# The Investigation of the Affectivity of Various Types of Cash Flows in a Diversified Capital Structure Based on the Type of Strategy

*Mahsa Moradi, Mehrdad Ghanbari**

*Department of Accounting, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran.*

ABSTRACT

The intensity of competition in business markets is to the extent that even the slightest strategic mistakes will lead to the failure of the organizations. The lack of knowledge and implementation of appropriate competitive strategies in such markets and, on the other hand, the failure to review the effects of these strategies on the types of cash flows in diverse capital structures is no also an exception to this rule. The subject of this study is to design and explain the affectivity model of various types of cash flows in a diversified capital structure based on the type of strategy. The present study is an applied one in terms of objective, a quantitative one in terms of data type and a descriptive survey one regarding how to conduct. The statistical population consisted of all companies listed on the Tehran Stock Exchange (TSE) during 2013 to 2017, among which 139 companies were selected as the sample by systematic elimination method. The statistical method used is the panel data method and fitting the regression models has been conducted using the same data. The results indicated that there is no significant difference between the effect of the differentiation strategy on the cash flow of accounting and cash flows to equity in companies that have a debt-based capital structure with companies whose capital structure is based on equity. Also, there is no significant difference between the impact of the cost leadership strategy on cash flow to equity and free cash flow in companies that have a debt-based capital structure with companies whose capital structure relies on equity.

## 1 Introduction

Recent research in management accounting has paid more attention to strategic approaches based on understanding, measuring, and managing key drivers of value creation for stakeholders. Companies also use the value-based management structure widely to create more and long-term value for stakeholders. For this purpose, defining and applying strategies that are potential sources of value creation for shareholders are essential for the success of value-based management [23]. Porter [23] represents a theory, in which he outlines three general strategies. He believes that strategies that a company can use to achieve competitive advantage include cost leadership strategy, differentiation strategy and focus strategy. In his studies in the field of competitive strategies, Barney [31] raises the question: Can a competitive advantage continue, or if its continuance depends on the ability of competitors to imitate or replicate that competitive situation? From the studies, it can be concluded that if a competitive advantage

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* Corresponding author.
E-mail address: mehrdadghanbary@yahoo.com; ghanbari@iauksh.ac.ir

can easily be imitated by competitors, it will not survive and disappears over time. Porter's research during 1996-2001emphasizes this concept. After Porter's initial work on general strategy, many studies such as Rajiv et al. [23] and Mousavi Shiri and Shakeri [8] examined the concept that companies, using any differentiation and cost leadership strategies, can achieve a superior performance, and the adoption of each strategy results in sales growth and higher return on assets (ROA).Companies that have adopted cost leadership strategy will be able to increase their market share through the creation a lower cost price than their competitors. On the other hand, companies that use the differentiation strategy can achieve a competitive advantage by providing products and services that have unique qualities and are of interest to their customers. In implementing the third strategy, the strategy focusing on a particular type of product, the organization tries to focus on specific parts of the market or specific groups of buyers. The company wants to achieve this goal by reducing costs or differentiating products and limiting the market. The main focus of this study is on cost leadership and differentiation strategies. Companies essentially acquire benefits based on current operational effectiveness using the cost leadership strategy. But over time, they cannot function sustainably, since these benefits can easily be imitated by competitors. On the other hand, companies that use the differentiation strategy, are able to obtain continues benefits and maintain their performance over time due to innovation and new technology [26]. Nevertheless, innovation in the differentiation strategy may result in a new product failure in the market, or the costs spent on research and development may not be ineffective. These factors make the differentiation strategy riskier than the cost leadership strategy. Shareholders, creditors, suppliers, etc. have a more priority for companies with predictable and more stable profits. Companies that follow the differentiation strategy may have more volatile profits due to innovative projects [14].  One of the most important goals of enterprises is profit making and increasing shareholders' wealth over the long term. Shareholders, creditors and other business-related groups require reliable and relevant information on their performance and managers in order to make rational decisions. Given the fact that shareholders and creditors allocate their limited financial resources to enterprises, an assessment of enterprises performance is critical to ensure the optimal allocation of resources. Performance measurement financial measures can be classified into two categories: traditional measures and new (value-based) measures. Traditional measures such as rate of return on investment, earnings per share, remaining profit, return on sales, etc. are all functions of accounting profit, and since this profit is manageable, in the other words, it can be manipulated and smoothed, it reduces the value of traditional measures. On the other hand, new value-based measures such as the economic added value and the market added value in the absence of effects from profit management and smoothing can provide more relevant and reliable information to measure the performance. In 2000, the publication of Statement No. 7 of the theoretical framework of the Financial Accounting Standards Board (FASB), drew the profession's attention to cash flow as a benchmark for assessing and anticipating future enterprises' activities. Using cash flows to measure performance, as well as value-based measures, can provide the user with a suitable benchmark for evaluation due to not involvement of numbers and figures relating to accounting profit. One of the most important components of any economic activity is the provision of required financial resources. The required financial resources can be provided from equity or debt. The combination of debt and equity in financing represents the capital structure. The main objective of the capital structure decisions is to maximize the market value of the firm through the appropriate combination of long-term funds. This combination is called the optimal capital structure. One of the main duties of financial managers in the company is to determine the best company's financial composition or the optimal capital structure in order to maximize the company's value [9]. Determining the optimal capital structure in

real-world conditions is a difficult task and its inclusion is beyond the purely theoretical discussions. Therefore, in order to formulate an optimal capital structure that brings the most profit to the company while minimizing the cost of capital, all the factors affecting the company's capital structure must be properly analysed and balanced. According to the Static Trade-off Theory, companies demand a balance between the benefits (tax shield) and debt issuance costs (potential bankruptcy costs) and seek an optimal debt ratio (capital structure) that maximizes the company's value [18]. The intensity of competition in business markets is to the extent that even the slightest strategic mistakes will lead to the failure of the organizations. Whether the creation of a competitive advantage by choosing cost leadership and differentiation strategies, taking into account a limitation as the type of capital structure governing the operating environment of the profit unit, can affect the company's cash flows as an indicator of performance, regardless of the deficiencies that affect the accounting profit, and how can a debt-based or equity-based capital structure affect the affectivity of cash flows from the company's strategies, are issues that the researcher seeks to find a scientific answer for them based on conducting a research with a structured methodology and appropriate data analysis.

## 2 Theoretical Foundations and Literature Review

### 2.1 Theoretical Foundations

In recent years, competitive advantage has been the focus of competitive strategies and many discussions have been made on it. Companies have to have a competitive advantage to improve their performance and compete with their competitors in order to be able to better perform in complex and changing conditions and to maintain themselves on the market. Many researchers have presented some theories and models for justifying and interpreting competitiveness of the factors affecting it, and have categorized the factors influencing competitiveness and presented them in the form of models. These theories and models also have relatively a large variety. However, in the meanwhile, Michael Porter's Diamond Model has a special significance. Generally, companies can use three types of strategies: differentiation strategy, performance strategy (cost leadership), and focus strategy [10]. Since adopting appropriate strategies in organizations is an element that influences how organizations function, organizations must first define their strategies to be used. How to evaluate and compare the performance of companies has always been one of the issues considered by managers, internal and potential shareholders, creditors and companies' customers. Therefore, establishing a correct understanding of the relationship between the strategies used in organizations and organizational performance can provide an accurate understanding for managers' decision making. One of the most important components of any economic activity is the provision of required financial resources. The required financial resources can be provided from equity or debt. The combination of debt and equity in financing represents the capital structure [2]. The main objective of the capital structure decisions is to maximize the market value of the firm through the appropriate combination of long-term funds. This combination is called the optimal capital structure [7]. One of the main duties of financial managers in the company is to determine the best company's financial composition or the optimal capital structure in order to maximize the company's value [9]. Determining the optimal capital structure in real-world conditions is a difficult task and its inclusion is beyond the purely theoretical discussions. Therefore, in order to formulate an optimal capital structure that brings the most profit to the company while minimizing the cost of capital, all the factors affecting

the company's capital structure must be properly analyzed and balanced. According to the Static Trade-off Theory, companies demand a balance between the benefits (tax shield) and debt issuance costs (potential bankruptcy costs) and seek an optimal debt ratio (capital structure) that maximizes the company's value [8]. This method is called the value changes method in order to determine the impact of debt on the stockholders' value. In the method of determining the capital structure by examining the value changes with regard to the Static Trade-off Theory, in order to predict the optimal debt ratio, factors such as size, profitability, business risk, secured assets and tax savings other than debt will be estimated. In cash flow approach, with the help of the variable of cash holdings and important control variables such as growth opportunities, liquidity ratio, gross cash flow generating power ration, and indicator of controlling the increase of debt service charges, the debt ratio is predicted and Then, the optimal debt ratio will be estimated at an optimal level of gross cash flow that pledges the ability to repay the maximum amount of debt. What factors are effective in determining the companies' capital structure? How is the optimal capital structure of companies determined? These questions have occupied the minds of many researchers in the field of corporate finance for many years [6]. The main problem in determining the capital structure is that, regarding the differences between stock and debt, how much debt and how much stock should be available in the capital structure for optimal performance [21]. One of the most important goals of enterprises is profit making and increasing shareholders' wealth over the long term. Shareholders, creditors and other business-related groups require reliable and relevant information on their performance and managers in order to make rational decisions. Given the fact that shareholders and creditors allocate their limited financial resources to enterprises, an assessment of enterprises performance is critical to ensure the optimal allocation of resources [9]. Making rational decisions is directly related to the assessment of the performance of enterprises and the assessment of managers' responsibilities, this assessment and measurement requires the recognition of criteria and indicators that are classified in two sets of financial and non-financial indicators. Performance measurement financial measures are preferable to non-financial measures due to their features such as being quantitative, feasible, objective and tangible [9]. Performance measurement financial measures can be classified into two categories: traditional measures and new (value-based) measures. Traditional measures such as rate of return on investment, earnings per share, remaining profit, return on sales, etc. are all functions of accounting profit, and since this profit is manageable, in the other words, it can be manipulated and smoothed, it reduces the value of traditional measures. On the other hand, new value-based measures such as the economic added value and the market added value in the absence of effects from profit management and smoothing can provide more relevant and reliable information to measure the performance. In 2000, the publication of Statement No. 7 of the theoretical framework of the Financial Accounting Standards Board (FASB), drew the profession's attention to cash flow as a benchmark for assessing and anticipating future enterprises' activities. Using cash flows to measure performance, as well as value-based measures, can provide the user with a suitable benchmark for evaluation due to not involvement of numbers and figures relating to accounting profit. The business in the third millennium has a lawful and stable order that gives meaning to the concept of management. Being challenging is one of the main and undeniable features of business and economic activities of this era. In this situation, the status and role of management is not only necessary, but also effective and inevitable [9]. A penetrating glance at the world reveals the fact more than ever that the world today is very different from the past. The process of globalization, the emergence of the WTO, the rapid and fundamental technological advancements, the increase in the rapid changes in the demand and consumption patterns, and the lack of resources and their costs, are the challenges that enterprises and industries face in the field

of trade and economic activities, and their survival is subject to correct and timely decision making against these changes. In the meantime, the increased number of competitors has made important the concepts such as competitiveness. This has led businesses, industries, and countries to strive to enhance their competitiveness by identifying the factors affecting competitiveness and strengthening them. Given the type of company activity, the status of competitors and the needs and tastes of customers, companies need to adopt a specific strategy to compete effectively with competitors in order to improve their financial performance [10]. From the perspective of investors, financial status is considered as the only factor or criterion determining the competitive status of an organization [4]. Calculation of the organization's performance is one of the important activities that is being performed when evaluating the strategy. One of the most complex issues that the current financial managers are facing is the relationship between the components of capital structure and it is the combination of debt and stock to finance. Decisions related to the company's capital structure have two aspects: first, the amount of capital needed, and the second, the combination of capital supply sources. It is assumed that the firm is aware of the amount of capital which it needs, and in such a case, the question is that what sources should be used to provide capital. The process that led to the final decision, is called the method of determining the capital structure [39]. Given that the capital structure affects the company's value through the rejection or acceptance of investment projects with a net positive or negative value, determining the optimal capital structure is one of the most challenging and difficult issues facing companies. The main problem in determining the optimal capital structure is how much debt and how much stock should exist? Considering different financing methods, we realize that borrowing, despite raising the degree of leverage of a company, brings the lowest cost of capital for the company due to the existence of tax benefits. However, high levels of borrowing may lead to financial difficulty and eventually bankruptcy. On the other hand, a company that finances solely through stocks, is deprived of benefits of tax savings of interest expense, and its market value is less than a leveraged company. The company's value will peak at the point where the debt ratio benefits the company through the creation of tax savings [21]. Financing decisions must be made in such a way as to support investment projects. However, if the issue of company's failure of debt repayment arises, financing decisions and capital structure determination will become more important, and managers in many cases will be forced to ignore the investment project and try to maintain the company's power of liquidity [7]. Due to the important role of liquidity and content load of the indicators of this criterion in implementing different methods by managing and applying strategies in the framework of capital structure, the necessity and importance of designing a mathematical model for the scientific expression of the impact of the type of strategy and capital structure on the company's cash flows become apparent. This study is trying to create conditions to meet this necessity, by selecting variables from three areas of management accounting, financial accounting and financial management. The objective of cost leadership and differentiation strategies is to gain the whole market and the objective of focus strategy is to take possession of parts of the market. Market orientation is rooted in marketing theory and is oriented towards the concept of market learning. Rokert considers market orientation as the degree that business unit: (a) acquires and applies information from customers; (b) develops a strategy to meet the customers' needs; and (c) implements that strategy to respond to customers' needs. In general, it can be said that market orientation discusses that products should reflect market demand and change in consumer preferences. In the literature, the framework by which companies may choose a business strategy to increase the company's efficiency has been developed. He argued that the company should choose between minimizing the cost of a product in an industry that is called

the cost leadership strategy, and a unique product in terms of quality, physical characteristics, or providing exclusive services which is called the product differentiation strategy. In the literary content of some of the arguments, the question of why the relationship between the company's financial leverage and performance is dependent on choosing a business strategy can be seen. The goal of the cost leadership strategy is that the company is a low cost producer in an industry. Cost leadership strategy will be realized through gaining experience, investing in mass production facilities, using cost savings and precise monitoring of all operating costs (through plans such as reducing size and quality management). Companies that apply the cost leadership strategy, will benefit due to using financial leverage in conditions that in which the management efficiency increases with the supervision of the lender. Supervision by the lender limits the managers' opportunistic behaviors by reducing available resources for discretionary costs. Therefore, the task of debt control is more important for companies seeking to increase efficiency. Also, in the cost leadership strategy, companies are required to control the basic costs and prevent the rise of many marketing or innovation costs. Each company competing in the industry has an explicit or implicit competitive strategy. Companies need capital to grow and progress. A portion of the capital within the company is funded through accumulated profits that are resulted from the company's profitability and not shared among the shareholders, and the remainder can be provided through capital markets or borrowing. A company that has no debt, its capital structure is formed by equity, and since most companies' capital structure is associated with debt and capital and given that investors invest in specific stocks, by comparing different types of stocks, based on different criteria, financial managers are very sensitive to receive loan, its effects and maximizing shareholders' wealth. Capital structure decisions are among the most important decisions made by financial managers, which have a huge impact on the company's profitability and ultimately the profit of each share, and most financial managers agree that the concept of leverage has a special place in the capital structure [1]. Cash flows are of the most important factors that are closely related to the company financing and affect it. According to a study by Garcia and Sogorb [15], there is a negative relationship between external financing and operating cash flows of the company. In other words, by increasing operating cash flows, companies are less likely to finance through external financial resources [5].

## 2.2 Literature Review

Among the studies conducted in relation to this study, Chathoth and Olsen [13] conducted a study on the impact of different factors on the company's performance, titled "Investigating the Impact of Environmental Risk, Company Strategy and Capital Structure on Company Performance". They carried out this study on the 48 selected restaurants in the United States and concluded that a large part of the deviations in restaurants performance could be explained through these variables. Anil and Yiğit [12] investigated "the relationship between a variety of diversification strategies and organizational performance." The statistical population of their study consisted of 359 companies listed on the Turkey Stock Market, of which, the data from 342 companies were gathered. In their research, Rumelt's classification was used to classify and measure the diversification strategy, and ROA (Return on Assets) and ROS (Return on Sales) indicators were used to measure organizational performance. According to the research results, companies with both types of diversification strategies had more ROA and ROS than those focused on a business. Hogen and Beker [17] found that fluctuations in cash flows negatively affect the stock returns. But there was no evidence that there was a significant relationship between earnings fluctuations and dividends paid. Parek and Jang [24] studied the relationship between capital structure, cash flow and company's performance. The results of their research indicated that higher debt

is considered as a positive sign. The performance of companies with higher free cash flow (FCF) is damaged. There is also a negative relationship between free cash flow and negative leverage. Sernigaj and Mamor [25] argue that capital structure has an inverse relationship with assets visibility, cash flows volatility and profitability, and it has a direct and significant relationship with growth size and rate. Amir [11] explores the role of institutional investors in cash management practices and Asian companies' commodities inventory. He indicated that an increase in the stock portfolio of foreign banks (as a group of institutional investors) compared to the stock portfolio of domestic banks (as the other group of institutional investors) lead to hold more cash and less inventory. Jermias [19] investigated the relative effect of business strategy on the relationship between financial leverage and company's performance. He concludes that there is a negative relationship between financial leverage and performance, and this relationship will be more negative when the product differentiation strategy is the chosen strategy instead of the cost leadership strategy. Tian and Zeitoun [30] examined the relationship between capital structure and companies' performance using information from 167 Jordanian companies during 1989-2003 and concluded that there is a significant relationship between the ratio of short-term debt to total assets, between the ratio of total debt to total assets, between the ratio of long-term debt to total assets, and between the ratio of total debt to total equity with the ration of return on assets. Jil [20] explored the relationship between cash flow management and debt costs using data from SDC database. According to his research results, the debt costs for all investigated companies had a negative effect on operating cash flows. Also, when companies carry out cash management, bondholders are more motivated to accurately examine the company's information, and information of managed operating cash is priced properly. He also found that there is a positive relationship between managed operating cash for companies with financial distress and debt costs. Gili [16] studied the status of managed cash flows in various corporate performance situations. In this study, it was found that in cases where the company is financially incapable of paying debt and has higher financial costs, cash flow management is also seen more in that company.

## 3 Research Methodology and Hypotheses

This study has two main hypothesis and eight sub-hypothesis as follows.
**The first main hypothesis:** There is a significant difference between the impacts of differentiation strategy on the types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.
**Sub-hypotheses:**
- There is a significant difference between the impacts of differentiation strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of differentiation strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of differentiation strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of differentiation strategy on the capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

**The second main hypothesis:** There is a significant difference between the impacts of the cost leadership strategy on types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.
**Sub-hypotheses:**

- There is a significant difference between the impacts of cost leadership strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of cost leadership strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of cost leadership strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

- There is a significant difference between the impacts of cost leadership strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

Regarding the features of this study, it can be considered an applied one in terms of purpose, an inductive one in terms of implementation logic, a retrospective one in terms of time, a quantitative one in terms of data type, a descriptive survey one in terms of how to conduct, and a causal and post-event one in terms of the relationship between variables. The statistical population consisted of all companies listed on the Tehran Stock Exchange (TSE) during a 5-year period from 2013 to 2017, among which 139 companies were selected as the sample by systematic elimination method.
There are various kinds of variables in this study, which are categorized as follows:
**Differentiation strategy:** The following indicators are used to determine the company's strategy.
The total sales, general, and administrative costs to net sales (sga/sales)
Net sales to cost of goods sold (sales/cogs)
The higher value of the two above indicators confirms that the company has used the differentiation strategy [10].
**Cost leadership strategy:** Cost leadership strategy indicator is as follows:
Net sales to book value of machinery and equipment (sales/assets)
The total number of employees to total assets (empl/assets)
The higher value of the two above indicators confirms that the company has used the cost (efficiency) leadership strategy [10].
**Capital structure:** In this research, the market debt ratio is used to measure the capital structure. Also, to measure the capital structure's dependence on debt or equity, this ratio is compared to the average industry, so that if the calculated ratio is lower than the average industry, it indicates the company's reliance on equity in the capital structure, and if the ratio is greater, indicates its reliance on debt.

$$Market\ debt\ ratio = \frac{Market\ value\ of\ debt}{Market\ value\ of\ debt + Market\ value\ of\ equity}$$

**Accounting cash flows**

Accounting cash flows = (EAT) Earnings after tax +Depreciation

**Cash flows to equity:** In this study, it is calculated based on the following formula:

| Amount | Description |
|---|---|
| xxx | Net profit is added (deducted) after tax: |
| xxx | Depreciation of tangible and intangible assets |
| (xxx) | Increase in working capital |
| (xxx) | Payment of the financial debts |
| xxx | Increase in financial debts |
| (xxx) | Increase in other assets |
| (xxx) | Gross investment in fixed assets |
| xxx | The book value of fixed assets sold and set aside |
| xxx | Cash flows to equity |

**Free cash flows**

| Amount | Description |
|---|---|
| xxx | Net profit is added (deducted) after tax: |
| xxx | Depreciation of tangible and intangible assets |
| (xxx) | Increase in working capital |
| (xxx) | Increase in other assets |
| (xxx) | Gross investment in fixed assets |
| xxx | Interest received |
| xxx | The book value of fixed assets sold and set aside |
| xxx | Free cash flow |

**Capital cash flow:** It includes cash flows of shareholders' equity and cash flows of creditors, which is equal to interest received minus the increase in debts.

Capital cash flow = Cash flow to equity + Profit from investments (interest received) - Increase in debts

**Company size:** The variables of logarithm of sales (logS) and logarithm of assets (logA) can be used for company size.

## 4 Data Analysis

It should be noted that when the sample size is large enough, the deviation from the assumption of normality is usually trivial and its consequences are negligible. According to the central limit theorem

(CLT), it can be seen that even in the absence of normality, the test statistics will asymptotically follow the appropriate distributions.

$$TCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$$

**Table A:** In order to test the heterogeneity of variance in linear regression models, we examine the dependence of the variance of the waste sentences derived from linear regression on the values of the explanatory variables of the models

| Description | F statistic | p-value | Test result | Method |
|---|---|---|---|---|
| $TCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Model 1 | 0.499 | 0.409 | Not Rejected Ho | Matched variance |
| $CFA_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Model 2 | 0.790 | 0.456 | Ho Not rejected | Matched variance |
| $SVCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Model 3 | 0.325 | 0.701 | Ho Not rejected | Matched variance |
| $FCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Model 4 | 0.360 | 0.052 | Ho Not rejected | Matched variance |
| $CCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Model 5 | 0.741 | 0.139 | Ho Not rejected | Matched variance |

The results in the Table A, show that the model always has the same variance and the zero hypothises indicate that the variance is consistent and they are not rejected. The Fleamer test was used to choose between panel data and pooled data. In the Fleamer test, the hypothesis H0, the intercepts equality (pooled data) is opposite to the null hypothesis H1, the intercepts inequality (panel data). The results of this test indicate that panel data method is more suitable. A summary of the results of the Fleamer test is provided as follows.

**Table 1:** The results of Fleamer test

| Description | F statistic | p-value | Test result | Method |
|---|---|---|---|---|
| Research model | 7.169473 | 0.0000 | H0 is rejected | Panel |
| $CF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Research model | 182.554926 | 0.0000 | H0 is rejected | Panel |
| $CFA_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Research model | 13.597622 | 0.0000 | H0 is rejected | Panel |
| $SVCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Research model | 8.466208 | 0.0000 | H0 is rejected | Panel |
| $FCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Research model | 1.901897 | 0.0000 | H0 is rejected | Panel |
| $CF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |

As it can be seen, the panel data technique is used to estimate the research models.

**Table 2**: The results of Hausman test

| Method | Test result | p-value | Chi-square statistics | Description |
|---|---|---|---|---|
| $TCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Random effects | H0 is not rejected | 0.8144 | 1.568855 | Research model 1 |
| $CFA_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Random effects | H0 is not rejected | 0.7861 | 1.725257 | Research model 2 |
| $SVCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Random effects | H0 is not rejected | 0.5344 | 3.141496 | Research model 3 |
| $FCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |
| Random effects | H0 is not rejected | 0.7682 | 1.823297 | Research model 4 |
| $CCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it} \pm \beta_3 DEBT_{it} * CLS_{it} \pm \beta_4 EQ_{it} * CLS_{it}$ | | | | |

According to the results of the Hausman test, the random effects method is chosen for fitting the regression model (except for the second and third models).

The main hypotheses are tested as follows:

**The first main hypothesis:** There is a significant difference between the impacts of differentiation strategy on the types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

**Table 4**: Multicollinearity test between the research variables corresponding to the first main hypothesis

| Multicollin- earity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | | |
| (Constant) 1 | 2.037 | 1.000 | 0.02 | 0.000 | 00.00 |
| 2 | 0.959 | 1.457 | 0.89 | 0.000 | 00.00 |
| 3 | 0.004 | 13.301 | 0.09 | 1.000 | 1.000 |

**Table 5**: Multiple regression test between the research variables (model summary) corresponding to the first main hypothesis

| Model | Multiple correla- tion co- efficient | Coeffi- cient of determi- nation | Adjusted coef- ficient of de- termination | Durbin-Wat- son statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.110 | 0.012 | 0.009 | 1.511 | 4.243 | 0.015 |

**Table 6**: Regression coefficients corresponding to the first main hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coef- ficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 15.223 | .092 | - | 165.486 | .000 |
| DEBTDS | .982 | .567 | .748 | 1.733 | .084 |
| EQDS | 1.096 | .568 | .834 | 1.931 | .054 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the first main hypothesis and the status indicator is less than 15, so there is no possibility of a multicollin-earity between the independent variables. In other words, there is no serious problem with the use of regression.

The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independ-ence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.511 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the impacts of differentiation strategy on the types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$TCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$TCF_{it} = 15.223 \pm 0.748 DEBT_{it} * DS_{it} \pm 0.834 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the differentiation strategy has a positive effect on the types of cash flows in the companies with debt-based and the companies with equity-based capital structure.

**Sub-hypotheses:** The first sub-hypothesis: There is a significant difference between the impacts of differentiation strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

**Table 7:** Multicollinearity test between the research variables corresponding to the first sub-hypothesis

| Multicolline-arity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | | |
| (Constant) 1 | 2.037 | 1.000 | 0.02 | 0.000 | 00.00 |
| 2 | 0.959 | 1.457 | 0.89 | 0.000 | 0.000 |
| 3 | 0.004 | 13.301 | 0.09 | 1.000 | 1.000 |

**Table 8**: Multiple regression test between the research variables (model summary) corresponding to the first sub-hypothesis

| Model | Multiple correlation co-efficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.063 | 0.004 | 0.001 | 1.623 | 1.370 | 0.255 |

**Table 9**: Regression coefficients corresponding to the first sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 14.195 | 0.063 | | 226.471 | 0.000 |
| DEBTDS | 0.215 | 0.386 | 0.242 | 0.558 | 0.577 |
| EQDS | 0.268 | 0.387 | 0.300 | 0.692 | 0.489 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the first sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the

independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.623 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is 0.255 and more than 0.05, it can be concluded that there is no significant difference between the impacts of differentiation strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$CFA_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$CFA_{it} = 14195 \pm 0.577 DEBT_{it} * DS_{it} \pm 0.489 EQ_{it} * DS_{it}$$

**Table 10**: Multicollinearity test between the research variables corresponding to the second sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | | |
| (Constant) 1 | 2.037 | 1.000 | 0.02 | 0.000 | 00.00 |
| 2 | 0.959 | 1.457 | 0.89 | 0.000 | 0.000 |
| 3 | 0.004 | 13.301 | 0.09 | 1.000 | 1.000 |

**Table 11**: Multiple regression test between the research variables (model summary) corresponding to the second sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.048 | 0.002 | -0.001 | 1.711 | 0.783 | 0.457 |

**Table 12**: Regression coefficients corresponding to the second sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 0.641 | 0.018 | | 36.189 | 0.000 |
| DEBTDS | 0.115 | 0.109 | 0.459 | 1.058 | 0.290 |
| EQDS | 0.109 | 0.109 | 0.432 | 0.995 | 0.320 |

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the differentiation strategy has a positive effect on accounting cash flow in the companies with debt-based and the companies with equity-based capital structure.

The second sub-hypothesis: There is a significant difference between the impacts of differentiation strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the second sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.711 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is 0.457 and more than 0.05, it can be concluded that there is no significant difference between the impacts of differentiation strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$SVCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$SVCF_{it} = 0.641 + 0.459 DEBT_{it} * DS_{it} + 0.432 EQ_{it} * DS_{it}$$

**Table 13**: Multicollinearity test between the research variables corresponding to the third sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | | |
| (Constant) 1 | 2.037 | 1.000 | 0.02 | 0.000 | 00.00 |
| 2 | 0.959 | 1.457 | 0.89 | 0.000 | 0.000 |
| 3 | 0.004 | 13.301 | 0.09 | 1.000 | 1.000 |

**Table 14**: Multiple regression test between the research variables (model summary) corresponding to the third sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.201 | 0.040 | 0.037 | 1.573 | 14.508 | 0.000 |

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the differentiation strategy has a positive effect on cash flow to equity in the companies with debt-based and the companies with equity-based capital structure. The third sub-

hypothesis: There is a significant difference between the impacts of differentiation strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 15**: Regression coefficients corresponding to the third sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 0.159 | 0.043 | | 3.693 | 0.000 |
| DEBTDS | 1.415 | 0.265 | 2.271 | 5.336 | 0.000 |
| EQDS | 1.429 | 0.266 | 2.290 | 5.380 | 0.000 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the third sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.573 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the impacts of differentiation strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$FCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$FCF_{it} = 0.159 + 2.271 DEBT_{it} * DS_{it} + 2.290 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the differentiation strategy has a positive effect on free cash flow in the companies with debt-based and the companies with equity-based capital structure. The fourth sub-hypothesis: There is a significant difference between the impacts of differentiation strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 16**: Multicollinearity test between the research variables corresponding to the fourth sub-hypothesis

| Multicolline-arity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | | |
| (Constant) 1 | 2.037 | 1.000 | 0.02 | 0.000 | 00.00 |
| 2 | 0.959 | 1.457 | 0.89 | 0.000 | 0.000 |
| 3 | 0.004 | 13.301 | 0.09 | 1.000 | 1.000 |

**Table 17**: Multiple regression test between the research variables (model summary) corresponding to the fourth sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.189 | 0.036 | 0.033 | 1.540 | 12.850 | 0.000 |

**Table 18**: Regression coefficients corresponding to the fourth sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 0.228 | 0.059 | | 3.879 | 0.000 |
| DEBTDS | 0.333 | 0.362 | 0.392 | 0.919 | 0.358 |
| EQDS | 0.174 | 0.363 | 0.205 | 0.479 | 0.632 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the fourth sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.540 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the impacts of differentiation strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$

$$CCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$CCF_{it} = 0.228 \pm 0.392 DEBT_{it} * DS_{it} \pm 0.2205 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the differentiation strategy has a positive effect on capital cash flow in the companies with debt-based and the companies with equity-based capital structure.

**The second main hypothesis:** There is a significant difference between the impacts of cost leadership strategy on types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 19**: Multicollinearity test between the research variables corresponding to the second main hypothesis

| Multicollin-earity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | DEBTCLS | EQCLS |
| (Constant) 1 | 2.011 | 1.000 | 0.01 | 0.00 | 0.00 |
| 2 | 0.989 | 1.426 | 0.98 | 0.00 | 0.00 |
| 3 | 0.000 | 9.254 | 0.02 | 1.00 | 1.00 |

**Table 20**. Multiple regression test between the research variables (model summary) corresponding to the second main hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.142 | 0.020 | 0.017 | 1.724 | 7.160 | 0.001 |

**Table 21**: Regression coefficients corresponding to the second main hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 15.317 | 0.087 | | 175.464 | 0.000 |
| DEBTCLS | 0.094 | 0.035 | 5.486 | 2.684 | 0.007 |
| EQCLS | 0.095 | 0.035 | 5.585 | 2.733 | 0.006 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the second main hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to

evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.724 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used.

Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the impacts of cost leadership strategy on types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$TCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$TCF_{it} = 15.317 + 5.486 DEBT_{it} * DS_{it} + 5.585 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the cost leadership strategy has a positive effect on types of cash flows in the companies with debt-based and the companies with equity-based capital structure.

**Sub-hypotheses:** The fifth sub-hypothesis: There is a significant difference between the impacts of cost leadership strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 22**: Multicollinearity test between the research variables corresponding to the fifth sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | DEBTCLS | EQCLS |
| (Constant) 1 | 2.011 | 1.000 | 0.01 | 0.00 | 0.00 |
| 2 | 0.989 | 1.426 | 0.98 | 0.00 | 0.00 |
| 3 | 0.000 | 9.254 | 0.02 | 1.00 | 1.00 |

**Table 23**: Multiple regression test between the research variables (model summary) corresponding to the fifth sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.123 | 0.015 | 0.012 | 2.368 | 5.287 | 0.005 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the fifth sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of

regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively.

**Table 24**: Regression coefficients corresponding to the fifth sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 14.198 | 0.059 | | 239.047 | 0.000 |
| DEBTCLS | 0.074 | 0.024 | 6.414 | 3.130 | 0.002 |
| EQCLS | 0.074 | 0.024 | 6.379 | 3.113 | 0.002 |

One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 2.368 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the impacts of cost leadership strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$CFA_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$CFA_{it} = 14.198 + 6.414 DEBT_{it} * DS_{it} + 6.379 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the cost leadership strategy has a positive effect on accounting cash flow in the companies with debt-based and the companies with equity-based capital structure.

**Table 25**: Multicollinearity test between the research variables corresponding to the sixth sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | DEBTCLS | EQCLS |
| (Constant) 1 | 2.011 | 1.000 | 0.01 | 0.00 | 0.00 |
| 2 | 0.989 | 1.426 | 0.98 | 0.00 | 0.00 |
| 3 | 0.000 | 9.254 | 0.02 | 1.00 | 1.00 |

The sixth sub-hypothesis: There is a significant difference between the impacts of cost leadership strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies

whose capital structure depends on equity.

**Table 26**: Multiple regression test between the research variables (model summary) corresponding to the sixth sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.053 | 0.003 | 0.000 | 1.719 | 0.976 | 0.777 |

**Table 27**: Regression coefficients corresponding to the sixth sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| (Constant) 1 | 0.648 | 0.017 | | 38.423 | 0.000 |
| DEBTCLS | 0.009 | 0.007 | 2.730 | 1.324 | 0.186 |
| EQCLS | 0.009 | 0.007 | 2.712 | 1.315 | 0.189 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the sixth sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.719 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is more than 0.05, it can be concluded that there is no significant difference between the impacts of cost leadership strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$SVCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$SVCF_{it} = 0.648 + 2.730 DEBT_{it} * DS_{it} + 2.712 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the cost leadership strategy has a positive effect on cash flow to equity in the companies with debt-based and the companies with equity-based capital structure. The seventh

sub-hypothesis: There is a significant difference between the impacts of cost leadership strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 28**: Multicollinearity test between the research variables corresponding to the seventh sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | DEBTCLS | EQCLS |
| (Constant) 1 | 2.011 | 1.000 | 0.01 | 0.00 | 0.00 |
| 2 | 0.989 | 1.426 | 0.98 | 0.00 | 0.00 |
| 3 | 0.000 | 9.254 | 0.02 | 1.00 | 1.00 |

**Table 29**: Multiple regression test between the research variables (model summary) corresponding to the seventh sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.057 | 0.003 | 0.000 | 1.934 | 1.134 | 0.322 |

**Table 30**: Regression coefficients corresponding to the seventh sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 0.234 | 0.042 | | 5.597 | 0.000 |
| DEBTCLS | 0.015 | 0.017 | 1.845 | 0.895 | 0.371 |
| EQCLS | 0.015 | 0.017 | 1.890 | 0.917 | 0.359 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the seventh sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.934 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is more than 0.05, it can be concluded that there is no significant difference between the impacts of cost leadership strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$FCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$

$$FCF_{it} = 0.234 \pm 1.845 DEBT_{it} * DS_{it} \pm 1.890 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the cost leadership strategy has a positive effect on free cash flow in the companies with debt-based and the companies with equity-based capital structure.The eighth sub-hypothesis: There is a significant difference between the impacts of cost leadership strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity.

**Table 31**: Multicollinearity test between the research variables corresponding to the eighth sub-hypothesis

| Multicollinearity test | eigenvalues | Status Indicator | Variance ratio | | |
|---|---|---|---|---|---|
| | | | Constant | DEBTCLS | EQCLS |
| (Constant) 1 | 2.011 | 1.000 | 0.01 | 0.00 | 0.00 |
| 2 | 0.989 | 1.426 | 0.98 | 0.00 | 0.00 |
| 3 | 0.000 | 9.254 | 0.02 | 1.00 | 1.00 |

**Table 32**: Multiple regression test between the research variables (model summary) corresponding to the eighth sub-hypothesis

| Model | Multiple correlation coefficient | Coefficient of determination | Adjusted coefficient of determination | Durbin-Watson statistic | F statistic | Significance level |
|---|---|---|---|---|---|---|
| 1 | 0.162 | 0.026 | 0.023 | 1.554 | 9.266 | 0.000 |

**Table 33**: Regression coefficients corresponding to the eighth sub-hypothesis

| Linear regression | Unstandardized coefficients | | Standardized coefficients | t statistic | Significance level |
|---|---|---|---|---|---|
| | Column B | Benchmark error | Beta value | | |
| Constant | 0.237 | 0.056 | | 4.209 | 0.000 |
| DEBTCLS | 0.005 | 0.023 | 0.409 | 0.201 | 0.841 |
| EQCLS | 0.003 | 0.022 | 0.248 | 0.122 | 0.903 |

The result consists of three outputs. In the first output, given that there are no small eigenvalues in the eighth sub-hypothesis and the status indicator is less than 15, so there is no possibility of a multicollinearity between the independent variables. In other words, there is no serious problem with the use of regression. The second output represents the multiple correlation coefficient, coefficient of determination, adjusted coefficient of determination, Durbin-Watson statistic, F statistic and the significance level of hypothesis test respectively. One of the assumptions, which is considered in the regression, is the independence of the errors from each other. If the errors independence assumption is rejected and the errors are correlated with each other, then no regression is possible. Durbin-Watson test was used to evaluate the independence of errors from each other. Since the value of Durbin-Watson statistic, namely 1.554 is located in the range of 1.5 and 2.5, the assumption of the absence of correlation between the errors is not rejected and regression can be used. Given the significance level value corresponding to F statistic, which is less than 0.05, it can be concluded that there is a significant difference between the

impacts of cost leadership strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure is based on equity. Regression analysis of variance is intended to check the certainty of a linear relationship between the two variables. In this hypothesis, sig is less than 5%; so, the assumption of a linear relationship between the two variables will be accepted. In the third output, in column B, the constant and independent variable coefficient in the regression equation are given, respectively. In this hypothesis, the regression model is as follows:

$$Y = \alpha \pm bx_1$$
$$CCF_{it} = \alpha_{it} \pm \beta_1 DEBT_{it} * DS_{it} \pm \beta_2 EQ_{it} * DS_{it}$$
$$CCF_{it} = 0.237 + 0.409 DEBT_{it} * DS_{it} + 0.248 EQ_{it} * DS_{it}$$

Given that in unstandardized coefficients, the variables scales are not the same, but in standardized coefficients, the variables scales are the same and it is possible to compare the variables, so the standardized coefficients are used to examine the effects of the independent variable on the dependent variable. Based on this hypothesis, the cost leadership strategy has a positive effect on capital cash flow in the companies with debt-based and the companies with equity-based capital structure.

## 5 Discussions and Conclusions

Conclusion based on the test of the first main hypothesis: There is a significant difference between the impacts of differentiation strategy on the types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of this hypothesis indicate that there is a significant difference between the impacts of differentiation strategy on the types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The decisions made by companies to finance, and their choice between financing via debt or capital, are significantly influenced by their assets characteristics. In the companies that have adopted a competitive strategy, assets structure is non-proprietary and they can be provided through resources obtained from debt. Because they have a higher possibility of liquidity at the time of company settlement. At the same time, in the companies with low competitive capability, assets are proprietary and should be provided through resources resulted by stockbrokers' share. Because at the time of company settlement, they have less possibility of liquidity. The results of this hypothesis are consistent with the results of the research conducted in the literature. Conclusion based on test of the hypothesis 1-1: There is a significant difference between the impacts of differentiation strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of the hypothesis indicate that there is no significant difference between the impacts of differentiation strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this hypothesis are in line with the results of the study by Honarbakhsh et al. [33] The results of the study conducted by Honarbakhsh et al. [33] indicate that dividend has a positive relationship with the company's performance in the companies with cost leadership strategy. Also, in the companies with product differentiation strategy, the variable of company size has a positive relationship with performance, but dividend has a negative relationship with performance. Conclusion based on test of the hypothesis 1-2: There is a significant difference between the impacts of differentiation strategy on cash flow to equity in the companies that have a debt-based capital structure with the

companies whose capital structure relies on equity. According to the results of this hypothesis, there is no significant difference between the impacts of differentiation strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure is depends on equity. The survival and success of organizations, in a mysterious and competitive environment of the contemporary world whose main characteristics are evolution, speed, complexity and uncertainty, require the selection and implementation of effective strategies and continuous improvement of performance. This is realized by designing and defining business goals and strategies, including differentiation strategy, planning and implementing them, and consequently controlling and evaluating the performance. The results of this hypothesis are in line with the results of the studies by [10] and Myers [27]. Conclusion based on test of hypothesis 1-3: There is a significant difference between the impacts of differentiating strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of the hypothesis indicate that there is a significant difference between the impacts of differentiation strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this hypothesis are consistent with the results of a study conducted by Jaggy and Gull [32], which have found a direct relationship between earnings management and large free cash flows in low growth companies. On the other hand, they are inconsistent with the results of a study by Moradzadeh Fard et al. [35], which investigated the relationship between free cash flow of the company and the stock market value in the stock exchange, and concluded that there is no significant relationship between free cash flow of the company and stock price at the level of 5% error. Conclusion based on test of hypothesis 1-4: There is a significant difference between the impacts of differentiation strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity.

The results of this hypothesis indicate that there is a significant difference between the impacts of differentiation strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this hypothesis are consistent and in line with the results of the study by Valipour[10]., which examined the impact of strategic position on company performance, and concluded that although the application of differentiation and cost leadership strategies leads to a successful financial performance, but this successful financial performance could be maintained in the coming years just by applying the differentiation strategy. Conclusion based on test of the second main hypothesis: There is a significant difference between the impacts of cost leadership strategy on types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. Regarding the results of this hypothesis, there is a significant difference between the impacts of cost leadership strategy on types of cash flows in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. Defining the optimal capital structure is one of the most challenging and the most difficult issues facing companies. The main problem in defining the optimal capital structure is how much debt and how much stock should there be? Considering different financing methods, it is found that borrowing, despite raising the degree of leverage of a company, brings the lowest cost of capital for the company due to the existence of tax benefits. However, high levels of borrowing may lead to financial difficulty and eventually bankruptcy. On the other hand, a company that finances solely through stocks, is deprived of benefits of tax savings of interest expense, and its market value is less than a leveraged company. The company's value will peak at the point where the debt ratio benefits the company through the creation of tax savings. The results of this hypothesis are similar to the results

obtained by Alamolhoda et al. [37] Conclusion based on test of hypothesis 2-1: There is a significant difference between the impacts of cost leadership strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of this hypothesis indicate that there is a significant difference between the impacts of cost leadership strategy on accounting cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this study are consistent with the results of the research by O'Brien [28] which found in empirical studies that business strategies affect the financial leverage of the company significantly. Conclusion based on test of hypothesis 2-2: There is a significant difference between the impacts of cost leadership strategy on cash flow to equity in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of this hypothesis indicate that there is a significant difference between the impacts of cost leadership strategy on cash flow to equity in companies that have a debt-based capital structure with companies whose capital structure depends on equity. The results of this hypothesis are in line with the results of the research conducted by Anil and Yiğit [12]. According to their research, the companies with both types of diversification strategies, have more ROA and ROS than the companies focused on a profession.

On the other hand, the results of this study are inconsistent with the results of the study of Jermias [19]. He concluded that there is a negative relationship between financial leverage and performance, and this relationship will be more negative when the product differentiation strategy is the chosen strategy instead of the cost leadership strategy. Conclusion based on test of hypothesis 2-3: There is a significant difference between the impacts of cost leadership strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. According to the results of this hypothesis, there is no significant difference between the impacts of cost leadership strategy on free cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this hypothesis are consistent with the results of the study carried out by Tehrani and Hesarzadeh [38], and Anil and Yiğit [12]. On the one hand, they are inconsistent with the results of the study of Sernigaj and Mamor [25]. Conclusion based on test of hypothesis 2-4: There is a significant difference between the impacts of cost leadership strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure relies on equity. The results of this hypothesis indicate that there is a significant difference between the impacts of cost leadership strategy on capital cash flow in the companies that have a debt-based capital structure with the companies whose capital structure depends on equity. The results of this hypothesis are in line with the results of the research by Chathoth and Olsen [13], which examined the impact of environmental risk, company's strategy, and capital structure on company performance.

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