Effect of financial structure on value of the company

An empirical study on the non-financial companies listed in Kuwait Stock Exchange 2010-2014

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Abstract:

This study aimed to investigate the effect of financial structure on value of the company. It has sampled nineteen non-financial companies listed in Kuwait Stock Exchange during the period from 2010 to 2014. Panel data for the firms are generated and analyzed using fixed-effects, random-effects and Hausman Chi Square estimations. We used a multiple regression model to examine the relationship between a dependent variable which is the company value and independent variables which are: capital structure, profitability of the company, size of the company and company liquidity. Empirical findings indicated existence of negative and significant relationship between the company value and the capital structure; this indicates that extensive use of debt affect negatively the market value of the company, which means that companies under study are not able to realize the benefits of using debt. Also, the results show a positive and significant relationship between company value and profitability of the company. The relationship between the company value and its size is positive, and it is statistically significant, which indicates that the company uses its total assets affectively to increase its value.

Key words: Capital structure, company value, non-financial companies, Kuwait Stock Exchange

Introduction:

Maximize company value or in otherwise maximize shareholder's wealth is one of the main goals that the company financial management seeks to achieve it, but there are many factors that influence this value, for this raison several theories and studies attempted to identify factors affecting the company value especially the impact of the financial structure, wish is a mix of debt and equity that a company uses to finance its business.

The financial structure theories are concerned with the question of whether the choice of financial structure affects company value. Theories of this relationship predict positive, negative, or no statistically significant relationship (Modigliani and Miller (1958, 1963), Miller (1977), Myers and Majluf (1984)…etc). Similarly, empirical studies have also produced mixed results (Masulis (1983), Hatfield, Cheng and Davidson (1994), Kaifeng (2002), Samuel, Ebenezer and Xicang (2012)...etc).

Following from this, the objective of the present study therefore is; to find out whether the amount of debt used in a company affects its market value, with a case study of companies listed in Kuwait Stock Exchange from 2010 to 2014.

Literature Review:

Masulis[1] (1983) measures the impact of financial structure changes on company value using a sample of one hundred and thirty three companies listed on the NYSE and ASE during the period from 1963 to 1978. The study use a multiple regression model with the primary announcement period stock return as a dependent variable and the major independent variables are changes in leverage multiplied by senior security claims outstanding and changes in debt tax-shields. The main result of the study is that both stock prices and company values are positively related to changes in debt level and leverage.

Hatfield, Cheng and Davidson[2] (1994) tested the argument suggested by Masulis (1983) which stated that when companies which issue debt are moving towards the industry average of debt ratio from below, the market will react more positively than when the company is moving away from the industry average. The sample consists of one hundred and eighty three companies which announced a new debt issue for the period from 1981 to 1986. The study classifies company's leverage ratio, as being above or below their industry average prior to the announcement of debt issued. They concluded that the market does not consider industry averages for leverage as discriminators for company's financial leverage. They found that there is no significant relationship between company's debt level and the industry's debt level and these results do not support Masulis (1983) argument.

Kaifeng[3] (2002) empirically examined the influence of financial structure on the company value given different growth opportunities. The sample includes one hundred and twenty seven companies incorporated in the Netherlands at the end of March 2001. The researcher used the price to equity ratio to differentiate the sample to high-growth companies and low-growth company's sub samples. The study applied the multiple regression approach with the company value measured by Tobin's Q as a dependent variable. The independent variable is total debt to assets ratio. The control variables are pre-tax profit margin ratio, tax rate, capital expenditures ratio and total assets. The regression model is preformed for the two sub samples. The researcher found that in the low-growth companies sub sample, the relationship between the financial structure and the value of the company is positive and significant while in the high-growth companies sub sample, the relationship is positive but insignificant.

Anup and Suman[4] (2010) tested the influence of debt-equity structure on the value of shares given different sizes, industries and growth opportunities with the companies incorporated in Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) of Bangladesh. For the robustness of the analysis samples are drawn from the four most dominant sectors of industry i.e. engineering, food & allied, fuel & power, and chemical & pharmaceutical to provide a comparative analysis. A strong positively correlated association is evident from the empirical findings when stratified by industry.

Samuel, Ebenezer and Xicang[5] (2012) examined the impact of financial structure on a company’s value. The analysis was implemented on all the 34 companies quoted on the Ghana Stock Exchange (GSE) for the year ended 31st December 2010. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study reveals that in an emerging economy like Ghana, equity capital as a component of financial structure is relevant to the value of a company, and Long-term-debt was also found to be the major determinant of a company’s value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it impacts more on a company’s value.

Ogbulu and Emeni[6] (2012) tested the impact of financial structure on a company’s value. The analysis was implemented on a sample of 124 companies quoted on the Nigerian Stock Exchange (NSE) for the year ended 31st December 2007. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study reveals that in an emerging economy like Nigeria, equity capital as a component of financial structure is irrelevant to the value of a company, while Long-term-debt was found to be the major determinant of a company's value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it results in a positive company value.

Theoretical Framework (Main theories in financial structure):

1. The Modigliani-Miller Models:

In 1958, two prominent financial theorists, Franco Modigliani and Merton Miller (MM), showed that under certain assumptions, company value and average cost of capital are independent of the company's financial structure. They were the first to undertake a formal analysis of the financial structure question using a scientific approach. Basically what they did was to compare the value and cost of capital of two companies identical in every respect except for one feature: one company had no financial leverage while the other had some debt in its financial structure. In developing their theoretical model, MM listed several assumptions[7], wish are[8]:

- There are no personal or corporate taxes.
- Business risk[9] can be measured by standard deviation of the earning before interest and tax (EBIT), and companies with the same degree of risk are said to be in a homogeneous risk class.
- Stocks and bonds are traded in a perfect market, that implies that there are no brokerage costs, and investors can borrow at the same rate as corporations.
- Investors have homogeneous expectations about expected future corporate earnings and the riskness of those earnings.
- The debt of companies and individuals is riskless, so interest rate on all debt is the risk-free rate.
- All cash flows are perpetuities[10], that is, all companies expect zero growth (Modigliani and Miller 1958).

MM without taxes (1958)[11]:

MM first performed their analysis under the assumption that there are no corporate or personal income taxes. On the basis of preceding assumptions, and in the absence of corporate taxes, MM stated and proved algebraically two propositions:

Proposition 1:

The value of any company is established by capitalizing its expected net operating income (EBIT) at a constant rate (K_{su}) which is based on the company's risk class and can be defined as cost of equity of unlevered company:

$$V_L = V_U = \frac{EBIT}{WACC} = \frac{EBIT}{K_{su}} \text{..........(1)}$$

Where:

V_L : Value of levered company, V_U : Value of unlevered company, K_{su} : cost of stock of unlevered company, $WACC$: weighted average cost of capital.

According to MM proposition 1, the value of the company is invariant to the financial leverage assumed by the company. Regardless of how little or how much debt the company chooses to have, that act alone cannot affect the value of the company. MM argue that company value stems from the earnings generated from the assets owned. Because changing the financial structure (debt-equity ratio) does not affect the assets structure of the company, the earnings are unaffected; consequently, company value is unaffected[12].

Under MM model when there are no taxes, the value of the company is independent of its leverage this implies that:

- The weighted average cost of capital to the company is completely independent of its financial structure.
- The weighted average cost of capital for the company regardless of the amount of debt it issues, is equal to the cost of equity it would have if it used no debt.

Proposition 2:

The cost of equity of a levered company (K_{SL}), is equal to the cost of equity of unlevered company (K_{SU}) plus a risk premium whose size depends on both the differential between unlevered company's cost of debt and equity and the amount of debt used.

$$K_{SL} = K_{SU} + \text{Risk premium}$$

$$K_{SL} = K_{SU} + (K_{SU} - K_d)\frac{D}{S} \text{..........(2)}$$

Where:

K_d : Constant cost of debt, D : Market value of debt, S : Market value of the company's equity.

Taken together, the two MM propositions imply that the inclusion of more debt in financial structure will not increase the value of the company, because the benefits of the cheaper debt will be exactly offset by an increase in the riskness.

Thus, MM argue that in a world without taxes, both the value of the company and its weighted average cost of capital would be unaffected by its financial structure (Modigliani and Miller 1958).

MM with corporate taxes (1963):

In 1963, Modigliani and Miller published a revision of their original paper, this time incorporating the effect of corporate income taxes. With corporate income taxes in place, MM find that the value of the levered company is equal to that of an otherwise equivalent unlevered company plus the tax shield benefit from debt[13].

Here are the MM propositions when corporations are subject to income taxes[14]:

Proposition 1:

The value of the levered company is equal to the value of unlevered company in the same risk class (V_U) plus the gain from leverage. The gain of leverage is the value of the tax saving, which is found as the product of corporate tax rate times the amount of debt the company uses:

$$V_L = V_U + T * D \text{..........(3)}$$

$$V_U = \frac{EBIT(1-T)}{K_{SU}}$$

Where:

T : Corporate tax rate, D : Debt amount.

Proposition 2:

The cost of equity to a levered company is equal to the cost of equity to unlevered company in the same level of risk plus a risk premium whose size depends on the differential between the cost of equity and debt to an unlevered company, the amount of financial leverage used, and the corporate tax rate:

$$K_{SL} = K_{SU} + (K_{SU} - K_d)(1-T)\frac{D}{S} \text{..........(4)}$$

Proposition (2), coupled with the fact that taxes reduce the effective cost of debt, is what produces the proposition (1) result namely that the company's value increases as its leverage increases (Modigliani and Miller 1963).

2. The Hamada model (1969): Introduction to market risk

Robert Hamada combined the Capital Asset Pricing Model (CAPM) with MM after tax model to obtain an expression for K_{SL}, the cost of equity of leverage company, to do that he added a financial risk premium:

K_{SL} = Risk free rate + Business risk premium + financial risk premium

$$K_{SL} = K_{rf} + (K_m - K_{rf})\beta_u + (K_m - K_{rf})\beta_u(1-T)\frac{D}{S} \text{..........(5)}$$

Where:

K_{rf} : Risk free rate, K_m : Rate of return on the market, β_u : Beta coefficient that the company would have if the company uses no financial leverage.

Hamada also showed that equation (5) can be used to derive another equation that analyzes the effect of leverage on beta.

Knowing that the security market line (SML) equation is equal to:

$$SML: K_s = K_{rf} + \beta(K_m - K_{rf}) \text{..........(6)}$$

Now by equating equation (5) and equation (6), then:

$$K_{rf} + (K_m - K_{rf})\beta_u + (K_m - K_{rf})\beta_u(1-T)\frac{D}{S} = K_{rf} + \beta(K_m - K_{rf})$$

$$(K_m - K_{rf})\beta_u + (K_m - K_{rf})\beta_u(1-T)\frac{D}{S} = \beta(K_m - K_{rf})$$

$$\beta = \beta_u + \beta_u(1-T)\frac{D}{S}$$

$$\beta = \beta_u\left[1 + (1-T)\frac{D}{S}\right] \text{..........(7)}$$

Thus, under the MM and CAPM assumptions, the equity beta of any company is equal to the equity beta the company would have if it used zero debt, adjusted upward by a factor that depends on the corporate tax rate and the amount of financial leverage employed. Therefore, the stock's market risk, which is measured by (β), depends on both the company's business risk as measured by (β_u) and its financial risk by $(\beta - \beta_u) = \beta_u(1-T)\frac{D}{S}$.

These relationships can be used to help to estimate a company's cost of equity. In sum, the results is an estimate of the company's equity beta given its business risk as measured by the equity betas of other companies in the same line of business, and it's financial risk as measured by its own financial structure and tax rate (Hamada 1969).

3. The Miller model 1977:

Although MM included corporate taxes in their second model, they did not extend their work to include personal taxes. However, Merton Miller introduced a model designed to show how leverage affects company's values when both personal and corporate taxes are taken into account.

With personal taxes included, and under the assumptions of MM models, the value of unlevered company is found as follows:

$$V_U = \frac{EBIT(1-T_c)(1-T_s)}{K_{su}} \text{..........(8)}$$

The $(1-T_s)$ term takes account for personal taxes. Therefore, the numerator shows how much of the company's operating income is left after the unlevered company pays corporate income taxes and its stockholders subsequently pay personal income taxes on their equity income, here personal taxes reduce the value of unlevered company, other things held constant.

Miller results can be supported by dividing the levered company's annual cash flows (CFL), into those going to the bondholders, and the stockholders after both corporate and personal taxes:

CFL= Net cash flows to stockholders + Net cash flows to bondholders.

$$CFL = (EBIT - I)(1-T_c)(1-T_s) + I(1-T_d) \text{..........(9)}$$

Where:

I : Annual interest payment, T_c : Corporate tax rate, T_s : Personal tax rate on income from stocks, T_d : Personal income tax rate from debt.

Equation (2-9) can be rearranged as follows:

$$CFL = EBIT(1-T_c)(1-T_s) - I(1-T_c)(1-T_s) + I(1-T_d) \text{..........}(9-a)$$

The first term in equation (2-9-a) is identical to the after tax cash flow of unlevered company as shown in equation (8). The second and the third terms, reflect leverage result from the cash flows associated with debt financing. Combining the present value of the three terms then:

$$V_L = \frac{EBIT(1-T_c)(1-T_s)}{K_{SU}} - \frac{I(1-T_c)(1-T_s)}{K_d} - \frac{I(1-T_d)}{K_d} \text{..........(10)}$$

In equation (10), the first term is identical to the value of unlevered company and rearranging equation (10), then:

$$V_L = V_U + \frac{I(1-T_d)}{K_d}\left[1-\frac{(1-T_c)(1-T_s)}{(1-T_d)}\right] \ldots\ldots\ldots (10-a)$$

In equation (10-a), the term $\frac{I(1-T_d)}{K_d}$ equals market value of debt (D), and then Miller model is:

Miller model: $V_L = V_U + \left[1-\frac{(1-T_c)(1-T_s)}{(1-T_d)}\right]D \ldots\ldots\ldots (2-11)$

The Miller model provides an estimate of the value of a levered company in a world with both corporate and personal taxes.

The Miller model has several implications:

1. The term in bracket in equation (2-11), $\left[1-\frac{(1-T_c)(1-T_s)}{(1-T_d)}\right]$ can be replaced by (T), then Miller model returns to the earlier MM model with corporate tax $(V_L = V_U = T * D)$.
2. If: $T_c = T_s = T_d = zero$, in this case equation (2-10) is the as the original MM model without corporate taxes.
3. If: $T_s = T_d = zero$, equation (2-11) is the same as MM model with corporate taxes (Miller 1977).

3.4 Trade-off theory:

The trade-off theory claims that a company's optimal debt ratio is determined by a tradeoff between the losses and gains of borrowing, holding the company's assets and investment plans constant (Brennan & Schwartz, 1978; DeAngelo and Masulis,1980; Bradley et al., 1984). The goal is to maximize company value. For that reason, debt and equity are used as substitutes. The starting point of the trade-off theory is the debate over the Modigliani and Miller (1958) theorem. If corporate income tax was included in the irrelevance proposition of the Modigliani and Miller (1958) model, it would produce an advantage for debt in terms of tax shields. Since there is no offsetting cost of debt and the objective function of the company is linear, companies can be financed by 100% debt. Due to this extreme situation, bankruptcy costs are used to offset the cost of debt. According to this argument, optimal leverage is defined as a trade-off between the tax benefits of debt and bankruptcy costs (Kraus and Litzenberger, 1973; Scott, 1977). Companies could choose debt because it is tax deductible, even though it increases the risk of bankruptcy and financial distress. Basically, bankruptcy costs increase with the degree of leverage.

Trade-off theory is divided into two parts: static trade-off theory and dynamic tradeoff theory. Static trade-off theory assumes that companies target their financial structure. Companies determine their financing needs based on the optimal financial structure. If the leverage ratio departs from the optimal choice, the company will alter its financing attitude back to the optimal level. Unlike the static trade-off theory, the dynamic trade-off theory considers the expectations and adjustment costs. The correct financing decision depends upon the financing margin that the company predicts in the next period. The optimal financial structure choice today is based on what is expected to be optimal in the next period. The optimal financial structure in the next period could be either generating new funds or paying them out. If new funds are generated, they may be in the form of debt or equity. In each case, the optimal financial structure in the next period will aid in pinning down a relevant comparison for the company in the current period.

In the literature, to test the trade-off theory, different proxies are used such as asset tangibility, profitability and company size. The trade-off theory assumes that these three proxies, asset tangibility, profitability, and company size, increase the leverage of companies. Tangible assets can be used as collateral. Therefore, the higher the collateral, the higher the leverage those companies may have. Consequently, this theory expects a positive relation between debt financing and tangibility. Profitability and company size are also expected to be positively related to leverage. Profitable companies should prefer debt to benefit from tax shields. Also, in many asymmetric information models such as Ross (1977), profitable companies are suggested to have higher leverage. Company size is accepted as a proxy for bankruptcy cost. The probability of bankruptcy for large companies is lower as compared to small companies since they have higher fixed assets. Thus, large companies have more debt than small companies as company size is positively related to leverage.[15]

5. Agency Costs (Free Cash flow) Theory:

Under this model, an optimal financial structure can be obtained by trading off the agency cost of debt against the benefit of debt (Riahi-Belkaoni, 1999). Agency costs are costs due to conflicts of interest. Two types of conflicts are identified by Jensen and Meckling (1976): first is the conflicts between shareholders and managers arising from the situation of managers holding less than 100% of the residual claim and second is the conflict between debt holders and equity holders arising from the debt contract that make equity holders invest sub-optimally.

Gleason and Mathur (2000) are of the opinion that a negative relationship between financial structure and performance suggests that agency issues may lead to use of higher than appropriate levels of debts in the financial structure, thereby producing lower performances. According to Berger and Bonaccorsi di Patti (2006), greater financial leverage may affect managers and reduce agency costs through the threat of liquidation which causes personal losses to managers of salaries, reputation and perquisites and higher leverage can mitigate conflicts between shareholders and managers concerning the choice of investment (Myers, 1977) and the amount of risk to undertake (Jensen and Meckling, 1976), the conditions under which the company is liquidated (Harris and Raviv, 1990) and dividend policy.

Using profit efficiency as an indicator of company performance to measure agency costs, a two-equation structural model to take into account reverse causality from company performance to financial structure and include measures of ownership has findings that are consistent with the agency costs hypothesis. Berger and Bonaccorsi di Patti (2006) find out that higher leverage or a lower equity capital ratio is associated with higher profit efficiency. They also find that profit efficiency is responsive to the ownership structure of companies consistent with agency theory and that profit efficiency embeds agency costs. Harris and Raviv (1991) also find results that are consistent with the agency models. Their findings show that leverage is positively associated with company value, default probability and liquidation value and negatively associated with interest coverage, the cost of investigating company prospects and the probability of reorganization following default.[16]

6. Signaling theory:

One of the MM's assumptions is that investors and managers have the same information about the company's prospects, which is called symmetric information. However, managers often have better information than outside investors, this is called asymmetric information, and it has an important effect on financial structure.

In asymmetric information, companies with extremely good prospects prefer to finance with debt because they would not have had to share profit of the new investment with new investors. Whereas, companies with poor prospects like to finance with stocks which would mean bringing in new investors to share the losses. Therefore, the announcement of stock offering of a mature company that has financing alternatives is taken as a signal that the company's prospects as seen by its management are not bright.

In normal times, maintaining a reserve borrowing capacity which can be used in the event that some especially good investment opportunity comes along. This means that companies in normal times should use less debt than is suggested by the trade-off theory.[17]

Methodology:

1. Population of the study:

The population of the study includes all non-financial companies listed in Kuwait Stock Exchange during the period from 2010 to 2014.

2. Sample of the study:

The sample of this study consists of nineteen non-financial companies listed in Kuwait Stock Exchange during the period from 2010 to 2014, and which satisfied the following criteria:

- The selected companies should have lasted from 2010 to 2014.
- The selected companies should have reported their annual accounts over the period of the study.
- Companies that were merged with another companies over the period from 2010 to 2014 are excluded from the sample.
- Information about selected companies should be available in order to test the variables of the study.

3. Data collection:

The data of this study was collected from the following sources:

Primary sources:

The data related to company's financial statements (income statement and balance sheet items) were collected from the firm's annual reports.

Secondary sources:

The information about the subject of this study was collected from books, theses and other sources related to the subject of the study.

4. Hypotheses of the study:

H_0: There is no relationship between financial structure and company value.

H_1: There is a relationship between financial structure and company value.

5. Model of the study:

Panel data Model:

Data sets that combine time series and cross sections are called longtitudinal or panel data sets. Panel data sets are more orientated towards cross section analyses – they are wide but typically short (in terms of observations over time). Heterogeneity across units is central to the issue of analyzing panel data. The basic framework is a regression of the form:

$$Y_{it} = X_{it}\beta + Z_i\pi + \varepsilon_{it} \qquad (1)$$

X has k columns and does not include a constant term. The heterogeneity or individual effect is $Z_i\pi$ where Z contains a constant term and a set of individual or group specific variables. Such as gender, location, etc. We will consider two cases:

Fixed Effects Z_i is unobserved, but correlated with X_{it} then OLS estimators of β are biased. However, in this case where $\alpha_i = Z_i\pi$ embodies all the observable effects and specifies an estimable equation. This takes α_I to be a group specific constant term.

Random Effects if the unobserved heterogeneity however formulated can be assumed to be uncorrelated with X_{it} then :

$$Y_{it} = X_{it}\beta + E[Z_i\pi] + \{ Z_i\pi - E[Z_i\pi] \} + \varepsilon_{it} \qquad (2)$$
$$= X_{it}\beta + \alpha + u_i + \varepsilon_{it} \qquad (3)$$

This random effects approach specifies that u_i is a group specific random element which although random is constant for that group throughout the time period.

Model specification:

This analysis is carried out within a panel data estimation framework. The preference of this estimation method is not only because it enables a cross-sectional time series analysis which usually makes provision for broader set of data points, but also because of its ability to control for heterogeneity and endogeneity issues. Hence panel data estimation allows for the control of individual-specific effects usually unobservable which may be correlated with other explanatory variables included in the specification of the relationship between dependent and explanatory variables.[18]

Through the above, we have three models: the Pooled, Fixed and Random effect.

Pooled Regression Specification:

$$V_{it} = \alpha_0 + \alpha_1 FS_{it} + \alpha_2 ROA_{it} + \alpha_3 L_i + \alpha_4 S_{it} + \varepsilon_{it} \qquad (1)$$

Fixed Effect Model Specification:

$$V_{it} = \alpha_0 + \alpha_1 FS_{it} + \alpha_2 ROA_{it} + \alpha_3 L_i + \alpha_4 S_{it} + \sum_{i=1}^{19} \beta_i\, DUM_i + \varepsilon_{it} \qquad (2)$$

Random Effect Model Specification:

$$V_{it} = \alpha_0 + \alpha_1 FS_{it} + \alpha_2 ROA_{it} + \alpha_3 L_i + \alpha_4 S_{it} + u_i + \varepsilon_{it} \qquad (3)$$

Where:

Dependent variable is:

(V_{it}): Value of the company, it is proxied by share closing price.

Independent variables are:

- (FS_{it}): Financial structure is measured by the total debt ratio which is the ratio of total debt to total assets (Rajan and Zingales, 1995)[19].
- (ROA_{it}): Profitability of the company (return on assets), it is proxied in this study by a ratio of net income to total assets (Kaen, 1995).
- (L_{it}): Liquidity of the company, it is proxied by the ratio of current assets to current liabilities.
- (S): Size of the company. There are many standards that are used to measure this variable, such as: sales volume, the total fixed assets, and the sum of total assets. Company's size is measured in this study with natural logarithm of total assets. Kaifeng Chen (2002) and Eldomiaty[20] (2004) are just a few examples of using a natural log of total assets as a proxy for the company's size.

While:

α_i : Coefficient values.

εi: Error term, it represents that part of the company's value which change randomly as a result of other factors not included in the model.

Descriptive Statistics:

The descriptive statistics of variables cover minimum, maximum, mean, Median and standard deviation.

Table (01): Descriptive Statistics

Statistic	V	FS	ROA	L	S
N	95	95	95	95	95
Minimum	0.040	0.002	-0.176	0.200	16.239
Maximum	2.800	0.507	0.286	8.452	22.034
Median	0.350	0.076	0.027	1.273	19.160
Mean	0.581	0.126	0.037	1.641	19.007
Std. Deviation	0.622	0.121	0.069	1.360	1.426

***Source**: Prepared by the researcher using Eviews*

The descriptive statistics presented in the table above covers 19 companies from 2010 to 2014.

From table (01), V ranges from 0.04 to 2.80 with a mean of 0.58 and a standard deviation of 0.62, FS has a minimum value of 0.002 and a maximum of 0.50, with an average value of 0.126 and a standard deviation of 0.12, R0A ranges from -0.17 to 0.28 with a mean value of 0.037 and a standard deviation of 0.069. L ranges from 0.2 to 8.45 with an average value of 1.64 and a standard deviation of 1.36, S ranges from 16.23 to 22.03 with an average value of 19.007 and a standard deviation of 1.42.

Table (02): Correlation between variables

Variables	V	FS	ROA	L	S
V	**1**				
FS	**-0.351**	**1**			
ROA	**0.435**	**-0.212**	**1**		
L	-0.127	**-0.228**	**0.303**	**1**	
S	**0.494**	0.021	0.098	**-0.619**	**1**

Bold values are different from 0 at a level of significance (0.05)

Source: Prepared by the researcher using Eviews

The table above summarizes the results of correlation analyses among the variables. This exercise serves two important purposes. First is to determine whether there are bivariate relationship between each pair of the dependent and independent variables. The second is to ensure that the correlations among the explanatory variables are not so high to the extent of posing multi-collinearity problems.

From table (01), the independent variables FS and L are negatively related to V; however, all the independent variables (FS, ROE, S) except L are significantly associated with V.

Regression Analysis:

We will now estimate the three models (the Pooled, Fixed and Random effect), The following table summarizes the results of the estimation:

Table (03): Results estimate three models (the Pooled, Fixed and Random effect)

Variable	Pooled	Fixed Effect	Random Effect
C	-3.183***	-2.934	-3.556***
FS	-1.508***	-0.424	-0.668*
ROA	2.987***	0.919*	1.091***
L	-0.003	0.0006	0.016
S	0.203***	0.186	0.219***
R-squared	0.476098	0.899988	0.399607
F-statistic	20.44694***	29.45064***	5.435918***
Prob(F-statistic)	0.000000	0.000000	0.000576

Note: *, **, *** indicate significance at the 10%, 5% and 1% levels of significance respectively.

Source*: Prepared by the researcher based on annex (01).*

Fisher test:

The F-statistics value of 20.44 (P<0.01), 29.45 (P<0.01) and 5.43 (P<0.01) show that the independent variables are jointly statistically significant in the Pooled, Fixed and Random estimates in explaining variations in V.

The coefficient of determination:

The R-square statistics value of 0.476, 0.899, and 0.399 shows that the independent variables jointly account for about 47.6%, 89.9% and 39.9% variation on V in the Pooled, Fixed and Random effect models respectively.

Choose between the three models:

At first we choose between Pooled model and the Fixed effects Model, Using **Redundant Fixed Effects test.** The test results are shown in the following table:

Table (04): Redundant Fixed Effects test

Redundant Fixed Effects Tests
Pool: MODEL
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	16.953593	(18,72)	0.0000
Cross-section Chi-square	157.321496	18	0.0000

Through the table above note that the prob. (0.0000) is less than 0.05, which means that the null hypothesis is refused and accept the existence of individual Fixed effects.

Hausman test:

Now, we'll choose between Fixed and Random effect Model, Using **Correlated Random Effects - Hausman Test.** The test results are shown in the following table:

Table (05): Correlated Random Effects - Hausman Test:

Correlated Random Effects - Hausman Test
Pool: MODEL
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.166953	4	0.0857

The Prob Hausman test statistics of (0.08>0.05), so, we accept the null hypothesis that differences in coefficient of the fixed and random estimates are not systematic, thus we accept and interpret the random effect model.

From the results presented in table (03), all independent variables (FS, ROA, S) are significantly related to V, except L is not significantly related to V.

The regression coefficient for the financial structure was (-0.668), this result confirms the negative relationship between the value of the company and the financial structure of the non-financial companies listed in KSE and it is statistically significant, which indicates that these companies are not able to realize the benefit of debt financing (tax savings), this result is different from (Masulis, 1983 and Kaifeng, 2002) who found a positive and significant impact of financial structure on company value, while the regression coefficient for the return on assets (ROA) was (1.091), so, there is a positive relationship between the company value and the company's profitability. The regression coefficient for the size of company was (0.219), this means that there is a positive relationship between the company value and its size, and it is statistically significant, which indicates that the company uses its total assets affectively to increase its value.

Conclusion:

A vast literatures investigate the relationship between capital structure and company performance since the seminal work of Modigliani and Miller (1958). While most of these studies explore the relationship in the developed countries, little is empirically known about such implications in emerging economies. The present study investigates the effect of financial structure on company value of nineteen non-financial companies listed in Kuwait Stock Exchange during the period from 2010 to 2014. Empirical findings indicated existence of negative and significant relationship between the company value and the capital structure; this indicates that extensive use of debt affect negatively the market value of the company, which means that companies under study are not able to realize the benefits of using debt. Also, the results show a positive and significant relationship between company value and profitability of the company. The relationship between the company value and its size is positive, and it is statistically significant, which indicates that the company uses its total assets affectively to increase its value.

Annex (01): Results estimate three models (the Pooled, Fixed and Random effect):

Dependent Variable: V?
Method: Pooled Least Squares
Date: 11/09/15 Time: 22:08
Sample: 2010 2014
Included observations: 5
Cross-sections included: 19
Total pool (balanced) observations: 95

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.183233	0.934522	-3.406269	0.0010
FS?	-1.507364	0.410709	-3.670146	0.0004
ROA?	2.986099	0.789038	3.784481	0.0003
L?	-0.002981	0.051261	-0.058161	0.9537
S?	0.202369	0.046121	4.387799	0.0000

R-squared	0.476098	Mean dependent var	0.581053
Adjusted R-squared	0.452813	S.D. dependent var	0.625508
S.E. of regression	0.462701	Akaike info criterion	1.347727
Sum squared resid	19.26834	Schwarz criterion	1.482141
Log likelihood	-59.01701	Hannan-Quinn criter.	1.402040
F-statistic	20.44694	Durbin-Watson stat	0.446409
Prob(F-statistic)	0.000000		

Dependent Variable: V?
Method: Pooled Least Squares
Date: 11/09/15 Time: 22:09
Sample: 2010 2014
Included observations: 5
Cross-sections included: 19
Total pool (balanced) observations: 95

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.939740	3.211729	-0.915314	0.3631
FS?	-0.420388	0.386538	-1.087570	0.2804
ROA?	0.919467	0.495031	1.857392	0.0673
L?	0.000612	0.045835	0.013354	0.9894
S?	0.186147	0.168935	1.101887	0.2742
Fixed Effects (Cross)				
_1--C	-0.305995			
_2--C	-0.327025			
_3--C	-0.157331			
_4--C	0.548912			
_5--C	-0.258310			
_6--C	-0.016197			
_7--C	0.131705			
_8--C	-0.442462			
_9--C	-0.268685			
_10--C	0.186043			
_11--C	-0.360500			
_12--C	-0.036717			
_13--C	0.659727			
_14--C	-0.302779			
_15--C	1.153852			
_16--C	-0.491505			
_17--C	-0.312256			
_18--C	0.831867			
_19--C	-0.232344			

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.899988	Mean dependent var	0.581053
Adjusted R-squared	0.869429	S.D. dependent var	0.625508
S.E. of regression	0.226025	Akaike info criterion	0.070658
Sum squared resid	3.678288	Schwarz criterion	0.688965
Log likelihood	19.64374	Hannan-Quinn criter.	0.320501
F-statistic	29.45064	Durbin-Watson stat	1.064884
Prob(F-statistic)	0.000000		

Dependent Variable: V?
Method: Pooled EGLS (Cross-section random effects)
Date: 11/09/15 Time: 22:12
Sample: 2010 2014
Included observations: 5
Cross-sections included: 19
Total pool (balanced) observations: 95
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.559943	1.299284	-2.739926	0.0074
FS?	-0.668121	0.352223	-1.896869	0.0611
ROA?	1.090916	0.484720	2.250609	0.0268
L?	0.015614	0.042178	0.370185	0.7121
S?	0.218780	0.067046	3.263140	0.0016
Random Effects (Cross)				
_1--C	-0.237509			
_2--C	-0.339534			
_3--C	-0.133846			
_4--C	0.489391			
_5--C	-0.181109			
_6--C	0.017546			
_7--C	0.102716			
_8--C	-0.494931			
_9--C	-0.216069			
_10--C	0.197574			
_11--C	-0.278948			
_12--C	0.011327			
_13--C	0.597046			
_14--C	-0.250521			
_15--C	1.027470			
_16--C	-0.452971			
_17--C	-0.388476			
_18--C	0.709983			
_19--C	-0.179140			

Effects Specification				
			S.D.	Rho
Cross-section random			0.401807	0.7596
Idiosyncratic random			0.226025	0.2404
Weighted Statistics				
R-squared	0.194585	Mean dependent var	0.141757	
Adjusted R-squared	0.158789	S.D. dependent var	0.252076	
S.E. of regression	0.231198	Sum squared resid	4.810739	
F-statistic	5.435918	Durbin-Watson stat	0.868668	
Prob(F-statistic)	0.000576			
Unweighted Statistics				
R-squared	0.399607	Mean dependent var	0.581053	
Sum squared resid	22.08154	Durbin-Watson stat	0.189250	

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