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**Article**

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Article

# An Assessment of the Association between Political Orientation and Financial Risk Tolerance

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**Abstract:** The purpose of this paper is to present findings from research that was undertaken to answer the following questions. First, to what extent is political orientation associated with financial risk tolerance, and second, to what degree is political orientation predictive of changes in risk tolerance across periods? Using panel collected before and after the 2020 U.S. presidential election, it was determined that the strength of affiliation with the Republican and Democratic Parties was descriptive of cross-sectional financial risk tolerance. Republicans were found to exhibit greater risk tolerance compared with Democrats. Across periods, the risk tolerance of Republicans was less stable, whereas the financial risk tolerance of Democrats was more stable. A significant decrease in risk tolerance was observed for those affiliating as a Republican pre-election to post-election. When political orientation was measured on a scale, the decrease in risk tolerance across periods for Republicans was significant. The risk tolerance of those affiliating as a Democrat increased across the periods but at a lower rate than in the drop in scores among Republicans. When viewed across the variables of interest in this study, political orientation was found to be an important descriptor of FRT.



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**Keywords:** financial risk tolerance; political orientation; political affiliation

## 1. Introduction

Researchers, over the last 3 decades, have engaged in efforts to identify personal and household characteristics associated with individual- and household-level financial risk tolerance, which can be thought of as a person's "willingness to trade off the possibility of incurring an almost certain small gain with the potential of making a larger gain with an equally high potential of losing wealth" (Rabbani and Nobre 2022, p. 139). The consensus among researchers who study household risk-taking is that risk tolerance differs across individuals and time, with observed differences stemming from personal and household characteristics, as well as changes in the political, economic, and social environment (Sahm 2012).

Financial risk tolerance is known to be associated with predisposing decision-maker biopsychosocial characteristics (e.g., gender and age).<sup>1</sup> Predisposing personal environmental factors are also thought to be related to the degree of risk tolerance exhibited by a financial decision maker. The extant literature shows, for example, that household income and attained education are positively associated with a person's willingness to take financial risks (Grable 2000; Wong 2011).<sup>2</sup> While personal and household characteristics, such as gender, age, household income, wealth, education, financial knowledge, homeownership, race/ethnicity, and marital status, have been extensively studied as descriptors of risk-tolerance and risk-taking behavior, there is one decision-maker characteristic that has yet to be fully examined: political orientation. Political orientation represents the degree to which someone affiliates with a political party, where political parties are assumed to represent aspects of left–right ideologies (Wildavsky and Dake 1990). Although overly simplified, in the United States, Democrats represent the left end of the political spectrum,

whereas Republicans represent the right side of the ideological spectrum. In this sense, political orientation represents a preference or value that is thought to be relatively stable over short periods but is subject to change over time.

According to [Christensen et al. \(2015, p. 1919\)](#), political orientation may be a useful “ex-ante measure of [a decision maker’s] attitude toward risk”. To date, however, there have been a limited number of studies devoted to exploring this possibility. The purpose of this paper is to present findings from research that was undertaken to answer the following two questions. First, to what extent is political orientation associated with financial risk tolerance, and second, to what degree is political orientation predictive of changes in risk tolerance across periods? Data used to answer these questions represent survey responses obtained from a panel study of a diverse group of financial decision makers before and after the 2020 U.S. presidential election. This study adds to the political orientation and risk-tolerance literature by showing that, in alignment with [Sahm \(2012\)](#), a person’s political orientation can be used, to some extent, to describe and explain their financial risk tolerance and risk-taking behavior. The remainder of this paper provides a greater context for the variables of interest in this study, a description of the methods used to address the research questions, a report of findings, and a discussion of results.

## 2. Study Background and Research Hypotheses

### 2.1. Political Orientation, Risk Tolerance, and Risk-Taking

Political orientation, as a specific type of political culture, tends to be assessed on a left–right ideology spectrum. The left side of the spectrum is represented by individualistic and egalitarian forms of social, cultural, and economic relationships. The right side of the spectrum tends to be dominated by thoughts and concepts that support hierarchical structures and relationships. Given that political orientation is not dichotomous, someone can affiliate anywhere on the ideological continuum. In the United States, the Democratic Party represents the left side of the ideology spectrum, whereas the Republican Party epitomizes the right side of the same ideology spectrum. The Democratic Party tends to be more heterogeneous in its makeup, representing a liberal social, cultural, and economic consortium of voters. The Republican Party represents a more homogenous group of voters who tend to exhibit concerns for situations in which social, cultural, and economic deviance is observed ([Levendusky 2009](#)).

While very few researchers have investigated the relationship between financial risk tolerance and political orientation, there has been directed effort at decomposing the relationship between generalized, environmental, and cultural risk preferences and political orientation. Much of this research has been framed in the context of cultural affiliation theory ([Ripberger et al. 2012](#)). This theory suggests that decision makers proactively form perceptions by choosing to focus on issues that cause stress, anxiety, and fear and, when responding to these feelings, adopting a political orientation that supports their perceptions ([Wildavsky and Dake 1990](#)). When viewed this way, political orientation corresponds to notions of cultural affiliation based on strongly held feelings, beliefs, and values.

Numerous hypotheses and assertions related to risk tolerance can be gleaned from the political orientation and cultural affiliation literature. Outside of the household and personal finance domains, Democrats have historically been thought to be willing to take personal risks, while being relatively unconcerned with risks associated with social deviance. Republicans have historically been assumed to be generally risk averse but willing to take societal and environmental risks ([Wildavsky and Dake 1990](#)). Those on the left of the ideological spectrum tend to hold an external locus of control perspective—they believe that luck, fate, corruption, connections, and birth determine income and wealth status ([Alesina and Angeletos 2005](#)). Those on the right generally believe that individual effort, work ethic, and dedication to goal achievement determine one’s wealth and income status ([Layman et al. 2006](#)).

Hypothetical associations and empirically derived relationships between political orientation and financial risk tolerance, within the domains of household and personal

finance, are less well defined. There has been, however, tangential research that informs potential hypotheses about the association between risk tolerance and political ideology. [Christensen et al. \(2015\)](#) examined the political orientation of senior-level corporate executives as a proxy for managerial liberalism or conservatism. They argued that political orientation can be used as an indicator of a decision maker's attitude toward uncertainty and risk. Christensen et al. designed their study to determine whether Democrats or Republicans are more likely to engage in aggressive tax avoidance strategies (i.e., a proxy for risk-taking). They noted that political orientation may be a better indicator of risk tolerance than demographic characteristics, which they called noisy indicators. Contrary to common thinking, Christensen et al. concluded that Republicans engage in fewer tax avoidance schemes compared with Democrats, which led Christensen and associates to conclude that Republicans (i.e., those on the right of the ideological spectrum) are more risk averse. It is important, however, to gauge their findings from the perspective of relative, not absolute, risk aversion. When evaluating results from their study, one should assume that all of the executives were more risk seeking than average and that among this group, Republicans were more risk averse.

Others have also indirectly examined the association between political orientation and risk attitudes and behaviors. [Chin et al. \(2013\)](#) found that the political ideology of a company CEO can be used to describe the company's pattern of donations to political action committees and when making socially responsible investment decisions. In their study, left-leaning CEOs invested more aggressively in corporate responsibility practices even when it might have hurt financial performance. [Gupta et al. \(2018\)](#) noted a similar pattern where liberal-leaning CEOs were more likely to take risks by way of investing compared with conservative-leaning CEOs who tended to focus on maximizing performance through cost-cutting measures. In a similar study, [Chin et al. \(2021\)](#) reported that economic conservatism exhibited by CEOs impairs cooperative decision making. [Semadeni et al. \(2021\)](#) extended this line of research by showing that when the personal wealth of a corporate CEO is tied to vested stock options, and the national political climate misaligns with the CEO's political ideology, the CEO will exhibit less risk-taking behavior.

While the work of these researchers, as summarized by [Christensen et al. \(2015, p. 1935\)](#), provides evidence that "political orientation seems to capture enduring differences in individuals' attitudes toward financial uncertainty and suggests that political orientation is an influential characteristic that may help predict an executive's decision . . . ", their work did not directly address the possibility of an association between political orientation and household or personal financial risk tolerance or risk-taking. In an attempt to fill this gap in the literature, [Morris et al. \(2008\)](#) tested for gambling and investment differences based on political affiliation. They reported political identity differences with Republicans (but not Democrats) consistently exhibiting conservative gambling and investment choices. They also noted that choices were activated through language identification more so than by identity-related values. Their findings hinted at the possibility that risk tolerance is likely a stable personal attribute. [Kaustia and Torstila \(2011\)](#) addressed the gap in the literature by examining differences in equity holdings between left- and right-leaning voters. They concluded that "left-wing voters and politicians are less likely to invest in stocks, controlling for income, wealth, education, and other relevant factors" (p. 98). Their study was among the first to suggest that political orientation and financial risk-taking may be associated; however, Kaustia and Torstila were only able to draw general conclusions about a possible relationship with risk tolerance because, while measuring risk-taking behavior through equity investing, they did not directly assess risk tolerance. They did note, however, that investing behavior should be influenced by someone's willingness to take a risk. They also concluded that left-leaning decision makers may not actually be risk averse in the domain of household and personal finance but instead be exercising their value orientation based on an "anti-capital market attitude" (p. 99). Their study introduced as many questions as it answered, creating an opportunity for others to study the political orientation–financial risk tolerance association more directly.

## 2.2. Other Factors Associated with Financial Risk Tolerance

Numerous personal and household characteristics have been identified in the literature as having an association with the risk tolerance of financial decision makers. Nearly all of the most common characteristics can be classified according to a scheme proposed by [Irwin and Millstein \(1986\)](#). Within the Irwin and Millstein definitional framework, characteristics that are thought to be uniquely associated with the risk tolerance of an individual are classified as either (a) predisposing endogenous biopsychosocial factors or (b) predisposing exogenous environmental factors. Examples of predisposing biopsychosocial endogenous factors include gender, age, and racial/ethnic background. Financial knowledge, income, education, wealth, homeownership, and marital status are examples of predisposing exogenous environmental factors. Endogenous biopsychosocial and exogenous environmental factors are thought to describe someone's willingness to take a risk, which is a precipitating variable that precedes the engagement in risk-taking behavior (i.e., risk tolerance primes a decision maker to take action). Precipitating factors can be classified as biological, psychological, or social/environmental. While the Irwin and Millstein definitional framework is modeled as a linear process, the variables that fit into each of the definitional categories are generally thought to be correlated, not causal.

Several predisposing endogenous biopsychosocial factors have been consistently used in the literature ([Kaustia and Torstila 2011](#)). Self-identifying as a male or female is thought to be related to risk tolerance, with males exhibiting a greater tolerance for risk ([Anbar and Eker 2010](#); [Chavali and Mohanraj 2016](#); [Grable and Roszkowski 2007](#); [Hallahan et al. 2004](#); [Larkin et al. 2013](#)). Older financial decision makers are generally thought to be less risk tolerant ([Brooks et al. 2018](#); [Gibson et al. 2013](#); [Hallahan et al. 2004](#); [Yao et al. 2011](#)), primarily because they lack time to recoup potential investment losses. Although still understudied, racial and ethnic differences in risk tolerance have been noted in the literature. Those who self-identify as White/Caucasian generally exhibit greater risk tolerance compared with those who self-identify as African American/Black or Hispanic/Latinx ([Ferreira and Dickason 2018](#); [Fisher 2019](#)).

Likewise, several predisposing endogenous biopsychosocial factors have been found to be related to financial risk tolerance. A decision maker's financial knowledge—measured either subjectively or objectively—is known to be related to elevated levels of risk tolerance ([Gibson et al. 2013](#); [Grable 2000](#); [Grable and Joo 2004](#); [Wang 2009](#)). Household income and education have also been shown to be associated with higher levels of risk tolerance ([Hallahan et al. 2004](#); [Pinjisakikool 2017](#); [Wong 2011](#)). Wealth status is also known to correlate with risk tolerance, with those who report greater wealth exhibiting more risk tolerance ([Fang et al. 2021](#)). It may be that income and wealth boost a household's capacity to engage in risk-taking activities. Homeownership and marital status are often included in risk-tolerance studies; however, reported relationships with risk tolerance have been inconsistent. It is sometimes argued that homeowners, because they have more to lose in the event of a catastrophic financial loss, are more likely to shy away from taking financial risks. Others have argued that similar to income and wealth, homeownership elevates risk capacity, thus leading to a greater willingness to take a financial risk (e.g., [Grable and Joo 2004](#); [Jianakoplos and Bernasek 2006](#); [Yang 2004](#)). Similarly, reported findings in the literature related to marital status have been inconsistent. Single decision makers are sometimes thought to be more risk tolerant because decision outcomes are felt by only one person, whereas a married financial decision maker must account for the ramifications of losses on other household members ([Hallahan et al. 2004](#); [Koekemoer 2018](#); [Wong 2011](#)). It is possible, however, that marital status may provide greater capacity to take a risk.

In this study, gender, age, and race/ethnicity, as predisposing endogenous biopsychosocial factors, and subjective financial knowledge, household income, attained education, wealth status, homeownership, and marital status, as predisposing exogenous environmental factors, were included in the models designed to test the research questions and hypotheses (discussed later in this section). The operationalization of each variable is provided later in the paper.

### 2.3. Research Hypotheses

Although the literature on the association between political orientation and risk tolerance is underdeveloped, the literature that does exist provides some insight into the directions of possible relationships.<sup>3</sup> Based on the existing literature, and in alignment with [Morris et al. \(2008\)](#) and [Christensen et al. \(2015\)](#), the following hypotheses were tested in this study:

**Hypothesis 1 (H1).** *Those who more strongly affiliate as a Republican will exhibit lower financial risk tolerance relative to those who more strongly affiliate as a Democrat, after controlling for the person's predisposing biopsychosocial and environmental profile.*

**Hypothesis 2 (H2).** *Those who more strongly affiliate as a Republican, compared with a Democrat, will exhibit greater stability in financial risk tolerance across time, after controlling for the person's predisposing biopsychosocial and environmental profile.*

**Hypothesis 3 (H3).** *Political orientation will explain more of the variance in financial risk tolerance than other predisposing personal biopsychosocial and environmental characteristics.*

## 3. Methods

Data for this study were obtained in two waves from Dynata, a proprietary panel, using an online Qualtrics questionnaire that was first distributed in late 2020 and again in early 2021. The first wave was collected in October 2020, before the 2020 U.S. presidential election (3 November 2020). A target sample consisting of 1000 adults 18 years of age or older was obtained, with the screen being eligible and likely to vote in the 2020 presidential election. Those participating in the study received a modest financial incentive. Due to missing data, incomplete surveys, and other response anomalies (e.g., random responses, duration of time spent on questions), the useable sample was reduced to 780. The Wave 2 survey was distributed to the final sample from the first wave of the study in March 2021. Those who participated received an additional incentive plus a small dollar bonus amount. Slightly more than 400 respondents from the first wave completed the second-wave survey.

### 3.1. Outcome Variable

The outcome variable of interest in this study was financial risk tolerance (FRT). FRT was assessed using a propensity measure developed by [Grable and Lytton \(1999\)](#). The scale has been widely used as a research instrument among those interested in assessing FRT ([Kuzniak et al. 2015](#); [Lucarelli et al. 2011](#); [Rabbani et al. 2017](#)). The scale has shown acceptable levels of validity (e.g., scores are positively associated with more aggressive investment choices) and reliability (e.g., Cronbach's alpha, omega, and greatest lower bound are typically reported to fall between 0.70 and 0.80, with higher reliability estimates for older individuals) across studies and time periods (see [Heo et al. 2022](#); [Kuzniak et al. 2015](#)). The survey asked respondents in the first and second waves of the study to answer the 13 questions composing the measure. Summed scores ranged from 13 to 39. Higher scores were indicative of greater risk tolerance (i.e., less risk aversion). Cronbach's alpha was 0.73 in the Wave 1 survey and 0.76 in the Wave 2 survey. In addition to cross-sectional analyses of the FRT data, a change variable was estimated by subtracting scores from the Wave 1 survey from scores on the Wave 2 survey. Based on this coding, a positive score was interpreted to mean an increase in reported risk tolerance across the two periods.

### 3.2. Political Orientation

Political orientation was measured by a self-report of affiliation with each political party (i.e., Democratic or Republican). Political orientation was assessed in the Wave 1 survey by asking the following two questions: (a) To what degree do you affiliate with the Democratic Party, and (b) To what degree do you affiliate with the Republican Party? Four response options were provided for each question: (1) Not at all, (2) Somewhat, (3) Quite

a bit, and (4) Always. The modal response category for both questions was “Not at all.” It is important to note that a respondent could report high (or low) affiliation with both parties simultaneously. This measurement approach aligns with the notion that political orientation (and thus affiliation with a political party) is not binary but instead a continuum (Swigart et al. 2020). To test this assertion, the political orientation variable was recoded so that someone who reported always affiliating with the Republican Party was coded 3 and someone who always reported affiliating with the Democratic Party was coded  $-3$ . A similar recoding was completed for the other orientation categories (2,  $-2$  for Quite a bit; 1,  $-1$  for Somewhat, and 0 for Not at all).<sup>4</sup> A new variable (i.e., political orientation) was created by adding someone’s Democratic orientation score to their Republican orientation score. The resulting scale indicated the strength of affiliation, with scores of 2 and 3 indicating strong Republican orientation and weak Democratic orientation and scores of  $-2$  and  $-3$  suggesting strong Democratic orientation and weak Republican orientation. In general, those who affiliated equally, somewhat, or not at all with both parties had scores of  $-1$ , 0, or 1, respectively. Someone who was scored this way can be thought of as politically independent. The recoded variable was used in robustness checks of the tested models.

### 3.3. Covariates

Nine covariates were included in the tests used to evaluate the hypotheses. Gender was assessed by asking respondents to self-identify as male, female, nonbinary, or other. The sample was closely split between males and females. Although one respondent indicated nonbinary in the Wave 1 survey, the respondent was removed from the analytic sample due to a lack of response in the Wave 2 survey. Thus, a binary indicator was created in which 1 represented female and 0 represented male.

Subjective financial knowledge was evaluated by asking, “How knowledgeable are you about personal finance topics?” Five response options were provided, including (1) not knowledgeable at all, (2) slightly knowledgeable, (3) moderately knowledgeable, (4) very knowledgeable, and (5) extremely knowledgeable. The modal category was moderately knowledgeable.

Household income was assessed using 12 income ranges starting with less than \$10,000 and ending with \$150,000 or more. The modal category was \$70,000 to \$79,999. Education was measured as the highest level of education achieved using the following response options: (a) some high school or less, (b) high school graduate, (c) some college/trade/vocational training, (d) associate’s degree, (e) bachelor’s degree, or (f) graduate or professional degree. The modal category was a bachelor’s degree. A binary indicator was created for the variable with 1 representing a bachelor’s or graduate/professional degree and 0 representing any educational level below a bachelor’s degree. Homeownership, as an exogenous factor, was coded 1 for homeowner and 0 otherwise.

Wealth status was measured with the following item: “Think about what you own (assets) and what you owe to others (debts and liabilities). If you sold everything you own and paid off all your debts, how much would you have left over?” Five answer options were provided: (1) It would be a large negative number, (2) It would be a negative number, (3) Neither negative or positive (\$0), (4) It would be a positive number, and (5) It would be a large positive number. The modal response was “It would be a positive number.” In alignment with Long and Freese (2014) and Pasta (2009), this ordinal variable was treated as a continuous variable in the analyses.

Self-identified race/ethnicity was assessed by asking each respondent to report whether they considered themselves to be (a) White/Caucasian, (b) African American/Black, (c) Hispanic/Latino/Latinx, (d) Native American, (e) Asian or Pacific Islander, or (f) other. Dummy variables were created for African American/Black, Hispanic/Latino/Latinx, Asian, and other race. White/Caucasian was used as the comparison category.

Age was measured using the following ranges (a) 18 to 24, (b) 25 to 34, (c) 35 to 44, (d) 45 to 54, (e) 55 to 64, (f) 65 to 74, and (g) 75 and older. Dummy variables were created for each age category. The modal classification was 45 to 54, which was then used as

the reference category in the analyses. Marital status was assessed with the following response options: (a) never married, (b) not married but living with a partner, (c) married, (d) divorced, (e) separated, (f) widowed, and (g) other. A binary indicator variable was created to represent those who were married (coded as 1) and those who were not married (coded as 0).

### 3.4. Data Analysis Methods

Four quantitative data analysis approaches were used to summarize the data and approximate answers to the research questions and hypotheses. First, descriptive statistics were calculated. Second, nonparametric correlations were estimated to show associations between the independent variables of interest in this study. Third, *t*-tests were conducted to determine whether differences in risk tolerance were present between those who affiliated more closely with being a Democrat or Republican. Finally, a series of regressions, with corresponding robustness checks, were estimated to identify the role of political orientation in describing FRT and in predicting changes in FRT. All analyses were conducted using SPSS Version 28.0.

## 4. Results

Table 1 summarizes the political orientation of survey respondents. Overall, 15% of the respondents did not affiliate with either party, while 18% always affiliated with the Democratic Party and not at all with the Republican Party. Another 14% always affiliated with the Republican Party and not at all with the Democratic Party.

**Table 1.** Political party orientation.

		Democratic Party Orientation				
		Not at All	Somewhat	Quite a Bit	Always	Total
Republican Party Orientation	Not at All	15%	7%	14%	18%	55%
	Somewhat	7%	8%	3%	1%	19%
	Quite a Bit	9%	2%	1%	0%	11%
	Always	14%	1%	0%	0%	15%
	Total	45%	17%	18%	20%	100%

Table 2 shows the descriptive statistics for, and the Spearman nonparametric correlation coefficient estimates between, the political orientation and Wave 1 and Wave 2 FRT variables. Financial risk-tolerance scores ranged from 13 to 37 in the Wave 1 survey ( $M = 23.91, SD = 5.24$ ) and 13 to 39 in the Wave 2 survey ( $M = 24.14, SD = 5.37$ ). These scores are similar to what has been observed in previous studies with similar populations of interest (Kuzniak et al. 2015; Lucarelli et al. 2011). Overall, the respondents skewed slightly toward the Democratic Party. FRT increased slightly from the first to the second survey.

**Table 2.** Summary statistics and correlations between financial risk tolerance (FRT) and political orientation.

		Correlations				
		Mean	Std. Deviation	1	2	3
1	Political Orientation	−0.27	2.00	0.199 **		
2	FRT (Wave 1)	23.91	5.24	0.09	0.734 **	
3	FRT (Wave 2)	24.14	5.37	−0.126 *	−0.328 **	0.401 **
	Change in FRT	0.13	3.88			

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Table 3 shows the descriptive statistics for the control variables used in the study. The sample was fairly evenly represented between males and females. Age was distributed across categories but skewed older. The majority of the respondents were married and



owned their homes. The respondents reported relatively high levels of household income, wealth, and educational status. The majority of the respondents self-identified as White/Caucasian. Independent sample *t*-tests were used to examine sample characteristic differences between respondents who were highly affiliated with the Republican Party (orientation score = 2 or 3) or the Democratic Party (orientation score = -2 or -3). Those who strongly affiliated as Republicans were more likely to be male, homeowners, married, and White/Caucasian. Republicans also reported higher levels of subjective financial knowledge, household income, and wealth compared with those who affiliated as Democrats. Those who affiliated strongly as Democrats tended to be female, younger, Asian, and African American/Black.

Table 3. Sample characteristics (N = 407).

Characteristic	Mean/Incidence	SD	High Republican Affiliation	High Democratic Affiliation	<i>t</i>	<i>p</i>
Female (vs. Male)	52%		41%	60%	-2.73	0.01
Subj. Fin Know (1-5)	3.14	1.05	3.47	2.92	3.82	<0.001
Household Income (1-12)	7.64	3.55	8.47	7.52	1.99	0.05
Wealth Status (1-5)	3.93	1.08	4.36	3.81	4.06	<0.001
Bachelor's Degree or Higher	59%		56%	63%	-1.00	0.32
Homeowner	72%		90%	65%	4.50	<0.001
Married	52%		68%	43%	3.55	<0.001
White/Caucasian	69%		88%	55%	5.53	<0.001
Black	13%		1%	25%	-5.60	<0.001
Hispanic	9%		7%	13%	-1.25	0.21
Asian	5%		0%	3%	-2.03	0.05
Age 18 to 24	7%		1%	7%	-2.11	0.04
Age 25 to 34	12%		6%	18%	-2.62	0.01
Age 35 to 44	15%		15%	20%	-1.02	0.31
Age 45 to 54	23%		25%	19%	0.87	0.38
Age 55 to 64	18%		17%	14%	0.55	0.59
Age 65 to 74	17%		23%	19%	0.62	0.54
Age 75 or Older	6%		11%	3%	1.74	0.09

As an initial analysis, independent sample *t*-tests were used to examine differences in FRT between respondents who indicated high affiliation with the Republican Party (score = 2 or 3) or the Democratic Party (score = -2 or -3). The results of the *t*-tests are presented in Table 4. FRT was highest for those with high Republican affiliation. Between the Wave 1 and Wave 2 surveys, FRT declined for respondents who affiliated with the Republican Party, while FRT nominally increased for respondents who affiliated with the Democratic Party. The change in FRT was significant for Republicans but not for Democrats.

Table 4. The difference in financial risk tolerance (FRT) and FRT change between high Republican and Democratic affiliation, Wave 1 and Wave 2.

Survey	High Republican Affiliation	High Democratic Affiliation	<i>t</i>	<i>p</i>
Wave 1 Survey FRT	25.33	22.56	3.76	<0.001
Wave 2 Survey FRT	24.41	23.19	1.70	0.091
Change in FRT from Wave 1 to Wave 2	-0.94	0.42	-2.26	0.025

Table 5 shows the results from the OLS regression models that were used to examine the relationship between political orientation and FRT for the Wave 1 and Wave 2 periods. The first panel of Table 5 shows the Wave 1 model. The model was statistically significant ( $F = 5.63, p < 0.001; R^2 = 0.23$ ). Political party orientation was positively and significantly associated with FRT in the Wave 1 survey ( $b = 0.37, p = 0.007$ ). Respondents who affiliated

to a greater extent with the Republican Party rather than the Democratic Party exhibited higher levels of FRT. Males and those with more financial knowledge and educational status exhibited more FRT than others. Being 75 years of age or older was negatively associated with FRT. The second panel of Table 5 shows the Wave 2 model results. The model was statistically significant ( $F = 5.44, p < 0.001; R^2 = 0.23$ ); however, postelection, political party orientation was not significantly associated with FRT ( $b = 0.11, p = 0.438$ ). The FRT of those who affiliated with the Republican Party was not significantly different from the FRT of those who affiliated with the Democratic Party. Three variables were found to be positively associated with FRT: being male, financial knowledge, and educational status. When viewed holistically, the data did not support Hypothesis 1 in Wave 1 or Wave 2 (i.e., Republicans exhibited greater nominal FRT in both periods).

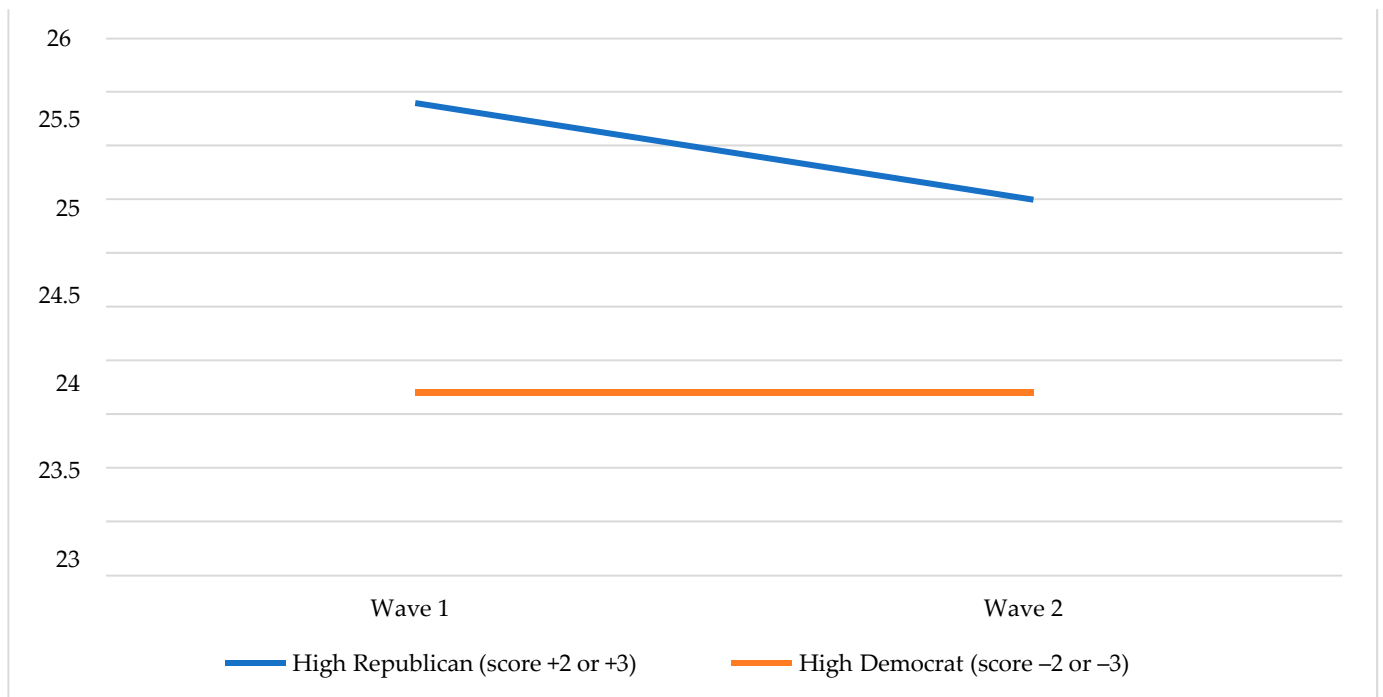
**Table 5.** OLS regression results describing financial risk tolerance (FRT).

	Wave 1 Survey				Wave 2 Survey			
	Estimate	SE	$\beta$	$p$	Estimate	SE	$\beta$	$p$
(Constant)	18.13	1.35		<0.001	17.41	1.42		<0.001
Political Orientation (High = Republican)	0.37	0.14	0.14	0.01	0.11	0.15	0.04	0.44
Female (vs. Male)	−1.53	0.55	−0.15	0.01	−1.29	0.58	−0.12	0.03
Subj. Fin Know	1.25	0.27	0.25	<0.001	1.31	0.28	0.25	<0.001
Married	−0.74	0.60	−0.07	0.22	−0.20	0.63	−0.02	0.75
Black	0.72	0.84	0.05	0.40	0.39	0.89	0.02	0.66
Hispanic	−0.02	0.90	0.00	0.98	−0.43	0.96	−0.02	0.65
Asian	−1.40	1.67	−0.06	0.40	2.50	1.74	0.11	0.15
Other Race	0.44	1.32	0.03	0.74	0.10	1.37	0.01	0.94
Bachelor’s Degree or Higher	1.23	0.61	0.12	0.04	1.63	0.64	0.15	0.01
Homeownership	0.90	0.70	0.08	0.19	1.15	0.72	0.10	0.11
Household Income	0.12	0.10	0.08	0.20	0.16	0.10	0.11	0.10
Self-Reported Net Worth	0.26	0.28	0.06	0.35	0.03	0.30	0.01	0.92
Age 18 to 24	1.92	1.13	0.10	0.09	1.38	1.18	0.07	0.24
Age 25 to 34	0.32	0.92	0.02	0.73	1.36	0.98	0.08	0.16
Age 35 to 44	−0.22	0.79	−0.02	0.78	0.40	0.84	0.03	0.63
Age 55 to 64	−0.64	0.75	−0.05	0.39	−0.30	0.79	−0.02	0.71
Age 65 to 74	−0.50	0.76	−0.03	0.55	−0.82	0.80	−0.06	0.32
Age 75 or Older	−2.66	1.18	−0.12	0.03	−1.01	1.23	−0.04	0.42
$R^2$	0.23				0.23			
F Statistic	5.63				5.44			
p-Value	<0.001				<0.001			

Table 6 shows the results from the OLS regression model used to examine whether the change in FRT from Wave 1 to Wave 2 was significantly associated with political party orientation. This model was designed to test the second hypothesis, which stated that those who more strongly affiliate as a Republican, compared with a Democrat, will exhibit greater stability in financial risk tolerance across time, after controlling for the person’s predisposing biopsychosocial and environmental profile. The model was statistically significant ( $F = 2.27, p = 0.002; R^2 = 0.11$ ). Affiliating as a Republican was negatively associated with a change in FRT from the Wave 1 to Wave 2 surveys ( $b = -0.27, p = 0.02$ ). The FRT of Republicans showed a statistically significant decline across the periods, although it is important to note that Republicans still exhibited a higher average level of FRT compared with Democrats, as illustrated in Figure 1. Identifying as Asian was found to be associated with an increase in FRT across the two periods.

**Table 6.** OLS regression results describing change in financial risk tolerance (FRT) from the Wave 1 to the Wave 2 survey.

	Estimate	SE	$\beta$	<i>p</i>
(Constant)	−0.71	1.10		0.52
Political Orientation (High = Republican)	−0.27	0.11	−0.14	0.02
Female (vs. Male)	0.38	0.45	0.05	0.40
Subj. Fin Know	0.06	0.22	0.02	0.78
Married	0.62	0.49	0.08	0.20
Black	−0.38	0.69	−0.03	0.57
Hispanic	−0.82	0.75	−0.06	0.28
Asian	3.95	1.34	0.24	0.01
Other Race	−0.33	1.06	−0.03	0.76
Bachelor’s Degree or Higher	0.41	0.49	0.05	0.41
Homeownership	0.24	0.56	0.03	0.67
Household Income	0.03	0.08	0.03	0.70
Self-Reported Net Worth	−0.25	0.23	−0.07	0.28
Age 18 to 24	−0.58	0.91	−0.03	0.58
Age 25 to 34	0.88	0.76	0.07	0.25
Age 35 to 44	0.65	0.65	0.06	0.32
Age 55 to 64	0.31	0.61	0.03	0.61
Age 65 to 74	−0.24	0.62	−0.02	0.70
Age 75 or Older	1.70	0.96	0.10	0.08
<i>R</i> <sup>2</sup>	0.11			
<i>F</i> Statistic	2.27			
<i>p</i> -Value	0.002			



**Figure 1.** Change in FRT from Wave 1 to Wave 2 for those with high Republican and high Democratic affiliation.

Tables 7 and 8 show results from robustness checks that were estimated separately using the recoded Republican and Democratic Party affiliation questions. The Republican political affiliation model was statistically significant ( $F = 2.06, p = 0.007; R^2 = 0.10$ ). FRT scores for those affiliating as a Republican declined over the two periods. Similar to the previous model, those affiliating as Asian exhibited an increase in FRT over the periods. The Democratic Party affiliation model was also statistically significant ( $F = 2.28, p = 0.002;$

$R^2 = 0.11$ ). Affiliation with the Democratic Party was not associated with a change in FRT. Self-identifying as Asian was associated with an increase in FRT. Based on these findings, the second hypothesis was not supported as strong affiliation as a Republican was not found to be associated with greater stability in FRT, controlling for other predisposing biopsychosocial and environmental factors.

**Table 7.** Regression showing change in financial risk tolerance (FRT) from the Wave 1 to Wave 2 survey based on Republican Party affiliation.

	Estimate	SE	$\beta$	<i>p</i>
(Constant)	−0.59	1.08		0.59
Republican Party Affiliation	−0.92	0.48	−0.11	0.05
Female (vs. Male)	0.34	0.44	0.04	0.44
Subj. Fin Know	0.01	0.21	0.00	0.96
Married	0.45	0.47	0.06	0.35
Black	−0.08	0.66	−0.01	0.90
Hispanic	−0.36	0.70	−0.03	0.61
Asian	3.29	1.30	0.19	0.01
Other Race	0.21	0.99	0.02	0.84
Bachelor’s Degree or Higher	0.36	0.48	0.05	0.45
Homeownership	0.31	0.56	0.04	0.58
Household Income	0.06	0.08	0.05	0.47
Self-Reported Net Worth	−0.21	0.23	−0.06	0.36
Age 18 to 24	−0.53	0.91	−0.04	0.56
Age 25 to 34	1.05	0.75	0.09	0.16
Age 35 to 44	0.70	0.64	0.06	0.28
Age 55 to 64	0.11	0.59	0.01	0.86
Age 65 to 74	0.04	0.60	0.00	0.95
Age 75 or Older	1.67	0.93	0.10	0.07
$R^2$	0.10			
<i>F</i> Statistic	2.06			
<i>p</i> -Value	0.007			

**Table 8.** Regression showing change in financial risk tolerance (FRT) from the Wave 1 to Wave 2 survey based on Democratic Party affiliation.

	Estimate	SE	$\beta$	<i>p</i>
(Constant)	−0.95	1.07		0.38
Democratic Party Affiliation	0.81	0.44	0.10	0.07
Female (vs. Male)	0.34	0.44	0.04	0.43
Subj. Fin Know	−0.02	0.21	−0.01	0.92
Married	0.49	0.48	0.06	0.30
Black	0.07	0.65	0.01	0.92
Hispanic	−0.77	0.72	−0.06	0.29
Asian	4.02	1.34	0.24	<0.001
Other Race	−0.23	1.06	−0.02	0.83
Bachelor’s Degree or Higher	0.58	0.48	0.07	0.23
Homeownership	0.25	0.55	0.03	0.65
Household Income	0.05	0.08	0.04	0.56
Self-Reported Net Worth	−0.23	0.23	−0.06	0.32
Age 18 to 24	−0.38	0.91	−0.03	0.67
Age 25 to 34	0.90	0.75	0.07	0.23
Age 35 to 44	0.78	0.64	0.07	0.23
Age 55 to 64	0.27	0.59	0.03	0.65
Age 65 to 74	−0.47	0.60	−0.05	0.43
Age 75 or Older	1.71	0.95	0.10	0.07
$R^2$	0.11			
<i>F</i> Statistic	2.28			
<i>p</i> -Value	0.002			

Results from the preceding tests were used to evaluate the third research hypothesis, which stated that political orientation will explain more of the variance in financial risk tolerance than other predisposing personal biopsychosocial and environmental characteristics. Test results failed to provide support for this hypothesis. Political orientation, measured on a scale from strongly Republican to strongly Democrat, explained the second most variance in the change in FRT scores from the Wave 1 to the Wave 2 survey. Even so, these findings add support to the following assertion made by [Christensen et al. \(2015, p. 1936\)](#): “. . . political orientation seems to capture enduring differences in individuals’ attitudes toward financial uncertainty . . . “. The Asian race/ethnicity variable explained the greatest amount of variance in the models (see Tables 6–8). Financial knowledge and educational attainment were also important in explaining FRT scores in the Wave 2 survey (see Table 5).

## 5. Discussion and Conclusions

The purpose of this study was twofold. The first purpose was to examine the extent to which political orientation is associated with FRT (cross-sectionally and over time). Findings from this study show that the strength of affiliation with the Republican and Democratic Parties was descriptive of cross-sectional FRT. Republicans were found to exhibit greater FRT compared with Democrats. Across periods, the FRT of Republicans exhibited relatively less stability, whereas the FRT for Democrats was more stable. A significant decrease in FRT was observed for those affiliating as a Republican pre-2020 presidential election to post-2020 election. When political orientation was measured on a scale, the decrease in FRT across periods for Republicans was significant. The FRT of those affiliating as a Democrat increased across the periods but at a lower rate than in the drop in scores among Republicans. When viewed across the variables of interest in this study, political orientation was an important descriptor of FRT.

It is important to place the findings from this study into a historical context. The 2020 U.S. presidential election was particularly contentious with the incumbent president at the time being a Republican. The Democratic challenger shared very few social, cultural, or economic positions with the sitting president. The election also took place during the COVID-19 pandemic and during a period of social unrest in major cities throughout the United States. Given the demographic profile of respondents affiliating with the Democratic Party—young single non-White/Caucasian females—it is possible that Democrat-affiliating respondents felt unsure about their future health, economic, and social condition. As such, they may not have been as willing pre-election to take financial risks. On the other hand, those affiliating as Republicans may have anticipated the re-election of the president. After the election, with the inauguration of a Democrat president, their expectations for the future may have shifted downward, thus changing their willingness to take financial risk down as well. It is also possible that the political orientation of Democrats was strengthened with the election of a Democrat president. This fits with the narrative proffered by [Wildavsky and Dake \(1990\)](#), who noted that cultural affiliation is based on strongly held feelings, beliefs, and values. The election may have sent signals to Republicans that their social and economic policy models would be abandoned, which could then have shifted FRT among Republicans downward.

The second purpose of this study was to determine the degree to which political orientation is predictive of changes in FRT across periods. As shown in Tables 6–8, political orientation was predictive of changes in FRT. Republicans shifted their FRT downward after the election, whereas the FRT of Democrats shifted upward. However, an important question remains unanswered; namely, would the shift in FRT have occurred had the Republican incumbent been reelected. It is conceivable that the change in FRT noted in this study might have changed direction. The FRT of Republicans might have increased had the Republican nominee won the election. Another possibility is that political orientation reflects a person’s view on the macroeconomic environment and that FRT varies, to some degree, with economic expectations. It is also possible that the way in which political

orientation was operationalized in this study influenced observed changes in FRT. Each of these possibilities should be explored in future studies.

Although tangential to the core purposes of this study, the regression results are also valuable in providing insight into the role predisposing endogenous biopsychosocial and predisposing exogenous environmental factors play in describing risk tolerance. From Wave 1 to Wave 2, males exhibited more risk tolerance than females, as did those with more financial knowledge and attained education. The findings related to knowledge and education suggest that these individual characteristics may enhance risk-taking capacity. It was also noted that self-identifying as Asian was associated with an observed increase in FRT from Wave 1 to Wave 2 of the survey.

Overall, the findings from this study advance the political-orientation and financial risk-tolerance body of knowledge in meaningful ways. To date, very few studies have been undertaken to test the relationships between political orientation, political affiliation, and FRT. Findings from this study help fill this gap in the literature. It does appear that political orientation is a useful predisposing factor that can be used to describe and predict FRT. Those who affiliate as a Republican appear to be more willing to take financial risks. The FRT of Republicans also appears to be less stable at least in the face of a lost election. The FRT of Democrats appears to be more stable and less subject to change over time. Of course, it is also possible that the stability of FRT is a relative factor that moves in response to changes in other environmental factors.

While the findings from this study are noteworthy, results do need to be evaluated in the context of certain limitations. As noted previously, this study was undertaken during the COVID-19 worldwide pandemic. The stress resulting from the pandemic may have had unforeseen impacts on the type of person who completed the surveys and how respondents answered questions. Additionally, the initial survey was distributed immediately before the 2020 election. Respondents may have been unduly influenced by media reports and worries about the election. The nature of the panel survey process may have also introduced biases into the data. Those who completed the follow-up survey may not have been representative of the larger cross-sectional sample. Data from future panel studies may provide additional evidence regarding the stability and validity of those who respond to such surveys. Future studies are needed to expand upon the results of this study. Specific opportunities for further research include identifying politically independent decision makers to determine whether these individuals differ in their risk tolerance and risk-taking propensities. It would also be useful to include measures of legislative risk-taking and financing, as well as indicators of governmental values, when evaluating the role of political orientation in describing risk tolerance. Finally, future studies should consider accounting for social identification and risk framing as controls as a way to explore the relationship between political orientation and risk tolerance.

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## Notes

- <sup>1</sup> Concerning these two characteristics, men are thought to be more risk tolerant (Hallahan et al. 2004; Hartnett et al. 2019), whereas older financial decision makers are assumed to be less risk tolerant (Brooks et al. 2018; Koekemoer 2018).
- <sup>2</sup> Personal environmental factors may provide a decision maker with the capacity to deal with negative financial outcomes associated with decision choices. Personal environmental characteristics may also equip decision makers with the financial and cognitive tools needed to organize and reframe choice scenarios and potential and realized outcomes.
- <sup>3</sup> Endogeneity issues plague much of the existing biopsychosocial, environmental, risk tolerance, and risk-taking behavior literature. More specifically, causality issues abound in much of the existing literature that attempts to link political orientation and risk tolerance and/or risk-taking. The predominant thinking is that risk tolerance—and its opposite, risk aversion—provides a pathway to risk-taking. The conceptual foundation for this argument is that risk tolerance is akin to a psychological trait, similar to personality (Dhiman and Raheja 2018; Rabbani et al. 2019; Wong and Carducci 2013). Those who make this argument suggest that risk tolerance at the individual level is relatively constant across choice scenarios and over time. Similar to the notion that behavioral intention should precede behavior (Ajzen 1991), risk tolerance is often assumed to pave the way to an engagement in risk-taking behavior (Irwin and Millstein 1986). It is possible, however, that the mere act of engaging in a risky behavior shifts a decision maker's willingness to take a future risk. Those who view risk tolerance this way argue that outcomes associated with previous actions may inform decision-maker expectations, which then lead decision makers to attempt to avoid subsequent regret and disappointment (Kahneman 2009; Pan and Statman 2012). The key takeaway from this discussion is that while a great deal of research effort has taken place to better understand the relationships between and among biopsychosocial, environmental, and risk-tolerance variables, all that can be said with certainty is that characteristics such as gender, age, income, and education appear to be associated with risk tolerance. There has not been sufficient research focused on exploring the causal relationships between and among these types of variables. This means that while causal associations are often hinted at in the literature, those interested in risk tolerance as a topic of study should move forward cautiously before inferring causation in the domain of financial risk tolerance and risk-taking. This is particularly true in relation to the potential association between risk tolerance and political orientation.
- <sup>4</sup> The selection of the political party for the negative scores was accomplished through a coin toss.

## References

- Ajzen, Icek. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179–211. [\[CrossRef\]](#)
- Alesina, Alberto, and George-Marios Angeletos. 2005. Fairness and redistribution. *American Economic Review* 95: 960–80. [\[CrossRef\]](#)
- Anbar, Adem, and Melek Eker. 2010. An empirical investigation for determining of the relation between personal financial risk tolerance and demographic characteristic. *Ege Akademik Bakis Dergisi* 10: 503–22. [\[CrossRef\]](#)
- Brooks, Chris, Ivan Sangiorgi, Carola Hillenbrand, and Kevin Money. 2018. Why are older investors less willing to take financial risk? *International Review of Financial Analysis* 56: 52–72. [\[CrossRef\]](#)
- Chavali, Kavita, and M. Prasanna Mohanraj. 2016. Impact of demographic variables and risk tolerance on investment decisions: An empirical analysis. *International Journal of Economics and Financial Issues* 6: 169–75.
- Chin, M. Kyun, Donald C. Hambrick, and Linda K. Treviño. 2013. Political ideologies of CEOs: The influence of executives' values on corporate social responsibility. *Administrative Science Quarterly* 58: 197–232. [\[CrossRef\]](#)
- Chin, M. Kyun, Stephen X. Zhang, Asghar A. Jahanshahi, and Sucheta Nadkarni. 2021. Unpacking political ideology: CEO social and economic ideologies, strategic decision-making processes, and corporate entrepreneurship. *Academy of Management Journal* 64: 1213–35. [\[CrossRef\]](#)
- Christensen, M. Dane, Dan S. Dhaliwal, Steven Boivie, and Scott D. Graffin. 2015. Top management conservatism and corporate risk strategies: Evidence from managers' personal political orientation and corporate tax avoidance. *Strategic Management Journal* 36: 1918–38. [\[CrossRef\]](#)
- Dhiman, Babli, and Saloni Raheja. 2018. Do personality traits and emotional intelligence of investors determine their risk tolerance? *Management and Labour Studies* 43: 88–99. [\[CrossRef\]](#)
- Fang, Ming, Haiyang Li, and Qin Wang. 2021. Risk tolerance and household wealth—Evidence from Chinese households. *Economic Modelling* 94: 885–95. [\[CrossRef\]](#)
- Ferreira, Suné J., and Zandri Dickason. 2018. Gender and behavior: The effect of gender and ethnicity on financial risk tolerance in South Africa. *Gender and Behaviour* 16: 10851–62.
- Fisher, Patti J. 2019. Black-White differences in financial risk tolerance. *Journal of Financial Service Professionals* 73: 70–82. [\[CrossRef\]](#)
- Gibson, Ryan J., David Michayluk, and Gerhard Van de Venter. 2013. Financial risk tolerance: An analysis of unexplored factors. *Financial Services Review* 22: 23–50.
- Gable, John E., and Michael J. Roszkowski. 2007. Self-assessment of risk tolerance by women and men. *Psychological Reports* 100: 795–802. [\[CrossRef\]](#) [\[PubMed\]](#)
- Gable, John E., and Ruth H. Lytton. 1999. Financial risk tolerance revisited: The development of a risk assessment instrument. *Financial Services Review* 8: 163–81. [\[CrossRef\]](#)
- Gable, John E., and So-Hyun Joo. 2004. Environmental and biopsychosocial factors associated with financial risk tolerance. *Journal of Financial Counseling and Planning* 15: 73–82.

- Grable, John E. 2000. Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology* 14: 625–30. [CrossRef]
- Gupta, Abhinav, Sucheta Nadkarni, and Misha Mariam. 2018. Dispositional sources of managerial discretion: CEO ideology, CEO personality, and firm strategies. *Administrative Science Quarterly* 64: 855–93. [CrossRef]
- Hallahan, A. Terrence, Robert W. Faff, and Michael D. McKenzie. 2004. An empirical investigation of personal financial risk tolerance. *Financial Services Review* 13: 57–78.
- Hartnett, Neil, Paul Gerrans, and Robert Faff. 2019. Trusting clients' financial risk tolerance survey scores. *Financial Analysts Journal* 75: 91–104. [CrossRef]
- Heo, Wookjae, Abed G. Rabbani, John E. Grable, and Michael Roszkowski. 2022. The alpha and omega of financial risk-tolerance assessment. *Financial Planning Review* 5: e1138. [CrossRef]
- Irwin, Charles E., and Susan G. Millstein. 1986. Biopsychosocial correlates of risk-taking behaviors during adolescence: Can the physician intervene? *Journal of Adolescent Health Care* 7: 82–96. [CrossRef]
- Jianakoplos, Nancy Ammon, and Alexandra Bernasek. 2006. Financial risk taking by age and birth cohort. *Southern Economic Journal* 72: 981–1001.
- Kahneman, Daniel. 2009. The myth of risk attitudes. *Journal of Portfolio Management* 36: 1. [CrossRef]
- Kaustia, Markku, and Sami Torstila. 2011. Stock market aversion? Political preferences and stock market participation. *Journal of Financial Economics* 100: 91–112. [CrossRef]
- Koekemoer, Zandri. 2018. The influence of demographic factors on risk tolerance for South African investors. Paper presented at the International Academic Conference, London, UK, May 25; p. 6408640.
- Kuzniak, Stephen, Abed G. Rabbani, Wookjae Heo, Jorge Ruiz-Menjivar, and John E. Grable. 2015. The Grable and Lytton risk-tolerance scale: A 15-year retrospective. *Financial Services Review* 24: 177–92.
- Larkin, Charles, Brian M. Lucey, and Megan Mulholland. 2013. Risk tolerance and demographic characteristics: Preliminary Irish evidence. *Financial Services Review* 22: 77–91.
- Layman, Geoffrey, Thomas Carsey, and Juliana M. Horowitz. 2006. Party polarization in American politics: Characteristics, causes, and consequences. *Annual Review of Political Science* 33: 1404–1418. [CrossRef]
- Levendusky, Matthew. 2009. *The Partisan Sort: How liberals Became Democrats and Conservatives Became Republicans*. Chicago: University of Chicago Press.
- Long, J. Scott, and Jeremy Freese. 2014. *Regression Models for Categorical Dependent Variables Using Stata*, 3rd ed. College Station: Stata Press.
- Lucarelli, Caterina, Cristina Ottaviani, and Daniela Vandone. 2011. The layout of the empirical analysis. In *Risk Tolerance in Financial Decision Making*. Edited by Lucarelli Caterina and Gianni Brighetti. London: Palgrave MacMillan, pp. 153–80.
- Morris, Michael W, Erica Carranza, and Craig R. Fox. 2008. Mistaken identify: Activating conservative political identities induces “conservative” financial decisions. *Psychological Science* 19: 1154–60. [CrossRef]
- Pan, Carrie H., and Meir Statman. 2012. Questionnaires of risk tolerance, regret, overconfidence, and other investor propensities. *The Journal of Investment Consulting* 14: 54–63. [CrossRef]
- Pasta, David J. 2009. Learning when to be discrete: Continuous vs. categorical predictors. In *SAS Global Forum* 248: 1–10. Available online: <https://support.sas.com/resources/papers/proceedings09/248-2009.pdf> (accessed on 8 January 2022).
- Pinjisakikool, Teerapong. 2017. The influence of personality traits on households' financial risk tolerance and financial behavior. *Journal of Interdisciplinary Economics* 30: 32–54. [CrossRef]
- Rabbani, Abed G., and Liana Holanda N. Nobre. 2022. Financial risk tolerance. In *De Gruyter Handbook of Personal Finance*. Edited by John E. Grable and Chatterjee Swarn. Berlin: De Gruyter, pp. 137–56.
- Rabbani, Abed G., John E. Grable, Wookjae Heo, Liana Nobre, and Stephen Kuzniak. 2017. Stock market volatility and changes in financial risk tolerance during the great recession. *Journal of Financial Counseling and Planning* 28: 140–54. [CrossRef]
- Rabbani, Abed G., Zheyang Yao, and Christina Wang. 2019. Does personality predict financial risk tolerance of pre-retiree baby boomers? *Journal of Behavioral and Experimental Finance* 23: 124–32. [CrossRef]
- Ripberger, Joseph T., Geoboo Song, Matthew C. Nowlin, Michael J. Jones, and Hank C. Jenkins-Smith. 2012. Reconsidering the relationship between cultural theory, political ideology, and political knowledge. *Social Science Quarterly* 93: 713–31. [CrossRef]
- Sahm, Cludia R. 2012. How much does risk tolerance change? *Quarterly Journal of Finance* 2: 1–38. [CrossRef]
- Semadeni, Matthenw, M. K. Chin, and Ryan Krause. 2021. Pumping the brakes: Examining the impact of CEO political ideology divergence on firm responses. *Academy of Management Journal* 64: 1213–1235. [CrossRef]
- Swigart, Kristen L., Anuradha Anantharaman, Jason A. Williamson, and Alicia A. Grandey. 2020. Working while liberal/conservative: A review of political ideology in organizations. *Journal of Management* 46: 1063–91. [CrossRef]
- Wang, Alex. 2009. Interplay of investors' financial knowledge and risk taking. *Journal of Behavioral Finance* 10: 204–13. [CrossRef]
- Wildavsky, Aaron, and Karl Dake. 1990. Theories of risk perception: Who fears what and why? *Daedalus* 119: 41–60.
- Wong, Alan, and Bernardo Carducci. 2013. Does personality affect personal financial risk tolerance behavior? *IUP Journal of Applied Finance* 19: 5–18.
- Wong, Alan. 2011. Financial risk tolerance and selected demographic factors: A comparative study in 3 countries. *Global Journal of Finance & Banking Issues* 5: 1–12.



- Yang, Yali. 2004. Characteristics of risk preferences: Revelations from Grable & Lytton's 13- item questionnaire. *Journal of Personal Finance* 3: 20–40.
- Yao, Rui, Deanna L. Sharpe, and Feifei Wang. 2011. Decomposing the age effect on risk tolerance. *The Journal of Socio-Economics* 40: 879–87. [[CrossRef](#)]