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Adjustment Speed of Capital Structure: Effect of Organizational and Performance Characteristics (Comparison between Financial and Non-Financial Sectors)

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Abstract:

Financing decisions such as capital structure have gained much attention in literature of financial development over the last decade. Capital structure deviations from its optimal level can occur for various reasons. According to the dynamic trade-off theory, continuous adjustment of capital structure to maximize company value is essential. If companies adjust their capital structure quickly towards the target leverage, past financing activities and historical market conditions will only have short-term effects on the current capital structure. Conversely, if companies adjust their capital structure slowly, the opposite is true. We examine the relationship between organizational and performance characteristics and capital structure, as well as the speed of adjustment, in financial and non-financial firms listed on the Tehran Stock Exchange and compare these effects between the two categories of companies. The statistical population consists of companies listed on the Tehran Stock Exchange from 2017 to 2022. The results show that the speed of capital structure adjustment is lower in the financial sector compared to the non-financial sector. Additionally, three performance variables—profitability, growth opportunities, and liquidity—are statistically significant and impact capital structure

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and its adjustment speed in both financial and non-financial sectors. However, the growth opportunities variable has a different effect direction in the financial sector compared to the non-financial sector, while the age variable does not have a significant effect. Regarding organizational characteristics—complexity, institutional ownership, and size—only organizational complexity in the financial sector is significant at a 95% confidence level, while all organizational characteristics are significant in the non-financial sector.

1- Introduction

Capital structure, as one of the most important subjects of financial economy, plays a significant role in financial development. Especially during the last decades and after the studies conducted by Modigliani and Miller (1963), the importance of the issue has increased. Also, after the development of literature on the subject such as Fama and French (2002) and Drobetz and Wanzenried (2006), the its position was improved in financial development.

Decision-making regarding the provision of necessary financial resources is one of the major concerns of financial managers in companies. Each company's capital structure is formed by combining various financial resources. Given that a company's capital structure can directly impact its value and credibility, it is of particular importance in financial discussions (Ghaemian et al., 2024). Various theories and suggestions have been proposed to determine an optimal capital structure—one that can meet the company's financial needs with the least cost and increase the company's value. Therefore, the costs of debt financing are among the factors that can influence capital structures and the speed at which they are adjusted. (Memon et al., 2020)

The speed of capital structure adjustment varies among companies, depending on the transaction costs associated with the necessary changes to achieve a new capital structure. This structure and its adjustment speed can be influenced by company performance characteristics such as growth opportunities, profitability, and liquidity, as well as organizational and structural characteristics (Ho et al., 2021). Therefore, examining the influencing factors and the speed of capital structure adjustment is important. On the other hand, the degree and direction of the impact of these factors and the speed of capital structure adjustment can differ between financial and non-financial companies due to differences in performance, which can be compared and evaluated in Iran’s economy. (Esmaeilpour et al., 2023)

Historically, numerous studies have sought a suitable metric for evaluating company performance to ensure alignment between company activities and the interests of current shareholders. A key aspect in this context is determining the optimal capital structure, which involves the efficient use of financial resources through equity and debt (Zamani Sabzi et al., 2020). The optimal capital structure is achieved when the benefits derived from debt (such as tax shields) are

balanced with the costs associated with it (such as bankruptcy costs). This concept relates to the theory of capital structure trade-off, aiming to achieve a suitable balance between the two primary financial sources: debt and equity. (Fatheh & Karami Nezhad, 2023)

In general, a company's capital structure consists of two main components: the amount of capital needed and the composition of financing sources. Theories related to capital structure focus on finding an optimal balance between using debt and equity. Companies strive to manage their capital structure so that the cost of capital is minimized, thus maximizing the company's value and shareholders' wealth. This requires continuous adjustment of the capital structure to ensure that the costs of adjustment are less than the benefits. (Liao, 2012)

Managers play a crucial role in adjusting the capital structure. They need to manage the capital structure in such a way that minimizes capital costs and maximizes the company's value. Capital structure is one of the most important factors affecting company valuation and its positioning in capital markets. Factors such as company size, risk, industry type, access to finance and economic and political environments impact optimal capital structure decisions. (Zhou et al., 2016)

Optimal allocation of limited financial resources is one of the fundamental strategies for achieving a company's financial goals. (Oino & Ukaegbu, 2015)

Due to various factors, a company's capital structure may deviate from its optimal state. Thus, according to the dynamic trade-off theory.

Continuous adjustment of the capital structure is vital for maximizing the company's value. Rapid adjustment towards the target leverage, the company's past financing activity, and historical market conditions may have a short-term impact on current capital structure, while slower capital structure adjustments' inverse is true.

On the other hand, rapid adjustment towards the target may imply lower transaction cost (such as lower costs for external finance), higher deviation costs, and flexibility. (Milan & Kamara, 2012).

We examine the factors affecting capital structure adjustment and its speed, as the capital structure is one of the most important issues in financial management and directly impacts company value. In this context, three main questions arise:

1. How do performance characteristics such as profitability, growth opportunities, and liquidity affect capital structure and its adjustment speed in financial and non-financial companies?
2. How do organizational characteristics such as size, complexity, and institutional ownership affect the capital structure of financial and non-financial companies?
3. In which sector (financial and non-financial) is the speed of capital structure adjustment greater?

The paper is structured as follows: After the introduction, section two provides the theoretical framework. Section three explicates the literature review, and section four elaborates the methodology of this paper. Section five is devoted to model specification and hypothesis testing. Section six analyzes the results, and section seven provides the results of model tests. The paper concludes with the concluding remarks.

2- Theoretical framework

In finance, the capital structure generally refers to the combination of debt and equity that a company uses to finance its investments. Understanding capital structure allows managers and other stakeholders to make optimal decisions. These decisions are made when managers are required to assess the impact of different financing methods on the company's risk and return and to evaluate the effect of capital structures on shareholder wealth (Ghadiri Moghadam & Asadian, 2010). The capital structure can affect many factors of the company, especially it can affect the risk of the company. In the literature of financial economics, one of the determining factors of companies' stock returns is the awareness of companies' risk. Because risk plays an important role in financial decisions by affecting the profitability and efficiency of the company.

Studies such as those by Modigliani and Miller (1958) and Myers and Majluf (1984) have been conducted on the concept of capital structure, and several models have been proposed to explain the capital structure of companies. Modigliani and Miller are pioneers in capital structure theory. Their theory laid the groundwork for studies and discussions on capital structure and its composition (Setayesh and Ebrahimi, 2021).

In examining the capital structure of companies, the focus is on defining the mix of different financing sources deployed to fund activities and investments. Prominent theories in this regard include the trade-off theory, pecking order theory, and market timing theory. (Huang & Ritter, 2009) The development of these theories underscores the importance of capital structure in corporate finance, despite market imperfections.

In this view, one of the factors affecting the rate of adjustment or deviation from optimal leverage is the speed of adjustment. The term "speed of adjustment" refers to how much a company reduces its distance from its optimal leverage over a financial period. Examining capital structure is the initial step in determining a company's exposure to financial distress, and it should be seriously considered in strategic planning and decision-making by managers (Stewater, 1984).

After estimating the amount of capital required, the company management discusses and determines the financing method, deciding how much debt is permissible and how much equity is needed to achieve the primary goal of maximizing shareholder value and, ultimately, the company's value (Gaud et al., 2007).

Many factors affect the correct composition of capital structure and its adjustment speed. These include performance characteristics such as profitability, risk degree, control, flexibility, company growth, organizational factors like institutional ownership and organizational complexity, business activities, interest rates, stock value, access to cash, tax policies, investor-manager relationships, and company credibility (Sinaei & Rezaeian, 2005).

Capital structure is a mix of debt and equity used by companies to finance their assets. Companies use both debt and equity in their capital structure (Assadi et al., 2021). The choice between debt and equity as a new source of finance is influenced by internal and external factors affecting the company's capital structure. To determine a company's capital structure, it is necessary first to identify the financial needs for investment and then choose the type of source. The objective of determining capital structure is to maximize shareholder wealth. Changes in shareholder wealth are affected by various factors, with capital structure being one of them (Jahanekhani, 2005).

A company's capital structure is affected by numerous internal and external factors. Internal factors are those arising from within the company, while external factors come from the external environment. Financing decisions are crucial, and finance managers attach more importance to internal control for compliance. Internal factors can play a significant role in this regard.

For instance, the degree of risk is a factor worth examining. Higher debt increases financial costs, including interest and other borrowing costs, and raises the financial risk of enterprises, i.e., the likelihood of default on payments and bankruptcy. In contrast, equity does not require renewal, and if a dividend do not pay, it will not increase the risk of bankruptcy, while debt increases the company's risk.

The overall level of activity is another influencing factor. If an industry is growing, companies need more financing to expand their operations, often leading them to financial markets. Conversely, a declining industry might force companies to halt operations and buy back preferred shares or repay debt. Capital structure also affects profitability, which can be important because Stock returns are affected by a wide variety of economic and non-economic factors (Dehghan Khavari et al., 2023). Interest rates also play a role. Interest rates on bonds depend on the balance between money supply and demand in the market. A shortage of financial resources can increase interest rates, leading companies to retain earnings and issue common shares rather than taking on expensive debt. When interest rates decrease due to a supply of money, companies may distribute dividends and borrow at lower rates, thereby replacing an expensive financing source with a cheaper one and increasing stock value.

Another factor is access to financial markets. Financial markets are subject to various phenomena and may experience changes where money is abundant,

leading companies to issue new shares or bonds to meet financial needs. However, if available funds decrease, companies might rely on bank loans and other financing institutions. The level of access to capital markets guides companies in choosing between issuing new shares or bonds.

Profit is one of the most important items on financial statements, used for performance evaluation and determining the value of a company (Francis, 2014). The relationship between profitability and capital structure arises from the comparison of companies' value as a method of improving investment processes. The outcome of financial and operational decisions is reflected in the company's profitability, and financial statements provide data for performance evaluation. A company's long-term survival depends on its ability to generate revenue to meet all obligations and provide appropriate returns to shareholders. (Alamshahi et al., 2014)

The profitability ratio indicates the efficiency and effectiveness of a company in utilizing its assets. Titman and Wessels (1988) and Rajan and Zingales (1995) found that, according to the pecking order theory, when a company's profitability increases, managers prefer internal funding over external financing. Modigliani and Miller (1963) suggest that profitable companies may prefer debt financing due to their high ability to pay debt services, benefiting from the tax shield, which is supported by the trade-off theory.

The pecking order theory suggests that profitable companies, due to their high retained earnings, have a relatively lower tendency to external financing and are likely to maintain a lower leverage ratio. Moreover, high profitability may lead to a better ability to meet debt obligations. Therefore, they have more opportunities to make leverage target adjustment decisions and have a relatively slower speed of adjustment compared to less profitable companies.

Company size reflects the scale and scope of a company's activities. Size is often measured by performance indicators, not physical capacity. Metrics such as sales, asset values, stock values, and price-to-earnings ratios can all affect capital structure and adjustment speed. (Tarafi, 2006)

Larger companies typically have a lower bankruptcy risk due to high diversification, allowing them to borrow at lower costs. (Rajan & Zingales, 1995) Additionally, adjusting capital structure generally involves significant transaction costs, which are minimal for large companies. These companies are often mature and have high assets, profitability, and financial flexibility. They generally have high credit ratings in debt markets and better access to capital markets, making external financing less costly and indicating a higher adjustment speed. (Drobetz & Wanzenried, 2006). However, some studies suggest that smaller companies might have a higher adjustment speed (Antao & Bonfim, 2014).

According to the findings of Leary and Roberts (2005), companies with more tangible and collateralizable assets have better access to capital markets. From the trade-off perspective, companies with higher tangible asset ratios are

expected to face lower financial distress costs. On the other hand, companies with fewer tangible assets are likely to have lower liquidation values. Also, due to their lower collateralizable, lenders may impose higher interest rates and relatively more expensive financing. This suggests that companies with more collateralizable assets have a relatively higher ability to adjust their leverage.

Institutional investors have become a significant part of capital markets in recent decades, handling a large portion of investments. Institutional investors have the resources to invest in companies and monitor managers. One solution to the agency problem is institutional ownership, which aligns the interests of managers and stakeholders. (Kazemi & Mohammad Nejad, 2011) Institutional investors focus on long-term value and have significant control power, affecting capital structure adjustments and adjustment speed. (Gaspar et al., 2005)

Organizational complexity refers to how organizational activities are divided into tasks and coordinated. It describes the relationships between components of the organization and can be applied to all organizational aspects. The organizational structure outlines job relationships and operational systems and processes. Investigating the issue and its importance for the financial sector, especially the banking sector, is more important because Stock Exchange investors have paid more attention to the banking group in recent years so that in many cases, the direction of the banking index has changed the general direction of the market (Dehghan Khavari et al., 2021). Regarding capital structure and financial leverage as a proxy, the net income theory suggests that as financial leverage increases, the average cost of capital decreases. The traditional view is that an optimal capital structure exists, and management can enhance company value through debt financing and financial leverage. This theory proposes that companies can reduce their capital costs by increasing debt levels. Although common shareholders expect higher returns with increased leverage, this effect is mitigated due to debt repayment. With leverage, investors also increase the cost of equity, which eventually balances with the benefits of cheaper debt.

The main commitment of the traditional view is that the cost of capital depends on capital structure, and an optimal capital structure minimizes the cost of capital. This combines elements of both the net income and operating income models. The net income model suggests that company value increases with higher financial leverage.

Thus, an optimal capital structure is a mix of debt and equity that minimizes the company's cost of capital and maximizes shareholder wealth. Achieving this is crucial, as companies strive to maintain a balance between debt and equity in the capital structure, ensuring financial flexibility.

When using various financial instruments, adherence to the matching principle is essential. Short-term funds should finance short-term assets with lower returns, while long-term funds should finance long-term assets with higher returns. Using

short-term funds for long-term assets increases the risk, while using long-term funds for short-term projects can raise financial costs. Companies continually adjust their capital structures based on conditions, replacing equity with debt to reduce risk and enhance ownership ratios (Mohammadi, 2005).
Therefore, capital structure is determined by the optimal mix of debt and equity to meet financial needs. This mechanism should be designed to maximize company value. Despite seeming straightforward, achieving this goal is complex. Managers must use quantitative data, such as profitability, liquidity, sales, and future growth opportunities, as well as qualitative factors, including industry type, public perception, and ownership structure, to create the most effective capital structure (Shariat Panahi & Khosravi, 2007).

3- Literature Review

Previous research on capital structure and its adjustment speed has explored various aspects of this topic. A summary of key findings includes:
Ghaemian et al. (2024) explored the role of liquidity on the dynamic nature of capital structure especially the speed with which companies adjust their capital structure towards the target. The hypothesis is that a firm with higher liquidity will face lower costs associated with issuing new securities and is therefore more willing to quickly correct any deviation of its actual leverage ratio from its target ratio. To check the validity of this claim, in this study, 106 companies admitted to the Tehran Stock Exchange between 2014-2016 were examined. Through rolling regression, the effect of each class of cash flow statement on adjustment speed in high and low leverage companies was tested. The results show that the speed of reaching optimal leverage in companies with low optimal leverage is higher than in companies with high optimal leverage. This issue shows the lack of attention to the future debt capacity of the companies admitted to the Tehran Stock Exchange.
Esmaeilpour et al. (2023) examined a comparative factor affecting the speed of capital structure adjustment among service companies and manufacturing industries listed on the Tehran Stock Exchange. To test the hypotheses, the information of 137 companies listed on the Tehran Stock Exchange in the period 2013-2019 has been used. The results showed that capital structure adjustment speed of manufacturing industries is larger than service companies. The estimated speed is 73% for service companies and 85% for manufacturing industries, which indicates the high speed of adjustment which can reduce the probability of financial crises in the economy.
Warmana et al. (2020) investigated the capital structure speed of adjustment of Indonesian companies for corporate value. They evaluated the influence of growth potential, profitability, company size, ratio between capital structure and its target, short-term loan, asset maturity, growth of GDP, and inflation rate towards capital structure speed of adjustment of manufacturing companies listed

on the Indonesian Stock Exchange. The results show that Indonesian manufacturing companies adjust their capital structure towards target leverage with a speed of adjustment of 64.73% per year, which is faster than developed countries.

Cahyono et al. (2019) explored the dynamic capital structure in Indonesia, focusing on the industry-specific variables affecting adjustment speed toward target leverage of non-financial listed companies, considering size, growth opportunity, profitability, asset structure, liquidity, and firm risk, as well as industry-specific variables using the dynamic adjustment model. They found Indonesian firms have target leverages, and they adjust toward the desired debt ratio. Industry-specific variables have substantial influences on adjustment speeds toward target leverage.

Ezeani (2019) examined the determinants of capital structure and speed of adjustment in Nigerian non-financial firms listed on the stock exchange and examined the relationship between firms' characteristics and the capital structure choice using the trade-off and pecking order theories and two-step GMM system estimation. The result shows 63% speed of adjustment for listed non-financial firms in Nigeria. Firm characteristics are capital structure determinants of non-financial firms. Asset tangibility and firm growth are positively related with both long-term and short-term leverage and highlight the importance of collateral in financing decisions of Nigerian non-financial firms. Profitability shows a negative and significant relationship with short-term leverage but is positively related with long-term leverage. Firm size and age show a negative and significant relationship with the long-term and short-term leverage. The coefficient signs of more independent variables confirm the dominance of the pecking order theory in Nigerian firms' financing behavior.

Buvanendra et al. (2018) examined the determinants of speed of adjustment toward optimal capital structure of listed firms in Sri Lanka, considering the impact of firm-specific and corporate governance factors in the capital structure adjustment using GMM. The results indicated that profitability, size, tangibility, non-debt tax shields, and governance factors significantly affect the speed of adjustment to optimum capital structure.

Kazemi and Mehri Namak Avrani (2018) studied the impact of cash flow on the speed of capital structure adjustment and optimal capital structure and found a significant and inverse relationship between cash flow and the speed of capital structure adjustment. Specifically, companies with negative cash flow had a higher speed of capital structure adjustment.

Kythreotis et al. (2018) explored the determinants of capital structure and speed of adjustment using a comparative approach and the company's characteristics in Iran and Australia based on the variables used in Pecking order theory and the trade-off theory, as well as liquidity, asset utilization ratio, and speed of

adjustment using GMM and OLS. The results showed that dynamic trade-off theory could better explain the changes in capital structure in Iran and Australia.
Hashemi and Keshavarz mehr (2015): According to the trade-off theory, each company faces different adjustment costs based on its specific characteristics and thus moves towards its target leverage at different speeds.
Memon (2015) investigated determining factors affecting the adjustment speed towards target capital structure in non-financial listed firms in Pakistan using GMM. He concluded that firms make full adjustments towards optimal capital structure in 1.46 years to 2.03 years, depending upon the proxy of target debt used. Firms' profitability, stock market development, and distance are found as determinants of the adjustment speed. Tangibility, earning volatility, cash, and industry median leverage affect the target leverage. The interest rate is the only country-specific factor that affect target debt.
Naveed et al. (2015) explored the factors affecting speed of adjustment under different economic conditions toward target debt in developing economies by employing two-step GMM. The findings suggest that the adjustment process is subject to a trade-off between convergence rate and cost of being off target. It validates the importance of dynamic trade-off modeling for optimal capital structure.
Lari et al. (2013) examined the relationship between collateralizable assets and capital structure and found that there is a significant and direct relationship between long-term collateralizable assets and long-term financial leverage, as well as between short-term collateralizable assets and short-term financial leverage.
Al-Najjar and Hosseini (2011), in their study entitled "revisiting the capital structure puzzle," they explored the factors affecting capital structure and its adjustment speed. They found that company characteristics such as size, growth, profitability, and risk have significant effects on capital structure.
Against the backdrop, this study contributes to knowledge by providing evidence on the **effect of organizational and performance** characteristics on the adjustment speed of **capital structure** as well as comparing the subject among Iranian financial and non-financial firms listed on the Tehran Stock Exchange.

4- Methodology

We selected 95 companies listed on the Tehran Stock Exchange as a sample for the period from 2018 to 2022. Companies were selected using a systematic elimination method based on certain filters. These filters included not being part of the services and investment companies, financial intermediation, having business continuity, and accessible data on the research variables from annual reports.
For financial sector companies, similar criteria were applied, and 18 companies from this sector were chosen. We utilize a partial adjustment model to estimate

the speed of capital structure adjustment. The standard partial adjustment model based on Flannery and Rangan (2006) is expressed as follows:

$$LEV_{it} - LEV_{it-1} = \lambda\,(LEV_{it}* - LEV_{it-1}) + v_{it}$$

In this model, LEV_{it} and $LEV_{it}*$ denote the actual financial leverage ratio and the target leverage ratio, respectively. v_{it} is the one-sided error term, which includes unobserved company-specific characteristics such as management ability and industry competition. λ denotes the adjustment speed, indicating how quickly companies move towards their target leverage. This coefficient ranges between zero and one, with values closer to one indicating a higher adjustment speed.

To calculate the target financial leverage, there are two methods:

First method: The target leverage can be derived from the average or moving average of actual financial leverage. However, this method has limitations as it does not account for changes in target leverage over time or its dependency on past decisions. (Shiam & Mayers,1999)

Second method: The target leverage is determined as a unique ratio based on company characteristics. The equation is:

$$LEV_{it}^{*} = \beta' X_{it-1}$$

Where, LEV_{it}^{*} denotes the target leverage as the dependent variable, X denotes a vector of explanatory variables, and β denotes the vector of coefficients. In this model, X_{it} denotes a vector of exogenous factors influencing financial leverage. In this study, the explanatory variables include profitability (Prof), growth opportunities (Grow), size (Size), age (Age), liquidity (Liq), institutional ownership (Ins), complexity (Comp), and tangible assets (TA).

The equations are:

$$Lev_{it} = \alpha_0 + \alpha_1 Lev_{it-1} + \alpha_2\, PROF_{it} + \alpha_3\, GROW_{it} + \alpha_4\, LIQ_{it} + \alpha_5 TA_{i,t} + \alpha_6 AGE_{i,t} + \alpha_7 Size_{i,t}$$

$$Lev_{it} = \alpha_0 + \alpha_1 Lev_{it-1} + \alpha_2 Comp_{it} + \alpha_3\, INS_{it} + \sum_{k=5}^{7} \alpha_k \quad X_{k,it}$$

We employ a one-step method, combining the equations to test the hypotheses. The general equation is as follows:

$$LEV_{it} = (1-\lambda)LEV_{it-1} + (\lambda\beta)X_{it} + v_{it}$$

This equation shows that managers take action to bridge the gap between their current position and where they aim to be.

Other features of this model include: (1) the actual debt ratio of companies converges towards the target debt ratio over time, and (2) the long-term effect of X_{it} on the debt ratio is determined by dividing the estimated coefficient by λ.

The concept of half-life refers to the number of years needed to fill 50% of the gap between the actual and optimal financial leverage. It is calculated using the formula:

$$Half_{Life} = \ln(0.5) / \ln(1 - \lambda)$$

To test the hypotheses, we employed the Generalized Method of Moments (GMM) econometric method. This method addresses issues related to autocorrelation and heteroscedasticity. Although a random effects model could be an alternative, the GMM method was chosen to maintain its advantages. The static panel method faces issues with serial correlation, heteroscedasticity, and endogeneity of some explanatory variables, making GMM, based on dynamic panel models, the preferred choice. Especially when there are issues such as the country specific unobserved effects and lagged dependent variables in explanatory variables, a dynamic panel model based on GMM is preferred for estimation.

5- Model specification and hypothesis test

In this model, the independent and dependent variables, as well as their calculation methods, are as follows:

Financial Leverage (LEV): This is the dependent variable, calculated as the ratio of total debt to total assets.

Company Complexity (Comp): This is the independent variable, measured by the number of subsidiaries of the parent company.

Institutional Ownership (INS): This independent variable is calculated as the fraction of shares held by institutional investors.

Profitability (Prof): This independent variable is calculated as the ratio of net profit to total assets.

Liquidity (Liq): This independent variable is calculated as the ratio of current assets to current liabilities.

Growth Opportunities (GROW): This is a variable in the model, measured as the ratio of market value to book value of the company.

Tangible Assets (TA): This is a variable in the model, calculated as the ratio of total collateralizable assets to total assets of the company.

Company Age (Age): This is also a variable in the model, calculated as the inverse of the logarithm of the difference between the year of interest and the year in which the company was established.

Company Size (SIZ): This is a variable in the model, calculated as the natural logarithm of the company's total assets.

Examination of the first hypothesis: Initially, the main hypothesis of the research is tested. To this end, the primary variables affecting capital structure and the measurement of capital structure adjustment speed, based on Dang et al. (2014), Drobetz & Wanzenried (2006), and Fama and French (2002), are included in the model. To test the first hypothesis, growth opportunities, profitability, and

liquidity are considered as performance variables. The model is then estimated for financial and non-financial firms using the generalized method of moments (GMM).

Examination of the second hypothesis: To test the second hypothesis, we extended the model of capital structure adjustment by including organizational variables while retaining the variables affecting capital structure. Therefore, to achieve more accurate results while preserving the variables affecting capital structure, organizational complexity and institutional ownership are included. The impact of these organizational indicators on capital structure decisions is assessed by adding them to the model of capital structure and its adjustment speed.

6- Analysis of the results

The results of the model estimation using the systemic generalized method of moments (GMM) are illustrated in Table1.

Table 1: The Effect of Adjustment Speed on Performance Characteristics (Financial vs. Non-Financial Sector on the Tehran Stock Exchange)

Variables	Financial		Non-Financial	
	Coef.	Prob.	Coef.	Prob.
LEV (-1)	0/23	0/006	0.19	0/02
GROW	0/0016	0/002	-0/18	0/003
PROF	-0/91	0/000	-0/29	0/004
TA	0/46	0/000	0/27	0/012
LIQ	-0/02	0/052	-0/16	0/007
SIZE	0/05	0/056	-0/19	0/05
AGE	-0/004	0/41	0/11	0/59
Half Life	0/41		0/42	

Source: Author's findings

The coefficient estimated for the dependent variable with one lag is significant at the 5% error level for both financial and non-financial sectors. This indicates that the companies have target market leverage. With the estimated coefficients of 0.18 and 0.19 for the financial and non-financial sectors, respectively. It can be said that the sample companies in both sectors adjust their financial leverage towards the potential leverage at a rate of 78% and 81% per year. According to the relevant formula, the half-life for financial and non-financial firms is approximately 0.47 and 0.40, respectively. In other words, it takes about six and five months for companies in both sectors to reduce deviations from potential leverage by half.

Effects of Performance Variables: According to Table (1), profitability has a significant effect on capital structure and its adjustment speed in both sectors.

The impact coefficient of profitability on capital structure is -0.91 for the financial sector and -0.29 for the nonfinancial sector, indicating a stronger effect of profitability on capital structure in the financial sector.
Growth opportunities are significant in both models but show a positive effect in the financial sector and a negative effect in the non-financial sector. Although the effect is not very strong in financial firms, a growth opportunity suggests an adjustment in capital structure in financial firms.
Tangible assets have a positive and strong effect in both sectors. Liquidity shows a significant and negative effect in the financial sector with 90% confidence and a significant and stronger negative effect in the non-financial sector with 95% confidence.
The effect of company size is significant in both sectors at 90% confidence but with different directions. Finally, the age does not have a significant effect on capital structure in either sector.

Table (2): The Effects of Organizational Characteristics on Capital Structure and Adjustment Speed (Financial Vs. Non-Financial Sectors on the Tehran Stock Exchange)

Variables	Financial		Non-Financial	
	Coef.	Prob.	Coef.	Prob.
LEV (-1)	0/24	0/04	0/18	0/005
Comp	-0/015	0/000	-0/23	0/001
INS	-0/002	0/36	-0/37	0/000
GROW	0/0017	0/004	-0/16	0/008
TA	0/39	0/005	0/14	0/02
SIZE	0/061	0/059	-0/22	0/04
AGE	-0/007	0/75	0/017	0/92
Half Life	0/46		0/49	

Source: Author's findings

Effects of Organizational Variables: The second model, aimed at examining the effects of organizational variables in financial and non-financial sectors, shows that the coefficient for the dependent variable with a lag is significant in both sectors. The effects of the control and basic variables, their direction, and their significance are identical to the initial base model. However, organizational complexity has a significant and negative effect in both financial and non-financial sectors, which is noteworthy. Institutional ownership shows a significant and relatively high negative effect in the non-financial sector, while it is insignificant in the financial sector. This suggests that higher institutional ownership results in a longer time for firms to reach their target capital structure.

7- Model Tests

A) Validity: To verify the validity of the model and the results, we conducted the Wald test for both financial and nonfinancial sectors' models. The Wald test checks the significance of the simultaneous effect of the explanatory variables. The null hypothesis of this test is that all coefficients are zero. If the probability of the statistic in the Wald test is less than 5%, the null hypothesis is rejected and the explanatory variables effect on the dependent variable, and, in general, the significance of the model is confirmed. The Wald test result is illustrated in table 3.

Table 3: Wald Test Results (Financial vs. Non-Financial Sectors)

Test	Financial				Non Financial			
	Chi-square		Prob.		Chi-square		Prob.	
	Mod1	Mod2	Mod1	Mod2	Mod1	Mod2	Mod1	Mod2
WALD	9/83	12/18	0/000	0/005	42/23	36/82	0/000	0/000

Source: Author's findings

The results of the Wald test indicate the rejection of the null hypothesis and the acceptance of the opposite hypothesis, that is, the significance of all the coefficients of the explanatory variables in the models. As a result, the variables used in the model influence the dependent variable.

B) For the validity of the instrumental variables in the model, the Sargan test was conducted. The results indicated that the null hypothesis is not rejected, and as a result, the instrumental variables are valid. The results of this test statistic are illustrated in table (4).

Table 4: Sargan test results (Financial vs. Non-financial sectors)

Test	Financial				Non-Financial			
	Chi-square		Prob.		Chi-square		Prob.	
	Mod1	Mod2	Mod1	Mod2	Mod1	Mod2	Mod1	Mod2
Sargan	13/32	9/62	0/27	0/56	11/018	7/76	0/17	0/12

Source: Author's findings

The null hypothesis of the Sargan test suggests that there is no correlation between the instrumental variable and error term. The instruments are valid if they are not correlated with the errors in the first order differential equation. Accepting this hypothesis means that the instrumental variables are valid. The results suggest that the probabilities of the models and both financial and non-financial sectors mean that the null hypothesis is not rejected and that the instrumental variables are valid.

C) Also, in the GMM, it is necessary to conduct the autocorrelation test. In this test, the null hypothesis indicates the lack of autocorrelation of the data. Arellano and Bond (1991) indicated that in the GMM estimation, disturbance terms should

have first-order serial autocorrelation and not second-order serial autocorrelation. In other words, the probability of the statistic is less than 5% in the first order and greater than 5% in the second order (it has an autocorrelation in the first order and not in the second order).

Table 5: Autocorrelation test results (financial vs. nonfinancial sectors)

Order	Financial		NonFinancial	
	Prob.		Prob.	
	Mod1	Mod2	Mod1	Mod2
1	0/002	0/01	0/041	0/0395
2	0/82	0/09	0/102	0/081

Source: Author's findings

According to the test results in the models and in both financial and nonfinancial sectors, there is autocorrelation in the first order, but there is no autocorrelation in the second order. Therefore, the null hypothesis cannot be rejected. The Arellano and Bond method is a suitable method for estimating model parameters and removing fixed effects. In other words, by differentiating the error term, the serial correlation between the components of the error term is removed.
In short, the results of the Wald test indicate that the null hypothesis is rejected, confirming the significance of all explanatory variables in the models. The results of the Sargan test show that the instrumental variables used in the model are valid, as the null hypothesis of no correlation between instruments and the error term is not rejected. The result of the autocorrelation test suggests that all models in both sectors show first-order autocorrelation but no second-order autocorrelation, validating the use of the Arellano-Bond method for parameter estimation and fixed effect removal.

8- Concluding remarks

On the impact of company performance characteristics, including growth opportunities, profitability, and liquidity, the results show that all three variables are significant and affect the capital structure and the speed of its adjustment in both financial and non-financial sectors. Among these, the growth opportunities variable has a different direction of impact in the financial sector compared to the non-financial sector. Also, the company age does not have a significant effect. The speed of capital structure adjustment is also higher in the financial sector than in the non-financial sector.
Regarding the differing sign and impact of growth opportunities between the financial and non-financial sectors, the signaling theory suggests a positive relationship between growth opportunities and debt. However, according to agency theory, the relationship between debt and growth opportunities can be either positive or negative. Debt can play a dual role in the company's value when growth opportunities are available, which can be explained through the

underinvestment and overinvestment theory. The negative relationship is consistent with the findings of Ziyari and Tayrani (2016).

On the significant relationship with liquidity, high liquidity can potentially facilitate the use of growth opportunities or, by increasing current assets, improve the company's profitability, thus negatively impacting the speed of capital structure adjustment. The research findings on the collateralizable assets are consistent with the views of Dang et al. (2012) and Lari et al.(2013) . The results of the second hypothesis show that among the organizational characteristics of the companies in the financial sector, only organizational complexity is significant at a 95% confidence level, while in the non-financial sector, all organizational characteristics are significant.

The results indicate an inverse relationship between complexity and the capital structure of companies in both financial and non-financial sectors. This can be explained by the fact that due to different management capabilities, quality of services, financial decision-making, and coordination issues, organizations with more subsidiaries and affiliated companies take longer to reach their target financial leverage. Antão and Bonfim (2014) and Salimpour (2007) findings align with these results. Based on the results, as the institutional investors play a significant role in information transfer and affect the company's value, a significant relationship between institutional ownership structure and capital structure reduces agency costs. Based on these findings, companies with institutional investor ownership tend to use less leverage.

According to the results, it is recommended that managers, investors, and creditors of companies need to consider the speed of capital structure adjustment of the company to obtain more information about the company's financial resources. Additionally, as large companies have a slower adjustment speed, it is suggested that they use their collateralizable assets to help adjust their financial leverage and accelerate the speed of capital structure adjustment. Managers should also undertake financing based on the necessity of adhering to the matching principle. Therefore, the method and extent of financing need to be determined according to the type of assets required by the company. This leads to a reduction in the overall cost of capital and achieves a more reasonable return based on the cost-benefit analysis.

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سرعت تعدیل ساختار سرمایه: تأثیر ویژگی‌های سازمانی و عملکردی (مقایسه بین بخش‌های مالی و غیر مالی)

چکیده:

تصمیمات تامین مالی مانند ساختار سرمایه در ادبیات توسعه مالی در دهه گذشته توجه زیادی را به خود جلب کرده است. به دلایل مختلف ممکن است ساختار سرمایه یک شرکت، از ساختار بهینه آن فاصله بگیرد. بنابراین طبق نظریه توازن پویا، اصلاح و تعدیل پیوسته ساختار سرمایه به منظور بیشینه کردن ارزش شرکت، امری حیاتی خواهد بود. در واقع اگر شرکت‌ها با سرعت زیادی به سمت اهرم هدف حرکت کنند، آنگاه فعالیت‌های تامین مالی گذشته شرکت و شرایط تاریخی بازار تنها اثرات کوتاه مدتی بر ساختار سرمایه فعلی شرکت خواهند داشت، در حالی که اگر شرکت‌ها به آرامی ساختار سرمایه خود را تعدیل کنند، عکس این قضیه صادق است. این پژوهش به بررسی ارتباط ویژگی‌های سازمانی و عملکردی شرکت‌های مالی و غیرمالی پذیرفته‌شده در بورس اوراق بهادار تهران با ساختار سرمایه و سرعت تعدیل آن و مقایسه اثرات آن‌ها میان این دو دسته از شرکت‌ها می‌پردازد. جامعه آماری این پژوهش، شامل شرکت‌های پذیرفته شده در بورس اوراق بهادار تهران طی سال‌های 1396 تا 1401می‌باشد. نتایج پژوهش نشان دهنده آن است که سرعت تعدیل ساختار سرمایه در بخش مالی کمتر از غیر مالی می‌باشد. همچنین هر سه متغیر عملکردی سودآوری، فرصت‌های رشد و نقدینگی، در هر دو بخش مالی و غیرمالی معنادار و بر ساختار سرمایه و میزان تعدیل سرعت آن اثرگذار هستند. در این میان متغیر فرصت‌های رشد دارای جهت اثرگذاری متفاوت در بخش مالی نسبت به بخش غیرمالی می‌باشد. همچنین متغیر عمر دارای اثر معنادار نمی‌باشد. از طرف دیگر نتایج حاصل از پژوهش نشان می‌دهد از ویژگی‌های سازمانی شامل پیچیدگی، مالکیت نهادی و اندازه، تنها متغیر پیچیدگی سازمانی شرکت‌های مورد بررسی در بخش مالی با فاصله اطمینان 95 درصد معنادار می باشد در حالیکه در بخش غیر مالی تمامی ویژگی‌های سازمانی معنادار هستند.

کلمات کلیدی: ویژگی‌های عملکردی، ویژگی‌های سازمانی، سرعت تعدیل ساختار سرمایه، ساختار سرمایه.