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Psychological Factors Affecting the Level of Loan Use of Investors in Vietnam's Real Estate Market*

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Abstract

The article analyzes the impact of psychological factors on the level of loans used by investors in Vietnam's real estate market. Individual investors in the Vietnamese real estate industry were surveyed using a questionnaire. A total of 320 questionnaires were collected for the survey. The author finalized 314 questionnaires after deleting those that were invalid due to too many blank cells. SPSS 25 was used to conduct quantitative research. According to the findings, Excessive Optimism (EO) is the factor that has the highest impact on the level of loan used by investors in the Vietnamese real estate market, and this relationship is positive. With an influence level of 0.261 and 0.130, the elements of herd psychology and overconfidence also have a beneficial impact on the degree of loan used by investors in Vietnam's real estate market. Fear of loss is a factor that has a negative relationship with the level of loan utilization by investors in the Vietnamese real estate market, although, with a beta coefficient of 0.134, the degree of influence is not significant. Studies on psychological aspects and human behavior in general, and investors in particular, can help investors avoid falling into these psychological traps.

Keywords: Psychology, Loans, Real Estate Market

JEL Classification Code: G40, G42

1. Introduction

The global economy will maintain strong growth momentum in 2022. The International Monetary Fund (IMF) forecasts the global economy will grow 4.9% in 2022. As an economy which is largely open, Vietnam has plenty of room to take advantage of opportunities when global purchasing power recovers. In 2022, the economy is forecasted to recover quickly, when the economic recovery program is well implemented, including the proposed social housing credit package of VND 65,000 billion; Housing development strategy The Ministry of Construction is urgently completing and submitting to the Government for approval; Public investment, especially legal issues that have been removed strongly in the past time, will soon amend the Land Law. The government is also amending the Decree on housing for industrial park workers, which will positively affect the real estate market.

The level of loan utilization is influenced by investor sentiment, and the two are linked. When the market is good, investor sentiment is optimistic, confident, and even herd-like; this influences the increase of loan capital to increase profits for investors; when the market is bad, investor fear of loss increases, and under the influence of high loan pressure and the herd mentality, investors quickly sell at any price, even accepting losses in the name of capital preservation. In Vietnam, articles on the real estate market include Nguyen et al. (2019, 2020) and Ha (2021). In the real estate market, what is the relationship between investor sentiment and loan usage?

2. Literature Review

2.1. Herd Behavior

From the perspective of unintentional herding behavior, Christie and Hwang (1995) defined herd behavior as

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when retail investors discard individual beliefs and make investment decisions mainly based on the collective behavior of the market. Herd behavior is unintentional market behavior where investors dismiss their prior beliefs (Chang et al., 2000). Intentional herding behavior occurs when low-skilled fund managers grudgingly mimic the activities of better-qualified investors by completely deleting the information they collect because they assume other investors' judgments are based on better access to information sources (Zhou & Anderson, 2011). Shiller (2005) proposed that herd mentality plays an important role in human decision-making. The idea that not everyone can be wrong is used to rationalize herd behavior. Herd mentality has proven to be a source of mispricing and speculation (Salzman & Zwinkels, 2017). Herding emerges when individuals abandon their own beliefs and mimic or follow other people's decisions or actions.

2.2. Psychological Fear of Loss

Genesove and Mayer (2001) first gave evidence of the fear of loss in homeowners. Engelhardt (2003) showed that nominal loss aversion in the housing market significantly influences household mobility. Homeowners have a significant preference for avoiding losses over making gains, as well as a reluctance to make a minor loss while selling their home. The equity position, according to Genesove and Mayer (1997), impacts the seller's pricing, the time on the market, and the final price obtained. Einiö et al. (2008) provided further evidence from a larger sample of 79,483 resale transactions in the Finnish apartment market between 1987 and 2003. Controlling for general trends in the real estate market Real estate, as well as specific local trends, the probability of selling the apartment for a profit is twice higher than the probability of selling the apartment and accepting a loss. This demonstrates a deviation owing to investor fear of loss, which causes them to stay to low-priced real estate since they have the mentality of waiting for the price to rise before trading.

2.3. Excessive Optimism

Excessive optimism often results from overconfidence and is related to the belief that future events will be better, more positive than the current situation. Professor Daniel Kahneman, who won the Nobel Prize in 2002, said that investors' over-optimism is because they often make investments on an internal perspective (focusing on the current state of the investment and the reaction reflect investors' judgments) instead of an external perspective (which focuses on predicting the current state through past performance data). Gervais et al. (2002) showed that excessive optimism had a negative effect on managers because it leads managers to invest in opportunities with negative NPV. Case et al. (2003) showed that households believed buying a home is not risky and that the average home price would increase by more than 11 percent per year. This said too optimistic. Farlow (2004) argued that over-optimism was the most important psychological bias in the real estate market and that the formation of bubbles has a role in the media. The media prefers optimists over pessimists, ignoring the potentially damaging consequences of presenting overly optimistic information to non-specialist investors. Pompian and Wood (2006) stated that over-optimism led investors to often ignore the negative effects of inflation, fees, and taxes, as well as making investors focus too much on forecasts and investing in familiar companies.

2.4. Overconfidence

Overconfident is a term used in psychology and behavioral science to describe persons who act as though they have more skill than they have (Campbell et al., 2004; Chen et al., 2007; Lichtenstein et al., 1982; Yates, 1990). It is investors' psychological state in which they assume they know more than other investors (Odean, 1998). Overconfident investors believe they can make more out of the market using their emotions, even though this is unlikely. Therefore, overconfident investors tend to believe that they are better at investing than others. Confidence is a good psychological state, but overconfidence can lead to deviations in behavior. Overconfidence causes investors to often trade more than others, and as a result, trading results are often inefficient. Overconfident investors are less likely to diversify their portfolios and invest with which they are familiar (Shiller, 2000; Thaler, 2021).

Shiller (2005) acknowledged that overconfidence determined behavior in the real estate market. Overconfidence can also stem from anticipating facts, which means they think they know certain events have happened before.

3. Research Methods and Models

3.1. Research Method

The research method used includes surveys through questionnaires of investors in the real estate market in Vietnam. Level of loan use, Herd psychology, Fear of loss, Over-optimism, Overconfident sentiment measured on a five-point Likert scale Very good, good, moderate, not good, bad. The 5-level Likert scale is familiarly used in many studies, so the author also quantifies each factor according to five levels. Quantitative research is carried out with SPSS 25 software.

The scope of the research is individual investors in the real estate market of Vietnam. Research data is collected in the form of face-to-face interviews and email interviews with individual investors in the Vietnamese real estate market. The survey results collected 320 questionnaires.

After eliminating the invalid questionnaires due to many blank cells, the author chose to use 314 questionnaires.

3.2. Research Model and Hypothesis

From the research overview, the proposed research model is as follows:

$$LU = \beta_1 + \beta_2 \times HB + \beta_3 \times FL + \beta_4 \times EO + \beta_5 \times OC + E$$

To evaluate the impact of factors on the application of management accounting in Vietnamese small and medium enterprises, the study uses 5 detailed hypotheses as follows:

H1: *Herd Behavior has an impact on the level of use of loans by investors in the real estate market of Vietnam.*

H2: *Fear of loss has a negative relationship to the level of loan use of investors in the real estate market. Vietnam real estate.*

H3: *Excessive Optimism has a positive relationship with the level of loan use of investors in the Vietnamese real estate market.*

H4: *Overconfidence has a positive relationship to the level of loan use of investors in the real estate market in Vietnam.*

4. Research Results

4.1. Testing the Scale

The results of evaluating the reliability of the scale by Cronbach's Alpha show that the scales have reliability greater than 0.6 and the correlation coefficient of the total variable is greater than 0.3. All scales satisfy the conditions for EFA exploratory factor analysis. The reliability of the scales is summed up in Table 1 below.

4.2. Exploratory Factor Analysis

Factor analysis was performed with Principle Component extraction, Varimax rotation for the observed dependent variable. The results show that the coefficient KMO = 0.824 (condition > 0.5); Significance level and Barlett test = 0.000 (meet condition < 0.05) show that EFA analysis is appropriate. The total variance extracted is 73.299% > 50%, and factor loading factors are all greater than 0.5, so they are satisfactory. The official scale after EFA processing includes 4 independent variables with 16 observed variables as proposed (Table 2).

4.3. Regression Analysis

Adjusted *R* squared in Table 3 reflects the influence of the independent variables on the variation of the

Table 2: Results of EFA Analysis

	Factor			
	1	2	3	4
FL1	0.935			
FL3	0.934			
FL2	0.919			
FL4	0.905			
HB4		0.908		
HB3		0.875		
HB2		0.859		
HB1		0.780		
OC2			0.859	
OC3			0.853	
OC1			0.830	
OC4			0.756	
EO2				0.779
EO1				0.744
EO4				0.700
EO3				0.633

Table 1: Scale Test Results

No.	Variable Names	Symbol	Number of Observed Variables	Cronbach's Alpha	Smallest Total Variable Correlation Coefficient
1	Level of loan use	LU	3	0.784	0.594
2	Herd Behavior	HB	4	0.892	0.674
3	Fear of loss	FL	4	0.950	0.866
4	Excessive optimism	EO	4	0.744	0.485
5	Overconfidence	OC	4	0.854	0.640

dependent variable, in this case, 4 factors (herd mentality, fear of loss, excessive optimism, Overconfidence) affects 62% of investors' use of loans in Vietnam's real estate market. The Durbin-Watson coefficient is 1.873, in the range from 1.5 to 2.5, so there is no first-order sequence autocorrelation.

To check whether this regression model is suitable for the collected data set and has application significance, the author continues to test the model's fit through the ANOVA test as follows (Table 4).

Sig test $F = 0.000 < 0.05$, so the regression model evaluates the influence of 4 factors (herd psychology, fear of loss, overly optimistic psychology, overconfident psychology) on the level of use of loans by investors in Vietnam construction real estate market is consistent with the overall.

The model's F-statistic has a Sig value. = 0.000 < 0.05 shows that the model fits the data set and can be generalized. VIF coefficients are all less than 2, so there is no multicollinearity between components that do not appear in the research model.

Regression results showing the influence of 4 psychological factors on the level of loan use of investors in the real estate market in Vietnam are shown in Table 5:

The regression model is written as follows:

$$LU = –0.094 + 0.261HB – 0.134FL + 0.561EO + 0.130OC + E$$

VIF coefficients are all < 2: no multicollinearity occurs.

Based on the results of quantitative research on psychological factors affecting the level of loan use of investors in the Vietnamese real estate market, the following conclusions can be drawn.

The multiple linear regression extracted by the standardized Beta coefficient shows that over-optimism (EO) is the factor that has the strongest impact on the level of loan use of investors in the Vietnamese real estate market. Male and this is a positive relationship. The factors of herd psychology and overconfidence also have a positive impact on the level of

Table 3: Statistical Results

Model	Model Summary				
	R	***R* Squared**	***R* Squared**	**Estimated Error of Standard Deviation**	**Durbin Coefficient - Watso**
1	0.791[a]	0.625	0.620	0.57508	1.873
. Predictors: (Constant), OC, HB, FL, EO					
b. Dependent Variable: LU					

Table 4: Suitability Test (ANOVA Model)

Model		**Sum of Squares**	**df**	**Mean Square**	***F***	**Sig.**
1	Regression	170.360	4	42.590	128.780	0.000[b]
	Residual	102.192	309	0.331		
	Total	272.552	313			

Table 5: Results of the Regression Multiple

Model		**Unnormalized Coefficient**		**Standardized Coefficients**	***t***	**Sig.**	**Multicollinear Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	–0.094	0.252		–0.374	0.000		
	HB	0.246	0.036	0.261	6.823	0.000	0.832	1.201
	FL	–0.094	0.025	–0.134	–3.680	0.000	0.913	1.095
	EO	0.684	0.050	0.561	13.758	0.000	0.730	1.370
	OC	0.147	0.041	0.130	3.567	0.000	0.910	1.099

Sig test value for each independent variable < 0.05: all variables are significant in the model.

loan use of investors in Vietnam's real estate market, with the impact level of 0.261 and 0.130, respectively. Fear of loss is a factor that has a negative relationship with the level of loan use of investors in the real estate market in Vietnam, but the degree of influence is not large with a beta coefficient of 0.134.

5. Conclusion

From the results of research on psychological factors affecting the level of loan use of investors in Vietnam's real estate market, the author makes some recommendations and recommendations as follows:

Herd psychology, fear of loss, over-optimism, and overconfidence may exist without individuals realizing it, yet they have a significant impact on the decision-making process. These psychological traps, on the other hand, can be avoided by publishing studies on psychological aspects and human behavior in general, as well as decisions of individual investors in particular.

The real estate market is inherently flawed, with risks such as speculation and price increases that are difficult to forecast. When real estate is created, a significant amount of money is needed to invest in the development and deployment of the property. Then, when real estate is exchanged, bought, and sold on the market, a lot of money is moved around. As a result, the capital market is frequently both an input and an output aspect in the real estate market's development. Furthermore, a well-functioning real estate market is the foundation for higher mortgage disbursement, hence encouraging financial market activity.

References

Campbell, W. K., Goodie, A. S., & Foster, J. (2004). Narcissim, confidence, and risk attitude. *Journal of Behvaiorial Decision Making, 17*(4), 297–311. https://doi.org/10.1002/bdm.475

Case, K. E., Quigley, J. M., & Shiller, R. J. (2003). *Homebuyers, housing, and the macroeconomy.* https://www.rba.gov.au/publications/confs/2003/pdf/case-quigley-shiller.pdf

Chang, E. C., Cheng, J. W., & Khorana, A. (2000). An examination of herd behavior in equity markets: An international perspective. *Journal of Banking and Finance*, *24*(10), 1651–1679. https://doi.org/10.1016/S0378-4266(99)00096-5

Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of Behavioral Decision Making*, *20*(4), 425–451. https://doi.org/10.1002/bdm.561

Christie, W. G., & Huang, R. D. (1995). Following the pied piper: Do individual returns herd around the market? *Financial Analysts Journal*, *51*(4), 31–37. https://doi.org/10.2469/faj.v51.n4.1918

Einiö, M., Kaustia, M., & Puttonen, V. (2008). Price setting and the reluctance to realize losses in apartment markets. *Journal of Economic Psychology*, *29*(1), 19–34. https://doi.org/10.1016/j.joep.2007.02.004

Engelhardt, G. V. (2003). Nominal loss aversion, housing equity constraints, and household mobility: Evidence from the United States. *Journal of Urban Economics*, *53*(1), 171–195. https://doi.org/10.1016/S0094-1190(02)00511-9

Farlow, A. (2004). *The UK housing market: Bubbles and buyers*. Switzerland: Credit Suisse First Boston.

Genesove, D., & Mayer, C. J. (1997). Equity and time to the sale in the real estate market. *American Economic Review*, *87*(3), 255–269. https://doi.org/10.3386/w4861

Genesove, D., & Mayer, C. (2001). Loss aversion and seller behavior: Evidence from the housing market. *Quarterly Journal of Economics*, *116*(4), 1233–1260. https://doi.org/10.1162/003355301753265561

Gervais, S., Heaton, J. B., & Odean, T. (2002). *The positive role of overconfidence and optimism in investment policy*. New York: McGraw-Hill.

Ha, N. H. P. (2021). Factors affecting real estate prices during the COVID-19 pandemic: An empirical study in Vietnam. *Journal of Asian Finance, Economics, and Business*, *8*(10), 159–164. https://doi.org/10.13106/jafeb.2021.vol8.no10.0159

Lichtenstein, S., Fischhoff, B., & Phillips, L. (1982). Calibration of probabilities: The state of the art to 1980. In Kahneman, D. Slovic P., & Tversky A. (Eds.). *Judgment under uncertainty: Heuristics and biases*. Cambridge, MA: Cambridge University Press.

Nguyen, M. T., Bui, T. N., & Nguyen, T. Q. (2019). Relationships between real estate markets and economic growth in Vietnam. *Journal of Asian Finance, Economics, and Business*, *6*(1), 121–128. https://doi.org/10.13106/jafeb.2019.vol6.no1.121

Nguyen, P. H., Tsai, J. F., Nguyen, T. T., Nguyen, T. G., & Vu, D. D. (2020). A grey MCDM based on DEMATEL model for real estate evaluation and selection problems: A numerical example. *Journal of Asian Finance, Economics, and Business*, *7*(11), 549–556. https://doi.org/10.13106/jafeb.2020.vol7.no11.549

Odean, T. (1998). Volume, volatility, price, and profit when all traders are above average. *Journal of Finance*, *53*(6), 1887–1934. https://doi.org/10.1111/0022-1082.00078

Pompian, M. M., & Wood, A. S. (2006). *Behavioral finance and wealth management: How to build optimal portfolios for private clients*. Hoboken, NJ: John Wiley & Sons, Inc.

Salzman, D., & Zwinkels, R. C. J. (2017). Behavioral real estate. *Journal of Real Estate Literature*, *25*(1), 77–106. https://doi.org/10.1080/10835547.2017.12090455

Shiller, R. J. (2000). Measuring bubble expectations and investor confidence. *Journal of Psychology and Financial Markets*, *1*(1), 49–60. https://doi.org/10.1207/S15327760JPFM0101_05

Shiller, R. J. (2005). *Irrational exuberance* (2nd ed). Princeton, NJ: Princeton University Press.

Thaler, M. (2021). Gender differences in motivated reasoning. *Journal of Economic Behavior and Organization*, *191*, 501–518. https://doi.org/10.1016/j.jebo.2021.09.016

Yates, J. F. (1990). *Judgment and decision making*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Zhou, J., & Anderson, R. I. (2011). An empirical investigation of herding behavior in the US REIT market. *Journal of Real Estate Finance Economics, 47*, 83–108. https://doi.org/10.1007/s11146-011-9352-x