

## **EXAMINING THE IMPACT OF MENTAL ACCOUNTING ON THE INVESTMENT DECISIONS IN THE TEHRAN STOCK EXCHANGE**

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### **Abstract**

*Since in the present research the examining the impact of mental accounting on the investment decisions in the Tehran Stock Exchange. The research method is descriptive – correlative. Correlative research is used for two purposes: Study impact of mental accounting on the investment decisions, and predicting one variable based on another. The population of the study was all company that listed in Tehran Stock Exchange and people how bought company's shares or intend to buy it. According to Cochran sampling, the sample size of this research was set at 126 that selected simple sampling method. To gathering of data, we used a questionnaire. All the reliability and validity of measures has examined. Questionnaires reliability was estimated by calculating Cronbach's Alpha; it was 0.796. To examine relation between independent variables and dependent variables in all hypothesis, Spearman correlation coefficient were used. Findings shows that there is a negative significant relationship between mental accounting and decisions of investors, assessments of financial activities, assessments of financial dictions. And also, there is not significant relationship between mental accounting and resource allocations.*

**Keywords:** *mental accounting and decisions of investors, assessments of financial activities, assessments of financial dictions, resource allocations*

### **INTRODUCTION**

In the behavioral analysis of how financial affairs are managed, a tendency to subdivide the investment problem into small decision units is often observed. Instead of looking at the decision problem as a whole, the decision units, called *mental accounts*, are treated separately. Shefrin and Thaler (1988), for example, report that people tend to decompose their income according to its source into three categories: salary income, asset income, and future income, and find that the marginal propensity to spend the income differs among these categories. This behavior violates the economic principle of the *fungibility of money*. Since money in one mental account is not a perfect substitute for money in another account (Rockenbach, 2004)..

The notion of mental accounting was introduced by Thaler (1985). The decomposition of the investment problem into mental accounts is interpreted as the result of the *framing (editing)* of

the complex problem into simpler sub problems as described by *prospect theory*. Modeling investors' decision making as based on mental accounts can explain several "anomalies" frequently reported in behavioral finance (see DeBondt and Thaler, 1995; Shiller, 1998, and Thaler, 1999). Benartzi and Thaler (1996), for example, provide an explanation of the famous *equity premium puzzle* by *myopic loss aversion*, a concept based on mental accounting and loss aversion (Rockenbach, 2004).

Three components of mental accounting receive the most attention here. The first captures how outcomes are perceived and experienced, and how decisions are made and subsequently evaluated. The accounting system provides the inputs to do both *ex ante* and *ex post* cost - benefit analyses. This component is illustrated by the anecdote above involving the purchase of the quilt. The consumer's choice can be understood by incorporating the value of the 'deal' (termed transaction utility) into the purchase decision calculus.

A second component of mental accounting involves the assignment of activities to specific accounts. Both the sources and uses of funds are labeled in real as well as in mental accounting systems. Expenditures are grouped into categories (housing, food, etc.) and spending is sometimes constrained by implicit or explicit budgets. Funds to spend are also labeled, both as flows (regular income versus windfalls) and as stocks (cash on hand, home equity, pension wealth, etc.). The first two anecdotes illustrate aspects of this categorization process. The vacation in Switzerland was made less painful because of the possibility of setting up a Swiss lecture mental account, from which the expenditures could be deducted. Similarly, the notional United Way mental account is a flexible way of making losses less painful.

The third component of mental accounting concerns the frequency with which accounts are evaluated and what Read, Loewenstein and Rabin (1998) have labeled 'choice bracketing'. Accounts can be balanced daily, weekly, yearly, and so on, and can be defined narrowly or broadly. A well-known song implores poker players to 'never count your money while you're sitting at the table'. An analysis of dynamic mental accounting shows why this is excellent advice, in poker as well as in other situations involving decision making under uncertainty (such as investing). (Thaler, 1999).

Mental accounting in financial decision making is frequently observed in the construction of portfolios. According to Von Neumann and Morgenstern, 1947 and Savage, 1954 rational portfolio theory, investors should only care about the expected utility of their portfolios and not about the specific portfolio components. In contrast, a tendency of investors to split up their investments into a *safe* account, designed for securing the wealth level, and a *risky* account for speculation is often observed. Fisher and Statman (1997) report that mutual fund companies often recommend constructing portfolios as pyramids of assets with cash in the bottom layer, bonds in the middle layer, and stocks in the top layer. Such a behavior is captured in the *behavioral portfolio theory (BPT-MA)* by Shefrin and Statman (2000) (Rockenbach, 2004).

According to standard finance theory, investment decisions should be based on trade-offs between the expected returns of the available alternatives (e.g., individual stocks, mutual funds, real estate) and the risks associated with these alternatives (generally operationalized as the variance in each alternative's returns). This idea, known as mean variance optimization, emanates from the observation that assets with higher expected returns typically also have greater variability of returns. Markowitz (1952) Modern portfolio theory holds, for instance, that, for any collection of securities, there is an efficient set of diversified portfolios that minimizes risk for given levels of expected returns and maximizes expected returns for given levels of risk. Rational investors should choose their portfolios from this efficient set and select the one that

maximizes their utility given their own attitudes toward risk (i.e., how much they would personally trade variance for expected returns) (Zhou and, Tuan Pham, 2004).

## **METHODOLOGY**

Since in the present research the examining the impact of mental accounting on the investment decisions in the Tehran Stock Exchange. The research method is descriptive – correlative. Correlative research is used for two purposes: Study impact of mental accounting on the investment decisions, and predicting one variable based on another.

The population of the study was all company that listed in Tehran Stock Exchange and people how bought company's shares or intend to buy it. According to Cochran sampling, the sample size of this research was set at 126 that selected simple sampling method.

To gathering of data, we used a questionnaire. All the reliability and validity of measures has examined. Questionnaires reliability was estimated by calculating Cronbach's Alpha; it was 0.796.

To examine relation between independent variables and dependent variables in all hypothesis, Spearman correlation coefficient were used.

## **RESULTS**

In this paper we have four main hypotheses. The statistical way of analysis of hypotheses is two ways,  $H_1$  is acceptance of hypothesis and  $H_0$  is rejecting of hypothesis. In other words, it means that  $H_1$  has positive meaning and  $H_0$  has negative meaning.

***Hypothesis 1.** There is significant relationship between mental accounting and decisions of investors.*

Correlation analysis has been done in order to determine the relationship between mental accounting as independent variable and decisions of investors as dependent variable. The Spearman correlation analysis result between these variables is shown in table 1.

Table 1: Results of Correlation coefficient of Hypothesis 1.

Variables	n	R	P-value	Result
Mental accounting and decisions of investors.	126	-.332	.000	Confirm $H_1$

Due to the significant level achieved about variables are less than 0.01, we can reject  $H_0$  and accepted  $H_1$  hypothesis with 99% confidence. So, we can say that there is a negative relationship between mental accounting and decisions of investors in Tehran Stock Exchange. Mental accounting cause to investors' decisions be random and non-analytic.

***Hypothesis 2.** There is significant relationship between mental accounting and assessments of investors' financial activities.*

Correlation analysis has been done in order to determine the relationship between mental accounting as independent variable and assessments of investors' financial activities as dependent variable. The Spearman correlation analysis result between these variables is shown in table2.

Table 2: Results of Correlation coefficient of Hypothesis 2.

Variables	n	R	P-value	Result
Mental accounting and assessments of investors' financial activities	126	-.251	.000	Confirm H <sub>1</sub>

Due to the significant level achieved about variables are less than 0.01, we can reject H<sub>0</sub> and accepted H<sub>1</sub> hypothesis with 99% confidence. So, we can say that there is a negative relationship between mental accounting and assessments of investors' financial activities in Tehran Stock Exchange. IF investors use mental accounting, their power reduce to assessments of investors' financial activities.

**Hypothesis 3.** *There is significant relationship between mental accounting and assessments of investors' financial dictions.*

Correlation analysis has been done in order to determine the relationship between mental accounting as independent variable and assessments of investors' financial dictions as dependent variable. The Spearman correlation analysis result between these variables is shown in table 31.

Table 3: Results of Correlation coefficient of Hypothesis 3.

Variables	n	R	P-value	Result
Mental accounting and assessments of investors' financial dictions	126	-.362	.003	Confirm H <sub>1</sub>

Due to the significant level achieved about variables are less than 0.01, we can reject H<sub>0</sub> and accepted H<sub>1</sub> hypothesis with 99% confidence. So, we can say that there is a negative relationship between mental accounting and assessments of investors' financial dictions in Tehran Stock Exchange. Mental accounting cause to assessments of investors' financial dictions be random and non-analytic.

**Hypothesis 4.** *There is significant relationship between mental accounting and resource allocations by investors.*

Correlation analysis has been done in order to determine the relationship between mental accounting as independent variable and resource allocations by investors as dependent variable. The Spearman correlation analysis result between these variables is shown in table 4.

Table 4: Results of Correlation coefficient of Hypothesis 4.

Variables	n	R	P-value	Result
Mental accounting and resource allocations by investors	126	.17	.053	Confirm H <sub>1</sub>

Due to the significant level achieved about variables are big than 0.01, we can reject  $H_1$  and accepted  $H_0$  hypothesis with 99% confidence. So, we can say that there is not relationship between mental accounting and resource allocations by investors in Tehran Stock Exchange.

Findings shows that there is a negative significant relationship between mental accounting and decisions of investors, assessments of financial activities, assessments of financial dictions. And also, there is not significant relationship between mental accounting and resource allocations.

- *There is significant relationship between* mental accounting and decisions of investors in Tehran Stock Exchange.
- *There is significant relationship between* mental accounting and assessments of financial activities in Tehran Stock Exchange.
- *There is significant relationship between* mental accounting and assessments of financial dictions in Tehran Stock Exchange
- *There is not significant relationship between* mental accounting and resource allocations in Tehran Stock Exchange.

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