

Determinants of Capital Structure Decisions: An Empirical Study from Developing Country

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Abstract: The aim of this study is to determine the factors affecting the capital structure decisions in Jordanian listed firms. To accomplish this, the data of 127 companies listed on the Jordanian stock exchange were collected from industrial and service sectors during 2011-2014. Financial sector was omitted from the study due to financing certain rules apply. To explain factors affecting the capital structure decision, capital structure was used as the dependant variable and the independent variables in this study include firm size, profitability, growth, tangibility, risk and liquidity. The data was analysed using regression analysis to examine the relationship between capital structure and the dependant variables. The empirical results reveal that firm size and risk are primary determinants of capital structure in Jordanian listed companies while the relationship with profitability was negatively significant. The remainder of the independent variables of growth, tangibility and liquidity revealed insignificant relationship with capital structure. The results will be of great benefit to corporate managers in making optimal capital structure decisions. The results proved consistency with capital structure theories and other research results.

Key words: Capital structure decisions, financial ratios, developing country, Jordan

INTRODUCTION

There are two main sources of firms financing, internal and external financing, internal financing associated with retained earnings and external financing could be in the form of debt or equity. Therefore, financing decisions are for firms and as a result, firms continuously invest to enhance growth. Capital structure theory is a systematic process of financing business activities by means of a combination of debt and equities. Competing capital structure theories propose the connection between debt financing, equity financing and the market value of the firm. Choosing between debt and equity is in itself a big task.

Furthermore, is the issue between managers and stakeholders which can be quite a problem. Such complicated issues of capital structure were sufficient to researchers such as Modigliani and Miller's (1958) and Myers (1984) to put forward their research to settle the capital structure issues. The two most acceptable theories of capital structure are traditional trade-off theory and Pecking order theory.

According to the traditional trade-off theory, the target leverage a firm has is the optimal debt ratio. Firms constantly plan to be close to this ratio, after any deviation occurs, debt ratio progressively returns to the

optimal level of leverage ratio. The optimal level is achieved by making trade-off between the gains and losses from debt or equity. Benefits comprise interest tax shield and the losses comprise agency costs, costs of financial distress, bankruptcy costs, etc. In comparison, Myers and Majluf (1984) stated that the pecking order hypothesis highlighted that there is no well-specified optimal debt level, which firms seek to accomplish. When there are insufficient sources of internal finance, firms use only external finance. Based on this theory, firms prefer internal financing rather than external financing and debt than equity.

In 1999, Shyam-Sunder and Myers confirmed that pecking order theory is better than the traditional trade-off theory in explaining a firm's behaviour. However, researchers have argued variations between the traditional trade-off theory and pecking order theory. Fama and French (2002) stated that several firms follow traditional trade-off theory while other firms follow the pecking order theory but none of them can be rejected. Baker and Wurgler (2002) proposed another capital structure theory is market-timing theory. The theory states that current capital structure is based on past equity market timing. This theory also suggests that when firm's share price is overvalued, they issue equity and when their share price is undervalued, they repurchase

equity. Country and economic specific factors are important in corporate financing decisions. Such factors include company laws and regulations, corporate governance, corporate and personal tax system and development of capital and debt markets. A country with high tax rate will sense more tax advantages and will be expected to have higher target debt ratios. Booth, Aivazian revealed that country specific factors were also significant among country factors.

Theoretical framework: The need for an optimal capital structure has led to the development of capital structure theories to support the financing decisions of a firm. These theories are discussed below.

Irrelevance proposition by the modigliani miller: The first theory about capital structure was proposed by Modigliani and Miller (1963). According to their proposition, a firm's value is irrelevant to capital structure or financing decision. They hypothesized that a firm's value is discounted free cash flow. Jensen (1986) described the free cash flow as, "cash flow in excess of that required funding all projects that have positive net present values when discounted at the relevant cost of capital". They further hypothesized that in a perfect market, it makes no difference what capital structure a company applies to finance its operations.

In addition, the firm's market value is established by its earning ability and by the risk of its principal assets. Also, a firm's value is autonomous of the method the firm is intended to use to finance its investments or distribution of dividends. Nevertheless, they hypothesized that in perfect capital market conditions certain assumptions were placed and are as follow; capital markets are ideal with no transaction costs, no bankruptcy costs, no taxes, market information symmetry for both companies and investors are identical. No effect of debt on a company's earnings before interest and taxes and borrowing costs for both companies and investors are equal. Their proposition was inconclusive in such a way, which lead to other researchers to consider more realistic capital structure theories.

Jensen (1986), Modigliani and Miller (1963) who presented a capital structure model of the benefits of personal taxes acknowledged the benefits of personal tax. While Myers (1984) urged that capital structure puzzle is more complex than the dividend puzzle. Stiglitz (1974) have eliminated the assumption of same risk class.

It is therefore obvious that firms depend on its assets, growth opportunities and cash flow. It is also obvious that most debts in the capital market are unsafe and information within investors and between insiders and outsiders is irregular.

The traditional trade-off theory: The trade-off theory of capital structure shows that a firm selects the amount of debt finance and equity finance used by balancing the costs of debts against the benefits of debts. The aim of the theory is to explain that corporations commonly financed partly with debt and partly with equity. The theory deals with two main concepts, the cost of financial distress and agency costs. Modigliani and Miller identified tax shield as a determinant of the capital structure in 1963. Subsequently, Kraus and Litzenberger (1973) acknowledged that the tax shield benefits offset largely by the costs of financial distress. However, the cost of financial distress is not an observable factor as the tax shield. Therefore, firms maintain a safety margin before benefiting from the tax shield. Thus, benefit from tax shields are compensated by costs of financial distress. They qualify this theory to the trade-off theory. The theory also illustrates why firms pursue a sensible debt issue regardless of the benefits of tax shields. The theory also has testable implications such as firms with high risk and growth opportunities. Firms with intangible assets will issue less debt as they have high financial distress costs. Firms with additional tax advantage might issue more debt.

Graham (1996) revealed that long-term debt depends on efficient marginal tax of a firm; Ackie-Mason (1990) on the other hand, revealed that tax-paying firms favour debt. Fama and French (1998) confirmed that there is no net tax benefit in debt and debt is bad news about profitability that exceeds interest tax shield or other debt benefits. A comprehensive theory of trade-off theory was developed, that considers more factors other than tax and costs of distress to compare the advantages and the disadvantages of the tax and equity and secure a trade-off. Consequently, there are many arguments as to why firms attempt to adjust their capital structure.

As well as the interest tax shields advantage, there are other advantages of debt such as debt is considered beneficial as for signalling by firms. Ross (1977) confirmed that leverage increases the value of the firm because increasing leverage corresponds with the value market realization. Debt decreases agency costs that are associated to equity; these costs are: free cash flow difficulties and decrease agency costs in terms of managerial disciplines, Jensen (1986). In addition to the costs of financial distress disadvantages of debt, there are other disadvantages of debt such as management acting in shareholders' best interest may invest in riskier assets; perhaps borrow more and pay out dividends to the shareholders, the debt holders incur the costs. Large debt causes missing valuable projects because firms cannot afford financing with more debts due to the current debts.

The traditional trade-off theory suggests that all firms have an optimal debt ratio. This ratio is an indicator where advantages of tax shield is matched with the costs of financial distress. This frequently results in debt ratio target adjusted mean reverting behaviour Myers (1984). Such target is not determined but it is computable from firms' variables and ratios like firm size, debt to equity ratio, growth ratio and non-tax shield Fama and French (2002).

The pecking order theory: Myers and Majluf (1984) and Myers (1984) proposed the pecking order theory. As well as information asymmetry between the insiders and the outsiders, Myers and Majluf (1984) like Modigliani and Miller assume perfect market conditions. If firm's management are acting in the shareholders interest, then they will not issue new undervalued shares and will issue new stock only at a market down price (Myers and Majluf, 1984). The management will issue new equity shares hoping to be compensated by net present value of growth or investment opportunities which causes a decline in share prices and subsequently is bad news for assets in place that becomes worse as the information asymmetry rises. Debt claims are prior to equity and debt issuers are less exposed to information asymmetry. Consequently, debt issue should influence prices as compared to equity issue. Kim and Stulz (1988) revealed that share prices rise with debt issue announcements. However, Masulis and Korwar (1986) stated the in the case of equity issue, share prices decline after announcement of equity issue. Firms do not have optimal debt ratio and subsequently the firm's debt ratio is signifying the accumulated external financing required.

Myers (1984) suggested that firms should benefit from filling the financial slack by issuing equity when there is little information asymmetry. As a result, firms can easily issue debts and this is the reason why firms with growth retain low debt issue. While Shyam-Sunder and Myers (1984), established validity for the pecking order theory, Frank and Goyal (2003), did not offer much backing for that and contrarily, Korajczyk *et al.* (1992) revealed that debt issues do not have priority to equity issues. Small firms with further growth opportunities ought to issue more debt than equity. It is worth mentioning that there is a difference between firm's information asymmetry and industry's information asymmetry; nonetheless, industry type has more volatile environment and therefore more information asymmetry. Many researchers have ignored this characteristic of information asymmetry. Information asymmetry could be associated to the value of the firm or firm's risk. Pecking order theory considers asymmetry as a solution

concerning the value of the firm and debt. However, when information asymmetry is related to firm's risk, debt is not the best choice. Hennessy and Whited (2005), explained that with increase in asset volatility using equity is more frequent as compared to the debt.

The market timing theory: Market timing theory states that firms issue new stock when their share prices are overvalued and they repurchase them when share prices are undervalued. Therefore, instable stock prices will influence the firm's financing decisions and eventually the firm's capital structure. Baker and Wurgler (2002) specified two types of equity market timing that result in the same capital structure dynamics. The first type is the Dynamic version of Meyers and Majluf (1984) which poses stress on the caution of managers and investors. Allotting equity happens right after constructive information are revealed thereby reducing information irregularity between the firm's management and her shareholders.

Share price increases whenever information asymmetry decreases (Korajczyk *et al.*, 1992). The second type of is when management raise equity when cost of equity is extremely low because they believe that investors are unreasonable Baker and Wurgler (2002). Graham and Harvey (2001) revealed that managers attempt to time interest rates by issuing debt when market interest rates are enormously low. They also revealed that large firms are concentrating on market timing in particular. Baker and Wurgler (2002) showed how capital structure is influenced by the historical ratio of market-to-book equity. They made clear that firms with low leverage inclined to raise funds when their valuation is high. Conversely, high leverage firms inclined to raise funds when their valuation is low. Moreover, capital structure is influenced by the market valuation volatility.

Agency theories: Agency theory of capital structure refers to the conflict of interest between managers and shareholders because management act in their own interest instead of acting on behalf of shareholders' interests. With these behaviours, shareholders will be frustrated from the managements' part by monitoring and controlling but to what extent these monitoring and controlling will continue while the cost of monitoring are high.

Paying dividend to shareholders decreases resources and wealth under the management's control and therefore it will minimise the managements' power. Managerial incentives are one of the main reasons of firm's growth more than the optimal size. In the case of growth, resources under management's control will rise and

consequently increase their power. Jensen (1986) revealed, “conflicts of interest between shareholders and managers over pay-out policies are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below the cost of capital or wasting it on organization inefficiencies”.

Moreover, Jensen (1986) observed that debt eases such conflicts between managers and shareholders, Grossman and Hart (1982) further revealed that bankruptcy is the cost to the managers and then they take more feasible and strong investment decisions which eventually reduces bankruptcy risk. Nevertheless, there are also disadvantages of debt on the performance of the managers such as under investment by missing good projects and investing in risky projects. Agency models propose that leverage has direct association with the value of firm, Harris and Raviv (1990), Hirshleifer and Thakor (1992), default probability Harris and Raviv (1991), extent of regulation Stulz (1990), free cash flow Stulz (1990), liquidity value Harris and Raviv (1990) and the significance of managerial reputation Hirshleifer and Thakor (1992). On the other hand, lever age is likely to be negatively associated to the growth opportunities Stulz (1990), interest coverage, firm’s investigation costs predictions and the likelihood of reforming upon default Harris and Raviv (1990). Bradley *et al.* (1984) established that leverage increased with increase in level of regulation as expected by the agency models. Bradley *et al.* (1984) further revealed that leverage increased with the increase in value of liquidation. Kim and Sorenson (1986) maintained that leverage is directly associated with the amount of managerial equity ownership. However, Friend and Lang (1988) found no such association between the leverage and the amount of managerial equity ownership. Determinates of capital structure and hypothesis development.

This study represents a brief description of explanatory variables used to determine firms’ capital structure. The capital structure is the dependent variable, which is measured by debt to equity ratio; six firm-specific independent variables were used to determine capital structures decision of a firm, namely size, profitability, growth, tangibility, business risk and liquidity (Booth *et al.*, 2001; Chandra, 2009; Chandra, 2015; Pahuja and Sahi, 2012; Rajan and Zingales, 1995; Velnampy and Nireesh (2012). The variables were selected in line with the previous literature that are discussed below.

Literature review

Size: Firm’s size has a predicted positive association with leverage. Large-sized firms are unlikely to become bankrupt and consequently attract more debt. As described by the trade-off theory, debt ratios should have a positive association with firm size as large firms are more diversified, less prone to debts, less risky and to have lower inconsistent earnings, prefer high debt ratios Castanias (1983), Titman and Wessels (1988). Furthermore, the pecking order theory, states that large-sized firms offer more of information asymmetry, consequently, attracts less debt Marsh.

Previous studies revealed a positive firm size association with the capital structure Agrawal and Nagarajan (1990), Al Fayoumi and Abuzayed (2009), Alipour *et al.* (2015), Bae (2009), Banerjee *et al.* (2000), Bevan and Danbolt (2002), Chang and Rhee (1990), Chen *et al.* (1998), Du and Dai, (2005), Eriotis *et al.* (2007), Ebeh (2011), Fattouh *et al.* (2005), Fischer *et al.* (1989), Gaud *et al.* (2005), Gharaibeh (2015), Hovakimian *et al.* (2004), Huang and Song (2006), Padron *et al.* (2005), Tomak (2013), Yu and Aquino (2009). A negative association may arise between firm size and capital structure because large firms have the capacity to finance through equity rather than debt, Chen (2003), Deloof and Overfelt (2008), Kale *et al.* (1991), Karadeniz *et al.* (2009), Ooi (1999), Titman and Wessels (1988), Wahap and Ramli (2014, 2013), Yolanda and Soekarno (2012). Further revealed no significant impact of size on capital structure and that firm size has insignificant relationship with debt ratios and capital structure. Additionally, Wanzenried (2006) and Ghazouani (2013), Rajagopal (2011), revealed that larger firms have less debt. Size was computed by the natural logarithm of total assets Alipour *et al.* (2015), Driffield *et al.* (2007), Sayilgan *et al.* (2006) and Suto (2003).

- H_1 : there is a positive relationship between firm’s size and capital structure

Profitability: Previous studies have shown that theoretical predictions are inconsistent on the effects of profitability on leverage. As the trade-off theory states that highly profitable firms should have more leverage and debt ratios and have less bankruptcy risk; consequently, creditors would be inclined to finance such firms. Leland and Pyle, stated that the amount of a firm’s leverage due to information asymmetry has significant positive association with profitability. In addition, a positive association exists between profitability and debt ratios Chiang *et al.* (2010), Jordan *et al.* (1998), Margaritis and Psillaki (2007), Reinhard and Li (2010). As specified by

pecking order theory, profitable firms have lower debt ratios and normally prefer internal sources of finance to external sources and consequently should have lower leverage (Bauer, 2004). Profitable firms have less debt; and short-term cash flow of firms are used in debt settlements, Abor and Biekpe (2009), Alipour *et al.* (2015), Gharaibeh (2015), Al-Najjar and Taylor (2008), Amidu (2007), Brav (2009), Deloof and Overfelt (2008), Eldomiaty (2007), Ezeoha (2011), Fama and French (2002), Gaud *et al.* (2005), Graham (2000), Hall *et al.* (2004), Heshmati (2001), Huang and Song (2006), Karadeniz *et al.* (2009), Kim *et al.* (2006), Ezeoha (2008), Lemmon and Zender (2010), Rajan and Zingales (1995), Sogorb-Mira and How (2005), Acaravci (2015), Strebulaev (2007), Viviani (2008), Yu and Aquino (2009).

A positive relationship exists between profitability and short-term debt ratio and negatively related with long-term debt ratio (Abor, 2005). Chittenden *et al.* (1996) stated insignificant association between profitability and long-term debt while profitability in small firms has a negative relationship with short-term debt ratio and total debt ratio. Al-Sakran (2001) reported insignificant association between profitability and debt ratio and a negative association in large firms. Studies also reported no association between profitability and capitals structure Bathala *et al.* (1994), De Miguel and Pindado (2001), Demircuc-Kunt and Maksimovic (1996), El-Sayed Ebaid (2009), Hovakimian *et al.* (2004), Huang and Song (2005), Jensen *et al.* (1992), Myers and Majluf (1984), Rajan and Zingales (1995), Schargrodsky (2002), Titman and Wessels (1988), Tomak (2013), Wahab *et al.* (2012), Wahap and Ramli (2013), Yolanda and Soekarno (2012). Profitability is proxy of return on assets (defined as earnings before interest and tax divided by total assets):

- H_2 : there is a negative relationship between firm's profitability and capital structure

Growth: It was claimed that firms with high growth opportunities are better off using more equity financing, because firms with higher leverage would most probably miss the opportunities of profitable investments, Jensen and Meckling (1976), Myers and Majluf (1984) and Fama and French (2000). As expected by the trade-off theory, firms with more investment opportunities have less leverage because they have more motivations to avert underinvestment that can emerge from agency conflicts. Moreover, the agency theory established that firms with more growth opportunities have more debt and need more financing; this can be achieved by increasing equity and decreasing debt in future financing decisions, Rajan and Zingales (1995).

Moreover, the trade-off theory forecasts a negative relationship between leverage and growth opportunities. The pecking order theory proposes that a firm's growth has negative relationship with capital structure. Growth opportunities perceived as assets and cannot be collateralized and consequently not subject to taxable income. The agency problem reveals a negative relationship between capital structure and growth. Consequently, firms with high growth opportunities may not initially issue debt and leverage is predicted to be negatively associated with growth opportunities Bevan and Danbolt (2002), De Miguel and Pindado (2001), Deesomsak *et al.* (2004), Huang and Song (2006), Nguyen and Neelakantan (2006), Ooi (1999), Rajan and Zingales (1995), However, Amidu (2007), Banerjee *et al.* (2000), Cassar and Holmes (2003), Chang and Rhee (1990), Fattouh *et al.* (2005), Heshmati (2001), Titman and Wessels (1988) established a positive association between growth opportunities and leverage (Karadeniz *et al.*, 2009; Eriotis *et al.*, 2007) established insignificant association between growth and leverage. Growth is computed by subtracting current year sales from that of the previous year divided by previous year sales:

- H_3 : there is a negative relationship between firm's growth and capital structure

Tangibility: The trade-off theory predicts a positive association between tangibility and leverage. The reason is that collateralizing tangible assets are straightforward and forfeits little loss of value if firms experiencing financial distress (Rajan and Zingales, 1995). The market value of assets include tangibles, intangibles and growth opportunities. Also a firm's tangible assets is a significant variable for leverage decisions by indicating that the level of borrowing is determined also depends on the type of assets-in-place (Myers, 1984). Moreover, because firms prefer matching assets maturity with liabilities maturity, this results in positive association between tangibility and long-term leverage (Stohs and Mauer, 1996). Furthermore, Harris and Raviv (1991), Myers and Majluf (1984) stated the pecking order theory normally forecasts a negative association between tangibility and leverage, because low information asymmetry is related to tangible assets results in lower cost of equity issues. Tangibility is computed by the ratio of net fixed assets to total assets:

- H_4 : there is a positive relationship between firm's tangibility and capital structure

Risk: The trade-off theory indicates that risky firms should not be highly levered (Wiwattanakantang, 1999; Titman and Wessels, 1988) and there for risk is negatively associated with debt. In addition, the pecking order theory also states that risk is negatively associated with leverage. Firms with high risk are subject to bankruptcy and hence have low debt credit-worthiness. When the market has a higher growth rate, there is a positive association between risk and market value of debts, Jordan *et al.* (1998), Omran and Pointon (2009) reported that the higher the risk the higher the long-term debt and concluded that firms with more risk have more long-term debt. Ebeh (2011) reported insignificant association between debt and business risk. While Cassar and Holmes (2003), Su (2010), Viviani (2008) revealed no association between risk and debt, Abor and Biekpe (2009), Al-Najjar and Taylor (2008), Chung (1993), Eldomiaty (2007), Heshmati (2001), Low and Chen (2004), Eldomiaty and Azim (2008) reported negative association between risk and capital structure. This may be explained by the fact that firms with higher risk are inclined to evade financing from external sources and depend on internal financing to avoid bankruptcy. Business risk is computed by the standard deviation of operating income divided by total assets over the past three years as in De Jong:

- H_5 : there is a negative relationship between firm's risk and capital structure

Liquidity: The trade-off theory states that firms should have enough liquidity in order to meet their debt obligations. The theory expects a positive relationship between liquidity and capital structure. Conversely, as the pecking off theory and the agency theory state that there should be a negative relationship between liquidity and capital structure, both theories further confirm that firms that have sufficient liquidity have less need for external financing and borrowing. Myers and Rajan supported this view by stating that external creditors determine how much debt financing available to the firm when agency costs of liquidity are high. Eldomiaty and Azim (2008) revealed that current ratio has a significant negative relationship with debt ratios as confirmed by the pecking off theory. Furthermore, other studies confirm that liquidity is negatively associated with debt ratio and suggested that firms with high liquidity prefer internal financing to external financing; this finding is consistent with the pecking order theory. Bevan and Danbolt (2002), Deesomsak *et al.* (2004), Eriotis *et al.* (2007), Friend and Lang (1988), Kim *et al.* (1998), Lipson and Mortal (2009), Opler *et al.* (1999), Rajan and Zingales (1995), Titman and Wessels (1988).

It is further discovered that liquidity and short and long-term debts have an indirect negative relationship Drever and Hutchinson (2007) and Sarlija and Harc (2012). Liquidity of a firm is measured by current ratio and hypothesised that:

- H_6 : there is a negative relationship between firm's liquidity and capital structure

MATERIALS AND METHODS

Data collection and methodology: The data source for this study is the Jordanian stock exchange. The study sample covers the period from 2011-2014 for the industrial and services sectors. The financial sector was excluded from the study due to specific financing rules (Tekker *et al.*, 2009).

Data was retrieved from the companies' annual reports. To test the relationship between capital structure and the independent variables and to perform a test of hypothesis, linear regression data analysis was conducted and the analysis model was as follow:

$$\text{Capital structure (Lev)} = \alpha + \beta_1 \text{size} + \beta_2 \text{profit} + \beta_3 \text{growth} + \beta_4 \text{tang} + \beta_5 \text{risk} + \beta_6 \text{liq} + \varepsilon \quad (1)$$

Where:

Lev	=	Capital structure
α	=	Intercept
$\beta_1 \dots \beta_6$	=	coefficient of each independent variables
Size 1	=	Firm's size
Profit 2	=	Profitability
Growth 3	=	Growth
Tang 4	=	Tangibility
Risk 5	=	Firm's
Liq 6	=	Liquidity
ε	=	error term

RESULTS AND DISCUSSION

As revealed in Table 1, the results confirm that leverage has a significant positive association with size and risk and negative significant association with profitability. As for growth, tangibility and liquidity they were found to have an insignificant association with leverage.

The results proved an obvious constructive relationship between firm size and leverage. It described that bigger firms experienced fewer cases of bankruptcy

Table 1: Statistical relationship between capital structure and its determinants

Model (196)	Unstandardized coefficients (B)	SE	Standardized coefficients (β)	t-values	Sig.
Constant	-90.627	25.618	-	-3.538	0.001
Size	17.441	3.465	0.217	5.033	0.000
Profitability	-104.548	23.129	-0.408	-4.520	0.000
Growth	0.004	0.004	0.040	1.010	0.315
Tangibility	-11.457	8.254	-0.054	-1.388	0.168
Risk	100.265	15.986	0.552	6.272	0.000
Liquidity ratio	-0.043	0.051	-0.033	-0.848	0.398

Dependent variable: Lev_ratio

thus facing bonus debt. This is because large firms usually have enough assets to cover their financial problems. Additionally, such firms rely on external financing to finance their future projects and have the advantage of creditworthiness to enter the market and can easily acquire loans without offering massive collaterals. The results disclosed are consistent with the static trade off theory and studies from previous literature. The result is consistent with the trade-off theory and previous studies; therefore, the hypothesis is accepted. The findings revealed a negative significant relationship between profitability and leverage. The results show that Jordanian firms generally favour internal financing to debt financing. That is, highly profitable Jordanian firms use greater internal financing than those with lower profitability who use more debt financing because their internal financing may be insufficient to finance their investments. Adequate profitability normally decreases the need for external financing eventually debt, also retained earnings is the most feasible source of finance for the majority of firms. The results are consistent with the pecking order theory and other research findings from previous literature. Therefore, the hypothesis is accepted. The results confirm that growth does not seem to be significantly related with firms' capital structure decisions. The result supported neither by the pecking order theory nor by the trade-off theory but was consistent with the agency theory and the results of previous studies (Karadeniz *et al.*, 2009; Eriotis *et al.*, 2007) who established insignificant association between growth and capital structure. Therefore, the hypothesis is rejected. It is also revealed that tangibility is insignificantly determinant of capital structure. The finding is not consistent with neither by the pecking order theory nor by the trade-off theory. This may be explained that there are an insufficient source of long-term capital in Jordan and excessive use of short-term debt becomes mandatory. Therefore, the hypothesis is rejected. As for risk, the result show a positive relationship between risk and capital structure. The result is not constant with the pecking order theory and the trade-off theory. This positive relationship is consistent with the agency cost

theory prediction stating that risk increases a negative influence on asymmetric information (Hovakimian *et al.*, 2001). Although, these firms are not depending on long-term debts in their capital structure, their extensive use of short-term debts can eventually increase their level of risk. Therefore, the hypothesis is rejected. It was revealed that a negative but insignificant relationship between liquidity and capital structure. Such result can be explained by the fact that earnings volatility limits investors' capability to predict future earnings. More explanation is that firms be inclined to use their liquid assets to finance their investment in preference to raising external debt. This result is not consistent with any of the capital structure theories. The hypothesis therefore is rejected.

CONCLUSION

The objective of this study is to examine the determinants of capital structure decisions of Jordanian listed firms for the period 2011-2014. Firm specific factor used to achieve the objectives are firm size, profitability, growth, tangibility, risk and liquidity. The results of the regression analysis revealed that firm size and risk have a positive significant association with capital structure decisions while profitability disclosed a negative significant association. The rest of the independent variable, namely growth, tangibility and liquidity reported a non-significant relationship with capital structure. This indicates that firm specific factors are significant part in capital structure determinants of Jordanian listed firms. However, it could be said that, unlike Jordanian small listed firms, large listed firms prefer to have higher debt ratio. Furthermore, Jordanian profitable firms prefer to have less debt in their capital structure and firms with high growth could have high debt ratio. Firm's capital structure includes a trade-off between debt and equity financing. The results of reveal that firms use a mixture of both types of debt alternately. In their operations, Jordanian firms tend to use more debt financing relative to equity financing that is not compatible with the basics of financing which should be taken into account by the

management. The reason is that firms may experience short-term debt settlements and may cause shortage in liquidity, ultimately distresses the firms' performance. It is observed that size and risk are important factors in determining particularly debt financing. The results also reveal that liquidity has a negative significant relationship with capital structure decisions; this negative association specifies that Jordanian firms with higher liquidity tend to borrow less (Deesomsak *et al.*, 2004).

This study contributes through the reported results largely with the results of other similar studies in emerging markets that represents a component of external validity. This study also contributes to the literature in a manner that it displays the capital structure theories that apply to emerging markets such as the Middle Eastern markets also apply to the Jordanian firms. Moreover, the results of the study offer a conceptual framework for capital structure of Jordanian firms and have important theoretical and practical impacts.

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