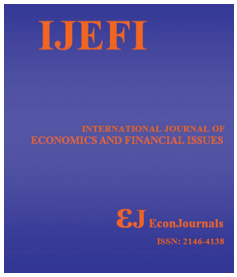

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2015, 5(Special Issue) 397-405.

2nd AFAP INTERNATIONAL CONFERENCE ON ENTREPRENEURSHIP AND BUSINESS MANAGEMENT (AICEBM 2015), 10-11 January 2015, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia.

Role of Psychological Factors in Individuals Investment Decisions

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ABSTRACT

In this study, the authors intend to identify psychological factors which could influence the criteria for investment decision which are discussed with three dimensions (risk, repay and corporate data). With regard to this aim, the criteria for investment decision were examined through defense mechanisms, personality traits, emotional intelligence and financial literacy. Defense mechanisms and certain personality traits have become prominent for risk criterion while defense mechanisms and financial literacyhave been important to repay criterion. Lastly, for corporate data criterion, defense mechanisms, some personality traits and emotional intelligence have been found as important. Within this scope, this study can be said to have carried out a preliminary research in its field in terms of explanatory variables.

Keywords: Investment Decision, Defense Mechanisms, Personality Traits, Emotional İntelligence, Financial Literacy
JEL Classifications: E44, G23

1. INTRODUCTION

Behavioral finance proposes that cognitive and affective bias which everyone could exhibit cause deviations from rational behavior. This argument has directed deep-rooted concepts in psychology to come into prominence and to be discussed in the financial context. Besides, the submission that probabilities are not stochastic but subjective has enabled financial behavior to be better predicted by perceptions and attitudes. On the other hand, there is a heavy concentration on demographics and socio-economic factors in order to explain financial behavior in the extant literature. In this regard, the literature needs to investigate behavioral and attitudinal factors which would make a divergence between individuals. Some researchers have stated that studies exerted little effort toward examining emotional and individual factors although the role of these factors on financial decision making has been manifested by some studies (Sjöberg and Engelberg, 2009). Grable et al. (2008) mentioned that past research has not sufficiently focused on the manner how environmental or individual factors can influence both antecedents and consequences of financial behavior. Moreover, they also asserted that little effort has been devoted to explaining the relationship between these factors and financial risk taking behaviors.

From this point of view, the aim of this study is to establish variables influencing individuals' investment decision criteria. Within this framework, a survey based on voluntary participation has been conducted through a private bank customers. Those participated in study were bank customers. That's why they are familiar with the financial topics. Also, relatively high educated and young people constituted sample profile and this is quite important to being acquainted with the concepts.

The investment decision criteria as the dependent variable in this study has been discussed with three dimensions: Risk, repay and corporate data. Defense mechanisms, personality traits, emotional intelligence and financial literacy havebuilt up the independent variables. Hence, this study can be said to be novel regarding explanatory variables. There are some studies correlating financial risk taking with personality traits. Yet, to our knowledge, there exists no research including defense mechanisms into their financial framed models. However, in psychology, the relationship

between defense mechanisms and risk taking in general has been examined. In this respect, this is a preliminary study paying attention to defense mechanisms in financial risk taking setting. Additionally, with the inclusion of emotional intelligence and financial literacy representing emotional abilities and financial knowledge respectively, we intend to deepeningthe comprehension of individual investment preferences. Recent research has indicated that individuals do not rationally behave every time. Thus, behavioral finance researchers have exerted great effort toward other components directing individuals to make finacial decisions. Herein, this study contributes to the extant literature.

This study revealed defense mechanisms as important factor on risk, repay and corporate data criteria for investment decision. Besides, certain personality traits is shown to be significant for investment decision criteria. According to results, financial literacy had impact on repay criterion of investment decision while emotional intelligence was substantial factor in evaluating past performance of firms (i.e., corporate data criterion).

All in all, this paper provides evidence of substantial components in making investment decisions by integrating financial literacy, emotional intelligence, personality and defense mechanisms into understanding this financial decision making process.

This paper proceeds as follows: The first sectionboth communicates the prior research and also mentions about the independent variables which we would employ in explaining investment decision criteria of individuals. The second section includes research methodology and subsequently analyses to answer our research questions. In conclusion section, the results are discussed and future research suggestions are made.

2. LITERATURE REVIEW

There are lots of studies concentrating on financial risk tolerance, risk taking and risk perceptions (e.g., Wong and Carducci, 1991; Carducci and Wong, 1998; Grable, 2000). The research on the determinants of financial risk taking revealed that demographics, socio-economic, behavioral and personality factors have largely explainedthe variance in financial risk taking. Further, some academicians have referred to neural basis of financial risk taking (Kuhnen and Knutson, 2005; Kuhnen and Chiao, 2009).

As mentioned before, behavioral finance proposes that cognitive and affective bias which everyone could exhibit cause deviations from rational behavior. Following this argument, researchershave started to examine deep-rooted concepts in psychology and to discuss them in the financial context. Additionally, the assumption that probabilities are not stochastic but subjective has enabled financial behavior to be better predicted by perceptions and attitudes. On the otherhand, there is a heavy concentration on demographics and socio-economic factors in order to explain financial behavior in the extant literature. In this regard, the literature needs to investigate behavioral and attitudinal factors which would make a divergence between individuals. Some researchers have stated that studies exerted little effort toward examining emotional and individual factors although the role of these factors has been manifested by some studies (Sjöberg and Engelberg, 2009). Grable et al. (2008) mentioned that past research has not sufficiently focused on the manner of how environmental or individual factors can influence both antecedents and consequences offinancial behavior. Moreover, they also asserted that little effort has been devoted to explaining the relationship between these factors and financial risk taking behaviors.

Weber et al. (2002) manifested that risk attitude or risk perception reduces the likelihood of risky behavior occurrence. Namely, if individuals perceive the risk of any behavior as high they are less likely to exhibit that behavior. In another study, it was revealed that the related risk perceptions of those who prefer not to use online banking are higher than the people who use (Demirdöğen et al., 2010).

Pasewark and Riley (2010) suggested that investors take relevant corporate data, investment risk and repay capability into consideration while making investment decision. In this study, it is suggested that emotional intelligence, personality, defense mechanisms and financial literacy may influence the criteria for individuals' investment decisions. This study employs the scale of investment decision criteria developed by the above-named authors.

2.1. Emotional Intelligence

Olson (2006) expressed that emotions which rational choice theory has ignored, however, could have an impact on financial behavior. Emotions are thought as disordered interims of mental activities in western tradition (Salovey and Mayer, 1990). In this respect, individuals in rational choice process have to share their energy and time between solving their problem and hence making a decision and regulating their emotional activities. Because, they ought todisplay an array of activities in order to understand, appraise and control their emotions respectively while trying solving a problem. Therefore, individuals sometimes display irrational behaviors at the expense of experiencing psychological satisfaction or personal relief (Gao and Schmidt, 2005). On the other hand, it should be stated that decision making theory displays divergency regarding how emotion and rationale can exist together. Indeed, some academicians assert that the removal of emotions from decision making process could drive individuals to make decision better while others proclaim that the capability of using emotions in the decision process represents a significant determinant of a good decision. Especially, recent research articulates that emotional abilities and behaviors referring to emotional intelligence can enhance both the output and also the process in a decision making problem (Hess and Bacigalupo, 2011).

Emotions are seen as coordinated reactions, ensuing various psycological integral parts (i.e., cognitive, motivational, physiological, experiential systems) and these reactions are seen internally or externally while carrying positive or negative meanings (Salovey and Mayer, 1990). Since both concepts are sometimes misused, it could be stated that mood is different from emotions in some aspects which it is free standing and not attributed to any object and lasting for some time period (Olson, 2006). Salovey and Mayer (1990) defined this construct

as "*the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions*." They approached emotional intelligence as a subset of social intelligence and discussed it in three-dimensions: (1) appraisal and expression of emotion, (2) regulation of emotion, (3) utilization of emotion.

Schutte et al. (1998) fulfilled factor analysis on the 62-item construct of Salovey and Mayer (1990) and attained unidimensional 33-item measure which equally encompasses three dimensions of this conceptual model. They validated and proved it reliable and this study employs the above-mentioned scale. In the meanwhile, it should be noted that there are also some studies arguing the relationship between emotional intelligence and personality, cognitive or academic ability (Rosete and Ciarrochi, 2005; Van der Zee et al., 2002; Lopes et al., 2003; Vakola et al., 2004; Van Rooy and Viswesvaran, 2004).

2.2. Personality

In explaining the differences between investor behaviors, lots of studies argued the role of personality on investing behavior. The logical connection between these two phenomena in this manner: Personality influences risk perceptions or risk tolerance of investors and these risk reflections form the investor behavior (Mayfield et al., 2008). It is said that personalityhas a relation to regret feeling regarding current investment as well as investment preferences (Xiao et al., 2009). Some research argued Type A personality, Myers-Briggs personality type or sensation seeking on financial risk taking (Carducci and Wong, 1998; Sjöberg and Engelberg, 2009; Filbeck et al., 2005) while other research employed Big Five personality traits in predicting financial behavior (Xiao et al., 2009; Mayfield et al., 2008; Hunter and Kemp, 2004).

Big five personality classification operationalizes personality traits and reduces it into five bilateral dimensions (i.e., extraversionness, agreeableness, conscientiousness, neuroticism, openness to experience). It is mentioned that big fiverelates to several personality scales (McCrae and John, 1992). This study utilized 44-item big five scale of Benet-Martinez and John (1998).

2.3. Defense Mechanisms

Defense mechanisms are defined asuseful but unconcious responses keeping ego from to be dissociated. Defense mechanisms of ego, one of major contributions in psychoanalysis, are known to be "relevant to drives, affects, development, personality, adaptation, and psychotherapy" (Plutchik, 1995).

Anxiety, whether the cause is real or not, is recognized as the most unappealing feeling for individuals. Moreover, it can be experienced both internally and also externally. Individuals experience internally caused anxiety under a conflict between their conscious and subconscious (Bovey and Hede, 2001).

Bond (1995) gives that definition of defense mechanisms: *"Patterns of feelings, thoughts or behaviors that are relatively involuntary and arise in response to perceptions of psychic danger. They are designed to hide or to alleviate the conflicts or stressors that give rise to anxiety."* According to psychoanalysts, everybody displays these mechanisms to some extent. But this does not imply that they are all favorable. As a matter of fact, classic psychoanalysts recognize defense mechanisms of ego as undesirable form of mental functioning and state that these mechanisms should be given up after they have realized the function of protectingimmature ego (Plutchik, 1995, p.17).

Recent research has attempted to extend this classical view and asserted that certain defense mechanisms are useful and adaptive. There exist adaptations in every one's life whichhelp individuals developing their ego. By means of these adaptations, individuals abandon particularly primitive defense mechanisms (White, 1963; as cited in Plutchik, 1995, p.18). Defense mechanisms are sometimes mistaken with coping styles. This discrimination may work best: Although defense mechanisms are immature and unconscious processes of mental development, coping styles are deemed as mature and conscious problem solving methods (Plutchik, 1995).

In order to operationalize these mechanisms, this study employs Defense Style Questionnaire 40 by Andrews et al. (1993). This 40-item scale encompasses 20 defense styles with two items each. Also, authors discuss defense mechanisms with three dimensions: Immature, neurotic and mature defense mechanisms. In this study, only neurotic and mature defense mechanisms were utilized since it is assumed that bank customers as adults would not display immature or primitive defense mechanisms. Namely, there are 15-item in defense mechanism scale in our study. Self-assessment of unconscious defense styles comes under criticism in some manner. One of them is whether individuals could self-assess their unconscious defense styles. Motivation, self-awareness and openness level of individuals constitute these limitations (Bond, 1995; Davidson and MacGregor, 1998).

It is unlikely for an individual to form a habitual activity by appealing to the certain defense mechanisms more (Andrews et al., 1993). Then, defense mechanisms such as personality could help in explaining individual behavior. In this regard, defense mechanisms are expected to influence investment decisions via risk taking. Many investment decisions are made under uncertainty and uncertainty makes people experience anxiety. This may be a logical connection between defense mechanisms and investment decision.

2.4. Financial Literacy

As a financial capability indicator, financial literacy has been focus of interest for both scholars and also policy makers. Now, individuals are more responsible and active for their individual retirement plans. Why is it so difficult to allocate individuals' excess funds through possible investment instruments any longer? This hardness might be arisen since they are confused with these complex and multiplexed products (or services). This seems more valid especially for the inexperienced or the unsophisticated (Van Rooij et al., 2011). It is reported that a vast quantity of households have not been acquainted with most primary economical notions and making plausible investment decision suffers from this serious illiteracy (Lusardi and Mitchell, 2007a; 2007b). Financial literacy

is suggested to be relevant to risk perceptions and investment decisions. It is proposed in a study (Lachance and Tang, 2012) that trust promotes the intentness of taking risk while investing and it is enhanced by some financial literacy. A study of Chen and Volpe (1998) provided evidence that highly financially illiterate participants had an inclination to make implausible decisions in terms of managing their personal finance.

The body of literature on the determinants of financial literacy is abounding. It is generally accepted that demographics relate to how much individuals financially know about. More specifically, Chen and Volpe (1998) have showed that low level of financial literacy has been more seen amongst women, those with little work experience, those under age 30. Lusardi et al. (2010) provided evidence that women are less financially literate than men and also that cognitive ability and education could improve the literacy level. Additionally, men, those who work in banking and finance sector and those having both high income and educational level are more literate (Al-Tamimi and Bin Kalli, 2009). In contrast to these findings above, Ludlum et al. (2012) stated that financial literacy has not varied according to gender while maritual status has made a difference.

Are the individuals' investment choices affected by the level of financial literacy? Or, those who prefer particular products or services may vary according to their financially knowledge level. Prior studies gave some evidence for these foremost questions. More specifically, financial literacy level made influence on wealth accumulation (Lusardi and Mitchell, 2007a), saving and investment decision (Bayer et al., 1996; Hilgert et al., 2003; Lusardi and Mitchell, 2007b), stock (van Rooij et al., 2011) or mutual fund participation (Müller and Weber, 2010) debt (Lusardi and Tufano, 2009), adjustable rate mortgage ownership (Smith et al., 2011) and personal budget management (Sharahbani, 2012), credit management (Hilgert et al., 2003) and credit card usage (Ludlum et al., 2012).

Within this framework, it is expected in this study that financial literacy would make a divergence between individuals' investment decision criteria. In measuring financial literacy level of individuals, the scale by van Rooij et al. (2011) was employed. This scale divides financial literacy into two components: Basic and advanced financial literacy and consists of 16 questions having one true answer. A financial literacy index is calculated from the true anwers of participants.

3. METHODOLOGY

3.1. Sample

Study sample comprised of 320 participants throughwhich one-to-one survey on voluntary basis has been conducted. Who participitated in the study are private and public bank customers. In datacollection process, branch manager of related bank has asked customers visiting the branch to participate in the survey. In this manner, the random sampling method giving equally chance to every one has been used.

It can be accepted that participants are familiar with the fundamental financial concepts since they are bank customers. When demographics examined, it is seen that approximately 75% of them comprised of graduates or higher study at least. Hence, they are considered to have reading comprehension to answer questions. 50% of the participants were male. The people aged between 20 and 40 accounted for nearly 77% of the sample. Most of participants (55%) consisted of married individuals. Briefly, it can be said that study sample comprised of relatively high educated and young individuals and dispersed equally in terms of gender and marital status.

3.2. Variables

This study includes five fundamental variables; defense mechanisms, emotional intelligence, personality and basic financial literacy as independent variables and criteria for investment decision as dependent variable. For defense mechanisms scale, it was employed by Andrews et al. (1993). Defense mechanisms can be divided into three dimensions-mature, neurotic and immature mechanisms. Yet, this study utilized only mature and neurotic ones on the basis of primitive and inadaptive nature of immature defense mechanisms. Unidimensional emotional intelligence scale of Schutte et al. (1998) was used in this study. Personality can be examined in five dimensions; extraversion, agreeableness, conscientiousness, neuroticism, openness to experience. Personality traits have been operationalized by the scale of Benet-Martinez and John (1998). For basic financial literacy measure, we employed Van Rooij et al. (2011). Through the true answers participants gave, a financial literacy index has been calculated. Pasewark and Riley (2010) have determined the criteria for investment decisions of individuals. This study employed only three criteria (i.e., risk, repay and corporate data criteria).

3.3. Analyses

To test research hypotheses, firstly factor analysis and subsequently reliability analysis have been fulfilled (Table 1). Barlett sphericity test value was calculated as 2.980,204 at 0.000 significance level. Thus, it can be said that there is no relationship between variables and the observations are convenient for factor analysis. By calculating KMO value, it was examined whether sample size is enough or not. KMO test value with 0.821 was calculated above acceptable level (good).

Table 1 shows eigenvalue, percentage of explained variance, reliability results and item numbers of each factor. Factors between F1 and F11 was called in the following way: F1: Defense mechanisms (mature), F2: Defense mechanisms (neurotic), F3: Emotional intelligence, F4: Personality (extraversion), F5: Personality (agreeableness), F6: Personality (conscientiousness), F7: Personality (neuroticism), F8: Personality (openness), F9: Investment decision criterion (risk), F10: Investment decision criterion (repay), F11: Investment decision criterion (corporate data).

As in the study of Van Rooij et al. (2011), basic financial literacy level is calculated through the true answers of questions and this measurement is no subject to factor analysis.

Following validity and reliability analysis, correlation analysis to examine possible relationships between variables was performed

(Table 2). In this study, since the dependent variable has three dimension, it was measured in three forms: F9: Investment decision (risk), F10: Investment decision (repay), F11: Investment decision (corporate data). Thus, there is a relationship between neurotic defense mechanisms, extraversion, agreeableness, openness and risk criterion of investment decision. And, there is an association between all independent variables-excluding mature defense mechanisms and emotional intelligence - and repay criterion of investment decision. Lastly, all variables except conscientiousness and basic financal literacy correlate with the corporate data criterion of investment decision. Additionally, risk, repay and corporate data criteria of investment decision have a positive association between each other with the value above 0.50 and at 0.000 significance level.

Following correlation analysis, to identify the determinants of each investment decision criterion, stepwise regression analysis was individually fulfilled. Therefore, every dependent variable was regressed on variables by starting from including the one with the highest correlation coefficient into the model.

3.4. Risk Criterion

First of all, to determine the motives for individuals focusing on risk criterion of investment decision, stepwise regression analysis was performed (Table 3). Correlation analysis indicated that there were four variables related to risk criterion: F2: Defense mechanisms-neurotic (0.453**), F4: Personality (extraversion) (0.374**), F8: Personality (openness) (0.337**), F5: Personality (agreeableness) (0.294**) (Table 2).

All models were at significant at 0.000 level. The last model in which all variables were included has greatest explaining power in the models. Yet, openness became insignificant in this model. Other variables were significant at 0.005 level (Table 3).

Table 1: Validity and reliability analysis

Validity and reliability	Defense mechanisms		Emotional intelligence	Personality					Investment decision criteria		
	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
	S4	S11	E3	K1	K11	K18	K27	K36	I1	I2	I7
	S8	S14	E4	K3	K12	K19	K28	K37	I5	I3	I8
		S15	E5	K4	K13	K20	K29	K38	I6		I9
			E6	K6			K30	K39			I10
			E17	K7							I11
				K8							I12
Eigenvalues	2.868	3.043	3.233	3.658	3.060	3.428	3.700	3.168	2.922	3.093	3.606
% of variance	2.063	2.189	2.326	2.631	2.202	2.466	2.662	2.279	2.102	2.225	2.594
Reliability	0.496	0.624	0.834	0.850	0.772	0.845	0.903	0.855	0.786	0.610	0.889

Table 2: Correlation analysis

F	F9	F10	F11	F1	F2	F3	F4	F5	F6	F7	F8	F12
F9	1	0.526**	0.549**	0.094	0.453**	0.071	0.374**	0.294**	−0.109	0.160	0.337**	0.032
F10		1	0.503**	0.153	0.411**	0.151	0.329**	0.208*	−0.201*	0.223*	0.289**	0.292**
F11			1	0.183*	0.408**	0.246**	0.347**	0.360**	−0.128	0.365**	0.403**	0.158
F1				1	0.261**	0.234*	0.343**	0.121	0.117	0.392**	0.321**	−0.064
F2					1	0.388**	0.531**	0.212*	0.077	0.297**	0.399**	−0.091
F3						1	0.517**	0.316**	0.143	0.380**	0.202*	−0.132
F4							1	0.426**	−0.007	0.442**	0.433**	−0.021
F5								1	−0.282**	0.515**	0.580**	0.278**
F6									1	−0.158	−0.213*	−0.494**
F7										1	0.487**	0.037
F8											1	0.145
F12												1

*.**p<0.05

Table 3: Stepwise regression results for risk criterion

Model	Variables	Statistics coefficient β	Significant	Adjusted R^2	Significant
1	Neurotic (F2)	0.453	0.000	0.198	0.000
2	Neurotic (F2)	0.501	0.000	0.205	0.000
	Extraversion (F4)		0.166		
3	Neurotic (F2)	0.489	0.000	0.202	0.000
	Extraversion (F4)	−0.146	0.121		
	Openness (F8)	0.071	0.433		
4	Neurotic (F2)	0.390	0.000	0.242	0.000
	Extraversion (F4)	−0.229	0.019		
	Openness (F8)	0.007	0.941		
	Agreeableness (F5)	0.283	0.009		

The findings that there is significant relationship between risk criterion and personality and defense mechanisms can be deemed as notably important. To date, although the existence of studies indicating the relation of financial risk taking and personality, there exist no studies estimating financial risk taking with defense mechanisms. This study contributes to the exant literature with the finding that both personality and also defense mechanisms could explain financial risk taking.

3.5. Repay Criterion

To identify the determinants of repay criterion of investment decision, stepwise regression analysis was performed (Table 4). Correlation analysis showed that there are seven variables in relation to repay ceriterion: F2: Defense mechanisms-neurotic (0.411**), F4: Personality (extraversion) (0.329**), F12: Financial literacy (0.292**), F8: Personality (openness) (0.289**), F7: Personality (neuroticism) (0.223*), F5: Personality (agreeableness) (0.208*), F6: Personality (conscientiousness) (−0.201*) (Table 4).

All models were significant at 0.000 level. Yet, all variables except neurotic defense mechanisms and financial literacy were not able to be significant even at 0.10 level (Table 4).

Hereupon, stepwise regression analysis including only significant variables (i.e., neurotic defense mechanism and financial literacy) was again performed (Table 5). As seen, both two models were significant at 0.000 level and the explaining power of the model (adjusted R^2) was increased. And both variables were also significant at 0.000 level. In addition to significant defense mechanism, financial literacy coefficient also became significant in estimating repay criterion of investment decision. This is notably important finding since financial literacy is, in deed, required in order to compute repay expectation of any investment alternative.

3.6. Corporate Data Criterion

To establish motives for individuals concentrating on corporate data criterion while making investment decision, regression analysis were performed (Table 2). Correlation analysis revealed that there are seven variables in relation to corporate data criterion: F2: Defense mechanisms (neurotic) (0.4081**), F8: Personality (openness) (0.403**), F7: Personality (neuroticism) (0.365**), F5: Personality (agreeableness) (0.360**), F4: Personality (extraversion) (0.347**), F3: Emotional intelligence (0.246**), F1: Defense mechanisms (mature) (0.183*) (Table 2).

All models were significant at 0.000 level. Yet, explaining power (adjusted R^2) showed variability between models and certain variables were found insignificant even at 0.10 level (Table 6). Then, these results necessiated the analysis to be repeated.

Thus, a new regression analysis including only significant variables such as neurotic defense mechanisms, emotional intelligence and openness was again fulfilled (Table 7). Explaining power of models has been progressively increased and all variables in all models were significant at 0.05 level. The important findings in this analysis are that (1) defense mechanisms remained significant estimator of corporate data criterion, (2) openness became important for corporate data criterion, (3) particularly emotional intelligence having no impact on other decision criteria became significant for corporate data criterion.

Table 4: Stepwise regression results for repay criterion

Model	Variables	Statistics coefficients β	Significant	Adjusted R^2	Significant
1	Neurotic (F2)	0.41	0.00	0.162	0.00
2	Neurotic (F2)	0.42	0.00	0.155	0.00
	Extraversion (F4)	−0.01	0.91		
3	Neurotic (F2)	0.43	0.00	0.260	0.00
	Extraversion (F4)	0.03	0.75		
	Financial literacy (F12)	0.34	0.00		
4	Neurotic (F2)	0.42	0.00	0.261	0.00
	Extraversion (F4)	−0.00	0.99		
	Financial literacy (F12)	0.33	0.00		
	Openness (F8)	0.09	0.31		
5	Neurotic (F2)	0.42	0.00	0.259	0.00
	Extraversion (F4)	0.01	0.90		
	Financial literacy (F12)	0.29	0.00		
	Openness (F8)	0.07	0.42		
	Neuroticism (F7)	−0.08	0.39		
6	Neurotic (F2)	0.37	0.00	0.262	0.00
	Extraversion (F4)	−0.03	0.76		
	Financial literacy (F12)	0.29	0.00		
	Openness (F8)	0.04	0.64		
	Neuroticism (F7)	−0.08	0.42		
	Agreeableness (F5)	0.13	0.21		
7	Neurotic (F2)	0.37	0.00	0.259	0.00
	Extraversion (F4)	−0.02	0.83		
	Financial literacy (F12)	0.30	0.00		
	Openness (F8)	0.07	0.50		
	Neuroticism (F7)	−0.09	0.37		
	Agreeableness (F5)	0.15	0.17		
	Conscientiousness (F6)	−0.07	0.51		

Table 5: Stepwise regression results for repay criterion for neurotic defense mechanism and fi nancial literacy

Model	Variables	Statistics coefficients β	Signficant	Adjusted R^2	Significant
1	Neurotic (F2)	0.41	0.00	0.162	0.00
2	Neurotic (F2)	0.44	0.00	0.266	0.00
	Financial literacy (F12)	0.33	0.00		

Table 6: Stepwise regression results for corporate datacriterion

Model	Variables	Statistics coefficient β	Significant	Adjusted R^2	Significant
1	Neurotic (F2)	0.408	0.00	0.160	0.00
2	Neurotic (F2)	0.329	0.00	0.219	0.00
	Openness (F8)	0.267	0.00		
3	Neurotic (F2)	0.345	0.00	0.225	0.00
	Openness (F8)	0.244	0.00		
	Neuroticism (F7)	−0.116	0.16		
4	Neurotic (F2)	0.307	0.00	0.223	0.00
	Openness (F8)	0.217	0.02		
	Neuroticism (F7)	−0.116	0.16		
	Agreeableness (F5)	0.087	0.40		
5	Neurotic (F2)	0.304	0.00	0.217	0.00
	Openness F8)	0.211	0.03		
	Neuroticism (F7)	−0.121	0.16		
	Agreeableness (F5)	0.078	0.48		
	Extraversion (F4)	0.025	0.80		
6	Neurotic (F2)	0.261	0.01	0.232	0.00
	Openness (F8)	0.151	0.13		
	Neuroticism (F7)	−0.092	0.28		
	Agreeableness (F5)	0.040	0.72		
	Extraversion (F4)	0.044	0.66		
	Emotional intelligence (F3)	0.179	0.07		
7	Neurotic (F2)	0.261	0.01	0.225	0.00
	Openness (F8)	0.157	0.13		
	Neuroticism (F7)	−0.088	0.32		
	Agreeableness (F5)	0.043	0.70		
	Extraversion (F4)	0.044	0.66		
	Emotional intelligence (F3)	0.183	0.08		
	Mature (F1)	−0.021	0.82		

Table 7: Stepwise regression results for corporate data criterion (only significant variables ıncluded)

Model	Variables	Statistics coefficient β	Significant	Adjusted R^2	Significant
1	Neurotic (F2)	0.408	0.000	0.160	0.000
2	Neurotic (F2)	0.295	0.001	0.222	0.000
	Emotional intelligence (F3)	0.285	0.002		
3	Neurotic (F2)	0.272	0.002	0.242	0.000
	Emotional intelligence (F3)	0.204	0.035		
	Openness (F8)	0.184	0.048		

4. CONCLUSION

In this study, individuals' considerations of investment decision criteria have been argued from the behavioral finance perspective. Within this framework, risk, repay and corporate data criterion of investment decisions have been tried to be explained with personality, defense mechanisms, emotional intelligence and financial literacy level.

In this regard, this can be deemed as one of the preliminary studies. There are some studies examining the relationship between personality, financial literacy and financial risk taking. However, there were no studies aiming to explain financial behavior with emotional intelligence and defense mechanisms. Accordingly, this study can be said to be novel and contributory to the literature in this manner.

This study has argued three components influencing individuals' investment decision and all analyses have been individually performed for these three components. Academicians in finance and particularly behavioral finance domain have exerted more effort to financial risk taking. This study revealed that other behavioral and psychological factors such as defense mechanisms and personality have impact on financial risk taking behavior. Similarly, repay expectations have importance on investment decision. According to this study results, repay criterion of individuals are influenced by their defense mechanisms and financial literacy levels. Last but not least, in evaluating past performance of any investment alternatives, personality, defense mechanisms and emotional intelligence of individuals had a place in making investment decision. The findingwhich can be interpreted in that past behavior may have

influence the actual behavior through attitudes corresponds with social behavior theory.

To conclude, trying to understand financial decisions by paying attention to these kind of psychological factors may contribute to behavioral finance literature. Any investment decision represents a financial behavior and the subjects of these behaviors are individuals. Accordingly, this consideration requires these kind of behavioral and attitudinal components to be included into research models. And this preliminary study can be said to justify this requirement.

As in any study, there are some limitations in this study. With a larger sample, it is obvious to attain more generalizable results. We suggest researchers design their studies by integrating psychological factors implied in this paper such as emotional intelligence, defense mechanisms, personality and extend this preliminary study. This study can be done in different sector.

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