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An empirical study of the influence of socioeconomic and psychological variables on investing behavior

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Abstract

Rather than focusing solely on the impact cognitive biases have on strategic investment and decision making, a new study examines them as a mediator in the interplay between different types of behavior and financial decision making. Depression is theorized to originate from a breakdown in both cognitive and attention control processes. Stress and worry are big contributors to the kind of mental slipups that end up costing you money in the long run. The predicted connection was investigated using structural models, with information from 252 traders on major Indian stock exchanges. Reduced anxiety levels provide a strong want to herd. Many things can cause representative bias, and stress is one of them. Interacting with others might lead to a person believing too much in their own abilities. To a far lesser extent than herding prejudice, stress has no discernible effect on one's ability to make sound financial judgments. Self-efficacy, behavioral patterns, and biases all play a role in investment choices.

Introduction

The idea of "rationality" is used to the analysis of financial markets within the traditional financial paradigm. In line with the principle of "rationality," people's views and preferences evolve when new knowledge becomes available. To maximize happiness, people typically opt for more pleasurable options. Participants in the market, according to the theory of behavioral finance, do not necessarily act in a consistent or reasonable manner. The value of a person's investments and their potential return might be affected by their emotional state. It is questionable whether or not the classical rationality idea still holds true in light of the present state of the financial markets. Classical financial theory may or may not be compatible with the modern human brain's complicated decision-making process. Investors' investing decisions may be impacted by a lack of emotional connection on their part. According to study published in the Journal of Personality and Social Psychology, persons with personality disorders are more prone to make bad financial decisions due to their negative moods. The existence of a stressor as well as its effect or influence may contribute to stress in an individual's life. Psychological stress has been the subject of both response-based and sensory-based theories. Both of these could be able to be found in the books. A demanding workload and a lack of leisure time are two major sources of stress. Reaction-based theories of stress define stress as the physiological response to an external stressor. According to this view, people are more complicated than just robots programmed to react to their environment and their own internal states of mind. Those who aren't able to keep their stress levels in check may experience clinical depression while dealing with extreme pressure. Mental health issues may be exacerbated by stress, which is a behaviour that may be changed.

Prolonged and debilitating sadness characterises depression. Depressed people are thus less inclined to make the most of economic chances. People with depression often ignore their pleasant emotions and focus instead on their negative ones. Someone who suffers from financial stress will have a harder time taking in and processing data regarding their financial situation. Those who are scared are paralysed by their conviction that they can do nothing to alter their circumstances. As a result, some people may try to act in ways that are

similar to those around them in order to justify their own actions and lessen their sense of shame (i.e. herding behavior).

Literature Review

Eysenck's attentional control theory and processing efficiency theories have previously been used to study human cognition. Using the prospect theory of behavioural bias, one can describe financial decision-making. Additionally, bias has been studied in academic studies. In contrast to Lucey and Dowling (2005), Baddeley, Burke, Schultz, and Tobler (2010) investigated the significance of personality traits in herding and financial decision-making. However, the relationship between financial decisions and psychological factors is currently under examination. How do these psychological factors influence behaviour when they are considered? A lot of factors may contribute to behavioural bias, thus it is essential to maintain an open mind.

This investigation as a whole has a vast quantity of information. Investors' decisions are primarily impacted by their preconceptions. It is established that a person's upbringing and heredity are the most common sources of behavioural biases. As indicated in the third point, behavioural biases serve as a form of mediator between the two parties. Investment decisions may be influenced by direct and indirect psychological factors (such as stress, depression, and anxiety) and social relationships (such as participation in group activities). India's scientists will investigate the hypothesis. We will analyse the direct and indirect effects of psychological factors on our results using SEM. This research will focus on Indian stock investors in particular...

Development of a research model and hypotheses

This study employs two methodologies to investigate the impact of behavioural biases. It focuses on how biases influence investing outcomes directly. Additionally, behavioural biases are evaluated to determine if they have an effect on investment success. Behavioral biases are caused by a combination of social and psychological factors, according to this research.

Anxiety, herding, and investing decisions are all things that people worry about

Anxiety is believed to decrease attentional control, hence decreasing processing speed. If resources are diverted away from task-relevant inputs, unrelated data may be analysed instead. Anxious individuals are unable to initiate a particular pattern of behaviour and are unable to modify or eliminate the event, object, or interpretation that threatens their desired objective. Due to its negative influence on performance, anxiety is an essential component of thinking. Anxious people make decisions based on their emotions, which might have unintended consequences. Confidence and self-efficacy suffer when people have less faith in their own abilities and rely more on others. We require greater command and less unpredictability. Anxious individuals will seek measures to reduce their feelings of insecurity and enhance their sense of control. By increasing social bonds, it is possible to lessen uncertainty and reestablish a sense of control. Even if a portion of the investors are not startled, the others will follow suit. This is true for a number of reasons, but the most important is that herding and imitation are intrinsically linked. Researchers discovered that individuals who have difficulty controlling their emotions are more likely to follow the herd.

Hypothesis 1: Anxiety causes herding behaviour, which has a negative impact on investing decisions.

Depression, loss aversion, and investing decisions are all factors to consider

According to the expectation principle, persons who lose money experience greater emotional distress than those who succeed. A person's investment behaviour is influenced by his or her past success or failure. In a loss-averse situation, a "win" is always smaller than an equal-sized loss because the subjective value of money decreases as wealth increases and increases as wealth decreases. This trend is characterised by the "law of diminishing marginal usefulness." According to the Loss Aversion Theory, investors should sell their gains while holding on to their losses because they believe the loser will outperform the winner in the future.

Depression and risk aversion are associated, but first we must define depression. Depression is characterized by a persistently poor mood and a desire to avoid activities that may affect one's health and well-being. People with depression are less risk-taking, which has a detrimental impact on investing.

Hypothesis 2: Depression causes loss aversion bias, which influences investment decisions negatively.

Stress, representativeness, and investment decisions are all factors to consider.

The term "stress" is used to describe the feeling of being under strain or stretched. The majority of research has focused on the capacity of individuals to notice and comprehend potential hazards in their surroundings. Stress restricts a person's perspective and actions to those variables that have the most impact on their current course of action. Due to the above justification, individuals who are under significant stress are more susceptible to bias. People have a propensity to make erroneous assumptions about the likelihood of certain occurrences. Stress may alter the amount of focus placed on information, resulting in a reduction in cognitive performance. According to the principle of small numbers, it is conceivable that a random sample drawn from a larger population could accurately represent all of its members. This concept stays true when tested on large, unbiased samples. If the sample is not typical of the population and is not large enough to be statistically significant, the confirmation bias heuristic may be used to explain this idea. The assumption that sample statistics results correspond to population parameters is problematic since it can easily result in erroneous predictions.

Hypothesis 3: Stress causes representative bias, which therefore affects investment decisions.

Overconfidence, social interactions, and investment decisions are all factors to consider

Investing has become an integral component of modern living in the twenty-first century. Moreover, many investors enjoy discussing stocks with friends and coworkers both at home and at the office. People discuss their assets in numerous situations, including the workplace, at lunch, on the radio, and online. When it comes to investing, the moral support of like-minded investors is essential for individuals who wish to go it alone. The Internet and digital communications technologies have altered the manner in which people communicate, which has had a substantial impact on the purchase and selling activities of investors. This evidence suggests that investors are impacted by social interaction and are sensitive to social cues.

Hypothesis 4: Overconfidence bias is exacerbated by social interactions, which lowers the quality of long-term investment choices..

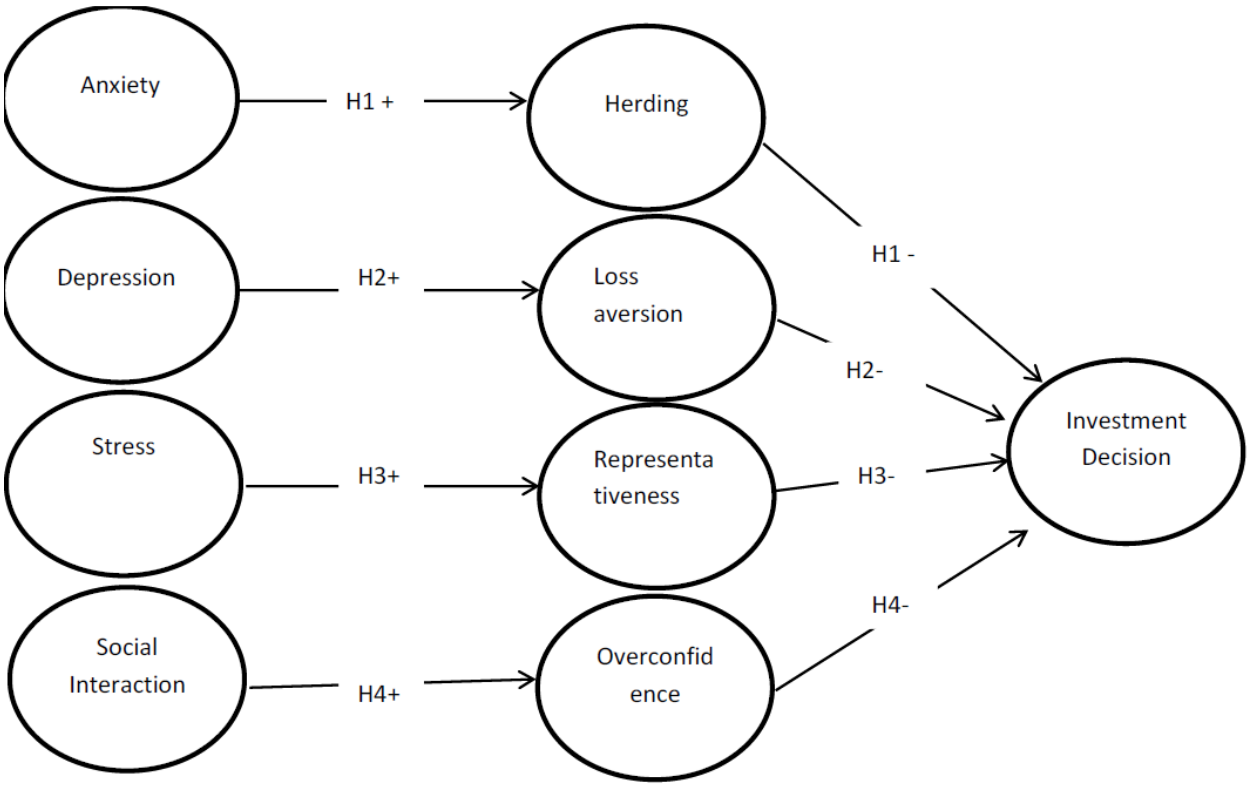

Figure 1: Hypothesized model

Research Methodology

Throughout the duration of the study, the researchers picked 252 stock investors, of which 80% were men and 20% were women. Due to a long history of male dominance in the workforce in India, women are underrepresented in the workforce. Using a self-report questionnaire and nonprobability sampling techniques, in-person interviews were done.

Measurements

Researcher Mitchell, Crane, and Kim (2007) devised a twelve-item scale for measuring stress (e.g. 1. For one reason or another, you were unable to govern the most crucial aspects of your life.).

Lim and Sng's (2006) two-item scale for measuring anxiety was proven to be very reliable and valid in previous studies (e.g., 1. I worry about my finances most of the time; 2. I often feel anxious about my personal finances).

For the measurement of depression, Garst, Frese, and Molenaar developed a two-item scale (2000). My mood is gloomy at the moment, and I don't feel like doing anything.

The researchers employed Ragins and Cotton's three-item social interaction measure (1999). It is not unusual for me to have one-on-one casual social interactions (e.g., I often meet up with my colleagues after work).

Five questions were used to measure representative bias, overconfidence, and loss aversion, however Waweru, Munyoki, and Uliana (2008) discovered that only four of the items were reliable for measuring herding behaviour (e.g., My investing recommendations are based on the historical performance of a small sample of representative equities, analysed using trend analysis.). It gives me great confidence to be able to beat out the competition because of my background in investing. I'm afraid I'll lose the money I've already invested if I sell my asset before it's fully matured.

According to Oberlechner (2008) and Waweru et al., return rates are the most important factor for evaluating investment success (2008). According to this study, researchers used primary data to make investment selections. Several aspects of our financial commitment were reexamined, including both internal and external factors. Investors were asked to use both subjective and objective criteria to compare their real return with their expected return and their actual return with the average stock market return rate. Overall investor satisfaction was also examined in this survey.

Therefore, each participant in this research evaluated their own personal investment results in the study individually. To illustrate my point, consider the following: The return on your recent stock investment was in line with what you expected. You're doing well if the market's average return is lower than your return rate. As a result of last year's successful investments, you're satisfied (including selling, buying, choosing stocks, and deciding the stock volumes). A Likert scale with a response range of 1 to 7 was used to survey respondents, with 1 indicating strong disapproval and 7 indicating strong support.

Analysis of Data

Analytical strategy

The researcher went through four stages of data analysis. The researcher performed a confirmatory factor analysis at this first stage in order to assess the validity of all measurements (Anderson & Gerbing, 1988). After the structural model was shown to be convergent and discriminantly valid, a SEM analysis was utilised to verify its validity (Anderson & Gerbing, 1988). Stock market investors who are depressed or stressed are more likely to make poor investment decisions, according to a new study.

Confirmation of Factor Analysis

Validity and dimensionality of the constructs were checked using well-established instruments in the Indian context. The data's dependability and dimensionality were verified using CFA, and the findings were promising. Anxiety and depression were rated based on factors such as social interactions and loss avoidance as well as a person's overconfidence and investing choices. It was initially loaded with all nine metrics into a single factor in the CFA's first phase (Anderson & Gerbing, 1988). We couldn't obtain excellent outcomes with the CFA if we just used one part of it (Table 1). After that, a nine-factor CFA was performed, with measurements taken for each variable. The findings of this CFA's study were in agreement with the available data (Table 1).

Table 1. Model Fit Indices

Models		χ^2	Df	χ^2/df	GFI	NFI	TLI	CFI	RMSEA
Model 1	One factor CFA	3036.03	820	3.70	0.58	0.55	0.61	0.62	0.1
Model 2	Nine factor CFA	1368.60	780	1.75	0.79	0.79	0.89	0.90	0.05

As stated by Kline, the nine-factor CFA has a factor loading ranging from 0.62 to 0.9 for all components (2011a). There may be convergent validity since the AVEs of all the components are larger than 0.4. Discriminant validity may be seen in feelings of fear, melancholy, and social participation. (see Table 2).

Table 2. Construct validity and reliability

	1	2	3	4	5	6	7	8	9	α
Anxiety	**0.79**									0.88
Stress	0.25	**0.47**								0.92
Depression	0.00	0.01	**0.55**							0.71
Social interaction	0.03	0.02	0.00	**0.51**						0.83
Herding	0.12	0.56	0.01	0.02	**0.59**					0.89
Investment decision	0.12	0.31	0.09	0.01	0.30	**0.61**				0.82
Overconfidence	0.22	0.64	0.02	0.06	0.50	0.31	**0.57**			0.87
Representativeness	0.19	0.40	0.00	0.02	0.32	0.25	0.41	**0.59**		0.89
Loss aversion	0.00	0.00	0.12	0.01	0.00	0.14	0.00	0.00	**0.48**	0.79

On the diagonal AVE and below are the values of the squared correlations (r).

Alpha levels (see Table 2) surpassed the recommended range for eight categories: 0.92 for stress, 0.89 for representative bias, 1.87 overconfidence 0.88 for anxiety 1.79 loss aversion 1.89 herding 1.83 social interaction 1.71 depression (see Table 2 for the alpha values) (Nunnally, 1978).

Variance in Common Methods

Because the study was cross-sectional and the researcher used the same questionnaire at the same time, it is possible that there was a common procedure bias in data collection (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). According to the authors (Podsakoff, MacKenzie, Lee and Podsakoff, 2003), The existence of CMB was detected using Harman's one-factor approach. Only half of the variance in the data was explained by the first component.

Multi-collinearity

The variance of the regression coefficients is boosted by multi-collinearity. The predicted equation's results will be less reliable if there are large deviations. The VIF (variance inflation factor) was used in a multi-collinearity test to identify any anomalies in the data (variance inflation factor). When the VIF is high, multi-collinearity becomes a concern. For determining whether or not there is multi-collinearity, VIF 10 is a good rule of thumb. No variables in this dataset have a VIF greater than 4. The results of this analysis show that there is no risk of multi-collinearity in our data..

Correlation analysis and descriptive statistics

Table 3 It shows the descriptive statistics (mean and standard deviation) and relationships among nine different variables. A quick glance at this correlation table provides a concise review of the purported and unproposed relationships between the various variables..

Table. 3. Descriptive Statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9
Anxiety	3.93	1.86	1								
Stress	4.13	1.29	.50	1							
Depression	3.63	1.77	-.01	.11	1						
Social interaction	4.38	1.38	.17	.15	.01	1					
Herding	4.23	1.47	.35	.75	.14	.14	1				
Investment decision	3.89	1.60	-.34	-.56	-.31	-.10	-.54	1			
Overconfidence	4.20	1.48	.47	.81	.13	.24	.70	-.55	1		
Representativeness	4.07	1.55	.44	.64	.09	.16	.56	-.50	.63	1	
Loss aversion	4.10	1.40	-.07	-.07	.34	-.10	-.02	-.37	-.07	.01	1

Correlations among variables are significant 5%

Discussions

Fit of the model

The model fit indices were evaluated using nine components generated by the researcher in this study (Anderson & Gerbing, 1988). Anxiety, tension, sadness, and social contact have been linked to investment decisions because of these biases, according to a study. The recommended strategy yielded encouraging results.. Table 4 shows (as an example).

Table 4. Model fit indices

		Model fit							
Model	Description of model	χ^2	Df	χ^2/df	GFI	NFI	TLI	CFI	RMSEA
Model 2	Multi mediation	1943.58	805	2.41	0.85	0.83	0.79	0.81	0.07

Model Validation

The impact of independent and mediating factors on investment decisions was examined using Structural Equation Modeling. Emotions such as joy, sorrow, or social interaction all had an effect on investors' pre- and post-mediation choices.

As shown in Table 4, The results are consistent with the mediation hypothesis, indicating that biases play a significant influence in investment choices.. (2=545.48 df=226 2/df=2.4 GFI =0.85 CFI =0.89 TLI =0.88 NFI =0.83 RMSEA =0.075).

Table 5. Direct Effects on Investment Decisions

Independent variable	Dependent variable				
	Loss aversion	Representative Bias	Herding	Overconfidence	Investor decision
Depression	0.45**	.....	.....	....	-0.09
Stress	....	0.71**	....	.....	-0.08
Anxiety	.....	.....	0.43**	....	-0.02
Social interaction	.....	.....	.....	0.30**	-0.01
Loss aversion	.....	.....	.....	.....	-0.59**
Representative	.....	.....	.....	.....	-0.14**
Herding	.....	.....	.....	.....	-0.27*
Overconfidence	.....	.....	.....	.....	-0.46**

**significant at 1%level of significance

*significant at 5% level of significance

All of these biases have a significant impact on the judgments made by investors. Investing decisions are constrained by investors' fear of losing money, as shown in Table 5. (i.e. -0.59 at 5 percent and 1 percent). As a result, investors' judgments will be affected by representative prejudice as well (i.e. -0.14 at 5 percent and 1 percent). Investment choices are negatively affected by herding, as seen in Table 5. A negative -0.27 at 5 percent and 1 percent is an example of this Overconfident investors are more likely to make bad judgments and underperform the market, according to research. There have been some biases identified in the studies, though. It has been found that emotional distress, including depression (i.e., 0.45 at 5% and 1%), herding bias (i.e., 0.71% at 5% and 1%), overconfidence bias (i.e., 0.43 at 5% and 1%), as well as social interaction (i.e., 0.43 at 5% and 1%), have a significant impact on loss aversion bias (ie., 0.45 at 5% and 1%). (i.e. 0.43 at 5 percent and 1 percent). For example, 0.30% at 5% and 1%.

Anxiety, depression, and social contact all have an effect on investor behaviour, as seen in Table 6. Loss aversion bias has a large role in investors' decision-making, whereas sadness has a far less effect (i.e. -0.09 at 5 percent and 1 percent). To put it another way, (for example, -0.09 for 5% and 1%). At 5%, the value is -0.24. It turns out, according to this study, that investors' reluctance to suffering losses influences their investment decisions. Investment choices are not affected by stress if herding bias is prevalent (i.e. -0.08 at 5 percent and 1 percent). There is a decent match between the model's predictions and the data (CFI=0.81 TLI= 0.79 NFI=0.71 RMSEA=0.07) when it comes to the effects of stress, depression, anxiety, and social contact on investment choices. (CFI =0.81 TLI = 0.79 NFI=0.71 RMSEA=0.07).

Table 6.Indirect Effects on Investment Decisions

Independent Variable	Dependent variable Investor decision			
	Via loss aversion	Via Representative	Via Herding	Via overconfidence
Depression	-0.24*	....	.....	....
Stress	.....	-0.10	....	.....
Anxiety	.....	.....	-0.10**	....
Social interaction	....	.....	.....	-0.08*

*significant at 5%level of significance

**significant at 1%level of significance

Nonetheless, when investors are herded by a mediator, their apprehensions have a significant impact on their judgments (i.e. -0.10 at 5 percent and 1 percent). It is evident from this graph that herding mediates between investor anxiety and the investor's ultimate decision. According to Table 6, mood swings do not affect the investment decisions of investors. The emotional state of a stressed-out investor does not influence their decision-making. Even while social contact has a minimal direct effect on investor decision-making,

overconfidence might have a significant indirect effect (-0.01 at 5% and 1%). -0.08 negative at 5% Our research indicates that when it comes to making investment decisions, overconfidence is the only mediator. Regardless of its impact, stress serves as a link between depressed and socially isolated individuals..

Limitations of Study

Because it focuses just on stock investors, this research has a narrow reach. Non-probability sampling was used in this study because of its ease of use and reliability as a decision-making tool. This approach was not used in this study since it was found to be ineffective.

Conclusions

A new study suggests that behavioral biases may have an effect on investment success. These prejudices result from the interaction of socio-psychological and cultural elements. Investors can make rational decisions if they are able to control their emotions. This research examines how investors make investment decisions in order to comprehend how behavioral biases influence investment decisions.

References

Albert, K. M., & Newhouse, P. A. (2019). Estrogen, stress, and depression: Cognitive and biological interactions. *Annual review of clinical psychology, 15*, 399-423.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin, 103*(3), 411-423.

Baddeley, M., Burke, C., Schultz, W., & Tobler, T. (2010). Impacts of personality on herding in financial decision-making. *https://doi.org/10.17863/CAM.1133*.

Barber, B. M., Lee, Y.-T., Liu, Y.-J., & Odean, T. (2008). Just how much do individual investors lose by trading? *The Review of Financial Studies, 22*(2), 609-632.

Barber, B. M., & Odean, T. (2007). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *The Review of Financial Studies, 21*(2), 785-818.

Barom, M. N. (2019). Understanding Socially Responsible Investing and Its Implications for Islamic Investment Industry. *Journal Of Emerging Economies and Islamic Research, 7*(1), 1-13.

Barrett, L. F. (2017). *How emotions are made: The secret life of the brain*: Houghton Mifflin Harcourt.

Boussaidi, R. (2013). Representativeness heuristic, investor sentiment and overreaction to accounting earnings: The case of the Tunisian stock market. *Procedia-Social and Behavioral Sciences, 81*, 9-21.

Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the national academy of sciences, 112*(28), 8567-8572.

Brooks, A. W., & Schweitzer, M. E. (2011). Can Nervous Nelly negotiate? How anxiety causes negotiators to make low first offers, exit early, and earn less profit. *Organizational Behavior and Human Decision Processes, 115*(1), 43-54.

Cartwright, E. (2018). *Behavioral economics*: Routledge.

Che, L. (2018). Investor types and stock return volatility. *Journal of Empirical Finance, 47*, 139-161.

Chen, M.-H., Chen, B. H., & Chi, C. G.-q. (2019). Socially responsible investment by generation Z: a cross-cultural study of Taiwanese and American investors. *Journal of Hospitality Marketing & Management, 28*(3), 334-350.

Cheng, P. Y. (2019). Risk Willingness and Perceived Utilities to Explain Risky Investment Choices: A Behavioral Model. *Journal of Behavioral Finance, 20*(3), 255-266.

Derakshan, N., & Eysenck, M. W. (2009). Anxiety, processing efficiency, and cognitive performance: New developments from attentional control theory. *European Psychologist, 14*(2), 168-176.

Dohmen, T., Falk, A., Huffman, D., Marklein, F., & Sunde, U. (2009). Biased probability judgment: Evidence of incidence and relationship to economic outcomes from a representative sample. *Journal of Economic Behavior & Organization, 72*(3), 903-915.

EMARA, N., Congcong, N., & Ya, G. (2018). The impact of sudden stops in capital flows on output and investment: Selected emerging markets. *Turkish Economic Review, 5*(4), 328-337.

Ergun, H. (2015). Monitoring Physiological Reactions of Construction Workers in Virtual Environment: A Feasibility Study Using Affective Sensing Technology. *FIU Electronic Theses and Dissertations. 2302. http://digitalcommons.fiu.edu/etd/2302*.

Garbuio, M., Lovallo, D., & Sibony, O. (2015). Evidence doesn't argue for itself: the value of disinterested dialogue in strategic decision-making. *Long Range Planning, 48*(6), 361-380.

Gärling, T., Fang, D., & Holmen, M. (2019). Review of behavioral explanations of how rank-based incentives influence risk taking by investment managers in mutual fund companies. *Review of Behavioral Finance*.

Garst, H., Frese, M., & Molenaar, P. (2000). The temporal factor of change in stressor–strain relationships: A growth curve model on a longitudinal study in East Germany. *Journal of Applied Psychology, 85*(3), 417-438.

Gilchrist, S., Yankov, V., & Zakrajšek, E. (2009). Credit market shocks and economic fluctuations: Evidence from corporate bond and stock markets. *Journal of monetary Economics, 56*(4), 471-493.

Gold, P. (2015). The organization of the stress system and its dysregulation in depressive illness. *Molecular psychiatry, 20*(1), 32-47.

Grahek, I., Everaert, J., Krebs, R. M., & Koster, E. H. (2018). Cognitive control in depression: Toward clinical models informed by cognitive neuroscience. *Clinical Psychological Science, 6*(4), 464-480.

Hall, C. C., Ariss, L., & Todorov, A. (2007). The illusion of knowledge: When more information reduces accuracy and increases confidence. *Organizational Behavior and Human Decision Processes, 103*(2), 277-290.

Harlé, K. M., Allen, J. J., & Sanfey, A. G. (2010). The impact of depression on social economic decision making. *Journal of abnormal psychology, 119*(2), 440-446.

Haushofer, J., & Fehr, E. (2014). On the psychology of poverty. *Science, 344*(6186), 862-867.

Heaney, C. A., & Israel, B. A. (2008). Social networks and social support. *Health behavior and health education: Theory, research, and practice, 4*, 189-210.

Inzlicht, M., Bartholow, B. D., & Hirsh, J. B. (2015). Emotional foundations of cognitive control. *Trends in cognitive sciences, 19*(3), 126-132.

Joyce, J. P., & Nabar, M. (2009). Sudden stops, banking crises and investment collapses in emerging markets. *Journal of Development Economics, 90*(2), 314-322.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the econometric society, 47*(2), 263-291.

Kaniel, R., Saar, G., & Titman, S. (2007). Individual investor trading and stock returns. *Journal of Finance, 62*(3), 1139-1168.

LeBlanc, V. R., McConnell, M. M., & Monteiro, S. D. (2015). Predictable chaos: a review of the effects of emotions on attention, memory and decision making. *Advances in Health Sciences Education, 20*(1), 265-282.

Levy, H., & Levy, M. (2003). Prospect theory and mean-variance analysis. *Review of Financial Studies, 17*(4), 1015-1041.

Lewis, R. L., Howes, A., & Singh, S. (2014). Computational rationality: Linking mechanism and behavior through bounded utility maximization. *Topics in cognitive science, 6*(2), 279-311.

Lim, V. K., & Sng, Q. S. (2006). Does parental job insecurity matter? Money anxiety, money motives, and work motivation. *Journal of Applied Psychology, 91*(5), 1078.

Lucey, B. M., & Dowling, M. (2005). The role of feelings in investor decision-making. *Journal of economic surveys, 19*(2), 211-237.

Miłaszewicz, D. (2019). Behavioural Finance Then and Now *Effective Investments on Capital Markets* (pp. 369-379): Springer.

Mitchell, A. M., Crane, P. A., & Kim, Y. (2008). Perceived stress in survivors of suicide: psychometric properties of the Perceived Stress Scale. *Research in nursing & health, 31*(6), 576-585.

Newell, B. R., Lagnado, D. A., & Shanks, D. R. (2015). *Straight choices: The psychology of decision making*: Psychology Press.

Newsom, J. T., Shaw, B. A., August, K. J., & Strath, S. J. (2018). Physical activity–related social control and social support in older adults: Cognitive and emotional pathways to physical activity. *Journal of health psychology, 23*(11), 1389-1404.

Nickerson, R. C. (1998). *Business and information systems*: Addison-Wesley Longman Publishing Co., Inc.

Rabbani, A., Yao, Z., Wang, C., & Grable, J. (2018). Association between Financial Risk Tolerance and Locus of Control, Sensation Seeking for Pre-Retiree Baby Boomers. *Sensation Seeking for Pre-Retiree Baby Boomers (September 27, 2018)*.

Rabin, M. (2002a). Inference by believers in the law of small numbers. *The Quarterly Journal of Economics, 117*(3), 775-816.

Rabin, M. (2002b). A perspective on psychology and economics. *European economic review, 46*(4-5), 657-685.

Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: a comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology, 84*(4), 529-550.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance, 32*(9), 1723-1742.

Robinson, O. J., Bond, R. L., & Roiser, J. P. (2015). The impact of stress on financial decision-making varies as a function of depression and anxiety symptoms. *PeerJ https://doi.org/10.7717/peerj.770, 3*, e770.

Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J.-P., Duarte, M. E., Guichard, J., . . . Van Vianen, A. E. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of vocational behavior, 75*(3), 239-250.

Steenbergen, L., Sellaro, R., van Hemert, S., Bosch, J. A., & Colzato, L. S. (2015). A randomized controlled trial to test the effect of multispecies probiotics on cognitive reactivity to sad mood. *Brain, behavior, and immunity, 48*, 258-264.

Tan, L., Chiang, T. C., Mason, J. R., & Nelling, E. (2008). Herding behavior in Chinese stock markets: An examination of A and B shares. *Pacific-Basin Finance Journal, 16*(1), 61-77.

Tanner Jr, J. F., Fournier, C., Wise, J. A., Hollet, S., & Poujol, J. (2008). Executives' perspectives of the changing role of the sales profession: views from France, the United States, and Mexico. *Journal of Business & Industrial Marketing, 23*(3), 193-202.

Thomson, J. D. (2018). Depression and Suicide in Teens Today. *PUBLISHER'S PAGE*, 37.

Trinugroho, I., & Sembel, R. (2011). Overconfidence and excessive trading behavior: An experimental study. *International Journal of Business and Management, 6*(7).

Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: A survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets, 1*(1), 24-41.

Wegbreit, E., Franconeri, S., & Beeman, M. (2015). Anxious mood narrows attention in feature space. *Cognition and Emotion, 29*(4), 668-677.

Williams, J. M., & Krane, V. (1992). Coping styles and self-reported measures of state anxiety and self-confidence. *Journal of Applied Sport Psychology, 4*(2), 134-143.

Yao, J., Ma, C., & He, W. P. (2014). Investor herding behaviour of Chinese stock market. *International Review of Economics & Finance, 29*, 12-29.

Zaki, J., & Ochsner, K. N. (2012). The neuroscience of empathy: progress, pitfalls and promise. *Nature neuroscience, 15*(5), 675-680.

Zimbardo, P. G., & Boyd, J. N. (2015). Putting time in perspective: A valid, reliable individual-differences metric *Time perspective theory; review, research and application* (pp. 17-55): Springer.