

## **CAPITAL STRUCTURE: DEFINITIONS, DETERMINANTS, THEORIES AND LINK WITH PERFORMANCE LITERATURE REVIEW**

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**ABSTRACT:** *The theory of capital structure and its relationship with a firm's value and performance has been a puzzling issue in corporate finance and accounting literature since the Modigliani and Miller theory (MM) (1958) argue that under the perfect capital market condition which assume that, if without bankruptcy cost and capital markets are frictionless, if without taxes, and without asymmetric information the firm's value is independent from capital structure. According to MM theory, the only variables that determined firm value was its future earnings power (expected cash flow) and hence the capital structure decision is irrelevant. Since that time, several theories have been developed to explain the capital structure of a firm including the Pecking Order Theory, Trade off theory, and the Agency Cost theory. This paper will shed light on the concept of capital structure, its theories and link with firms' performance.*

**KEYWORDS:** Capital Structure, Performance.

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### **INTRODUCTION**

If there has been any area of finance theory that has attracted the greatest attention and caused the highest controversy, it is definitely the theory of capital structure and leverage and how they affect firm's performance. The capital structure issue and its impact on firms performance can be traced back to the classic MM 1958 work which argued that under certain conditions, the choice between debt and equity does not affect firm value, the value of a corporation and its costs of capital are unaffected by its capital structure and the only variables that determined firm value was its future earnings power (expected cash flow) and hence the capital structure decision is irrelevant.

Capital structure has been an important focus point in the literature since MM started publishing their research about it in 1958. Capital structure is a remarkable topic because it has researched in both academic level and corporate level since the financing decisions of a firm are of vital importance for its operating and investing activities. Therefore, there are many theories, which discuss it in many different ways. It basically is referred how a firm mixes debt and equity in order to finance itself or in other words, it concerns about combination of funds, in the form of debt and equity. Therefore, there is still hot debate regarding that does an optimal capital structure exist and how capital structure affects firm performance and vice versa.

MM1958 created a fictional world without taxes, transaction costs, bankruptcy costs, growth opportunities, asymmetric information between insider and outsider investors and differences in risk between different firms and individuals. They proved that under these perfect conditions financing is irrelevant for shareholder's wealth and there is no optimal debt to equity ratio. However, the series of simplifying assumptions have often been questioned by subsequent literature. From these assumptions there are three basic: (1) the tax benefits of gearing, (2) bankruptcy costs and (3) asymmetric information; and the four major capital structure theories that based on these assumptions are: (1) the trade-off, (2) pecking order, (3) market timing, and

(4) free cash-flow theories. As Lew (2012) stated, the trade-off theory is based on the tax benefits of gearing and bankruptcy costs; and the pecking order, free cash-flow and market timing theories are based on asymmetric information.

However, in the real-world taxes exist and have a significant influence on a firm's capital structure and on a firm's value. In general, there are often preferences for debt rather than equity finance as it decreases the cost of finance. The tax deduction allowed for interest payments will relatively lower the after-tax cost of debt which would bring down the overall cost and increase the firm's value.

In this paper, the concept of capital structure, components of capital structure, and cost of each component will be explained. Also, the research will present the capital structure theories and the factors that may influence a firm's capital structure decision. Following that, the research will discuss financial performance and its interplay with capital structure.

### **Capital Structure Definition**

There have been several attempts to define Capital Structure, all of definitions explain the kinds of securities and the proportionate amounts that makeup capitalization. It is the mix of different sources of long-term sources such as equity shares, preference shares, debentures, long-term loans and retained earnings. One of these definitions for Gangeni (2006) that state the study of capital structure attempts to explain the mix of securities and financing sources used by corporations to finance real investment. The firm needs to make investments in order to at least remain in business, let alone display some growth. To finance these investments, the firms can use internal finance sources such as retained earnings and issuing shares for public or use external finance sources as a loans or bonds.

The term capital structure refers to the relationship between the various long-term sources financing such as equity capital, preference share capital and debt capital as Parmasivan & Subramanian (2009). Capital structure is the permanent financing of the company represented primarily by long-term debt and equity and deciding the suitable capital structure is the important decision of the financial management because it is closely related to the value of the firm. Gitman and Zutter (2012) defined capital structure as the mix of long-term debt and equity maintained by the firm.

Although, the actual levels mix of the firm's permanent long-term financing represented by debt, preferred stock, and common stock equity may vary somewhat over time, most firms try to keep their financing mix close to a target capital structure. According to Brigham and Ehrhardt (2011), the main purpose of the capital structure is to comprise of the optimal mix of debt and equity. A firm's capital structure decision includes its choice of a target capital structure, the average maturity of its debt, and the specific types of financing it decides to use at any particular time. As with operating decisions, managers should make capital structure decisions that are designed to maximize the firm's intrinsic value.

From the last definitions, the capital structure can be defined as the mixing of financial sources to finance the firms' operations. Financial sources can include the debt and equity that can be used by the firms.

### Optimal Capital Structure

To maximize the firm's intrinsic value, the cost of capital structure must be reduced to the lowest level. When reach this point, that's mean the optimum capital structure is achieved. Optimum capital structure may be defined by Parmasivan & Subramanian (2009) as the capital structure or combination of debt and equity that leads to the maximum value of the firm. Optimum capital structure is the capital structure at which the Weighted Average Cost of Capital (WACC) is minimums and thereby the value of the firm is maximums.

Deciding the suitable capital structure is important decision of the financial management because it is closely related to the value of the firm. Capital structure is the permanent financing of the company represented primarily by long-term debt and equity. Asaf (2004) states that the "Optimal capital structure means having the right balance of debt and equity financing in the business". Debt financing decisions for most corporations involves balancing a series of trade-offs involving cost, liquidity, choice of maturity, and the basis and frequency of interest rate resets.

Because the value of a firm equals the present value of its future cash flows as in equation, it follows that the value of the firm is maximized when the cost of capital is minimized. In other words, the present value of future cash flows is at its highest when the discount rate (the cost of capital) is at its lowest. By using this equation, the value of the firm,  $V$ , can be defined by Gitman and Zutter (2012, p.535) as the follow:

$$V = \frac{EBIT \times (1 - T)}{ra} = \frac{NOPAT}{ra}$$

Where:

EBIT = Earnings before Interest and Taxes T = tax rate

NOPAT = net operating profits after taxes, which is the after-tax operating earnings available to the debt and equity holders, EBIT (1 - T)

ra = weighted average cost of capital

Clearly, if assumed that NOPAT (and therefore EBIT) is constant, the value of the firm,  $V$ , is maximized by minimizing the  $ra$ . From figure (a) in next page there are three cost functions: the cost of debt, the cost of equity, and the WACC as a function of financial leverage measured by the debt ratio (debt to total assets). The cost of debt,  $r_i$ , remains low because of the tax shield, but it slowly increases as leverage increases, to compensate lenders for increasing risk. The cost of equity,  $r_s$ , is above the cost of debt because the stockholders require a higher return to compensate for the higher degree of financial risk. The  $ra$  results from a weighted average of the firm's debt and equity capital costs. At a debt ratio of zero, the firm is 100 percent equity financed. As debt is substituted for equity and as the debt ratio increases, the WACC declines because the after-tax debt cost is less than the equity cost ( $r_i < r_s$ ). In this range, the tax benefits of additional debt outweigh the costs of borrowing more. However, as the debt ratio continues to increase, the increased debt and equity costs eventually cause the WACC to rise (after point M in Figure (a)).

### Graphical View of Optimal Structure

Because the maximization of value,  $V$ , is achieved when the overall cost of capital,  $r_a$ , is at a minimum (see Equation), the optimal capital structure is that at which the  $r_a$  is minimized. In Figure (a), point M represents the minimum WACC the point of optimal financial leverage and hence of optimal capital structure for the firm.

Figure (b) plots the value of the firm that results from substitution of  $r_a$  from Figure (a) for various levels of financial leverage into the zero-growth valuation model in Equation. As shown in Figure (b), at the optimal capital structure, point M, the value of the firm is maximized at  $V^*$ . Simply stated, minimizing the WACC allows management to undertake a larger number of profitable projects, thereby further increasing the value of the firm.

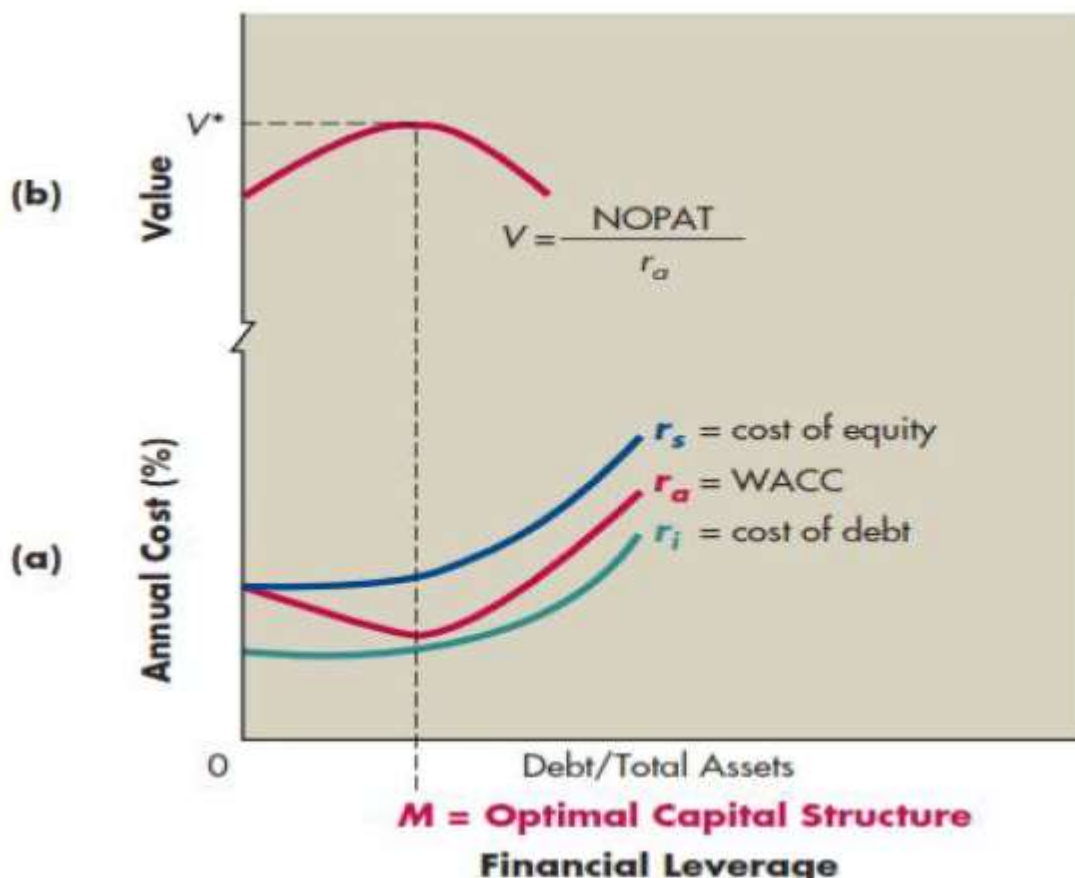


Figure 1: Cost function and value capital cost and the optimal capital structure, Source: Gitman and Zutter (2012, p.536).

However, as a practical matter, there is no way to calculate the optimal capital structures implied by Figure. Because it is impossible either to know or to remain at the precise optimal capital structure, according to (Gitman & Zutter, 2012), firms generally try to operate in a range that places them near what they believe to be the optimal capital structure.

From the last figure, firms usually manage toward a target capital structure to reach the maximum value by making a combination from equity and debt with the lowest cost.

## **Ideal capital market**

Taking MM 1958 standpoint to its extreme, it could be argued that a company could have a capital structure consisting of 100% debt and that will still not in any way affect the value of the company. Furthermore, MM 1958 also purposed that the expected ROE is an increasing function of the firms leverage, meaning that higher leverage should yield a higher return on a company's equity.

However, MM 1958 admitted that these propositions were only valid given certain theoretical environmental conditions, namely a so called “ideal capital market”. An ideal capital market, according to (Gansuwan & Önel, 2012), relies in short form on the existence of the following five assumptions:

1. Capital markets are frictionless: No transaction cost or taxes. No costs associated with bankruptcy.
2. All market participants share homogenous expectations: Relevant and homogenous information are available to all actors in the market, hence homogenous expectations from the actors.
3. All market participants are atomistic: No participant on the market can affect the price of a security through trading.
4. The firm's investment program is fixed and known: The firm's capital investment program and thus its assets, operations and strategies are fixed and known to all investors in the market.
5. The firm's financing is fixed: Once it is chosen, the capital structure of the firm is fixed.

Since the MM 1958 propositions relies on what arguably could be considered highly rigid environmental conditions, which especially seems to be far removed from the realities of the modern business world as it is commonly characterized by very dynamic business environments, globalization of markets and trade and thus rapidly changing strategies and business models for companies.

During the decades which have passed since the emergence of MM propositions regarding capital structure, a vast amount of research, in somewhat different directions, have added quite a bit of new knowledge in the discussion regarding capital structure, which will be reviewed in this chapter. The starting point of that will be to look at what could have argued to be “mainstream” financial research in the field of capital structure, post MM.

## **Components of Capital Structure**

All of the items on the right-hand side of the firm's balance sheet, excluding current liabilities, are sources of capital. Total capital breakdown into two components, equity capital and debt capital.

## **Equity Financing**

In components of capital structure, equity share capital represents the ownership capital of the company. It is the permanent capital and cannot be withdrawn during the lifetime of the company. Owners are the real risk bearers, but they also enjoy rewards. Their liability is restricted to their capital contributed.

Equity shares are popular among the investing class. With equity financing via common stock, you can reduce or increase your ownership percentage in your company through the sale or purchase of common stock to/from one or more individuals or entities in exchange for a specified amount of money<sup>1</sup>. The common equity represents the amount that all common shareholders have invested in a company. Most importantly, this includes the value of the common shares themselves. However, it also includes retained earnings and additional paid-in capital.

According to Nawaz, et al., (2011), capital consists of two types: (1) Contributed capital, which is the money that was originally invested in the business in exchange for shares of stock or ownership and (2) Retain earnings, which represent profits from past years that have been kept by the company and used to strengthen the balance sheet or fund growth, acquisitions, or expansion.

If a firm doesn't use debt financing, it's referred to as an unlevered firm. This brings about what is referred to as business risk which is defined as the risk a firm's common stockholders would face if the firm had no debt (Ehrhardt & Brigham, 2011). In other words, it is the risk inherent in the firm's operations, which arises from uncertainty about future operating profits and capital requirements. If a firm doesn't use debt, then its return on invested capital shall be measured by return on equity. This simply means that the business risk of a leverage free firm will be measured by the standard deviation of its ROE.

## **Debt Financing**

The debt capital in a company's capital structure refers to borrowed money that is at work in the business. The safest type is generally considered long-term debt because the company has years, if not decades, to come up with the principal, while paying interest only in the meantime according to Nawaz, et al. (2011). In components of capital structure, debenture capital is a part of borrowed capital; the creditors of the company are the debenture holders. Different types of debentures are issued for the convenience of investors. Also, organizations can obtain long-term and medium-term loans from banks and financial institutions. Public Deposits can be used as debt finance; public deposit means any money received by a non-banking company by way of deposit or loan from the public, including employees, customers and shareholders of the company other than in the form of shares and debentures.

When a firm decides to use debt financing for its operations it's faced with a financial risk and it's referred to as a levered firm. Ehrhardt & Brigham (2011) defined financial risk as the additional risk placed on the common stockholders as a result of the decision to finance with debt. Financial risk is the probability that the earnings of the firm will not be as projected because of the method of financing. Also, the financial risk arises because debt has a fixed financing obligation usually in the form of interest which must be met when the obligation falls due before the shareholders can share in the retained earnings. The level of debt (financial leverage) that is acceptable for one industry or line of business can be highly risky in another,



because different industries and lines of business have different operating characteristics (Gitman & Zutter, 2012).

### **Cost of Capital**

As explained above, capital consists from two components, one is debt and other is equity. If a firm finances its operation with debt, it is borrowing money from a lender for a certain period of time with a promise to pay the money back with its interest. In return the lender receives interest payments on the loan. With equity financing the shareholders buy shares in the company, they become owners and in return they receive a portion of the firm's profit. Cost of capital in general represents the different costs attached to the different sources of financing obtained by an organization.

### **Interest (Cost of Debt)**

The company could raise debt in a variety of ways which included borrowing funds from financial institutions or from public debt in the form of bonds (debentures) for a specified period of time at a certain interest rate wakida (2011).

The company can use various bonds, loans and other forms of debt, so this measure is useful for giving an idea as to the overall rate being paid by the company to use debt financing. The measure can also give investors an idea as to the riskiness of the company compared to others, because riskier companies generally have a higher cost of debt.

Lenders are relatively demand lower returns because they take the least risk of any contributors of long-term capital so the cost of debt is lower than the cost of other forms of financing. Also, the tax deductibility of interest payments lowers the debt cost to the firm substantially.

### **Dividends (Cost of Equity)**

When investors provide equity capital to the firm, they acquire a right to the future dividends of that firm given that they become partial owners of the company and that these dividends cannot be determined from the onset wakida (2011). Businesses have an option of raising capital internally by retaining earnings. The opportunity cost of retained earnings is the rate of return on dividend forgone by equity holders and the cost of external equity is the minimum rate of return which the shareholders require on funds supplied by them by purchasing new shares to prevent a decline in the existing market price of the equity share wakida (2011).

Unlike debt capital, which the firm must eventually repay, equity capital remains invested in the firm indefinitely—it has no maturity date. The two basic sources of equity capital are (1) preferred stock and (2) common stock equity, which includes common stock and retained earnings. Common stock is typically the most expensive form of equity, followed by retained earnings and then preferred stock. In addition, a firm that increases its use of leverage significantly can see its cost of debt rise as lenders begin to worry about the firm's ability to repay its debts. According to Gitman & Zutter (2012), whether the firm borrows very little or a great deal, it is always true that the claims of common stockholders are riskier than those of lenders, so the cost of equity always exceeds the cost of debt.

### **Theories of capital structure**

In this thesis will investigate whether the type of debt within the capital structure has an impact on a firm's performance. In order to do so, first will understands the theories that explain a

firm's choice of capital structure, to see when and why a firm chooses debt rather than equity to finance its operations. These theories are presented below.

### **Modigliani & Miller (MM)**

In 1958 MM wrote the article "The cost of capital, corporate finance and the theory of investment". This article introduced two propositions that had an enormous impact in the field of finance, and that today can be found in finance textbooks used by universities around the world. The proposition regards a firm's capital structure and its cost of capital in a perfect capital market. The perfect capital market assumes that there are no taxes, no transaction costs and that the borrowing and lending rate is the same for corporations and individuals according to Ehrhardt & Brigham, (2011).

Five years after MM introduced Proposition I & II, in 1963 they published the article "Corporate Income Taxes and the Cost of Capital: A Correction". It was an extension and correction of the Propositions that they had introduced five years earlier, where taxes had been included. The inclusion of taxes had an effect on both of the propositions. Below, an explanation of the two propositions, with and without taxes.

#### **Modigliani and Miller: No Taxes**

Modern capital structure theory began in 1958, when MM published what has been called the most influential finance article ever written. MM's study was based on some strong assumptions, which included the following as (Ehrhardt & Brigham, 2011; Quiry et al, 2009):

There are no brokerage costs.

There are no taxes.

There are no bankruptcy costs.

Investors can borrow at the same rate as corporations.

Investors have the same information as management.

EBIT is not affected by the use of debt.

The perfect markets theory of capital structure contradicts the "real world" approach. The corporation can mix any proportion of debt and equity to build capital structure without any effect on firm value because the value is independent of its capital structure as MM 1958 state and the determinant factor for firm value is future earnings power (future cash inflow). Although, keep in mind that these propositions assume a perfect capital market.

The proposition of no taxes or irrelevant proposition can be stated as Ross et al, (2011), MM Proposition I (no taxes): The value of the levered firm is the same as the value of the unlevered firm. This is the first proposition of the MM theorem in absence of taxation. It simply states that, in perfect financial markets, the value of a levered company is exactly the same as an unlevered company.

Before MM, the effect of leverage on the value of the firm was considered complex. MM showed a simple result: if levered firm's are priced too high, rational investors will simply borrow on their personal accounts to buy shares in unlevered firm. This substitution is



oftentimes called home made leverage. Homemade leverage is a substitution of risks that investors may undergo in order to move from overpriced shares in highly levered firms to those in unlevered firms by borrowing in personal accounts.

Furthermore, the MM theorem investigates the effect of changing in leverage on total cash flow and return on equity (point view of stockholders). Firstly, the effect produced by changing leverage on total cash flow is absence. According to Quiry et al., (2009) this indicates the WACC doesn't change, whatever the leverage. Secondly, Ross et al., (2011) in their book corporate finance: Core Principles & Applications studied the effect of change in leverage on stockholders. They find the change in capital structure benefit the stockholders if and only if the value of the firm increases. Conversely, these changes hurt the stockholders if and only if the value of the firm decreases. So, Managers should choose the capital structure that they believe will have the highest firm value, because this capital structure will be most beneficial to the firm's stockholders. This result supported by Olokoyo (2012) in his study that find the expected return on equity is positively related to the leverage because the risk of equity increases with leverage.

### **Modigliani and Miller II: The Effect of Corporate Taxes**

When MM introduced taxes into their proposition in 1963 the result was altered. It was shown that it was beneficial for firms to include debt in their capital structure. Firms that are partly financed by debt can deduct the interest it pays on its debt, from the tax it has to pay on its income as MM 1958. It creates a higher total value for a firm that is financed with debt and equity, a leveraged firm, than for a firm that is financed only with equity, an unleveraged firm. The value of firm is equal to the value of the firm's cash flow with no debt tax shield (value of an all equity firm) plus the present value of tax shield in the case of perpetual cash flows.

The Tax Code allows corporations to deduct interest payments as an expense, but dividend payments to stockholders are not deductible. The differential treatment encourages corporations to use debt in their capital structures. This means that interest payments reduce the taxes paid by a corporation, and if a corporation pays less to the government then more of its cash flow is available for its investors. In other words, the tax deductibility of the interest payments shields the firm's pre-tax income.

The tax shield tends to be stronger than the increase when the debt level is low. However, as (Malm & Roslund, 2013) when the debt level reaches a certain level the increase in the cost of equity will be higher than the reduction from the tax shield due to the increased risk of default on the debt payments. Since interest payments on debt are tax deductible, the effective cost of debt is lower than equity in most cases. Higher debt leverage also improves the return on equity measure of financial performance (Asaf, 2004). Debt thus is an attractive funding source for companies, compared to equity because the interest that pays on the debt will deduct from taxable income and reduce the amount that will be pay for government. However, the cost of debt increases as leverage increases and credit ratings consequently deteriorate. Other things remaining equal, the benefits of debt are greater when tax rates are higher.

### **Miller: The Effect of Corporate and Personal Taxes**

Merton Miller (this time without Modigliani) later brought in the effects of personal taxes. The income from bonds is generally interest, which is taxed as personal income at rates, while income from stocks generally comes partly from dividends and partly from capital gains.

If investors are taxed heavily on interest income (relative to taxation on equity income), they demand higher risk-adjusted returns for holding debt (relative to holding equity), thereby discouraging the use of debt at the corporate level. The personal tax burden on interest income is generally higher than that for equity income. Three reasons are presented by Graham (1998) for why the personal tax rate on interest income is generally higher than that for equity income. 1) Long-term capital gains are often taxed at a rate below statutory personal rates, 2) taxes on capital gains can be deferred until the gain is realized, and 3) capital gains taxes can be avoided altogether if equity shares are held until death.

So, on average, returns on stocks are taxed at lower effective rates than returns on debt. Because of the tax situation, Miller argued that investors are willing to accept relatively low before-tax returns on stock relative to the before-tax returns on bonds. Thus, as Miller pointed out, (1) the deductibility of interest favors the use of debt financing, but (2) the more favorable tax treatment of income from stock lowers the required rate of return on stock and thus favors the use of equity financing.

### **Pecking Order Theory**

The pecking order theory was first introduced in 1961 by Donaldson but was later altered and modified by Myers and Maljuf in 1984. The theory regards what type of financing a firm prefers when it is in need of more funding, whether it is internal or external. In this situation, according to Ehrhardt & Brigham (2011), the firm first raises capital internally by reinvesting its net income and selling its short-term marketable securities. When that supply of funds has been exhausted, the firm will issue debt and perhaps preferred stock. Only as a last resort, the firm will issue common stock.

A theory stating that, all other things being equal, companies seeking to finance a new project or product have a hierarchy of preferred financing options that progresses from the most preferred to the least preferred. The hierarchy is said to follow this order: internal funding (or simply financing a project or product out-of-pocket), debt issuance, debt-equity hybrid issuance, and equity issuance. The reasons why firms have that order of preference have to do with asymmetric information.

Asymmetric information occurs because managers have more information than the shareholders about the state of the firm and how well it is doing. The result is therefore that the shareholders will base their belief on the firm's future on the manager's actions. The manager's actions are believed to signal information about the state of the firm. According to (Malm & Roslund, 2013), issuing shares sends a message that the shares are overvalued, whereas issuing debt does not send any message. Debt issuing is therefore favored over equity issuing.

As Olokoyo, (2012) said, if firms are required to finance new projects by issuing equity, underpricing may be so severe that new investors capture more than the net present value of the new project, resulting in a net loss to existing shareholders. As a result, managers will hesitate to issue equity if they feel that it is undervalued by the market. However, investors realize that managers will hesitate to issue new equity when it is underpriced. Thus, both managers and investors react according to their available information. Based on this argument, if managers tend to issue undervalued equity (low priced equity), the wealth will be transferred to the investors against the shareholders' benefits and wealth. In this situation, according to Al-tally (2014), internal funds and debt will be preferred to equity.

## **The Trade-off Theory & Financial Distress Costs**

The results of MM depend on the assumption that there are no bankruptcy costs. However, bankruptcy can be quite costly. Firms in bankruptcy have very high legal and accounting expenses, and they also have a hard time retaining customers, suppliers, and employees. Moreover, bankruptcy often forces a firm to liquidate or sell assets for less than they would be worth if the firm were to continue operating. Also, key employees jump ship, suppliers refuse to grant credit, customers seek more stable suppliers, and lenders demand higher interest rates and impose more restrictive loan covenants if potential bankruptcy looms as Ehrhardt & Brigham (2011). Bankruptcy-related problems are most likely to arise when a firm includes a great deal of debt in its capital structure. Therefore, bankruptcy costs discourage firms from pushing their use of debt to excessive levels.

As capital structure was defined as mix of debt and equity, firm hope to reach the optimal capital structure with lowest WACC and highest firm value, the tradeoff theory tries to explain how a firm can obtain an optimal capital structure, by adjusting their debt and equity levels so there is a balance between the benefits from their tax shield and their financial distress costs Malm & Roslund (2013). According to the theory, the optimal capital structure is reached when the present value of the tax shield is just offset by the present value of the financial distress costs.

According to the tradeoff models, the optimal capital structure does exist. A firm is regarded as setting a target debt level and gradually moving towards it. The firm's optimal capital structure will involve the tradeoff among the effect of corporate and personal taxes, bankruptcy costs and agency costs. Bankruptcy-related cost was divided for two components by Ehrhardt & Brigham (2011); (1) the probability of financial distress and (2) the costs that would be incurred if financial distress does occur.

Main focus of a firm is to substitute debt for equity, vice versa in order to find optimal debt ratio and maximize value of the firm. Hence, trade-off theory can be summarized as balancing the different benefits and costs associated with debt financing to have optimal capital structure. Debt also has disciplining role because of reduction in free cash flow (Gansuwan & Önel, 2012). Tax shield is also important point of the theory. Firms can deduct interest payment of debt from tax, as a result net income of the firms increases. In order to maximize tax shield, firms may choose higher debt levels. According to Niu (2008), the trade-off theory predicts that firm profitability is enhanced by maximizing the benefits of the tax shield offered by debt.

It is interesting to note that as years go by other researchers are continuing to use the MM theory as a base to launch further analysis – with some not even agreeing with the applicability of the propositions under current global economic conditions. In their view, the theory implies that highly profitable firms should have higher debt levels in order to protect the profits from tax – a fact that they observe is not supported by empirical evidence. An extension to this point provided by (Gangeni, 2006) in his study, there is a limit to what the firm can borrow as the actual cost of debt leads to lower profitability of the firm – in turn reducing the effectiveness of the tax shield.

### **Agency Costs (Free Cash flow) Theory**

Agency problems may arise if managers and shareholders have different objectives. Such conflicts are particularly likely when the firm's managers have too much cash at their disposal.

Managers often use excess cash to finance projects none of which have much to do with maximizing stock prices according to Ehrhardt & Brigham (2011).

Agency costs are costs due to conflicts of interest. Two types of conflicts were identified by (Olokoyo,2012; Niu,2008): first is the conflicts between shareholders and managers arising from the situation of managers holding less than 100% of the residual claim and the second is the conflict between debt holders and equity holders arising from the debt contract that make equity holders invest sub optimally. In order to prevent this situation, principal would always choose to add additional clause in contract or take measures to monitor agency, which will definitely increase the relevant cost.

However, the theory suggests that choosing best/optimal capital structure may mitigate agency conflicts and decrease agency cost. Therefore, according to the theory, high leverage/debt ratio help a firm to reduce its agency cost and mitigate agency conflicts. According to (Gansuwan & Önel, 2012), this debt ratio also encourages managers to act more in the interests of shareholders. As a result, the firm's value increases. In addition, the optimal capital structure is minimizing the agency cost as (He, 2013).

Agency costs of monitoring managers and their risk-aversion is sometimes exacerbated by compensation structures as managers are only rewarded for success, and there are penalties for failure (Gangeni, 2006). In situations like this, the managers have a moral dilemma in that they tend to prioritize their own needs ahead of those of the shareholders. Agency costs would be reduced if the firm paid higher dividends and therefore the managers would operate more transparently as they would have to source funding from the capital markets on a regular basis (Gangeni, 2006). According to Ehrhardt & Brigham (2011), firms can reduce excess cash flow in a variety of ways. One way is to funnel some of it back to shareholders through higher dividends or stock repurchases.

### **Signaling Theory**

It was assumed by MM that investors have the same information about a firm's prospects as its managers-this is called symmetric information. However, managers in fact often have better information than outside investors. According to Ehrhardt & Brigham (2011) this is called asymmetric information, and it has an important effect on the optimal capital structure.

Signaling theory states that corporate financial decisions are signals sent by the company's managers to investors in order to shake up these asymmetries. These signals are the cornerstone of financial communications policy. According to Gangeni (2006), the argument here is that management will only issue debt or equity if there are not enough internal resources to finance the desired investments or the risk is not in line with the anticipated returns. In this case, the emphasis will be on identifying what trends in the type, level and reliability of the information supplied. So the managers would not issue additional equity if they thought the current stock price was less than the true value of the stock (given their inside information). Hence, investors often perceive an additional issuance of stock as a negative signal, and the stock price falls.

### **The Market Timing Theory**

An extension of the Signaling theory implies that managers will use equity finance when they believe it is overvalued and use debt when they believe equity is undervalued. This is based on the premise that they believe they have information that the firm is positioned to generate better performance in the future than the market currently believes.

In corporate finance, according to Baker & Wurgler (2002), equity market timing refers to the practice of issuing shares at high prices and repurchasing at low prices. The intention is to exploit temporary fluctuations in the cost of equity relative to the cost of other forms of capital. In the efficient and integrated capital markets studied by MM (1958), the costs of different forms of capital do not vary independently, so there is no gain from opportunistically switching between equity and debt. In capital markets that are inefficient or segmented, by contrast, market timing benefits ongoing shareholders at the expense of entering and exiting ones. Managers thus have incentives to time the market if they think it is possible and if they care more about ongoing shareholders.

According to Al-Tally (2014), the market timing theory suggests that managers, depending on their definition of firm value, tend to issue equity when they feel that the market overvalues their company. Market timing is sometimes classified as part of the behavioral finance literature, because it does not explain why there would be any asset mispricing, or why firms would be better able to tell when there was mispricing than financial markets. The effect of market timing on capital

structure examined by Al-tally (2014), the study found that low leverage firms are those that raise funds when their market valuations are high, while high leverage firms are those that raise funds when their market valuations are low.

### **Life Stage Theory**

The basic premise of organizational life stage theory is that firms – in a similar fashion to living organisms – progress through a set of life stages that starts at birth and ends in death.

According to Utami & Inanga (2012), firms in different life cycle stages have different characteristics, especially regarding the information asymmetry. Mature firms have less information asymmetry whereas growth firms have more. This is because mature and older firms are more closely followed by analysts and are better known to investors and, hence, should suffer less from problems of information asymmetry. This theory recognized a relationship between capital structure and the life stage of the firm. According to this theory, the stages of birth and growth are typical with a higher use of debt than equity. The mature companies decrease the level of debt, which rises again in the decline stage.

To see the relationship between capital structure and firm value (Chowdhury, A. & Chowdhury, S. 2010) considered share price as proxy for value and different ratios for capital structure decision in Bangladesh. The interesting finding suggests that maximizing the wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a negative correlation in this decision and it has to be as minimums as possible. This is also seen that by changing the capital structure composition during life stages the firm can increase its value in the market. Nonetheless, this could be a significant policy implication for finance managers, because they can utilize debt to form optimal capital structure to maximize the wealth of shareholders.

### **Determinants of Capital Structure**

Different capital structure theories with tax benefits, bankruptcy costs, and asymmetric information costs were explained in the previous section. A number of previous pieces of research have shown that capital structure is affected by some other determinants, such as country, industry, firm size, firm age, market situations and etc. Thus, the management needs



to consider these determinants, which are generally related to the economic environment, and firm's characteristics. Some of these determinants are used in this thesis as criteria for firm's characteristics.

### **Firm Size**

The firm's size is related to several topics in the capital structure theory, such as asymmetric information, financial distress costs, transaction costs, and accessibility to the financial market (Lew, 2012). In addition to the issue of information asymmetry, other reasons presented by Gansuwan & Önel (2012) for why smaller companies might obtain less external financing and thus have a lower leverage ratio compared to larger companies, include the following ones below:

**Transaction costs:** smaller firm seeking external capital is facing higher transaction costs, as that is a function of scale. Meaning that larger companies may obtain scale advantages, which reduces the transaction costs, while seeking external capital in relation to smaller companies

**Market access:** smaller firms may not have access to this type of public funding through stock markets (by for instance issuing new share issues) and might be considered less reputable in not being a public company, capital market access as a factor could also influence the level of external financing.

**Bankruptcy costs:** bankruptcy costs of firm tend to have an inverse relationship with firm size, i.e. larger firms have lower bankruptcy cost than smaller ones and vice versa. To elaborate, bankruptcy cost could come both in a direct as well as in an indirect fashion. An example of a direct bankruptcy cost could be the liquidation return and an indirect cost could be in the form of the stakeholders losing confidence in the business long-term survival.

**Operating risks:** firms operating risk is argued to be inversely related to the size of the firm, thus meaning that smaller firms should pre-disposed to utilize rather less debt and outside financing compared to the larger ones, due to the perceived operating risk being higher in smaller firms.

Larger firms obtain benefits from their size and diversification because they can borrow with lower costs and survive economic disasters with more resilience than smaller firms. Consequently, this should enable them to perform better than smaller firms and thus generate more profit. Furthermore, large firms are expected to incur lower agency costs for issuing debt or equity, less cash flow volatility, and have easier access to the credit market. Therefore, large companies are expected to hold more debt in their capital structures than small firms to get the benefit of the tax shield (Titman & Wessels, 1988). Also, it is argued that smaller firms tend to have large short-term debt and less long-term debt due to the conflict between shareholders and debt holders.

Capital structure is closed link with corporate performance and to find the relation between size and performance San & Heng (2011) focuses on construction companies which are listed in main board of Bursa Malaysia from 2005 to 2008. All the 49 construction companies are divided into big, medium and small sizes, based on the paid-up capital. The result shows that there is relationship between capital structure and corporate performance. For big companies, return on capital with debt to equity market value and EPS with long-term debt to capital have a positive relationship whereas EPS with debt to capital is negatively related. In the interim, only operating margin with long-term debt to common equity has positive relationship in



medium companies and EPS with debt to capital has a negative relationship in small companies.

### **Industry**

Each industry may have specific features that affect the debt structure of firms in that industry. These may arise from the different business environments of industries, the degree of competition in product markets, the capital required in these industries, and the skill composition of the industries. Titman (1984) presents a model that implies that firms with specialized products suffer higher costs in the event of bankruptcy, and thus will have less debt in their capital structure. Since the uniqueness can vary from one industry to another so the firm industry sectors affect leverage.

Furthermore, industry is related to several factors in the capital structure theory, such as bankruptcy costs, liquidation value, asymmetric information, collateral value and macro-economic industrial trends. Firms with tangible assets could retain more value when firms go into bankruptcy, than firms with intangible assets, because tangible assets will have a higher liquidation value and fewer asymmetric information costs. In regard to liquidity, Aftab et al., (2012) state that there are industry effects associated with liquidity. Different industries have different levels of liquidity to take care of operational requirements as well as managing the rate of return of the firm.

### **Corporate Capital Structure in Developing Countries**

Based on (Al-Qaisi, 2013) for the time period 2003 – 2007, the empirical results indicate that listed Palestinian firms have low leverage ratios. In addition, the results show that long-term debt is literally non-existent. Finally, the Seemingly- Unrelated Regression estimation results indicate that while some of the well-known determinants of capital structure (firm size and firm profitability) are applicable to the Palestinian case.

The nature and determinants of the capital structure choice of Jordanian, Kuwaiti, Omani and Saudi Arabian non-financial listed companies also examined by (Omet & Mashharawe, 2003). However, depending on the availability of the data, the final samples of companies consist of 51 Jordanian companies, 30 Kuwaiti companies, 38 Omani companies and 29 Saudi Arabian companies. Based on the time period 1996-2001, the results indicate that Jordanian, Kuwaiti, Omani and Saudi companies have quite low leverage ratios. In other word, the Jordanian, Kuwaiti, Omani and Saudi Arabian companies have extremely low values of long- term debt in their respective capital structures.

Bas, Muradoglu & Phylaktis (2009) discuss the capital structure decisions of firms in developing markets covering 25 countries from different regions. In contrast to early studies, the main focus is on the small firms because their contribution to GDP is higher than large firms and they comprise the majority of firms in developing countries. The study analyzes whether the determinants of capital structure show differences among small, medium and large firms and it examine whether the determinants of capital structure are same for listed and private firms.

Regardless of how the firm defines, in accordance with the capital structure theory, the importance of firm level variables, such as tangibility and profitability are confirmed. According to the results, private, small, medium and large firms follow the maturity matching principle and pecking order on their debt financing decisions. But listed firms prefer equity

financing to long term debt financing. Moreover, internal funds do not have an impact on the debt financing decisions. Another major finding is the size effect. It's see different responses from small and large firms towards debt financing. As firms become larger, firms become more diversified and risk of failure is reduced as a result of that firms can have higher leverage. Based on results, small and large companies have different debt policies. Due to the information asymmetries, small firms have limited access to finance; therefore, they face higher interest rate costs. Also, they are financially riskier compared to large firms. As a result of that, small companies have restricted access to debt financing which may influence their growth.

The economic environment of the countries has influenced the debt decisions of firms differently. Since large and listed firms can have easily access to both the domestic and the international financial markets, their financing decisions are not influenced by the economic conditions of the country as much as the small, medium and private firms. For instance, large firms do not consider most of the macroeconomic factors for their long-term debt financing decisions. The environment is important for short term borrowing.

They find differences in the capital structure decisions of listed and private firms and small and large companies. Large and listed companies can have easily access to finance in developing countries; whereas, for small and private firms, access to finance is more depended on the conditions of economic environment of the country.

Prasad, Green & Murinde (2001) analyzed the financial structure of Malay and Thai non-financial companies using a unique new company accounts dataset - an unbalanced panel consisting of the published accounts of 174 listed Thai companies over an average period of about 5.5 years and 165 listed Malay companies over an average of just under 8 years. The main findings are fourfold. First, although the evidence generally supports the pecking order hypothesis, there is also evidence to suggest a "reversed pecking-order" of finance. Second, they find further evidence to suggest that the "brake" of equity valuation preventing over-gearing by unprofitable firms may not to be working for both Malaysia and Thailand. Third, they find that information asymmetries still persist. Fourth, risk is found to have a non-linear influence on leverage; thus, the risks of bankruptcy are non-linear as postulated by the traditional capital structure school of thought. These findings have important implications for firms in considering their financing decisions.

Booth et al. (2001) examine the corporate financial structures in 10 developing countries: India, Pakistan, Thailand, Malaysia, Turkey, Zimbabwe, Mexico, Brazil, Jordan, and South Korea. They consider whether financial leverage decisions and the factors that affect them differ across countries and whether capital-structure models make better predictions if the company's nationality is known.

The data, which come from the International Finance Corporation, contain condensed financials for the largest companies in each country from 1980 to 1990, although not all periods are included for all countries. This dataset provides the most detailed capital-structure data available for developing countries. The sample contains a significant proportion of the total equity capitalization in each country. The authors examine three debt ratios: (1) total liabilities divided by total liabilities plus net worth, (2) long-term liabilities divided by long-term liabilities plus net worth, and (3) long-term liabilities divided by long-term liabilities plus average equity market value. The first ratio is available for all 10 countries, the second for all but Thailand, and the last for all but Thailand, Brazil, and Mexico. All countries except Korea,

the most developed, have debt below the median level of the G-7 (France, Germany, Italy, Japan, U.S., U.K. and Canada) countries. All are at least “adequate” for accounting quality.

They find wide differences in financial markets. The ratio of stock market capitalization to GDP ranges from 2.1 percent to 78.5 percent. Several countries have stock market turnover similar to that in the United States, but others have significantly less turnover. Most of the countries have significant banking system concentration and government-directed credit policies. No strong relationship is found between macroeconomic factors and capital structures.

The strongest result is that more-profitable companies use less total debt. Results for the long-term debt ratio are similar but weaker—except that the coefficients of the tangibility ratio are largely reversed, implying that a company with more tangible assets will use more long-term debt but lower total debt. The long-term debt ratio results using the market value of equity should be treated cautiously, however, because market value data are available for only seven countries. The authors conclude that capital-structure models have predictive power in developed and developing countries. Small, profitable, taxpaying companies with largely tangible assets tend to have less total debt but more long-term debt. Finally, country factors matter at least as much as financial variables, except in the case of the market value ratios.

### **Empirical Studies**

Abiodun (2014) employs a triangulation approach to investigating the relationship between capital structure and firms’ performance in Nigeria. The paper considers 31 manufacturing firms with audited financial statements for the periods 1999 and 2012. The paper finds a strong curvilinear relation between ROA and debt-to-equity ratio, otherwise known as Leverage. The paper has been refuted that the large firms are more inclined to retain higher performance than middle firms under the same level debt ratio.

Hasan et al. (2014) study the influence of capital structure on firm’s performance on 36 Bangladeshi firms listed in Dhaka Stock Exchange during the period 2007–2012. The paper has used four performance measures; (Earning per Share) EPS, ROE, ROA and Tobin’s Q; as dependent variables and three capital structure ratios; STDTA, LTDTA and TDTA ratios; as independent variables. Using pooling panel data regression method, the paper found that EPS is significantly positively related to STDTA while significantly negatively related to LTDTA. There is significant negative relation between ROA and capital structure. On the other hand, there is no statistically significant relation exists between capital structure and firm’s performance as measured by ROE and Tobin’s Q.

Quang and Xin (2014) study the impact of ownership structure and capital structure on firms’ financial performance in context of an emerging transitional economy. According to research findings, capital structure has a negative impact with statistical significance on financial performance that measured by ROA & ROE. The higher level of state ownership in ownership structure, the better financial performance it has. While clear evidences with statistical significance of the impact of managerial ownership on financial performance have not been found, this paper found out that the level of entrenchment of managers in state-owned enterprises is higher than that of businesses of other types.

Seetanah et al. (2014) seek to empirically assess the impact of capital structure on performance of Mauritian firms listed on the Official Market of the Stock Exchange of Mauritius for the period 2005-2011. The study employs both static and dynamic panel data techniques to identify the determinants of firm performance. The results indicate that the main determinants of firm

performance are capital structure, firm size, business risk, Mauritius Rupee/ Euro exchange rate and Mauritius Rupee /United State Dollar exchange rate. Growth opportunities, free cash flow, age of the firm and price of oil are found to have insignificant influence on firm performance. Firm performance is observed to be negatively related to capital structure indicating that firms with lower leverage have better performance thereby supporting the pecking order theory.

Twairesh (2014) investigate the impact of capital structure on the performance of non-financial firms operating in Saudi Arabia as one of emerging or transition economies. Panel econometric technique called fixed effect regression is used for the period between 2004 - 2012. Sample data includes 74 companies. The study analyzes the relationship between capital structure proxies that include STDTA, LTDTA and TDTA and the operating performance measured by ROA and ROE. The firm's size was used as a control variable. The study finds that STDTA, LTDTA and TDTA have significant impacts on ROA. While only LTDTA has significant impacts on ROE. Firm size has significant impacts on firm performance when ROA is a dependent variable and no impact on firm performance when ROA is dependent variable.

Xiaomeng and Yong (2014) use annual asset-liability ratio and ROE, respectively, as a measure of capital structure and financial performance to 1995-2009. All domestic listed companies in the real estate industry are used in empirical research. The empirical results show that: the existence of a long-term stable relationship asset-liability ratio and ROE.

Çekrezi (2013) examines several determinants of capital structure on firm's choices of financial leverage. The paper used three capital structure measures; STDTA, LTDTA and TDTA as dependent variables and four dependent variables: tangibility, profitability (measured with ROA), size and liquidity. The investigation uses panel data procedure for a sample of 65 non-listed firms, which operate in Albania, over the period 2008-2011. The results revealed a significant negative relation of ROA and a significant positive relation of size to all measures of leverage.

Goyal (2013) seeks to study the impact of capital structure on profitability of public sector banks in India listed on national stock exchange during 2008 to 2012. Regression Analysis has been used for establishing relationship between ROE, ROA & EPS with capital structure. The findings reveal positive relationship of STDTA with profitability as measured by ROE, ROA & EPS.

He (2013) encompasses 2 developed countries (Germany and Sweden) and a developing country (China) to test the impact from capital structure to firm performance of period 2003-2012 with more than 1200 listed companies in Germany and Sweden and more than 1000 listed companies in China. The result shows that capital structure has a significant negative effect on firm performance in China, whereas, significant positive effect on 2 European countries before financial crisis happened in 2008.

Taani (2013) examines the impact of capital structure on performance of Jordanian banks. The annual financial statements of 12 commercial banks listed on Amman Stock Exchange were used for this study which covers a period of 5 years from 2007-2011. Multiple regressions were applied on performance indicators such as Net Profit, Return on Capital Employed, ROE and Net Interest Margin as well as Total Debt to Total Funds and Total Debt to Total Equity as capital structure variables. Multiple regression models are applied to estimate the relationship between capital structure and banking performance. The results show that bank performance is

to be significantly and positively associated with TD; while TD is found to be insignificant in determining ROE in the banking industry of Jordan.

Abbadi and Abu-Rub (2012) establishes a model to measure the effect of capital structure on the bank efficiency in Palestinian financial institutions measured by ROE, ROA, Total deposit to assets, total loans to assets and total loans to deposits were used to measure capital structure. The paper found that leverage has a negative effect on bank profits, an increase in each ROA and Total Deposit to Assets increase bank efficiency. The paper also tested the effect of the above variables on bank market value measured by Tobin's Q. The paper found that Leverage has a negative effect on market value of the bank, a positive and strong relationship between market value and ROA and bank deposits to total deposits.

Chao (2012) study the influence of capital structure on organizational performance at Taiwan-listed info-electronics companies, with corporate governance being the Moderator. While convenience sampling was used to yield knowledge from the population, the linear Structural Equation Modeling was adopted to verify the goodness-of-fit effects among the overall model, structural model and measurement model. Findings from this study show that, at Taiwan-listed info-electronics companies, the capital structure and corporate governance both have significant interactive influence on the organizational performance.

Chinaemerem and Anthony (2012) examines the impact of capital structure on financial performance of Nigerian firms using a sample of 30 non-financial firms listed on the Nigerian Stock Exchange during the 7-year period, 2004 – 2010. Panel data for the selected firms were generated and analyzed using ordinary least squares (OLS) as a method of estimation. The result shows that a firm's capital structure has a significantly negative impact on the firm's financial measures ROA and ROE. The study of these findings, indicate consistency with prior empirical studies and provide evidence in support of Agency cost theory.

Lew (2012) examines capital structure theories and debt level determinants by uses 4,598 sample companies from 11 countries and 27 industries over a 20-year period. The sample examines 11 different characteristics, which include firm size, debt level, and bankruptcy probability. There are five main findings. First, firms which are financial stable issue relatively more debt. Second, they have a preference for moderate debt levels and thus limit their bankruptcy probability. They also try to exploit opportunities from overestimated stock price by issuing stocks to increase cash inflows. Third, the effects from bankruptcy costs are greater than transaction costs in terms of capital structure adjustment. Fourth, during the sample period, firms continuously decrease leverage levels. Fifth, firm's characteristics and macro-economic factors affect their capital structure.

Pouraghajan & Malekian (2012) investigate the impact of capital structure on the financial performance of companies listed in the Tehran Stock Exchange. For this purpose, they studied a sample of 400 firms in the form of 12 industrial groups during the years 2006 to 2010. In this study, Variables of ROA and ROE used to measure the financial performance of companies. Results suggest that there is a significant negative relationship between debt ratio and financial performance of companies, and a significant positive relationship between asset turnover, firm size, asset tangibility ratio, and growth opportunities with financial performance measures. In addition, research results show that by reducing debt ratio, management can increase the company's profitability and thus the amount of the company's financial performance measures and can also increase shareholder wealth.



Skopljak and Luo (2012) investigate the relationship between capital structure and firm performance of Australian Authorized Deposit-Taking Institutions. Findings show a significant relationship between capital structure and firm performance of Australian Authorized Deposit-Taking Institutions. At relatively low levels of leverage an increase in debt leads to increased profit efficiency hence superior bank performance, at relatively high levels of leverage increased debt leads to decreased profit efficiency as well as bank performance.

Umar et al. (2012) examines the impact of capital structure on firms' financial performance in Pakistan of top 100 consecutive companies in Karachi Stock Exchange for a period of 4 years from 2006 - 2009. Exponential generalized least square regression is used to test the relationship. The results show that all the three variables of capital structure, STDTA, LTDTA, and TDTA, have negatively impacts on the Earnings before Interest and Tax (EBIT), ROA, EPS and Net Profit Margin whereas Price Earnings ratio shows negative relationship with STDTA and positive relationship is found with LTDTA where the relationship is insignificant with, TDTA. The results also indicate that ROE has an insignificant impact on STDTA and TDTA but a positive relationship exists with LTDTA.

Abu Mouamer (2011) examines the relationship between capital structure and debt lifetime among listed companies in PEX. This study investigates 15 firms over 5-year period (2000-2004). The study Variables used for the analysis include profitability, leverage ratios (TD, STD, and LTD), liquidity, age, asset structure, and firm size and sales growth are also included as control variables. The panel character of the data allows for the use of panel data methodology. The study has shown that the service companies have the highest TD ratio (53.69 percent), followed by industrial companies (50.86 percent), trade companies (34.11 percent) and agriculture companies (24.02 percent). The one-way analysis of variance (ANOVA) shows no significant difference in the use of debt, neither total, LTD or STD among companies in the 4 sectors. Adding to that, ANOVA indicates insignificant differences among the companies in the sample with respect growth opportunities, size, age, tangibility, and liquidity. The correlation analysis has shown that TD is positively and significantly related to tangibility, on the country, no significant relationship between the long debt and STD on the one hand and age, growth, liquidity, tangibility, and size on the other hand.

Muzir (2011) examine and test the relationships among firm size, capital structure, and financial performance providing evidence from Turkey. It is also aimed to argue the validity of three major capital structure theories - Irrelevance Theorem, Trade-Off Theory, and Pecking Order Theory - on a comparative basis. A data set of the financial statements for at least 5 years between 1994 – 2003 of 114 firms listed at the Istanbul Stock Exchange is used in modeling insolvency risk based on specific financial ratios through a binary logistic regression analysis. The results present some robust evidence suggesting that the effect of firm size on financial performance and sustainability may differ according to the way how size expansion is financed. Any asset expansion financed with debt has proved to increase risk exposure especially during economic downturns, which favors the Trade- off Theory over the others.

San and Heng (2011) investigate the relationship of capital structure and corporate performance of firm before and during crisis (2007). This study focuses on construction companies which are listed in Main Board of Bursa Malaysia from 2005 - 2008. All the 49 construction companies are divided into big, medium and small sizes, based on the paid-up capital. For big companies, return on capital with Debt to Equity Market Value and EPS with Long-term Debt to Capital have a positive relationship whereas EPS with Debt to Capital is negatively related. In the interim, only Operating Margin with Long- term Debt to Common Equity has positive



relationship in medium companies and EPS with Debt to Capital has a negative relationship in small companies. In sum, the outcome reveals that the relationship exists between capital structure and corporate performance in selected proxies.

Daraghma and Alsinawi (2010) investigate three variables that have an effect on the financial performance of the corporations listed in PEX. The three variables are aboard of directors' characteristics (size and composition), management ownership, and capital structure. Study employs various statistical techniques to examine the hypotheses (descriptive analysis, and ordinary least square; simple and multiple regressions) to study 28 corporations 4 years 2005-2008. The results of the study indicate that the CEO- Chairman separation does not have any significant impact while the CEO-Chairman duality has a significant impact on the financial performance. Additionally, the paper finds out that the board size has a significant negative impact on the financial performance. In addition, this paper concludes a positive impact of management ownership on the financial performance. Finally, they conclude that the debt financing has no influence on the profitability of Palestinian corporations.

El-SayedEbaid (2009) investigates the impact of capital structure choice on firm performance in Egypt as one of emerging or transition economies. Multiple regression analysis is used in the study in estimating the relationship between the leverage level and firm's performance. Using three of accounting-based measures of financial performance (ROE, ROA, and gross profit margin), and based on a sample of non-financial Egyptian listed firms from 1997 – 2005. The results reveal that capital structure choice decision, in general terms, has a weak-to-no impact on firm's performance.

Ananiadis and Varsakelis (2008) address two questions. First, does the capital structure affect performance in the same way as in the mature economies? Second, does the short run financial policy of the firm affect the performance and under what circumstances? They apply a panel data analysis using data from the Athens Stock Exchange to test for these questions. Using contemporary data, this study investigated the relationship between capital structure, short run financial management and profitability. The analysis covered 130 industrial firms listed in the Athens Stock Exchange for the period 1995-2000. The net-working capital management has a positive impact on the returns on assets. Financial leverage intensifies this positive effect. Finally, inventories management seems to play a significant role in the explanation of profitability. The empirical findings show that high inventories turnover may lead to lower sales and consequently to low profitability.

## CONCLUSION

As observed by the previous studies, for the period of time with the use of regression analysis and correlation, most studies examine the impact of capital structure (STD, LTD, TD) as independent variables on firm's financial performance (ROA, ROE, ROI, EPS) as dependent variables under other control variables such as industry, growth, tangibility and size of the firms. From the evidence of previous studies, it seems that the relation between capital structure and firm's financial performance is mixed between positive and negative relation according to the place, size, and industry.

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