CSCanada
International Business and Management
Vol. 14, No. 2, 2017, pp. 29-42
DOI:10.3968/9188

ISSN 1923-841X [Print]
ISSN 1923-8428 [Online]
www.cscanada.net
www.cscanada.org

The Capital Structure Conundrum: Revisited in the Literature

Md. Bokhtiar Hasan[a],*

[a]Assistant Professor, Department of Finance & Banking, Islamic University, Kushtia, Bangladesh.
*Corresponding author.

Received 15 January 2017; accepted 19 March 2017
Published online 26 April 2017

Abstract

The study begins with surveying the capital structure theories ranging from MM irrelevance to the latest theories. The survey mainly revolves around four recognized theories of capital structure; the trade-off theory, agency costs theory, pecking order theory, and market timing theory. However, the principal objectives of the study are to investigate the empirical evidences of relevant theories and identify the major determinants of capital structure. The survey takes place both in developed as well as developing countries. The results of survey unveil that each theory, in isolation, fails to gain consensus in explaining the capital structure phenomenon. Rather it seems that the theories, in most cases, are complimentary. Even though the two theories; trade-off and pecking order; have surely some supremacy over others, the recent performance of market timing theory puts other theories into challenge. Amid many determinants of capital structure, this study spots six determinants; profitability, assets tangibility, firm's size, agency costs, firm's growth, and market timing as significant ones. But, profitability, agency costs, and market timing are evidently sought to be superior determinants of capital structure choices. Thus, it appears that the capital structure conundrum still remains.

Key words: Capital structure; The trade-off theory; Agency costs theory; Pecking order theory; Market timing theory; Determinants

Hasan, M. B. (2017). The Capital Structure Conundrum: Revisited in the Literature. *International Business and Management, 14*(2), 29-42. Available from: http://www.cscanada.net/index.php/ibm/article/view/9188
DOI: http://dx.doi.org/10.3968/9188

INTRODUCTION

In general, capital structure is the blending of debt and equity that a firm uses to finance its overall operation and growth. Here debt refers to usually long-term debt, but it may also include specific short-term debt. Preferred stocks and retained earnings may also be included in the capital structure. Capital structure is a very controversial issue in corporate finance (Akinyomi & Olagunju, 2013). Many researchers and academicians attempted to perform many researches with an eye to find out the answers of several questions regarding capital structure: Has capital structure any impact on firm's performance, or is capital structure relevant to firm's value, or have the financial managers any choices on capital structure policy? But until 1958, no one can address this issue suitably (Hasan et al., 2014). However, it gets water following "the capital structure irrelevance theory" as proposed by Modigliani and Miller (1958) (shortly called "MM theory"). Subsequent this proposition a wide range of theoretical and empirical studies have been conducted to investigate on the various issues of the capital structure, but these direct to different and often contentious results (Frentzel, 2013). Even with the pretty discussion, the understanding about how the firms make their financing choices and what determines corporate capital structure is still imprecise. It continues drawing attention of the researchers as one of the hot issues in finance. Accordingly, this also directs me to instigate this study. This is a literature survey type research. This study principally surveys the existing literatures and amasses the results of those studies. Subsequently, these results are compared to existing theories in order to justify whether these theories have any empirical evidence or not.

In essence, the study is inspired from the very popular survey on capital structure theory by Harris and Raviv (1991). Albeit their study focuses on diverse aspects of capital structure theories, the main focus of their study is to find empirical evidence and relevant determinants

of capital structure. Accordingly, our study has some intuitive features. First, the survey will be investigated for two sub-periods: early and current periods. Then, the study also looks into the relevant evidence in the developing countries couple with developed ones. Another feature is that evidence will be inspected on the basis of favorable, unfavorable and mixed results of the relevant studies. Nonetheless, this study has three-fold objectives. First, the study will investigate the empirical evidence relevant to major capital structure theories. Second, it will provide the findings from the investigation. And finally the study will offer some observations if any. From the survey of empirical evidence, the paper unfolds that no theory, in isolation, can expound the capital structure issue suitably, which evidences the existence of capital structure paradox.

The rest of this paper is organized as follows. Section 1 will diagnose the major theories of capital structure. Section 2 will discuss data and methodology. In section 3 we will present the evidence relevant to theories. Finally, section 4 will provide conclusions and recommendation.

1. DIAGNOSIS OF THE CAPITAL STRUCTURE THEORIES

After MM Irrelevance and relevance theories (1958 and 1963) four recognized alternative theories: the trade-off theory, agency costs theory, pecking order theory, and market timing theory; have come up to now (Vergas et al., 2015). Before proceeding to weighty investigation about capital structure we need to overview the relevant theories. This section will diagnose all the major theories of capital structure.

1.1 The Irrelevancy Theory of Capital Structure - Modigliani and Miller

Prior to 1958, not a single theory got triumphant to address the capital structure issue aptly. In 1958, Modigliani and Miller proposed a theory called "irrelevance theory of capital structure" shortly "MM theory". This theory is called most influential in finance (Weston & Brigham, 1990). MM theory is rested on some impractical assumptions particularly the assumption of perfect capital markets. If these assumptions hold true, they prove that capital structure is immaterial to shareholders of a firm as because it does not make any impact on firm's value. Hence the following situation must exist:

$$V_L = V_U = S_L + D .$$

Here V_L is the value of a levered firm, which is equal to V_U, the value of an identical but unlevered firm. S_L is the value of the levered firm's stock, and D is the value of its debt.

Albeit MM theory is rested on some impractical assumptions, this theory provides us a basis to perform research on capital structure. Later Modigliani and Miller (1963) revised their earlier theory by relaxing the assumption of no corporate taxes and show that the value of a firm increases with more debt due to the tax shield gained on interest payment of debt.

$$V_L = V_U + TD .$$

Here TD is product of corporate tax and amount of debt.

This implies that with a tax rate of about 45%, employment of every dollar of debt adds about 45 cents of value to the firm, and this leads to the conclusion that the optimal capital structure is virtually 100% debt.

1.2 The Trade-Off Theory

The trade-off theory is an expansion of the MM theorem with taking consideration the effects of taxes and bankruptcy costs. The classical version of the hypothesis goes back to Kraus and Litzenberger (1973). However, the theory assumes that firms trade off the benefits of debt financing (favorable corporate tax treatment) against the higher interest rates and bankruptcy costs and find an optimal capital structure – that mixer at which firm's value will be maximized. The theory also adds that profitable firms can borrow more up to a certain level, because after then the profitability and the value of the firm will reduce due to interaction of bankruptcy costs and agency costs. Certainly the trade-off theory dominates the literature on capital structure claims that the optimal capital structure can be obtained by balancing the losses and gains of debt (Myers, 1977).

1.3 The Agency Costs Theory

Jensen and Meckling (1976) expand the M&M view through developing agency costs theory. They assume that agency problems may occur if shareholders and managers have different objectives. Such conflicts are particularly likely when the firm's managers have too much cash at their disposal. Managers often use excess cash to finance pet projects or for perquisites that may lead to reduce firm's value (Weston & Brigham, 1990). By contrast, managers with limited "excess cash flow" are less able to make such wasteful expenditures. Thus, the use of debt capital will minimize the agency cost since the payment of debt interest diminishes the surplus cash.

1.4 The Pecking Order Theory

In contrast to the trade-off theory, Myers and Majluf (1984) developed the pecking order theory which assumes that there is no optimal capital structure. Instead the theory states that firms have a preferred hierarchy for financing choices. The theory is based on the idea of asymmetric information between firm's managers and investors. Asymmetric information implies that firm's managers have more information about the firm's operations, riskiness, and future prospects than investors have. In this case, it becomes tough for firm's managers to persuade investors about the true value of their firm especially about the firm's future prospect (Miglo, 2010). Therefore, it is likely that the market undervalues firm's

shares as investors have less information to accurately value the securities issued. This makes raising new equity very costly (Weston & Brigham, 1990). To evade the underinvestment problem, managers will look for financing the new project using a security that is not undervalued by the market (Cotei & Farhat, 2009).

Thus, Myers and Majluf (1984) propose a hierarchy for financing; implying that a firm first raises capital internally from retained earnings and selling off its short-term marketable securities. Then, the firm will issue debt and preferred stock provided that the first source has been exhausted. Finally the firm will issue new stock only as a last resort.

1.5 The Market Timing Theory

Lately, Baker and Wurgler (2002) have proposed a new theory of capital structure named "market timing theory of capital structure" which is based on the assumption that firm picks the financing source that is most cost efficient at the point in time fund is required. Hence, managers can increase current shareholder's wealth by timing the issue of securities meaning that firms sell new stocks when the stock price is perceived to be overvalued, and buying back own shares of stocks when they are undervalued. Therefore, stock price variation is a deciding factor that affects firm's capital structures decision.

Manager first release positive information which reduces the asymmetry problem between the firm's management and stockholders prior to issuing equity. Reduce in information asymmetry will increase the stock price (Luigi & Sorin, 2009). This implies that firms create their own timing opportunities to finance their project.

2. DATA AND METHODOLOGY

This study is a literature survey type. After diagnosing the different theories of capital structure, we review the existing empirical evidence with a view to find out each theory's relative strength. Another objective of this study is to mark the significant determinants of capital structure. We also look for any new dimension regarding the theories that have recently been discovered. Albeit the study covers the literatures that published from 1958 (following MM theory) up to September, 2016, the study puts special focus on recent literatures. In addition, the survey finds evidence in both developed as well as developing countries with a view of making consensus regarding capital structure issue.

3. THE EVIDENCE

MM theory opened the door for researchers to conduct their researches on various issues of capital structure. After that extensive researches have been conducted to unearth the relationship between capital structure and firm's performance in the world and the trend is still continuing. However, the study will search for evidence pertinent to four theories; the trade-off theory, agency costs theory, pecking order theory, and market timing theory.

3.1 The Trade-Off Theory

Most of the initial researches on capital structure support the idea of an optimal capital structure i.e.; trade-off theory (Barclay & Smith, 2005). At the early, Mayers (1977), Miller (1977), Ross (1977), Leland and file (1977), Heinkel (1982), Blazenko (1987), John (1987), Dammon and Senbet (1988), Noe (1988), Narayanan (1988), Poitevin (1989), Ravid and Sarig (1989), Hirshleifer and Thakor (1989), Harris and Raviv (1990a), Stulz (1990), Roden and Lewellen (1995), Champion (1999), Ghosh et al. (2000), Fernandez (2001), Hovakimian (2001), and Hadlock and James (2002) find a significant and positive relationship between profitability and capital structure. This positive relationship refers that the more debt in the capital structure causes the more performance of the firm. Certainly these evidences support trade-off theory.

Harris and Raviv (1991) conduct a huge survey on literature of capital structure studies since 1958 to 1991. They integrate the results of these studies and find that leverage decreases with volatility, advertising expenditures, research and development expenditures, bankruptcy probability, profitability and uniqueness of the product and increases with fixed assets, non-debt tax shields, growth opportunities, and firm size.

In recent, Margaritis and Psillaki (2010) evidence a significant positive relation between leverage and performance of French firms. Matemilola et al. (2011), Warokka et al. (2011), Samuel (2013), Aliakbar et al. (2013), and Nguyen and Nguyen (2015) got the same result in African, Malaysian, Iranian Vietnam firms respectively. Hasan et al. (2014) get positive relation between short term debt and firm's performance as measured by EPS in Bangladesh.

In contrast, a rigorous study was performed by Titman and Wessels (1988) to find out the determinants of capital structure. They find negative relation between profitability and all types of debts. Rajan and Zingales (1995) also investigate the capital structure of US firms and reveal that there is a negative relation between profitability and debt-level, and the relationship would be more visible if the firm size is big. A number of researches support this relationship. For example; Kester (1986), Chang (1987), Friend and Lang (1988), Fama and French (1998), Gonedes et al. (1998), Shyam-Sunder and Myers (1999), Simerly and Li (2000), Gleason et al. (2000), Booth et al. (2001), Pandey (2001), and Fama and French (2002) confirm a significant negative relation between the debt and profitability in their studies. This negative relation between debt and profitability evidently certify against the trade-off theory.

In recent studies, Berger and Bonaccorsi di Patti (2006), Barclay et al. (2006), Frank and Goyal (2007), Athula et al. (2011), Nor and Fatihah (2012), Shubita and Alsawalhah (2012), Iavorskyi (2013), Amos and Jeremiah (2013), Canarella et al. (2014), Gharaibeh (2015), and Hamid et al. (2015) also validate the negative relation between the debt and profitability.

Ramadan (2015) finds negative relationship between profitability and debt which is not consistent with tradeoff theory, but the positive relationship between firm's size and leverage evidences the tradeoff theory.

Some authors reveal mixed results. Kinsman and Newman (1998) investigate the relationship between debt level and firm's performance and uncover that earnings are negatively correlated with short-term debt, but positively related with long-term debt. A similar result was found by Mesquita and Lara (2003), Abor (2005), Zeitun and Tian (2007), and Salim and Yadav (2012) in Brazil, Ghana, Jordan and Malaysia respectively. On the other hand, Hasan et al. (2014) expose that earnings are positively associated with short-term debt, but negatively associated with long-term debt.

Tianyu (2013) inspect the relationship between capital structure and firm's performance in both developed (Germany & Sweden) and developing countries (China). He observes that capital structure tends to be negatively correlated with firm's performance in developing countries (e.g. in China) whereas, positively correlated with the same in developed countries (e.g. two European countries).

Alternatively, some scholars obtain weak to no relation; e.g. Phillips and Sipahioglu (2004) evidence that there is no significant relation between capital structure and firm's performance in UK. Ibrahim (2009) also confirms the result in Egypt.

A number of authors find asset tangibility and firm's size as influential factors in determining capital structure of a firm. A significant positive relationship between asset tangibility and firm's capital structure was unearthed by Myers (1977, 1984), Titman and Wessels (1988), Rajan and Zingales (1995), Shyam-Sunder and Myers (1999), and Baker and Wurgler (2002). They opine that companies having comparatively high level of tangible assets are less likely to be default and will have more ability to secure debts which may lead to this positive relationship. But studies in developing countries reveal mixed results. For example; Wiwattanakantang (1999) evidences a positive relationship between tangibility and capital structure in Thailand whereas negative relation is exposed by Booth et al. (2001) in ten developing countries and Huang and Song (2002) in China.

In recent, Barclay et al. (2006), Brown and Marble (2007), and Harrison et al. (2010) reveal that asset tangibility is positively related to leverage, while profitability and market-to-book ratios are negatively related. Finally they concluded that their finding supports trade-off theory. Skoogh and Swärd (2015) also uncover positive relationship between tangibility and capital structure. They also added that even though their findings do not support any single theory uniformly, they identify the trade-off theory as the finest theory of capital structure.

The firm's size can also be a significant determinant of capital structure. But the relation between capital structure and firm's size can be either positive or negative. For example, Marsh (1982), Oliner and Rudebusch (1992), Hamaifer et al. (1994), Rajan and Zingales (1995), Wald (1999), Anderson and Makhija (1999), Booth et al. (2001), and Pandey, (2001) get positive relationship between them. This positive relationship leads to the existence of trade-off theory (Pandey, 2001). This positive relationship is also evidenced in developing countries by Wiwattanakantang (1999), Booth et al. (2002), Pandey (2001), and Huang and Song (2002). In contrast, a significant negative relation is unearthed by Kester (1986), Kim and Sorensen (1986), and Titman and Wessels (1988). Some researchers get mixed results. Bevan and Danbolt (2002), Caesar and Holmes (2003), and Esperanca et al. (2003) find that size is negatively related to short term debt, but positively related to long term debts.

Recent studies also expose positive relationship between capital structure and firm's size; such as; Gharaibeh (2015), Sanusi and Taha (2015), and Didier (2016) for instance.

Byoun (2007) reveals that although both small and large firms have low debt ratio, causes are different. Large firms prefer to finance from internal sources; e. g. retained earring; while small firms do not depend on internal funds rather rely on supplementary equity financing. Finally, he winds up that these findings neither evidence of the pecking order theory nor the tradeoff theory. Fareed et al. (2014) discover that debt has negative relation with profitability whilst positive relation with tangibility, firm size, and growth, which validate the static trade off theory.

3.2 The Agency Costs Theory

Following the agency costs theory as developed by Jensen and Meckling (1976), a number of researchers conduct testing of this theory. Mixed results are detected in their studies. Some authors find that agency costs can be trimmed down by the use of more debt in the capital structure; i.e. supporting agency cost theory. At the early, Grossman and Hart (1982), Jensen (1986), Williams (1987), Rajan and Winton (1995), Agrawal and knoeber (1996), Stulz (2000), Ang et al. (2000), Berger and Patti (2002), Li and Cui (2003), and Florackis and Ozkan (2004) evidence negative relation between debt and agency cost and accordingly support the agency cost theory.

In line with early studies, recent studies conducted by Berger and Bonaccorsi di Patti (2006), Margaritis and Psillaki (2007), Zhang and LI (2008), McKnight and Weir

(2009), Xiao (2009), Pratheepkanth (2011), Chang et al. (2012), Gul et al. (2012), Siddiqui et al. (2013), Kokoreva and Ulugova (2013), Rakesh and Lakshmi (2013), Mohammed (2013), and Zheng (2013) also demonstrate negative relationship between debt and agency cost. In contrary, Onsomu (2013) and Chechet and Olayiwola (2014) found positive relation between leverage and the agency cost which evidence against agency cost theory. Likewise, Brounen et al. (2006) conduct an inspection regarding managers in European countries and reveal no relation between capital structure and agency costs. Therefore, the role of debt in diminishing agency costs has no consensus (Florackis & Ozkan, 2004).

Agency cost theory is also evidenced in Developing countries; e.g. Bundala (2012) in Tanzania et al. (2013) in India, and Umer (2014) in Ethiopia.

Rajan and Winton (1995) and Stulz (2000) demonstrate that short term debt can be a useful tool to control management, which will direct to check agency costs.

Kim and Sorensen (1986) and Titman and Wessels (1988) reveal that growing firms tend to have high agency costs and therefore firm's growth and financial leverage is expected to be inversely related. This negative relation is also expounded by Rajan and Zingales (1995), De Miguel and Pindado (2001), Chen and Jiang (2001), Bevan and Danbolt (2001), Drobetz and Fix (2003), Nguyen and Neelakantan (2006), Cheng and Green (2008), and Green and Murinde (2008). On the other hand, positive relation between leverage and firm's growth is revealed by Chang and Rhee (1990), Banerjee et al. (2000), Fattouh et al. (2002), Schargrodsky (2002), and Singh and Davidson (2003).

Berger and Bonaccorsi di Patti (2006) test agency cost theory through making link between leverage and firm performance of U.S. banking industry. They find that leverage is positively connected with the firm performance which justifies the agency cost theory. Using the same methodology Margaritis and Psillaki (2007) also support the agency cost theory.

3.3 The Pecking Order Theory

Subsequent the development of pecking order theory by Myers and Majluf (1984), many researchers investigate to test this theory and evidence in favor of the pecking order theory. At the beginning, Krasker (1986), Narayanan (1988), Noe (1988), Constantinides and Grundy (1989), Baskin (1989), Wilbricht (1989), Cadsby et al. (1990), Dybvig and Zender (1991), Claggett (1991), Jensen et al. (1992), Persons (1994), Vogt (1994), Jung et al. (1996), Cadsby et al. (1998), Shyam-Sunder and Myers (1999), Fulghieri and Lukin (2001), Pandey (2001), Watson and Wilson (2002), Lemmon and Zender (2004), Xueping Wu et al (2004), Zhao et al. (2004), and Ghosh and Cai (2004), all confirm this theory.

Recent studies also get evidence in favor of this theory. For example; Gaud et al. (2005), Leary and Roberts (2005), Akhtar and Oliver (2006), Beattie et al. (2006), Brounen et al. (2006), Aggarwal and Zong (2006), Raj Aggarwal et al (2006), Ursel (2007), Cole (2008), Jong et al. (2009), Karadeniz et al (2009), Ahmed et al. (2009), Bharath et al. (2009), De Jong et al. (2011), Tucker and Stoja (2011), Rödel (2013), Canarella et al. (2014), Hasan et al. (2014), and Laisi (2016). They all find the validity of pecking order in their studies.

This theory is successfully tested in developing countries too; such as; Booth et al. (2001) in 10 developing countries, Pandey (2001) in Malaysia, Tong and Green (2007) in China, Ahmed et al. (2009) in Malaysia, Saarani and Shahadan (2013) in Malaysia, Hasan et al. (2014) in Bangladesh, Koksal and Orman (2014) in Turkey, Acaravci (2015) in Turkey, Jantarakolica and Sakayachiwakit (2015) in Thailand, Indonesia, Malaysia, and Philippines, and Bhama et al. (2016) in India.

However, some studies investigated by Helwege and Liang (1996), Seifert and Gonenc (2008), Leary and Roberts (2008), Machielsen (2013), and Khan and Adom (2015) notice very little evidence for the pecking order theory.

In contrary, many researchers reveal no evidence in favor of the pecking order theory. For example, Jalilvand and Harris (1984), Auerbach (1985), Long and Malitz (1985), Brennan and Kraus (1987), Noe (1988), Constantinides and Grundy (1989), Smith and Watts (1992), Opler and Titman (1994), Helwege and Liang (1996), Vilasuso and Minkler 2001, Fama and French (2002), and Frank and Goyal (2003). They all disagree with the behavior of pecking order theory in their respective studies. Latest studies as examined by Fama and French (2005), Gaud et al. (2007), Seifert and Gonenc (2008), Harrison et al. (2010), and Vasiliou and Daskalakis (2009) also refute the pecking order theory.

Based on their empirical results, Gaud et al. (2005), Ghosh and Cai (2004), and Tucker and Stoja (2011), all suggest for both trade-off and pecking order theories, whereas Graham and Harvey (2001), Prasad et al. (2001), and Fama and French (2002) substantiate assorted and vague results regarding to this theory.

3.4 The Market Timing Theory

Prior to market timing theory of Baker and Wurgler (2002), a number of studies informally identify this market timing as an explanatory factor in capital structure choices. For example, Taggart (1977), Marsh (1982), Jalilvand and Harris (1984), Asquith and Mullins (1986), Korajczyk et al. (1991), Choe, et al. (1993), Rajan and Zingales (1995), Bayless and Chaplinsky (1996), Pagano et al. (1998), Hovakimian et al. (2001), and Graham and Harvey (2001). They all examine the firm's timing manner indirectly and majority studies discover the validation of equity market timing (Kaya, 2007). However, the market timing theory gets

recognition following the theory of Baker and Wurgler (2002).

At the early, Korajczyk and Levy (2002), Huang and Ritter (2004), Flannery and Rangan (2004), Hovakimian et al. (2004), Elliott et al. (2004b), Chang et al. (2006), O'Brien, et al. (2007), Mahajan and Tartaroglu (2008), Harrison et al. (2010), Kim and Weisbach (2008), and Vasiliou and Daskalakis (2009) examine the firm's market timing behavior and their findings are consistent with Baker and Wurgler (2002) theory. Some studies uncover the existence of market timing effect on capital structure decision, even though this effect is momentary. For instance, Roberts and Leary (2005), Alti (2006), Hovakimian (2006), Flannery and Rangan (2006), Kaya (2007), and Kayhan and Titman (2007), they all agree with the equity market timing, but they suggest that the influence of market timing on capital structure decision is provisional.

Current studies as conducted by Guney and Iqbal-Hussain (2010), Alti and Sulaeman (2012), Arosa et al. (2012), Gomes and Phillips (2012), Canarella et al. (2014), Dani et al. (2016), and Kim et al. (2016) also corroborate the market timing theory. In addition, this market timing behavior is also exposed in developing countries; such as; Ni et al. (2009) in china, Chichti and Bougatef (2010) in Tunisia, Setyawan and Frensidy (2013) in Indonesia, and Khanna et al. (2014) in India.

Conversely, several studies find no strong evidence in support of the market timing theory. For example, Alti (2003), Bie and Haan (2004), Leary and Robert (2005), Chen and Zhao (2005), Mahajan and Tartaroglu (2008), Brendea (2012), Çelik and Akarim (2013), Russel and Hung (2013), Dierker et al. (2015), Kargar et al. (2015), and Shumilovskaya (2016). They stumble on either very little and inconsistent or no evidence of market timing behavior in their respective studies.

On the other hand, the findings of Hovakimian et al. (2014), and Kim et al. (2016) evidence for both pecking order and market timing theories.

CONCLUSION

From the above the survey analysis, it seems that the puzzle of capital structure still remains. It also appears obvious that a single theory cannot explain capital structure phenomenon completely, since all the four theories have both favorable and unfavorable evidences. Rather the theories, in most cases, are complimentary (Harris & Raviv, 1991). But, the two theories; trade-off and pecking order; have surely some preeminence over others. However, the results of the above analysis are summarized in the below Tables 1 to 10. The first four tables present the results of the empirical evidences of the four theories and the rest of the six tables show the empirical evidences of the determinants of capital structure choices. The survey uncovers that different studies conducted in different countries and even in the same county regarding the same issue of capital structure exhibit different results. These studies, therefore, fail to revive a consensus on capital structure theories.

Table 1
Results of Empirical Evidence of Trade-Off Theory of Capital Structure

Name of the theories	Empirical results	References
Trade-off theory	Favorable	Early Studies: Mayers (1977, 1984), Miller (1977), Ross (1977), Leland & file (1977), Marsh (1982), Heinkel (1982), Blazenko (1987), John (1987), Dammon & Senbet (1988), Noe (1988), Narayanan (1988), Poitevin (1989), Ravid and Sarig (1989), Hirshleifer & Thakor (1989), Harris & Raviv (1990a), Stulz (1990), Oliner & Rudebusch (1992), Hamaifer et al. (1994), Roden & Lewellen (1995), Champion (1999), Wiwattanakantang (1999), Wald (1999), Anderson & Makhija (1999), Ghosh et al. (2000), Fernandez (2001), Hovakimian (2001), Hadlock & James (2002), Brown & Marble (2007), Harrison et al. (2010), Margaritis & Psillaki (2010), Matemilola et al. (2011), Warokka et al. (2011), Samuel (2013), Aliakbar et al. (2013), Skoogh & Swärd (2015), Nguyen & Nguyen (2015), Gharaibeh (2015), Sanusi and Taha (2015), Didier (2016) .
	Unfavorable	Kester (1986), Kim and Sorensen (1986), Chang (1987), Friend & Lang (1988), Fama & French (1998) Gonedes et al. (1998), Simerly & Li (2000), Gleason et al. (2000), Fama & French (2002), Berger & Bonaccorsi di Patti (2006), Byoun (2007), Frank & Goyal (2007), Athula et al. (2011), Nor & Fatihah (2012), Shubita & Alsawalhah (2012), Iavorskyi (2013), Amos & Jeremiah (2013), Canarella et al. (2014), Gharaibeh (2015), Hamid et al. (2015)
	Mixed	Titman & Wessels (1988), Rajan & Zingales (1995), Kinsman & Newman (1998), Shyam-Sunder & Myers (1999), Pandey (2001), Booth et al. (2001), Bevan & Danbolt (2002), Caesar & Holmes (2003), Esperanca et al. (2003), Mesquita & Lara (2003), Abor (2005), Barclay et al. (2006), Zeitun & Tian (2007), Salim & Yadav (2012), Fareed et al. (2014), Hasan et al. (2014), Ramadan (2015)

Table 2
Results of Empirical Evidence of Agency Theory of Capital Structure

Name of the theories	Empirical results	References
Agency costs theory	Favorable	Grossman & Hart (1982), Jensen (1986), Kim & Sorensen (1986), Williams (1987), Titman & Wessels (1988), Rajan & Winton (1995), Rajan & Zingales (1995), Agrawal & knoeber (1996), Stulz (2000), Ang et al. (2000), De Miguel & Pindado (2001), Chen and Jiang (2001), Bevan & Danbolt (2001), Berger & Patti (2002), Li & Cui (2003), Florackis and Ozkan (2004), Berger & Bonaccorsi di Patti (2006), Margaritis & Psillaki (2007), Zhang and LI (2008), McKnight & Weir (2009), Xiao (2009), Pratheepkanth (2011), Chang et al. (2012), Gul et al. (2012), Bundala (2012), Tanzania et al. (2013), Siddiqui et al. (2013), Kokoreva & Ulugova (2013), Lakshmi (2013), Mohammed (2013), Zheng (2013), Umer (2014)
	Unfavorable	Chang & Rhee (1990), Banerjee et al. (2000), Fattouh et al. (2002), Schargrodsky (2002), Sign and Davidson (2003), Onsomu (2013), Chechet & Olayiwola (2014), Brounen et al. (2006), Florackis & Ozkan (2004),
	Mixed	

Table 3
Results of Empirical Evidence of Pecking Order Theory of Capital Structure

Name of the theories	Empirical results	References
Pecking order theory	Favorable	Krasker (1986), Narayanan (1988), Noe (1988), Constantinides & Grundy (1989), Baskin (1989), Wilbricht (1989), Cadsby et al. (1990), Dybvig & Zender (1991), Claggett (1991), Jensen et al. (1992), Persons (1994), Vogt (1994), Jung et al. (1996), Cadsby et al. (1998), Shyam-Sunder & Myers (1999), Fulghieri & Lukin (2001), Booth et al. (2001), Pandey (2001), Watson & Wilson (2002), Lemmon & Zender (2004), Wu et al (2004), Zhao et al. (2004), Ghosh & Cai (2004), Gaud et al. (2005), Leary & Roberts (2005), Akhtar & Oliver (2006), Beattie et al. (2006), Brounen et al. (2006), Aggarwal & Zong (2006), Raj Aggarwal et al. (2006), Ursel (2007), Tong & Green (2007), Cole (2008), Jong et al. (2009), Karadeniz et al. (2009), Ahmed et al. (2009), Bharath et al. (2009), De Jong et al. (2011), Tucker & Stoja (2011), Rödel (2013), Saarani & Shahadan (2013), Canarella et al. (2014), Koksal & Orman (2014), Hasan et al. (2014), Acaravci (2015), Jantarakolica & Sakayachiwakit (2015), Bhama et al. (2016), Laisi (2016).
	Unfavorable	Jalilvand & Harris (1984), Auerbach (1985), Long & Malitz (1985), Brennan & Kraus (1987), Noe (1988), Constantinides & Grundy (1989), Smith & Watts (1992), Opler & Titman (1994), Helwege & Liang (1996), Vilasuso & Minkler 2001, Fama & French (2002), Frank & Goyal (2003), Fama & French (2005), Gaud et al. (2007), Seifert & Gonenc (2008), Harrison et al. (2010), Vasiliou & Daskalakis (2009).
	Mixed	Graham & Harvey (2001), Prasad et al. (2001), Fama & French (2002), Gaud et al. (2005), Ghosh & Cai (2004), Tucker & Stoja (2011).

Table 4
Results of Empirical Evidence of Market Timing Theory of Capital Structure

Name of the theories	Empirical results	References
Market timing theory	Favorable	Korajczyk & Levy (2002), Huang & Ritter (2004), Flannery & Rangan (2004), Hovakimian et al. (2004), Elliott et al. (2004b), Roberts & Leary (2005), Alti (2006) & Hovakimian (2006), Chang et al. (2006), Flannery & Rangan (2006), Kaya (2007), Kayhan & Titman (2007), O'Brien, et al. (2007), Mahajan & Tartaroglu (2008), Harrison et al. (2010), Kim & Weisbach (2008), Vasiliou & Daskalakis (2009), Ni et al. (2009), Guney & Iqbal-Hussain (2010), Chichti & Bougatef (2010), Alti & Sulaeman (2012), Arosa et al. (2012), Gomes & Phillips (2012), Setyawan & Frensidy (2013), Khanna et al. (2014), Canarella et al. (2014), Dani et al. (2016), Kim et al. (2016).
	Unfavorable	Alti (2003), Bie & Haan (2004), Leary & Robert (2005), Chen & Zhao (2005), Mahajan & Tartaroglu (2008), Brendea (2012), Çelik & Akarim (2013), Russel & Hung (2013), Dierker et al. (2015), Kargar et al. (2015), Shumilovskaya (2016).
	Mixed	Hovakimian et al. (2014), Kim et al. (2016).

Table 5
Empirical Evidence of the Association Between Profitability and Debts

Determinants	Relationship with debt	References
Profitability	Positive relation with debt	Mayers (1977), Miller (1977), Ross (1977), Leland & file (1977), Heinkel (1982), Blazenko (1987), John (1987), Dammon & Senbet (1988), Noe (1988), Narayanan (1988), Poitevin (1989), Ravid & Sarig (1989), Hirshleifer & Thakor (1989), Harris & Raviv (1990a), Stulz (1990), Roden & Lewellen (1995), Champion (1999), Ghosh et al. (2000), Fernandez (2001), Hovakimian (2001), Hadlock & James (2002), Margaritis & Psillaki (2010), Matemilola et al. (2011), Warokka et al. (2011), Samuel (2013), Aliakbar et al. (2013), Nguyen & Nguyen (2015).
	Negative relation with debt	Titman & Wessels (1988), Rajan & Zingales (1995), Kester (1986), Chang (1987), Friend & Lang (1988), Fama & French (1998) Gonedes et al. (1998), Shyam-Sunder & Myers (1999), Simerly & Li (2000), Gleason et al. (2000), Booth et al. (2001), Pandey (2001), Fama & French (2002), Berger & Bonaccorsi di Patti (2006), Barclay et al. (2006), Frank & Goyal (2007), Athula et al. (2011), Nor & Fatihah (2012), Shubita & Alsawalhah (2012), Iavorskyi (2013), Amos & Jeremiah (2013), Canarella et al. (2014), Gharaibeh (2015), Hamid et al. (2015), Ramadan (2015).
	Mixed results	Kinsman & Newman (1998), Mesquita & Lara (2003), Abor (2005), Zeitun & Tian (2007), Salim & Yadav (2012), Tianyu (2013), Hasan et al. (2014),
	No relation	Phillips & Sipahioglu (2004), Ibrahim (2009).

Table 6
Empirical Evidence of the Association Between Tangibility and Debts

Determinants	Relationship with debt	References
Tangibility	Positive relation with debt	Myers (1977, 1984), Titman & Wessels (1988), Rajan & Zingales (1995), Shyam-Sunder & Myers (1999), Wiwattanakantang (1999), Baker & Wurgler (2002), (2006), Brown & Marble (2007), Harrison et al. (2010), Skoogh & Swärd (2015).
	Negative relation with debt	Booth et al. (2001), Huang & Song (2002).
	Mixed results	
	No relation	

Table 7
Empirical Evidence of the Association Between Firm's Size and Debts

Determinant	Relationship with debt	References
Firm's size	Positive relation with debt	Marsh (1982), Oliner & Rudebusch (1992), Hamaifer et al. (1994), Rajan & Zingales (1995), Wald (1999), Anderson & Makhija (1999), Wiwattanakantang (1999), Booth et al. (2001), Pandey, (2001), Huang & Song (2002), Fareed et al. (2014), Gharaibeh (2015), Sanusi & Taha (2015), Didier (2016).
	Negative relation with debt	Kester (1986), Kim & Sorensen (1986), Titman & Wessels (1988).
	Mixed results	Bevan & Danbolt (2002), Caesar & Holmes (2003), Esperanca et al. (2003).
	No relation	

Table 8
Empirical Evidence of the Association Between Agency Cost and Debts

Determinant	Relationship with debt	References
Agency cost	Positive relation with debt	Onsomu (2013), Chechet & Olayiwola (2014).
	Negative relation with debt	Grossman & Hart (1982), Jensen (1986), Williams (1987), Rajan & Winton (1995), Agrawal & knoeber (1996), Stulz (2000), Ang et al. (2000), Berger & Patti (2002), Li & Cui (2003), Florackis & Ozkan (2004), Berger & Bonaccorsi di Patti (2006), Margaritis & Psillaki (2007), Zhang & LI (2008), McKnight & Weir (2009), Xiao (2009), Pratheepkanth (2011), Chang et al. (2012), Gul et al. (2012), Bundala (2012), Siddiqui et al. (2013), Kokoreva & Ulugova (2013), Lakshmi (2013), Mohammed (2013), Zheng (2013), Tanzania et al. (2013), Umer (2014).
	Mixed results	
	No relation	Florackis & Ozkan (2004), Brounen et al. (2006).

Table 9
Empirical Evidence of the Association Between Firm's Growth and Debts

Determinant	Relationship with debt	References
Firm's growth	Positive relation with debt	Chang & Rhee (1990), Banerjee et al. (2000), Fattouh et al. (2002), Schargrodsky (2002), Sign & Davidson (2003).
	Negative relation with debt	Kim & Sorensen (1986), Titman & Wessels (1988), Rajan & Zingales (1995), De Miguel & Pindado (2001), Chen & Jiang (2001), Bevan & Danbolt (2001), Drobetz & Fix (2003), Nguyen & Neelakantan (2006), Cheng & Green (2008), Green & Murinde (2008).
	Mixed results	
	No relation	

Table 10
Empirical Evidence of the Association between Market Timing and Debts

Determinant	Relationship with capital structure choice	References
Market timing	Market timing has significant effect on capital structure choice	Korajczyk & Levy (2002), Huang & Ritter (2004), Flannery & Rangan (2004), Hovakimian et al. (2004), Elliott et al. (2004b), Chang et al. (2006), O'Brien et al. (2007), Mahajan & Tartaroglu (2008), Harrison et al. (2010), Kim & Weisbach (2008), Vasiliou & Daskalakis (2009), Ni et al. (2009), Chichti & Bougatef (2010), Guney & Iqbal-Hussain (2010), Alti & Sulaeman (2012), Arosa et al. (2012), Gomes & Phillips (2012), Setyawan & Frensidy (2013), Khanna et al. (2014), Canarella et al. (2014), Dani et al. (2016), Kim et al. (2016).
	Market timing has significant effect on capital structure, but for temporary	Roberts & Leary (2005), Alti (2006), Hovakimian (2006), Flannery & Rangan (2006), Kaya (2007), Kayhan & Titman (2007).
	Market timing has either little or no effect on capital structure	Alti (2003), Bie & Haan (2004), Leary & Robert (2005), Chen & Zhao (2005), Mahajan & Tartaroglu (2008), Brendea (2012), Çelik & Akarim (2013), Russel & Hung (2013), Dierker et al. (2015), Kargar et al. (2015), Shumilovskaya (2016).

Albeit the capital structure decision can be influenced by many variables, this study identifies six significant variables; profitability, assets tangibility, firm's size, agency costs, firm's growth, and market timing; which are corroborated by most of the researchers (see also Table 5 to 10). But profitability, agency costs, and market timing have certainly been appeared to be the most commanding determinants of capital structure choices. However, this study discovers some observations which are documented below:

- No significant difference in results between early and recent studies on capital structure is found in this survey. In addition, both developed and developing countries produce the same results.
- It seems that negative relationship between debt and profitability is mainly evidenced in developing countries as the markets in those countries are generally inefficient. But this study demonstrates that this negative relationship is sufficiently evidenced in developed countries too. Moreover, a numerous studies in developing countries reveal positive relationship between debt and profitability.
- Firm's profitability is positively associated with its long-term debt, but negatively connected with short-term debt.
- Size, along with profitability, has recently emerged as one of the influential determinants of capital structure.
- In recent, the market timing theory supposedly throws a challenge to other influential theories of capital structure (see also Table 10).

It seems clear from the above the discussion that owing to its enduring paradox, the capital structure issue is still being accepted by the researchers as one of the sizzling issues of finance. However, this paper has some limitations too. This paper could check more aspects of capital structure; such as; survey could be conducted on the basis of developed, emerging, and developing countries, survey on determinants could be more significantly focused, and the survey period could be divided into three sub-periods; early, mid, and latest periods. Later, Researchers are suggested to take care of these aspects.

ACKNOWLEDGMENTS

A Special Thanks to Md. Delowar Hossain, MBA Student of Finance and Banking Department, Islamic University, Kushtia, Bangladesh for His Contribution in Compiling References of This Paper.

REFERENCES

Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *Journal of Risk Finance*, *6*, 438-447.

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanism to control agency problem between managers and shareholders. *Journal of Financial and Quantitative Analysis, 34*(3), 377-397.

Akinyomi, O. J., & Adebayo, O. (2013). Determinants of capital Structure in Nigeria. *International Journal of Innovation and Applied Studies*, *3*(4), 999-1005.

Aliakbar, R., Seyed, H. S. N., & Pejman, M. (2013). The relationship between capital structure decisions with firm performance: Comparison between big and small industries in firms listed at Tehran stock exchange. *World of Sciences Journal, 1*(9), 83-92.

Alti, A. (2003). *How persistent is the impact of market timing on capital structure*? (pp.1-35). Working Paper, University of Texas Austin.

Alti, A. (2006). How persistent is the impact of market timing on capital structure? *The Journal of Finance, 61*(4), 1681-1710.

Altı, A., & Sulaeman, J. (2012). When do high stock returns trigger equity issues? *Journal of Financial Economics, 103*(1), 61-87.

Amos, O. A., & Jeremiah, O. I. (2013). Capital structure and profitability of quoted companies in Nigeria. *International Journal of Business and Social Research, 3*(3), 99-106.

Anderson, C. W., & Makhija, A. K. (1999). Deregulation, disintermediation, and agency costs of debt: Evidence from Japan. *Journal of Financial Economics, 51*, 309-399.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *Journal of Finance, 55*(1), 81-106.

Athula, M., Anura, D. Z., Khorshed, C., & Anil, C. (2011). Capital structure and firm performance in emerging economies: An empirical analysis of Sri Lankan firms. *Corporate Ownership & Control, 8*(4), 253-263.

Baker, M., & Wurgler, J. (2002). Market timing and capital structure. *Journal of Finance, 57*(1), 1-32.

Banerjee, S., Almas, H., & Clas, W. (2000). The dynamics of capital structure. *SE/EFI Working Paper Series in Economics and Finance, 333*, 1-20.

Barclay, M. J., & Smith, C. W. (1996). On financial architecture: Leverage, maturity and priority. *Journal of Applied Corporate Finance, 8*(4), 4-17.

Berger, A. N., & di Patti, E. B. (2006). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking and Finance, 30,* 1065-1102.

Bevan, A. A., & Danbolt, J. (2001). *On the determinants and dynamics of UK capital structure* (pp.1-37). Working Paper Series, Department of Accounting & Finance University of Glasgow.

Bevan, A. A., & Danbolt, J. (2002). Capital structure and its determinants in the United Kingdom—A decompositional analysis. *Applied Financial Economics, 12*(3), 159-170.

Blazenko, G. W. (1987). Managerial preference, asymmetric information, and financial structure. *The Journal of Finance, 42*(4), 839-862.

Booth, L., Aivazian, V., Demirguc-Kunt, A., & Maksimovic, V. (2001). Capital structure in developing countries. *Journal of Finance, 56*, 87-130.

Brailsford, T. J., Oliver, B. R., & Pua, S. L. H. (2002). On the relation between ownership structure and capital structure. *Accounting and Finance, 42*(1), 1-26.

Brennan, M., & Kraus, A. (1987). Efficient financing under asymmetric information. *Journal of Finance, 42*(5), 1225-1243.

Brounen, D., Jong, A. D., & Koedijk, K. (2006). Capital structure policies in Europe: Survey evidence. *Journal of Banking & Finance, 30*(5), 1409-1442.

Bundala, N. N. (2012). Do Tanzania companies practice trade off theory, agency theory or pecking order theory? *International Journal of Economics and Financial Issues, 2*(4), 401-422.

Byoun, S. (2007). *Financial flexibility, leverage, and firm size*. Retrieved from http://www.baylor.edu/business/finance/doc.php/231009.pdf

Canarella, G., Nourayi, M., & Sullivan, M. J. (2014). An alternative test of the trade-off theory of capital structure. *Contemporary Economics, 8*(4), 365-385.

Cassar, G., & Holmes, S. (2003). Capital structure and financing of SMEs: Australian evidence. *Journal of Accounting and Finance, 43*(2), 123-147.

Champion, D. (1999). Finance: The joy of leverage. *Harvard Business Review, 77*(4), 19-22.

Chang, K., Wee, J. B., & Yi, H. (2012). Does national culture influence the firm's choice of debt maturity? *Asia Pacific Journal Financial Studies, 41*(4), 424-457.

Chang, R. P., & Rhee, S. G. (1990). The impact of personal taxes on corporate dividend policy and capital structure decisions. *Financial Management, 19*(2), 21-31.

Chang, X., Hilary, G., Shih, C. M., & Tam, L. H. K. (2009). Conglomerate structure and capital market timing. *Financial Management, 39*(4), 1307-1338.

Chechet, I. L., & Olayiwola, A. B. (2014). Capital structure and profitability of Nigerian quoted firms: The agency cost theory perspective. *American International Journal of Social Science, 3*(1), 139-158.

Chen, L., & Zhao, S. X. (2006). On the relation between the market-to-book ratio, growth opportunity, and leverage ratio. *Finance Research Letters, 3*(4), 253-266.

Chen, L. H., & Jiang, G. J. (2001). *The determinants of dutch capital structure choice* (pp.1-25). The European Economic Association Annual Congress, Berlin.

Cole, R. (2008). What do we know about the capital structure of privately held firms? Evidence from the surveys of small business finance. *MRPA*, *4669*, 1-58.

Cotei, C., & Farhat, J. (2009). The trade-off theory and the pecking order theory: Are they mutually exclusive? *Journal of Finance and Banking Research*, *3*(3), 1-16.

Dammon, R., & Senbet, L. (1988). The effect of taxes and depreciation on corporate investment and financial leverage. *American Economic Review, 85*(3), 357-373.

Drobetz, W., & Fix, R. (2003). *What are the determinants of the capital structure? Some evidence for Switzerland* (pp.1-35). WWZ/Department of Finance, University of Basel, Working Paper No.4/03.

Elliott, W. B., Koëter-Kant, J., & Warr, R. S. (2008). Market timing and the debt–equity choice. *Journal of Financial Intermediation, 17*(2), 175-197.

Esperanca, J. P., Ana, P. M. G., & Mohamed, A. G. (2003). Corporate debt policy of small firms: An empirical (re) examination. *Journal of Small Business and Enterprise Development*, *10*(1), 62-80.

Fama, E., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of Financial Studies, 15*, 1-33.

Fama, E. F., & French, K. R. (1998). Taxes, financing decisions and firm value. *Journal of Finance, 53*, 819-843.

Fama, E. F., & Jensen, M. C. (1983). Agency problem and residual claims. *Journal of Law and Economics*, *26*, 327-349.

Fareed, Z, Zulfiqar, B., & Shahzard, F. (2014). The effect of firm specific factors on capital structure decision: Evidence from power and energy sector of Pakistan. *Middle East-Journal of Scientific Research, 21*(9), 1419-1425.

Fattouh, B., Harris, L., & Scaramozzino, P. (2002). Capital structure in South Korea: A quantile regression approach. *Royal Economic Society Annual Conference*, *70*, 1-34.

Florackis, C., & Ozkan, A. (2004). *Agency costs and corporate governance mechanisms: Evidence for UK firms*. Working Paper, University of York, UK.

Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics, 67*(2), 217-248.

Frank, M. Z., & Goyal, V. K. (2007). Trade-off and pecking order theories of debt. *Handbook of Corporate Finance: Empirical Corporate Finance, 2*, 1-82.

Frentzel, B. (2013). *Capital structure theory since modigliani-miller* (Bachelor of Arts Thesis (BA)). Berlin School of Economics and Law. Retrieved from https://opus4.kobv.de/opus4-hwr/files/166/Frentzel,Bennet_BA_2013.pdf

Friend, I., & Lang, L. H. P. (1988). An empirical test of impact of managerial self-interest on corporate capital structure. *Journal of Finance*, *43,* 271-281.

Gaud, P., Hoesli, M., & Bender, A. (2007). Debt-equity choice in Europe. *International Review of Financial Analysis, 16*(3), 201-222.

Gaud, P., Jani, E., Hoesli, M., & Bender, A. (2005). The capital structure of Swiss companies: An empirical analysis using dynamic panel data. *European Financial Management, 11*(1), 51-69.

Gharaibeh, A. M. (2015). The effect of capital structure on the financial performance of listed companies in Bahrain bourse. *Journal of Finance and Accounting, 3*(3), 50-60.

Ghosh, C., Nag, R., & Sirmans, C. (2000). The pricing of seasoned equity offerings: Evidence from REITs. *Real Estate Economics*, *28*, 363-384.

Gleason, K. C., Mathur, L. K., & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *Journal of Business Research, 50*(2)*,* 185-191.

Gonedes, N. J., Lang, L., & Chikaonda, M. (1988). *Empirical results on managerial incentives and capital structure*. Working Paper, The Wharton School, University of Pennsylvania.

Grossman, S. J., & Hart, O. (1982). Corporate financial structure and managerial incentives. In J. McCall (ed.), *The economics of information and uncertainty* (pp.107-140). Chicago: University of Chicago Press.

Gul, S., Sajid, M., Razzaq, N., & Afzal, F. (2012). Agency cost, corporate governance and ownership structure (the case of Pakistan). *International Journal of Business and Social Science, 3*(9), 268-277.

Hadlock, C., & James, C. (2002). Do banks provide financial slack? *Journal of Finance*, *57*(2), 1383-1420.

Harris, M., & Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, *46*, 297-356.

Harrison, D. M., Panasian, C. A., & Seiler, M. J. (2010). Further evidence on the capital structure of REITs. *Real Estate Economics,* 1-34.

Hasan, M. B., Ahsan, A. F. M. M., Rahaman, M. A., & Nurul, M. A. (2014). Influence of capital structure on firm performance: Evidence from Bangladesh. *International Journal of Business and Management, 9*(5), 184-194.

Heinkel, R. (1982). A theory of capital structure relevance under imperfect information. *Journal of Finance, 37,* 1141-1150.

Hirshleifer, D., & Thakor, A. V. (1989). *Managerial reputation, project choice and debt* (pp.14-89). Working paper, Anderson Graduate School of Management at UCLA.

Homaifar, G., Zietz, J., & Benkato, O. (1994). An empirical model of capital structure: Some new evidence. *Journal of Business Finance and Accounting, 21*, 1-14.

Hovakimian, A., Hovakimian, G., & Tehranian, H. (2004). Determinants of target capital structure: The case of dual debt and equity issues. *Journal of Financial Economics, 71*(3), 517-540.

Huang, R., & Ritter, J. R. (2009). Testing theories of capital structure and estimating the speed of adjustment. *Journal of Financial and Quantitative Analysis, 44*(2), 237-271.

Huang, S. G. H., & Song, F. M. (2006). The determinants of capital structure: Evidence from China. *China Economic Review*, *17*(1), 14-35.

Iavorskyi, M. (2013). *The impact of capital structure on firms performance: Evidence from Ukraine*. Retrieved from http://www.kse.org.ua/download.php?downloadid=306

Ibrahim, A. O. (2009). Financial integration of GCC capital markets: Evidence of non-linear co-integration. *Afro-Asian Journal of Finance and Accounting, 1*(3), 251-265.

Jahanzeb, A., Rehman, S., Bajuri, N. H., & Karami, M. (2014). Trade-off theory, pecking order theory and market timing theory: A comprehensive review of capital structure theories. *International Journal of Management and Commerce Innovations, 1*(1), 11-18.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305-360.

Kayhan, A., & Titman, S. (2007). Firms' histories and their capital structure. *Journal of Financial Economics, 83*(1), 1-32.

Kester, C. W. (1986). Capital and ownership structure: A comparison of United States and Japanese manufacturing corporations. *Financial Management*, *15*(1), 5-16.

Khan, A. S., & Adom, A. Y. (2015). A test of the pecking order theory of capital structure in corporate finance. *Accounting & Taxation, 7*(2), 43-49.

Kim, W. S., & Sorensen, E. H. (1986). Evidence on the impact of the agency costs of debt in corporate debt policy. *Journal of Financial and Quantitative Analysis, 21*(2), 131-144.

Kinsman, M., & Newman, J. (1998). Strategic assets, capital structure, and firm performance. *Journal of Financial and Strategic Decisions, 10*(3), 23-36.

Kokoreva, M., & Ulugova, A. (2013). Agency costs and capital structure choice in emerging markets. *Economic and Social Development: Book of Proceedings,* 384-396.

Krasker, W. (1986). Stock price movements in response to stock issues under asymmetric information. *Journal of Finance 41*, 93-105.

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance, 28*(4), 911-922.

Laisi, T. (2016). *Pecking order theory in a bank-centered lending environment– evidence from North European economies*. Retrieved from http://www.tritonia.fi/fi/e-opinnaytteet/tiivistelma/6865/Pecking+order+theory+in+a+bank-centered+lending+environment+-+Evidence+from+North+European+economies

Leland, H., & Pyle, H. (1977). Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance, 32*(2), 371-87.

Lemmon, M., & Zender, J. (2004). *Debt capacity and tests of capital structure theories*. Working Paper of University of Utah and University of Colorado at Boulder.

Li, H., & Cui, L. (2003). Empirical study of capital structure on agency costs in Chinese listed firms. *Nature and Science, 1*(1), 12-20.

Margaritis, D., & Psillaki, M. (2007). Capital structure and firm efficiency. *Journal of Business Finance and Accounting, 34*(9-10), 1447-1469.

Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. *Journal of Banking and Finance, 34*(3), 621-632

Matemilola, B. T., Bany-Ariffin, A. N., & McGowan, C. B. (2013). Unobservable effects and firm's capital structure determinants, *Managerial Finance, 39*(12), 1124-1137.

McKnight, P. J., & Weir, C. (2009). Agency cost, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The quarterly review of economics and finance*, *49*(2), 139-158.

Mesquita, J. M. C., & Lara, J. E. (2003). Capital structure & profitability: The Brazilian case. *Academy of Business & Administration Sciences Conference,* 11-13.

Miglo, A. (2010). *The pecking order, trade-off, signaling, and market-timing theories of capital structure: A review.* University of Bridgeport. MPRA. Retrieved from http://ssrn.com/abstract=1629304.

Miguel, A. D., & Pindado, J. (2001). Determinants of capital structure: New evidence from Spanish panel data. *Journal of Corporate Finance, 7*(1), 77-99.

Miller, M. H. (1977). Debt and taxes. *Journal of Finance*, *32*(2), 261-275.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *American Economic Review*, *48*, 261-297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, *53*, 443-453.

Mohammed, D. (2013). A dynamic panel model of capital structure and agency cost in Nigerian listed companies. *Accounting & Taxation, 5*(2), 33-44.

Myers, S. C. (1977). The determinants of corporate borrowing. *Journal of Finance, 32*, 147-175.

Myers, S. C. (1984). The capital structure puzzle. *Journal of Finance*, *39*(3), 575-592.

Myers, S. C., & 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.

Narayanan, M. P. (1988). Debt versus equity under asymmetric information. *Journal of Financial and Quantitative Analysis 23*, 39-51.

Nguyen, T., & Nguyen, H. (2015). Capital structure and firms' performance: Evidence from Vietnam's stock exchange. *International Journal of Economics and Finance, 7*(12), 1-10.

Nguyen, T. D., & Neelakantan, R. (2006). Capital structure in small and medium-sized enterprises: The case of Vietnam. *ASEAN Economic Bull, 23*(3), 192-211.

Noe, T. H. (1988). Capital structure and signaling game equilibria. *The Review of Financial Studies, 1*(4), 331-356.

Nor, E. A. B. M., & Fatihah, N. B. A. (2012). Reviewing relationship between capital structure and firm's performance in Malaysia. *International Journal of Advances in Management and Economics, 1*(4), 151-156.

Oliner, S., & Rudebusch, G. (1992). Sources of the financing hierarchy for business investment. *Review of Economics and Statistics, 74*(2), 643-654.

Onsomu, G. P. (2013). *The relationship between capital structure and agency costs of firms listed at the nairobi securities exchange*. Retrieved from http://erepository.uonbi.ac.ke:8080/bitstream/handle/11295/77733/Onsomu_The%20relationship%20between%20capital%20structure%20and%20Agency%20costs%20of%20firms%20listed%20at%20the%20Nairobi%20Securities%20exchange.pdf?sequence=3&isAllowed=y

Pandey, M. (2001). *Capital structure and the firm characteristics: Evidence from an emerging market* (pp.1-17). Indian Institute of Management Ahmedabad, Working Paper.

Phillips, P. A., & Sipahioglu, M. A. (2004). Performance implications of capital structure as evidence from quoted UK organizations with hotel interests. *The Service Industries Journal*, *24*(5), 31-51.

Poitevin, M. (1989). Financial signaling and the "deep-pocket" argument. *Rand Journal of Economics 20*, 26-40.

Pratheepkanth, P. (2011). Capital structure and financial performance: Evidence from selected business companies in colombo stock exchange Sri Lanka. *Journal of Arts, Science & Commerce, 2*(2), 171-183.

Rajan, R. R., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of Finance, 50*(5), 1421-1460.

Rakesh, H. M., & Lakshmi, P. (2013). Capital structure on agency costs: Evidence from Indian public companies. *IOSR Journal of Business and Management, 15*(1), 50-53.

Ravid, S. A., & Sarig, O. H. (1989). *Financial signalling by precommitting to cash outflows.* Working paper, Rutgers, The State University of New Jersey.

Rodel, H. A. (2013). *Capital structure: Evidence from Dutch firms.* File retrieved from https://essay.utwente.nl/63896/.

Roden, D. M., & Lewellen, W. G. (1995). Corporate capital structure decisions: Evidence from leverage buyouts. *Financial Management, 24*(2), 76-87.

Ross, S. (1977). The determination of financial structure: The incentive signaling approach. *Bell Journal of Economics, 8*, 23-40.

Samuel, F. (2013). Capital structure, product market competition and firm performance: Evidence from South Africa. *The Quarterly Review of Economics and Finance, 53*, 140-151.

Sanusi, N. A., & Taha, R. (2015). An empirical analysis of capital structure decisions in Malaysian listed companies. *Journal of Sustainability Science and Management, 10*, 65-73.

Shubita, M. F., & Alsawalhah, J. M. (2012). The relationship between capital structure and profitability. *International Journal of Business and Social Science, 3*(16), 104-112.

Shyam-Sunder, L., & Myers, S. C. (1999). Testing static trade of against pecking order models of capital structure. *Journal of Financial Economics, 51*, 219-244.

Siddiqui, M. F., Razzaq, N., Malik, F., & Gul, S. (2013). Internal corporate governance mechanisms and agency cost: Evidence from large KSE listed firms. *European Journal of Business and Management, 5*(23), 103-109.

Singh, M., & Davidson, W. N. (2003). Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking and Finance, 27*, 793- 816.

Skoogh & Swärd (2015). *The impact of tangible assets on capital structure: An analysis of Swedish listed companies*. Retrieved from http://gupea.ub.gu.se/bitstream/2077/39577/1/gupea_2077_39577_1.pdf

Smith, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Financial Economics, 32*(3), 263-292.

Stulz, R. M. (1990). Managerial discretion and optimal financial policies. *Journal of Financial Economics, 26,* 3-27.

Tianyu, H. (2013). *The comparison of impact from capital structure to corporate performance between Chinese and European listed firms* (Master's thesis). Jonkoping University. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-21994

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance, 43*(1), 1-19.

Umer, U. M. (2014). Determinants of capital structure: Empirical evidence from large taxpayer share companies in Ethiopia. *International Journal of Economics and Finance, 6*(1), 53-65.

Vergas, N., Cerqueira, A., & Brandão, E. (2015). The determinants of the capital structure of listed on stock market non-financial firms: Evidence for Portugal. *FEP Working Papers, 555*, 1-32.

Wald, J. K. (1999). How firm characteristics affect capital structure: an international comparison. *Journal of Financial Research, 22*(2), 161-187.

Warokka, A., Herrera, J. J. D., & Abdullah, H. H. (2011). East Asian corporate governance: A test of the relation between capital structure and firm performance. *International Journal Economics and Finance Studies, 3*(2), 1-10.

Xiao, S. (2009). *How do agency costs affect firm value? Evidence from China*. Retrieved from http://cn.ckgsb.com/frsc2009/papers/72d21803-daff-401f-af1c-ef0337358d8b.pdf

Zeitun, R., & Tian, G. G. (2007). Capital structure and corporate performance: Evidence from Jordan. *The Australasian Accounting Business and Finance Journal, 1*(4), 40-61.

Zhang, H., & Li, S. (2008). *The impact of capital structure on agency costs: Evidence from UK public companies* (pp.1-18). Proceedings of the 16th Annual Conference on Pacific Basin Finance Economics Accounting Management Conference.

Zheng, M. (2013). Empirical research of the impact of capital structure on agency cost of Chinese listed companies. *International Journal of Economics and Finance, 5*(10), 118-125.

