Islamic Capital Structure Model: An Interim Analysis

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ABSTRACT

In this paper, a model of Islamic capital structure is formulated in which corporate tax and zakat payment exist by firms into the consideration of combination of debt and equity. The presence of corporate tax shield substitutes for debt such as zakat payment, non-debt tax shield is shown to imply a optimal debt level (with leverage-related costs which is financial distress).Theoretically, the most significant reason that prompt firms to raise debts are due to the tax shield that results fromthe tax savings generated by making interest payments on debt. Nevertheless, since the model of Islamic capital structure take into account the zakat payment, the theoretical model as shown by comparative statics prove the implications which is negatively relationship between leverage of the firm and the corporate zakat payment. In other words, managers tend to react positively to an equity issue as a result of "the zakat payment shield benefit".

Keywords:capital structure, corporate tax, zakat.

INTRODUCTION

In corporate finance there exists a large body of literature that examines the financing behaviour of firms, reflected by their capital structure.The relationship between capital structure and value of a firm has been the most debated issue, may it be in theories or in empirical researches. However,capital structure is defined as the way a firm finances its investment via some combination of equity and debt. Despite being different in nature, debt and equity complement each other as source of finance for firm's investment projects. The main concern is to figure out the best mix of both. Therefore, a motivation of this study is to revisit capital structure theory which it is one of the most important topics in corporate finance.

According to Myers (2001) there is no unifying theory on the choice between debt and equity and no reason to expect one either, there are however several theories that are "conditionally useful" for explaining capital structure choice. One of the most famous theory that could clarifying capital structure policy is trade-off theory.Trade-off theory is one of the most popular variations of Modigliani-Miller theorem. Kraus and Litzenberger (1973) argue that financial leverage is determined by the balance between the tax shield benefits and bankruptcy costs of debts. Since firms do not need to pay tax for debts' interest, thus tax shield exists by taking debts. On the other hand, debts can also bring bankruptcy risk to firms if firms do not have the capacity to refund debts. One of the theory's important purposes is to explain the reason why companies are usually financed partly with debt and partly with equity. It says that there is an advantage to finance with debt.

Theoretically, the most significant reason that prompt firms to raise debts are due to the tax shield that results fromthe tax savings generated by making interest payments on debt. As a result, by using debt, estimatedtax liability of firms could be deducted and thus increase its after-tax cash flow, causing more lucrativebusiness to utilize higher level of debt for the sake of increasing their debt tax shield(Rasiah & Kwee, 2011).

Economic intuition suggests that the position of the taxes in the business environment is an important factor of financing decisions. It is therefore an interesting research question to analyze the impact of taxes factor as determinant on firm's effort to achieve the target capital structure.However, there is an alternative for tax payments which is zakat payment. Until now, most of the theory viewes tax benefits and zakat payments in isolation. Then, the tax deductions and the zakat payment are both expected to influence the capital structure decisions. There is a large theoretical literature on capital structure. From this literature, it can be concluded that corporate tax is an important factor in the capital structure decision.

Until today, a large body of academics have surfaced dealing with the issue how firms should optimally choose their capital structure. Studies emerged attempting to provide a theory that best explains the capital structure puzzle. However, despite the large number of academic research on this issue, no studies considering zakat payment as factor that could influence the composition of capital structure.To face these challenge, this study try to develop the model of Islamic capital structure theory by take into account the zakat payment as factor that could be affect capital structure policy. Despite many theories may explain the conventional capital structure theory. This study will focus on the introduction of zakat in the conventional static trade-off theory developed by Miller (1977) and Bradley *et. al.*(1984).

LITERATURE REVIEW

Capital structure decision is the mix of debt and equity that a company uses to finance its business. The analysis of how companies choose their financing mix has been primarily an empirical question, and such studies have been plentiful in the last decade.The capital structure as the most important parameter in evaluating companies performance must be considered by manager. Even, management has to afford to determine the capital structure due to identify an ideal combination of financial sources in each company, in order to increase the firm value. Choosing an ideal capital's structure means how to decrease firm's costs and increase its value in the market.

Besides that, the impact from the decision will help the firm's ability to deal with its competitive environment. Furthermore, the capital structure of a firm is used by a firm to enhance its firms' value. Thus, a firm's specific strategy should deal with the appropriate mix of debt and equity to finance the firm's investment. Furthermore, theoretical works have brought three main classes of models to test: the trade-off, the pecking order, and the agency hypotheses. Under the trade-off hypothesis, (Bradley et. al., 1984) point out that the firms have a target debt ratio and try to move towards this target. The target leverage ratio occurs when the marginal benefit of tax equals the marginal cost of an additional unit of debt.

Meanwhile, under the pecking order hypothesis, (Baskin, 1989) argues that due to asymmetric information, firms prefer to use retained earnings as their first financing source, followed by debt and, lastly, by equity. Equity is less interesting to firms, given that it entails larger information asymmetry costs, making its issuance more expensive relative to other funding sources. While, under the agency hypothesis, (Gaud, P., *et. al.*, 2005) indicated that firms also face financial distress costs, but the level of debt becomes a governance device due to informational asymmetries and difference in the utility functions of stakeholders.

According to Gleason et al. (2000), the utilization of different levels of debt and equity in the firm's capital structure is one such firm-specific strategy used by managers in the way for improved performance. Hence, most firms have strived to achieve an optimal capital structure in order to minimize the cost of capital or to maximize the firm value, thereby improving its competitive advantage in the marketplace through a mixture of debt and equity financing. Thus, selecting the right type of debt is an equally important issue as opting for an appropriate debt to equity ratio. However, as noted by Myer (2001), each theory works under its own assumptions and propositions, hence, none of the theories can give a complete picture of the practice of capital structure.

Furthermore, the static trade-off theory emerged in the streamline of the path-breaking irrelevance theorem. Static trade-off theory, focus on the repayment and costs of issuing debt, predicts that an attractive target debt ratio is to make the paramount value of the company. The best point can be accomplishs when the marginal value of the payback is linked with debt concerns exactly offsets

the raise in the present value of the costs correlated by handing out more debt, as Myers (2001) point out. Morover, the main benefit of debt is the tax deductibility of interest payments. The tax deduction of corporate interest payments support the application of debt.

The conventional analysis of capital structure states that firms determine their leverage level trading off the advantages against the disadvantages that debt employment provides (Scott, 1976; Bradley et al., 1984). The so-called trade-off theory emerges under this line of reasoning and includes fiscal, financial distress and agency conflicts issues. Concerning the fiscal approach of trade-off theory, Modigliani and Miller corrected their original paper in 1963. Then, they conclude that firms would prefer debt to other financing resources due to the tax deductibility of interest payments. This would induce firms to be completely financed by debt. However, Mateev, et. al. (2013) argued that bankruptcy costs, and other costs associated with debt, could explain why firms were not totally financed by debt. This discussion on the benefits and costs of debt is central to the trade-off theory of capital structure.

Furthermore, the static trade-off theory states that each firm has a well-defined optimal capital structure, which balances the benefits and costs associated with debt financing. The main benefits of debt include (i) tax deductibility gained by taxpaying firms (Modigliani and Miller, 1963), and (ii) advantages of using debt to mitigate the agency costs of equity and the free cash flow problem (e.g. Jensen and Meckling, 1976; Jensen, 1986). The costs of debt can be identified as (i) non-debt tax shields (DeAngelo and Masulis, 1980), and (ii) agency costs of debt due to suboptimal investment behaviour (Jensen and Meckling, 1976), or underinvestment problem (Myers, 1977).

As stressed earlier, the most significant reason that prompt firms to raise debts are due to the tax shield that results from the tax savings generated by making interest payments on debt. As a result, by using debt, estimated tax liability of firms could be deducted and thus increase its after-tax cash flow, causing more lucrative business to utilize higher level of debt for the sake of increasing their debt tax shield. Nonetheless, debt financing not only produce benefit, but also yield costs such as interest, agency costs, bankruptcy cost, etc. Therefore, firms have to considered costs of both debt and equity in order to maximized its value.

Furthermore, Gitman (2003) showed how to maximized firm's value with minimize its cost of capital. He proved it using a modification of the zero growth dividend model to determine the value of the firm:

$$V = EBIT \times (1-T) / k_a$$

where:
V	= the value of the firm
EBIT	= earnings before interest and taxes
T	= tax rate
EBIT x (1-T)	= after tax operating earnings available to debt and equity holders
k_a	= weighted average cost of capital (WACC)

However, it can be concluded that if the earnings of the firm (EBIT) are held constant, the value of the firm (V) will be maximized when the average cost of capital (k_a) is minimized. Then, it can be graphically illustrated as showed Figure1.

[*Insert Figure 1*]

In the depiction on Figure 1, the WACC is a function of the cost of equity and the cost of debt. At a debt ratio of 0% the firm is 100% equity financed. Due to the fact that it is generally cheaper to employ debt financing than equity financing (ki < ks) the WACC declines as more debt is added to the capital structure. As more debt is added costs associated with debt begin to increase and the WACC starts to increase forming a U shape or inflection point beyond which it is no longer sensible or economically viable to add debt to the capital structure of the firm.

However, the determination of debt also be influenced by the existence of other non-debt tax shields such as depreciation, allowances for research and development expenses and investment tax credit. According to DeAnglo and Masulis (1980), indicated that firms with tax deductions for depreciation and investment tax credits can consider these deductions as a substitute for the tax shield. Then, they revealed that there is a negative connection between debt and non-debt tax shield.

Besides, a firm can maximize its value by issuing as much debts as possible, but if the firm is using too much debt in its capital structure, there is a higher possibility that the firm cannot meet its interest and principal payment and will default on its debt obligations. More specifically, a firm that

has difficulty and trouble meeting its debt obligations is in financial distress. However, the static trade-off theory incorporates the bankruptcy and agency costs along with the tax saving benefits in the balance.

Regarding the static trade-off theory, the most significant reason that stimulate firms to raise debts are due to the tax shield that results from the tax savings generated by making interest payments on debt. Hence, by using debt, estimated tax liability of firms could be deducted and thus increase its after-tax cash flow, causing more lucrative business to utilize higher level of debt for the sake of increasing their debt tax shield. Nevertheless, there is any alternative for tax payments namely zakat payment.Until now, the discourse on zakat generally and zakat payment in the business environment in particular has been steadily expanding. But, still few research which considering zakat payment as factor that could influence capital structure decision. However, the tax deductions and the zakat payment are both expected to influence the capital structure decisions.

Furthermore, since Malaysia is the few country in the world, where zakat payments are deducted from the income tax. This study will designate Malaysia as base for construct Islamic capital structure. In 2005, Malaysian government was announced that any corporate zakat paid to State Islamic Religious Councils (SIRCs) will be considered as an allowable deduction. Moreover, Abu Bakar (2007) asserted that more Malaysian companies are becoming aware and more interested in fulfilling their zakat obligation.

Meanwhile, the basic principle of zakat on corporate wealth is based on merchandise goods (`*urud al-tijarah*), namely, anything obtained for the purpose of trading to gain a profit. The wealth becomes *zakatable* once it exceeds the *nisab*, which is calculated as the equivalent monetary value of 85 grams of gold. Once this requirement is met, zakat needs to be paid each year at the rate of 2.5 percent. Moreover, refering to the section 44(11A) of *the Income Tax Act 1967*, in 2005 the Government had allowed the amount of zakat paid by a company is to be treated as deduction of up to 2.5% of the aggregate income. Besides that, zakat on business income paid by the Labuan offshore companies is also given as an income tax rebate. This rebate is equivalent to the amount of business zakat paid to the religious authority that subject to a maximum of 3% of net profit or RM20,000. (*Malaysian Association of Tax Accountants*, 2013).

THEORETICAL MODEL

As already discussed previously, capital structure of the firm is an important thing that must be decided by the managers, as it will ultimately related to the firm value. How does a manager determines the composition of capital structure to be an important task. However, further discussion will be focused on develop of theoretical model that consider the objectives of the study as pointed out earlier, especially in terms of the influence of zakat on capital structure decision.

Furthermore, the theoretical model to develop the relationship between zakat and firm's capital structure is adopted from Bradley et.al. (1984).Several modifications will be introduced. The modifications involved the construction of a static capital structure model in the presence of zakat. In addition, the modifications also incorporated the modes of Islamic debt and equity financings.The model captures the essence of the tax advantage and bankruptcy costs trade-off models of Kraus and Litzenberger (1973), Scott (1976), and Kim (1978); the agency costs of debt arguments of Jensen and Meckling (1978) and Myers (1977); the potential loss of non-debt tax shields in non-default states in DeAngelo and Masulis (1980); the differential personal tax rates between income from stocks and bonds in Miller (1977), and the extensions of Miller's model by DeAngelo and Masulis (1980), Kim (1982), Modigliani (1982), and Bradley et.al. (1984).

However, the model involves zakat payment as Islamic instrument due to modeling of Islamic capital structure. In a nutshell, the model will treat zakat as non-tax shield that expected has effect to finance decision. Regarding the purpose of developing Islamic capital structure, this study employing the original model from Bradley *et.al* (1984), then extends that model with considering zakat payment. More importantly, to develop a model that represents the current state in the theory of optimal capital structure, the following assumptions have to be fulfilled:

1. Investors are risk-neutral.
2. Investors face a progressive tax rate on returns from bonds, t_{pb}, while the firm faces a constant corporate tax rate, t_c , and also faces a constant zakat rate, z_c.
3. Corporate and personal taxes are based on end-of-period wealth; consequently, debt payments (interest & principle) are fully deductible in calculating the firm's end-of-period tax bill, and are fully taxable at the level of the individual bondholder.

4. Equity returns (dividends & capital gains) are taxed at a constant rate, t_{ps}.
5. There exist non-debt tax shield, such as accelerated depreciation and investment tax credits, that reduce the firm's end-of-period tax liability.
6. Negative tax bills (unused tax credits) are not transferrable (saleable) either through time or across firms.
7. The firm will incur various costs associated with financial distress should it fail to meet, in full, the end-of-period payment promised to its bondholders.
8. The firm's end-of-period value before taxes and debt payments, $\hat{X}$, is a random variable. If the firm fails to meet the debt obligation to its bondholder, $\hat{Y}$, the costs associated with financial distress will reduce the value of the firm by a constant fraction k.

Furthermore, under the above assumptions of the model, the uncertain end-of-period pre-tax returns to the firm's stockholders and bondholders can be written as follows:

Cash Flow of Debt and Equity after Corporate Tax and Zakat Payment

$$\hat{Y}_s = \begin{cases} (\hat{X} - \hat{Y})(1 - t_c) + \phi - z_c(\hat{X}), & \hat{X} \geq \hat{Y} + \phi/t_c \\ \hat{X} - \hat{Y} - z_c(\hat{X}), & \hat{Y} \leq \hat{X} < \hat{Y} + \phi/t_c \\ 0, & \hat{X} < \hat{Y} \end{cases} \tag{1}$$

$$\hat{Y}_b = \begin{cases} \hat{Y}, & \hat{X} \geq \hat{Y} \\ \hat{X}(1 - k) - z_c(\hat{X}), & 0 \leq \hat{X} < \hat{Y} \\ 0, & \hat{X} < 0 \end{cases} \tag{2}$$

where

$\hat{Y}_b, \hat{Y}_s$	= the gross end-of-period returns to bondholders and stockholders, respectively,
$\hat{X}$	= The firm's end-of-period value before taxes and debt payments,
$\hat{Y}$	= the total end-of-period promised payment to bondholders,
ϕ	= the total after-tax value of the non-debt shields if they are fully utilized at the end-of-period,
t_c	= corporate tax rate,
z_c	= corporate zakat rate,
k	= costs of financial distress of end-of-period value of the firm.

The model modification above has been incorporate zakat payment as non-tax shield. Zakat payment calculated based on firm's earning before taxes and debt payments. More spesifically, Equation (1) shows that if pre-tax earnings are large enough for the firm to fully utilize the non-debt tax shield (ϕ/t_c), then the gross end-of-period return to stockholders is $(\hat{X} - \hat{Y} - \phi/t_c)(1 - t_c) + \phi/t_c - z_c(\hat{X}) = (\hat{X} - \hat{Y})(1 - t_c) + \phi - z_c(\hat{X})$. Then, if the firm's pre-tax earnings are such that $\hat{X} - \hat{Y} - \phi/t_c < 0$, the firm will pay no tax but still pay zakat, and Assumption 6 implies that the end-of-period return to stockholders is $\hat{X} - \hat{Y} - z_c(\hat{X})$. Meanwhile, the end-of-period pre-tax return to bondholders in Equation (2) follows from Assumption 8 and the fact that bondholders have limited liability in the event that the firm's end-of-period value $\hat{X}$ is negative.

According to Assumption 1, that of risk neutrality, Equations (1) and (2) provide the following beginning-of-period market value of the firm's stocks (S) and bonds (B):

$$S = E(\hat{Y}_s)/E(\tilde{r}_s) = \frac{1 - t_{ps}}{r_o}$$

$$\left[\int_{\hat{Y} + \phi/t_c}^{\infty} [(\hat{X} - \hat{Y})(1 - t_c) + \phi - z_c(\hat{X})]f(\hat{X})d\hat{X} + \int_{\hat{Y}}^{\hat{Y} + \phi/t_c} (\hat{X} - \hat{Y}) - z_c(\hat{X})f(\hat{X})d\hat{X} \right] \tag{3}$$

$$B = E(\hat{Y}_b)/E(\hat{r}_b) = \frac{1 - t_{pb}}{r_o}$$

$$\left[\int_{Y}^{\infty} \hat{Y} f(\hat{X}) \, d(\hat{X}) + \int_{0}^{Y} \hat{X}(1 - k) - z_c(\hat{X}) f(\hat{X}) d(\hat{X}) \right] \tag{4}$$

where

S, B	= the market value of the firm's stocks and bonds, respectively,
$E(\check{r}_s), E(\check{r}_b)$	= one plus the expected pre-tax rate of return from stocks and bonds, respectively,
r_o	= one plus the rate of return on default-free, tax-exempt bonds,
$f(\check{X})$	= probability density of $\check{X}$,
t_{ps}	= equity returns (dividends & capital gains) are taxed at a constant rate,
t_{pb}	= progressive tax rate on returns from bonds.

Furthermore, adding Equation (3) and (4) yields the market value of the firm (V):

$$V = \frac{1}{r_o} \left[(1 - t_{pb}) \int_{0}^{Y} \hat{X}(1 - k) - z_c(\hat{X}) f(\hat{X}) d(\hat{X}) \right.$$
$$+ \int_{Y}^{Y + \phi/t_c} [\{(\hat{X} - \hat{Y}) - z_c(\hat{X})\}(1 - t_{ps}) + \hat{Y}(1 - t_{pb})] f(\hat{X}) d(\hat{X})$$
$$\left. + \int_{Y + \phi/t_c}^{\infty} [\{(\hat{X} - \hat{Y})(1 - t_c) + \phi - z_c(\hat{X})\}(1 - t_{ps}) + \hat{Y}(1 - t_{pb})] f(\hat{X}) d(\hat{X}) \right] \tag{5}$$

Equation (5) shows that the value of the firm is equal to the present value of the sum of three expected values (integrals). The first integral represents the situation in which is $\check{X}$ positive but insufficient to meet its debt obligation. Under this condition, the payment to the firm's bondholders is $\check{X}$ less total costs of financial distress, $k\check{X}$, and then less total zakat payment of the firm's end-of-period value before taxes and debt payments $z_c\check{X}$. Consistent with the assumption of a wealth tax, the payment to the firm's bondholders, net of costs of financial distress, is subject to the personal tax rate t_{pb}.

Thesecondintegral represents the states of world in which the firm's end-of-period pre-tax value, $\check{X}$, is greater than its debt obligation ($\hat{Y}$) but less than the maximum level of earnings that would result in a zero end-of-period corporate tax bill ($\hat{Y} + \phi/t_c$). In these states, the firm has no corporate tax bill; however, the payments to bondholders and stockholders are subject to the personal tax rates. Finally, the third integral defines the after-tax cash flows to the firm's securityholders if earnings are sufficient to pay bondholders and to generate a positive corporate tax liability.

Furthermore, the firm's optimal leverage decision involves setting $\hat{Y}$, the end-of-period payment promised to bondholders, such that the market value of the firm is maximized. Differentiating (5) with respect to $\hat{Y}$ yields the first order condition of Equation (6), where $V_{\hat{Y}}$ is the partial derivative $\partial V/\partial \hat{Y}$.

$$V_{\hat{Y}} = \frac{(1 - t_{pb})}{r_o} \left[\left\{ -k - z_c + \frac{(1 - t_{ps})z_c}{(1 - t_{pb})} \right\} \hat{Y}.f(\hat{Y}) \right. \tag{6}$$
$$\left. + \left\{ (1 - F(\hat{Y})) \left(1 - \frac{(1 - t_{ps})(1 - t_c)}{(1 - t_{pb})} \right) - \frac{(1 - t_{ps})}{(1 - t_{pb})} t_c \left(F\left(\hat{Y} + \frac{\phi}{t_c} \right) - F(\hat{Y}) \right) \right\} \right]$$

where F. is the cumulative of probability density function of $\check{X}$.

The first term in Equation (6) represents the marginal net tax advantage of debt, while the second and third terms represent marginal expected leverage-related costs. The optimal leverage involves balancing the net tax advantege of debt against leverage-related cotsts, non-debt tax shield, and zakat.

Furthermore, in order to know the effect of each variable on capital structure, we can utulize the comparative statics analysis.The comparative statics of the leverage relevancy model can be shown by differentiating the optimally condition (6) with respect to each of the relevant exogenous variables. Differentiating $V_{\hat{Y}}$ in (6) with respect to z_c, k, ϕ, t_{ps} and t_{pb} yields the following cross-partial derivatives:

$$V_{\hat{Y}\phi} = \frac{-(1-t_{ps})f(\hat{Y}+\frac{\Phi}{t_c})}{r_0} < 0 \tag{9}$$

$$V_{\hat{Y}t_{ps}} = \frac{\{[1-F(\hat{Y})]-t_c[1-F(\hat{Y}+\frac{\Phi}{t_c})]\}}{r_0} > \frac{(1-t_c)[1-F(\hat{Y})]}{r_0} > \frac{\hat{Y}.f(\hat{Y})}{r_0} > 0 \tag{10}$$

$$V_{\hat{Y}t_{pb}} = \frac{(-k-z_c)\hat{Y}.f(\hat{Y})-[1-F(\hat{Y})]}{r_0} \tag{11}$$

The cross-partial derivatives in Equations (7), (8) and (9) are negative. An increase in zakat payment, the cost of financial distress and non-debt tax shields will lead to a reduction in the optimal level of debt.Further, the comparative statics provide the following testable implications:

1. The optimal level of debt is inversely related to the corporate zakat payment.
2. The optimal level of debt is inversely related to the costs of financial distress, which include bankruptcy costs and the agency costs of debt.
3. The optimal level of debt is inversely related to the level of non-debt tax shields.
4. The optimal level of debt is positively related to the personal tax rate on equity.
5. The optimal level of debt is inversely related to the marginal bondholder's tax rate.

However, it is supported by DeAngelo and Masulis (1980), they showed a model of corporate tax and differential personal tax, introducing the factor of "non-debt corporate tax shields", referring to "depreciation deductions or investment tax credits" and "depletion allowances". They argue that non-debt corporate tax shields suggest a unique interior optimum leverage decision for each firm in market equilibrium, no matter whether leverage-related costs are present or not. Based on their model, they predict that leverage of the firm is i) positively related to corporate tax rates; ii) negatively related to marginal bankruptcy costs; and iii) negatively related to the non-debt tax shields.

As alluded to earlier, according to the static trade-off theory of capital structure (also referred to as the tax based theory), optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as financial distress and bankruptcy. In view of this conventional theory, issuing equity means moving away from the optimum and should therefore be considered bad news.

Furthermore, since there is any alternative for tax payments namely zakat payment. As stressed earlier, the zakat payment is expected to influence the capital structure decisions. Moreover, the comparative statics prove the implications which is negatively relationship between leverage of the firm and the corporate zakat payment. In other words, managers tend to react positively to an equity issue as a result of "the zakat payment shield benefit".

CONCLUSION

A firm that utilizesa higher debt financing is more likely to pay less tax. The fact that traditionally equity financings are treated less favorably than the debt financings has given rise to the earlier mentioned tax puzzle. The existence of this puzzle was created by the fact that firms pay less tax on one hand and are exposed to bankruptcy in the form of higher interest payment on the other hand. The question on whether zakat is a prior lead to an advantage or to a disadvantage for the utilization of debt financings by firm has given slightly point of light. Managerial option policyis expected to reduce debt financings because they increase the current liabilitiesand alternatively issuing more equityin consequence ofcorporate zakat payment.
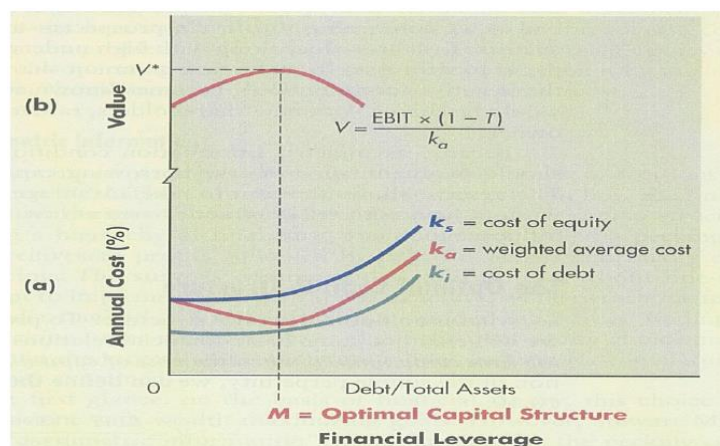
REFERENCES

Abdullah Ibrahim, et.al. 2012. Assessing Financial Report on adopting Business Zakat Guidelines on Malaysian Government Linked Companies. *International Journal of Business and Social Science* Vol.3 No.24.

Abu Bakar, N. B. 2007. A Zakat Accounting Standard (ZAS) for Malaysian Companies. *The American Journal of Islamic Social Science* 24:4, 74-92.

Aggrawal, R. (1981). International Differences in Capital Structure Norms: An Empirical Study of Large European Companies. *Management International Review* 21(1): 75-88.

Akhyar and Abu Bakar. 2009. Accounting Treatment for Corporate Zakat : A Critical Review. *International Journal of Islamic and Middle Eastern Finance and Management*, Vol.2 No.1, pp.32-45.

Almeida, H. and Campello, M. (2007). Financial Constraints, Asset Tangibility, and Corporate Investment. *The Review of Financial Studies* 20: 1429-1460.

Anderson, C.W. & Makhija, A.K. (1999). Deregulation, Disintermediation and Agency Costs of Debt: Evidence from Japan. *Journal of Financial Economics* 51(2): 309-339.

Arellano, M. and Bond S., 1991. Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies* 58, 277–297.

Arellano, M. and Bover, O., 1995. Another Look at the Instrumental Variable Estimation of Error-Component Models. *Journal of Econometrics* 68, 29 – 51.

Blundell, R., Bond, S., 1998. Initial Conditions and Moment Conditions in Dynamic Panel Data Models. *Journal of Econometrics* 87, 115–143.

Booth, L., Aivazian, V., Kunt, A.D. & Maksimovic, V. (2001). Capital Structures in Developing Countries. *The Journal of Finance*: 87-130.

Bradley M., et. al. (1984). On the Existence of an Optimal Capital Structure: Theory and Evidence. The Journal of Finance, Vol. 39 No.3.

Chang, Chun. (1987). Capital Structure as Optimal Contracts. *Working Paper*. Carlson School of Management, University of Minnesota.

DeAngelo, H. & Masulis, R.W. (1980). Optimal Capital Structure Under Corporate and Personal Taxation. *Journal of Financial Economics* 8: 3-29.

Elton, E. & Gruber, M. (1970). Marginal Stockholder Tax Rates and the Clientele Effect. *Review of Economics and Statistics* 52(1): 68-74.

Fama, Eugene F. & French, Kenneth R. (1998). Values versus Growth: The International Evidence. *Journal of Finance* 6: 1975-1997.

Fisher, E., Heinkel, R. & Zechner, J. (1989). Dynamic Capital Structure Choice: Theory and Tests. *The Journal of Finance* 44: 19-40.

Friend, I. & Lang, L.H.P. (1988). An Empirical Test of the Impact of Managerial Self-Interest on Corporate Capital Structure. *Journal of Finance* 43: 271-81.

Ghorbani, N., and Babaei, E., 2014. Exchange Market Algorithm. *Applied Soft Computing* 19.

Ghosh, A., Cai, F. & Li, W. (2000). The Determinants of Capital Structure. *American Business Review* 18(2): 128-132.

Gitman, LJ. (2003). Principles of Managerial Finance. Boston: Addison Wesley, Pearsons Education.

Gonedes, N.J., Lang, L. & Chikaonda, M. (1988). Empirical Results on Managerial Incentives and Capital Structure. *Working Paper*. The Wharton Business School, University of Pennsylvania.

Graham, J.R. (1999). Do Personal Taxes Affect Corporate Financing Decisions?. *Journal of Public Economics* 73(2): 147-185.

Graham, J.R. & Harvey, C.R. (2001). The Theory and Practice of Corporate Finance: Evidence From The Field. *Journal of Financial Economics* 60 (2–3), 187–243.

Guney, Y., Li, Ling & Fairchild, R. (2011). The Relationship between Product Market Competition and Capital Structure in Chinese Listed Firms. *International Review of Financial Analysis* 20: 41-51.

Harris, M. & Raviv, A. (1991). The Theory of Capital Structure. *Journal of Finance* 46: 297-355.

Haugen, Robert A. & Senbet, Lemma W. (1978). The Insignificance of Bankruptcy Costs to the Theory of Optimal Capital Structure. *Journal of Finance* 33: 383-393.

Hook, Law Siong. (2012). Dynamic Panel Data. *Panel Data Analysis Workshop*, Universiti Sains Malaysia, November 28-29.

Ibrahim, T. E. 2007. Determinants of Corporate Capital Structure: Evidence from an Emerging Economy. *International Journal of Commerce and Management*, Vol. 17, No. 1/2, pp. 25-43

Jong, Abe de., Kabir, R. & Nguyen, T.T. (2008). Capital Structure around the World: the Roles of Firm- and Country-Specific Determinants. *Journal of Banking and Finance* 32: 1954-1969.

Jong, Abe de., Verbeek, M. & Verwijmeren, P. (2011). Firms' Debt-Equity Decisions when the Static Tradeoff Theory and the Pecking Order Theory Disagree. *Journal of Banking and Finance* 35: 1303-1314.

Kayo, Eduardo K. & Kimura, Herbert (2011). Hierarchical Determinants of Capital Structure. *Journal of Banking & Finance* 35: 358-371.

Kester, W. Carl. (1986). Capital and Ownership Structure: A Comparison of United States and Japanese Manufacturing Corporations. *Financial Management* 15 (Spring): 5-16.

Kraus, Alan and Litzenberg, R.H. (1973). A State-Preference Model of Optimal Financial Leverage. *Journal of Finance* 28; 911-922.

Kunt, Demirgüç Asli & Maksimovic, Vojislav. (1999). Institutions, Financial Markets and Firm Debt Maturity. *Journal of Financial Economics* 54: 295-336.

Mateev, M., Poutziouris, P. & Ivanov, K. (2013). On the Determinants of SME Capital Structure in Central and Eastern Europe: a Dynamic Panel Analysis. *Research in International Business and Finance* 27: 28-51.

Mackie-Mason, J. (1990). Do Taxes Affect Corporate Financing Decisions?. *Journal of Finance* 45: 1471-1494.

McMillan, David G. & Camara, Omar. (2012). Dynamic Capital Structure Adjustment: US MNCs & DCs. *Journal of Multinational Financial Management* 22: 278-301.

Miller, M. (1977). Debt and Taxes. *The Journal of Finance* 32(2): 261-275.

Modigliani, Franco & Miller, Merton H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review* 48, No. 3 (June): 261-297.

Myers, S. C. (1984). The Capital Structure Puzzle. *Journal of Finance* 39 (July): 575-592.

Myers, S. C. and Majluf, N. S. (1984). Corporate Financing and Investment Decisions
When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics* 13: 187-221.

Naidu, G. N. (1986). Capital Structure Strategies of Australian and South African Firms. *Management International Review* 26(2): 52-61.

Ndiaye, Alione. (2007). Islamic Charities in Switzerland and the Practice of Zakat. PSIO Occasional Paper 2.

Qian, Y., Tian, Y. & Wirjanto, T.S. (2009). Do Chinese Publicly Listed Companies Adjust Their Capital Structure toward a Target Level?. *China Economic Review* 20: 662-676.

Rajan, R.G & Zingales, L. (1995). What Do We Know About Capital Structure? Some Evidence from International Data. *Journal of Finance* 50: 1421-1460.

Shyam Sunder, L. & Myers, S.C. (1999). Testing Static Tradeoff Against Pecking Order Models of Capital Structure. *Journal of Financial Economics* 51: 219-244.

Tongkong, Supa (2012). Key Factors Influencing Capital Structure Decision and Its Speed of Adjustment of Thai Listed Real Estate Companies. *Procedia – Social and Behavioral Sciences* 40: 716-720.

Titman, S. & Wessels, R. (1988). The Determinants of Capital Structure Choice. *Journal of Finance* 32: 1467-1484.

Vareto, Franco. 1998. Genetic Algorithms Applications in the Analysis of Insolvency Risk. *Journal of Banking and Finance* 22.

Voutsinas, Konstantinos & Werner, Richard A. (2011). Credit Supply and Corporate Capital Structure: Evidence from Japan. *International Review of Financial Analysis* 20: 230-334.

Yang, J., Davis, G. C. & Leatham, D. J. (2001). Impact of Interest Rate Swaps on Corporate Capital Structure: An Empirical Investigation. *Applied Financial Economics* 11: 75-81.

FIGURE 1.: Optimal Capital Structure

Source: Gitman (2003)