or himself as more willing to take a risk. The mean and standard deviation for the variable were 4.83 and 2.73, respectively. Skewness and kurtosis were −0.08 and 2.44, suggesting that risk tolerance was skewed to the left, where the mean was less than the median, resulting in a heavy-tailed distribution.

The choice to use the single-item 0–10 financial risk-tolerance measure included in the NLSY79 was made because the question coincided with risk-tolerance measures used in previous studies. For example, the most widely used dataset in household finance—the Survey of Consumer Finances (SCF)—added a 0–10 financial risk-tolerance question in 2016. While it is important to recognize that one-question subjective risk-tolerance measures have inherent weaknesses (e.g., lack of multidimensionality) and may not be a perfect representation of a person's willingness to take a risk, there is evidence that shows questions like this one provide a minimally acceptable level of validity (Gilliam & Grable, 2010; Grable & Lytton, 2001) when evaluating risk attitudes. For example, Grable and Rabbani (2014) noted risk tolerance consistency across life domains when risk tolerance is assessed using single-item questions. Grable and Rabbani also reported that scores from a single-item measure generally relate positively with risk-taking behavior.

Independent Variables

Table 1 shows the items used as independent variables in the models. In the present study, baby boomers were

categorized as core boomers (i.e., born between 1957 and 1959) and trailing boomers (i.e., born between 1960 and 1964). In this study, locus of control was measured as a respondent's belief about the degree of control they have over life outcomes. The locus of control variable was created by summing scores from four locus of control items (Rotter, 1966). The four items asked about the degree of control one has over the direction of one's life, the importance of planning, the importance of luck, and the degree of influence one has over life outcomes. Higher scores corresponded to an external locus of control orientation. Respondents with an external locus of control orientation believe that what happens in life is based primarily on luck, chance, and the influence of other people, whereas those with a strong internal locus of control orientation believe that they have control over their own life and life outcomes (Rotter, 1966).

The NLSY79 did not measure sensation seeking directly; therefore, this study employed an indicator variable—a question that asked about whether a respondent had ever used drugs—as a proxy for sensation seeking. The rationale behind using this proxy was supported by Zuckerman and Kuhlman (2000), who found that sensation seeking tends to be significantly related to participation in several types of risky activities, including drinking, smoking, drug use, and engagement in unprotected sex. The literature shows that among measures of sociability, drug use is generally positively and significantly associated with sensation seeking. This explains why, in many studies, sensation seeking is used as a predictor of drug use (e.g., Leeman et al., 2014; Quinn & Harden, 2013).

Control Variables

Table 1 shows the coding and descriptive summary for the demographic variables that were used as control variables in the models: gender, age, race, marital status, education, employment status, business ownership, and income. These variables correspond to variable classifications in Irwin's (1993) risk-taking model. Among all environmental and biopsychosocial factors, these seven variables tend to be among the most widely studied (Fonseca et al., 2012; Hirschl et al., 2003; Ho et al., 1994; Irandoust, 2017; Yao et al., 2005). Income was used in a logarithmic form for ease of interpretation. Specifically, an increase in income of one dollar might not affect those with high incomes, whereas a 1% point increase in income may be more meaningful for those with varying income levels. Using the log of income

TABLE 1.   Summary Statistics

	Min	Max	Mean	Std. Dev.	Skewness	Kurtosis
Risk tolerance	0	10	4.83	2.73	−0.08	2.44
Log (income)	0	12.82	10.63	1.1	−1.42	9.56
Age	49	56	52.64	2.24	−0.04	1.80
Locus of control	0	4	0.97	0.97	0.89	3.32

Categorical variables used in OLS regression

Name	Levels	Proportion (%)
Baby boomers	0 = Core boomers	25.76
	1 = Trailing boomers	74.24
Sensation seeking	0 = No	95.11
	1 = Yes	4.89
Education	0 = High school or below	50.16
	1 = College	49.84
Gender	0 = Male	50.53
	1 = Female	49.47
Race	0 = White	83.3
	1 = Black	13.85
	2 = Others[a]	2.85
Employment status	0 = Working	80.79
	1 = Unemployed	14.21
	2 = Retired	2.29
	3 = Homemaker	2.71
Marital status	0 = Never married	11.88
	1 = Married	60.74
	2 = Others[b]	27.38
Having business	0 = No	82.56
	1 = Yes	17.44

Note. Standard deviations are in parenthesis.
[a]includes those persons who were Japanese, Chinese, Vietnamese, Asian Indian, Native American, Korean, Eskimo, Pacific Islander, or of another race besides black or white.
[b]people who are separated, divorced, or widowed.

allows for a more precise estimate of any income effect on financial risk tolerance.

Data Analysis Procedures

Several data analysis procedures were undertaken using STATA/SE 15.1 statistical software. Demographic group differences were evaluated using *t* and analysis of variance (ANOVA) tests. The research hypotheses were tested using ordinary least squares (OLS) regression models. Post-hoc variance inflation factor (VIF) tests were conducted to check for multicollinearity among the variables used in the regression models. Significance tests were based on alpha levels at .01, .05, and .10.

Although the dependent variable—financial risk tolerance—was measured on an ordinal scale, scores were assumed to be continuous. This assumption was based on Williams' (2016) argument that an ordinal scale dependent

variable can be treated as a continuous variable when the dependent variable has five or more categories, which is the case for financial risk tolerance in this study. Three separate models, each using a different set of respondents, were computed to address the research questions and associated hypotheses. The first model estimated the determinants of financial risk tolerance for the overall baby boomer sample. The second model included only core baby boomers, whereas the third model was delimited to include only trailing baby boomers. The first model also estimated whether trailing baby boomers exhibited a greater financial risk tolerance compared to core baby boomers after controlling for sensation seeking, locus of control, and control variables. The core model was estimated as follows:

$$RT = \alpha + \beta_{1j}D_{Boomer} + \beta_{2j}logI + \beta_{3j}Age + \beta_{4j}D_{Edu}$$
$$+\beta_{5j}D_{Gender} + \beta_{6j}D_{Race} + \beta_{7j}D_{ES} + \beta_{8j}D_{MS} + \beta_{9j}D_{HB}$$
$$+\beta_{10j}D_{SS} + \beta_{11j}LOC + \mu_i$$

where RT is each respondent's risk-tolerance score; D_{Boomer} is a dummy variable for the baby boomer segment where core baby boomers was the reference group; I is a respondent's income; Age is a respondent's age reported in years; D_{Edu} is a dummy variable for education where high school or below was the reference category; D_{Gender} is a dummy variable for self-reported sex where male was the reference group; D_{Race} is a dummy variable for race where White was the reference group; D_{ES} is a dummy variable for employment status where working was the reference group; D_{MS} is a dummy variable for marital status where never married was the reference group; D_{HB} is a dummy variable representing owning a business where not having a business was the reference group; D_{SS} is a dummy variable for sensation seeking where not being a sensation seeker was the reference category; LOC is a respondent's locus of control score; and μ_i is the error term.

Results

Descriptive Statistics of the Sample

The baby boomers tested in this study were risk-neutral on average, with mean and median risk-tolerance scores of 4.83 (±2.73) and 5.00, respectively. Males were significantly more risk tolerant ($M = 5.19$) than females ($M = 4.53$) ($t_{7,665} = 9.83$, $p < .01$). Approximately 5.50% of core boomers and 4.70% of trailing boomers were sensation seekers.

On average, both male and female baby boomers ($M = 1.01$ and $M = 1.08$, respectively) exhibited an internal locus of control orientation. However, females exhibited a significantly stronger tendency of reporting an external locus of control orientation compared to males ($t_{6,486} = -2.65$, $p < .01$). Locus of control varied significantly among racial/ethnic groups. Blacks exhibited an external locus of control orientation ($M = 1.20$), followed by other (i.e., reference group) ($M = 1.19$) and Whites ($M = 0.95$) ($F_{2, 6,095} = 28.76$, $p < .01$). As shown in Table 2, average risk-tolerance scores for core boomers ($M = 4.79$) were lower than scores for trailing boomers ($M = 4.86$). Both core boomers and trailing boomers ($M = 1.06$ and $M = 1.04$) exhibited, on average, an internal locus of control orientation.

Tests of multicollinearity were undertaken. Results showed that the VIF of all independent variables was less than 10, suggesting that none of the variables were acting as a linear combination of the other independent variables. Based on this finding, several regression models were estimated using all of the control variables.

Regression Results

Table 3 shows the results from the regression analyses. The regression results indicated that there were no significant differences in risk-tolerance scores between core and trailing baby boomers. Sensation seeking had a significant positive association with financial risk tolerance. In the sample, a pre-retiree baby boomer respondent who was a sensation seeker exhibited significantly higher financial risk tolerance than one who was not a sensation seeker.

In the core model (Model 1), locus of control was significantly and negatively associated with financial risk tolerance. Respondents who held an external locus of control orientation reported having a lower financial risk tolerance. This result means that a pre-retiree baby boomer with an external locus of control orientation was likely to be more risk-averse. Conversely, a pre-retiree baby boomer with an internal locus of control orientation was more likely to have a higher willingness to take risk. However, when the core and trailing baby boomer cohorts were examined separately, this relationship was evident only in the trailing baby boomer cohort.

Of the demographic variables included in the regression analyses, gender, race, and education were found to be

TABLE 2. Comparison Between Two Baby Boomer Cohorts

	Mean Risk Tolerance	Mean Locus of		Sensation Seeking	
				No	Yes
Core boomer	4.79	**Control**	1.06	94.53%	5.47%
Trailing boomer	4.86		1.04	95.32%	4.68%
P-value of mean difference test[a]	0.39		0.48	0.08	

[a]For risk tolerance and locus of control, the *p*-values are from T-test; for sensation seeking, the *p*-value is from chi-square test of proportion.

TABLE 3. OLS Regression Estimates of Predictors of Financial Risk Tolerance

	Model 1: Overall	Model 2: Core Boomer	Model 3: Trailing Boomer
Intercept	5.69*** (1.67)	19.15* (10.4)	5.58*** (1.59)
Boomer (Ref.: core boomer)			
Trailing boomer	−0.13 (0.154)		
Sensation seeking (Ref.: no sensation seeking)	0.74*** (0.227)	1.02** (0.508)	0.67*** (0.254)
Locus of control[a]	−0.12*** (0.049)	0.09 (0.107)	−0.18*** (0.055)
Log (income)	0.04 (0.047)	0.22** (0.107)	−0.01 (0.052)
Age	−0.02 (0.029)	−0.30 (0.186)	−0.01 (0.029)
Education (Ref.: High school or below)			
College	0.31*** (0.089)	0.30 (0.195)	0.32*** (0.099)
Gender (Ref.: Male)			
Female	−0.65*** (0.088)	−0.56*** (0.199)	−0.67*** (0.099)
Race (Ref.: White)			
Black	0.36*** (0.100)	0.27 (0.227)	0.37*** (0.110)
Others	0.28 (0.184)	−0.22 (0.398)	0.41** (0.207)
Employment status (Ref.: Working)			
Unemployed	0.40** (0.179)	0.31 (0.401)	0.41** (0.200)
Retired	0.39 (0.446)	0.98 (0.685)	−0.07 (0.591)
Homemaker	0.73 (0.499)	−0.25 (1.224)	0.92* (0.547)
Marital status (Ref.: Never married)			
Married	−0.32** (0.134)	−0.52* (0.317)	−0.27* (0.148)
Others	−0.11 (0.143)	−0.21 (0.333)	−0.08 (0.159)
Having business (Ref.: No business)	1.05*** (0.117)	0.72*** (0.257)	1.14*** (0.131)
Number of observations	4,159	857	3,302
Pseudo R^2	0.0458	0.0364	0.0496

Standard errors are in parentheses.
*, **, and *** indicate significance at an alpha level of .1, .05, or .01, respectively.
[a]Locus of control: A high score = External locus of control; A low score = Internal locus of control.

significantly associated with financial risk tolerance. Female pre-retiree baby boomers were significantly less willing to take risks than males. Compared with White pre-retiree baby boomers, Blacks were significantly more risk tolerant overall. This relationship was even more pronounced for trailing boomers. Respondents who held a college degree level of education were more risk tolerant than those who had a lower level of attained education. In this sample, age was not significantly associated with financial risk tolerance.

Income was significant only for core boomers (Model 2). Specifically, a 1% increase in income was associated with a 0.22-point increase in financial risk tolerance. In other words, higher financial risk tolerance was positively associated with core boomer income, *ceteris paribus*. Unemployed pre-retiree baby boomers exhibited a higher level of financial risk tolerance than working respondents. Among trailing baby boomers, married respondents had significantly lower risk-tolerance scores compared to never married respondents. Pre-retiree baby boomers who owned one or more businesses were found to have significantly higher risk-tolerance scores compared to those who did not own a business.

Discussion, Limitations, and Implications
Discussion
The present study adds to the existing literature on the determinants of financial risk tolerance by analyzing the financial risk tolerance of pre-retiree baby boomers (those who were age 54–62 in 2019 and age 49–57 in 2014) using nationally representative data. In this study, sensation seeking and locus of control were found to be significantly associated with financial risk tolerance. Support for the research hypotheses was obtained. Findings corresponded with much of the previous literature (e.g., Wong & Carducci, 2016). The results from this study suggest that financial professionals should consider assessing their pre-retiree baby boomer clients' degree of sensation seeking and locus of control orientation as an element of the data in-take process.

The ability to recognize unique characteristics and background factors of clients that can be used to anticipate financial preferences is a skill all financial professionals should possess (Moreland, 2018). In this regard, a client's sensation-seeking behavior and locus of control orientation appear to be important factors that financial professionals can use when conceptualizing strategies designed to facilitate financial health among clients. In addition to recognizing client characteristics, the ability to engage in purposeful communication with clients is another essential skill associated with the successful application of the financial counseling and planning process (Grable & Goetz, 2017). Financial professionals may already know about the usefulness of assessing client sensation seeking and locus of control as a pathway to helping forge more profound and stronger client relationships and providing tailored client experiences, but results from this study indicate there is a

supplemental benefit to assessing and evaluating a client's sensation-seeking and locus of control preferences: these characteristics appear to be reliable indicators of financial risk tolerance and thus both factors play a potentially significant role in shaping many financial behaviors and decisions.

Limitations
The results from this study should be evaluated in the context of potential limitations. For example, data for the study were obtained from a secondary dataset. Some of the questions asked in the survey may suffer from validity issues. For example, the NLSY79 risk-tolerance question suffers from potential limitations as it is a single item without specific parameters to define the decision respondents should call to mind. Future studies ought to consider a more robust measure of client risk attitudes.

Another potential concern is the sensation-seeking proxy used in this study. While it is common in the psychophysiological literature to indicate sensation seeking through drug use (Leeman et al., 2014; Quinn & Harden, 2013), the sensation-seeking question utilized in this study was asked early in the survey process (i.e., when respondents were relatively young). Additionally, people use drugs for numerous reasons, including peer pressure or the therapeutic benefits of certain drugs. Future studies within the domain of personal finance should be conducted to determine the robustness of the association between drug use and sensation seeking measured via a valid questionnaire.

Finally, the analyses relied on delimitations that limit generalizability to those born in the years 1957–1964, which corresponds to pre-retiree baby boomers who are typically still in the workforce. The results may not apply to individuals who are already in retirement (leading baby boomers born between 1946 and 1950). Even so, it is reasonable to expect that the findings from this study should apply to other generations. Future tests should be made utilizing data from the entire U.S. population.

Implications
As a locus of control scale, such as the one developed by Rotter (1966), is quick to administer, financial professionals should consider adding such a measure to their documentation routine when data is being obtained from a client. Since locus of control tends to be stable over time among working-age adults (Cobb-Clark & Schurer, 2013), it is not

necessary to readminister a locus of control scale unless a client experiences a major life-changing event, such as divorce or the death of a loved one. Similarly, sensation seeking can be evaluated using the Brief Sensation Seeking Scale (BSSS), which is available in both eight-item and four-item forms (Pechorro et al., 2018). After a client's characteristics are assessed using valid and reliable questionnaires, financial professionals can apply the following guidelines for those clients who are found to be atypical.

Guidelines for Sensation Seekers. Findings from this study suggest that a sensation-seeking pre-retiree baby boomer is likely to report holding a financial risk tolerance that exceeds the average. Sensation seeking has been linked to the more general trait of impulsivity (Holmes et al., 2016), which itself has been shown to be positively associated with problematic financial behaviors, including gambling and irresponsible credit card use (Payne et al., 2019; Worthy et al., 2010). For financial professionals, a pivotal positive step when helping sensation-seeking clients is to guide them through the process of developing and adhering to a spending plan. Although one would expect a pre-retiree baby boomer to have already established basic financial saving and investing practices, given the current marginal state of financial capability and wellness in the United States (Bajtelsmit & Rappaport, 2018; Prawitz & Cohart, 2016), it is prudent to take extra steps to help sensation-seeking clients. For example, it may be necessary to allocate a percentage or dollar amount of a budget toward expenditures that fulfill impulsive tendencies. Once current consumption and saving have been stabilized, the financial professional can move on to advocating for or setting up safeguards for the client's financial future.

When working with clients, it is important to remember that sensation-seeking propensities may impact the investment and retirement components of a client's financial life. Sensation-seeking clients, particularly those in the pre-retiree baby boomer generation, may have a mismatch between the two significant factors that determine an asset allocation profile: financial risk tolerance and the investment time horizon. Since many baby boomers are near retirement and have shorter investment horizons, pre-retiree baby boomers should be encouraged to allocate away from significant positions in equities toward less volatile asset holdings. A sensation seeker may not feel the need to engage in reallocation activities. In such cases,

the financial professional should take the opportunity to provide extra counseling by implementing education about the risks and rewards of investing in a time-constrained context.

Locus of Control Guidelines. Findings from this study indicate that a pre-retiree baby boomer who displays an external locus of control orientation will be more likely to hold a below-average tolerance for financial risk. The average locus of control score in the sample was skewed toward an internal rather than external orientation. Based on study results, financial professionals should be on alert for clients who exhibit a strong external locus of control orientation and recognize that these clients might be financially at risk.

In an efficient market, it is reasonable to conclude that a client's financial risk tolerance should be associated with the rate of return the client realizes on invested assets (Fisher & Yao, 2017). If a pre-retiree baby boomer client holds an external locus of control world view, the client is likely to exhibit a low financial risk tolerance, and thus prefer lower risk investments and assets. In this case, the client may have difficulty realizing a rate of return necessary to meet intermediate- and long-term financial goals. Although clients approaching retirement should generally take less investment risk than younger individuals, it is important to communicate to pre-retiree baby boomer clients that they still need a level of portfolio risk that preserves the purchasing power of accumulated assets.

Clients who exhibit an internal locus of control orientation may be easier to advise. Holding an internal locus of control orientation is generally associated with better life outcomes (Buddelmeyer & Powdthavee, 2016; Prawitz & Cohart, 2016). Higher financial risk tolerance may be a way a pre-retiree baby boomer client with an internal locus of control orientation experiences better life outcomes—the client may be earning higher returns on investments, which helps the client achieve higher consumption and saving goals. Although it may take a considerable amount of financial planning and counseling guidance to help a client with an external locus of control orientation understand that they do have some control over significant life outcomes, nudging these clients to be more willing to take financial risk is an essential step in helping them reach important financial objectives, such as a secure retirement. As noted by Tumataroa and O'Hare (2019), appropriately

implemented financial counseling interventions can lead to a greater improvement in self-control.

Summary

To summarize, financial risk tolerance is an important input into the decision-making process associated with shaping the appropriate level of risk imbedded within an investment portfolio (Jones et al., 2016; Rabbani et al., 2017; Schooley, & Worden, 2016), as well as, informing other financial recommendations and decisions. It was determined that pre-retiree baby boomers who engage in sensation-seeking behavior exhibit higher financial risk tolerance. It was also found that pre-retiree baby boomers with an internal locus of control orientation exhibit greater financial risk tolerance. Understanding the financial risk tolerance exhibited by pre-retiree individuals in the baby boomer generation can be, as shown in this study, useful for financial professionals when providing financial advice. Obtaining a better understanding of the factors associated with risk-tolerance attitudes can help inform practice by providing explanations as to why a client may be acting in a way that seems counter to the client's best interest. An enhanced understanding of risk attitudes can be helpful when developing recommendations to improve the financial wellness of older individuals, especially by ensuring that recommendations match a person's sensation-seeking preferences and sense of control over life outcomes.

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