

## REVIEW

# Theory of capital structure decision: Overview of the banking industry

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**Abstract:** The relevance of capital structure decisions is documented in this paper. It highlights existing literature in a review of previous empirical studies and fundamental theories of capital structure. The study underscored the factors influencing the choice of funding associated with market timing theories such as pecking order theory and the trade-off theory. The study observed that, the choice of capital varies across sectors and industries on the basis of business risks, corporate governance, profitability, internal controls, and efficiency the asset structure as reported in recent empirical studies. The study further observed that most empirical researchers universally endorse asset structure, industry volatility, corporate taxes and firm growth as strong determinants of capital structure. The above dimensions may either improve the solvency position of a firm or trigger major financial distress depending on the source of capital.

**Keywords:** capital structure, trade-off theory, pecking order theory, leverage, ROE

## 1 Introduction

The choice of capital requires critical assessment of internal and external factors affecting the business. This article presents a detailed discussion of capital structure composition and related attributes relating to banking industry and the financial sector with elaborated examples of what may influence financing decisions of firms to either choose between debt and equity. Owing to data limitation and non-availability of reliable data, the study adopts a theoretical approach. Firm capital structure mix continues to insight incessant debates following previous propositions asserting that firm value is independent of its capital structure ratio under a set of strict assumptions [1]. This study sought to review exiting literature to identify the determinants of capital structure decisions and ascertain whether financial institutions are resorting to unconventional sources of funding or maintaining existing traditional methods of funding. This study has become necessary due to divergent opinions about earlier propositions, arguing that firm capital structure matters due to the impacts on value, efficiency, profitability and sustainability of the firm. Financing decisions of a financial institution similar to those in other sectors [2]. Therefore, it is important to understand how these institutions acquire capital to procure a new technology, machinery, diversify, growth, operational costs and fund promotional activities [3]. It is well documented in literature that; the capital structure could be a mix of equity and debt. However, the main point of disagreement is what constitute a perfect combination and which option is more preferable under which condition. Earlier researchers only identified fund availability, industry debt ratio, interest rates, profitability, associated agency costs and flexible market conditions as some of the main determinants of capital [4]. However, today the complex nature of business and risk and other factors regulating the business environment have necessitated a critical evaluation of the elements associated with financing decisions [5]. More so, since the determinants of capital structure vary according to industry and sectors, empirical researchers have always identified peculiar factors within the firms or a combination of industry characteristics and the line of business [6]. Financial institutions require capital, however the purpose differ from non-financial institutions, for example banks manage the liquidity demands of multiple clients and complex needs of their stakeholders [4]. The capital requirements are also meant to service depositors and borrowers with credit facilities [7]. The underlined responsibilities of financial institutions require the maintenance of optimum liquidity in order to remain solvent. This means financial institutions are concerned about, liquidity and solvency, market risks and credit risk which is an integral

part of their operations [8]. Moreover, setting aside optimal of capital will minimize the impact of risk on profit.

## 2 Theory of capital structure

Existing literature defines the concept as a combination of different types of funding such as owners capital, reserves, surplus or resorting to creditors for loans, debentures [3]. A similar opinion said by Myers [5], financing decision is critical as the CFO is charged with maintaining a good balance between creating and maximizing value for shareholders while take measures to meet an optimal financing requirement. Various theories emerged to guide financing decisions of firms that includes; MM approach, also known as the static theory and then Perking order theory the traditional approach, net income theory and net operating income approach. The relevance of these theories is that some are consistent and dependent on one another, provide opposing views base of concrete arguments and assumptions [9]. The early pioneers of capital structure theories, Modigliani and Miller (1958), developed their first theory which traditionally served a foundation guide in corporate financing. The theory implies that, with strict compliance to a set of assumptions, the value of a firm could be independent of the choice of capital. It states that the market value of any firm is unaffected by its capital structure , since investors have access to market information and conditions about risk relative to their choice of securities [10]. Additionally, in the absence of taxes, transaction cost, shareholders earn a 100% risk on return on their investments. Based on these, the level of debt, thus the gearing-ratio, does not influence the value of the firm because investors can create and remove leverage privately.

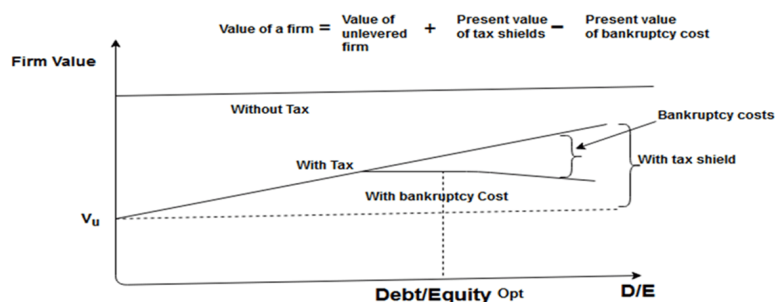


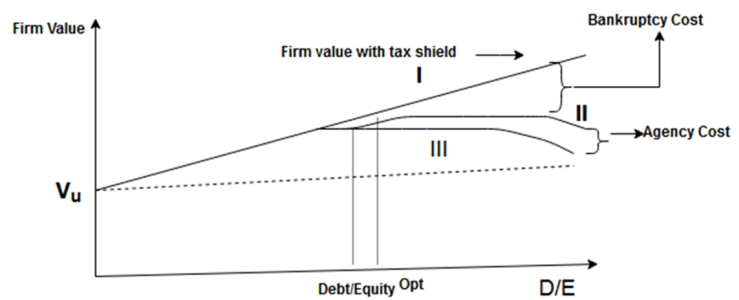
Figure 1 MM Approach to firm with no Taxes

On the other hand, capital structure is irrelevant because firms operating on a similar capital structure would earn equal returns. All the above assumptions put in together in a form of propositions, have fiercely been disputed by other renowned scholars in corporate finance [11]. They argued that, rationale investors would switch between firms and try to spread risks and get attracted to high value earning securities, in a free capital market were buying and selling of securities is not limited

Though there exist misconceptions and lack of consensus in literature on which of these notable theories best explains the reality, the static trade off by Modigliani and Miller (1958), incorporates the cost of capital, bankruptcy risk and costs (see Figure 1). It also covers other associated costs such as agency cost that may be charged to tax benefits should the firm include debt in the capital structure. The theory further clarifies that the firm incurs bankruptcy cost when the likelihood of risk is higher the zero. In other words, it is an indication that the firm may not be able to meet its long-term financial obligations.

Liquidation, is a classic example of bankruptcy costs, meant to dispose the assets in order to make up for the loss in value of the assets. Eventually, creditors, lenders and investors receive less proceeds in the event that the liquidator initiates an action to defray the bankruptcy costs as a result of default on payments [12, 13]. Consequently creditors, lenders and investors, may have to increase the cost of lending, it a cost that will safeguard the lenders and absorb any unexpected loss of value. From this standpoint, borrowers may have to face a high cost of capital as result of high probability of liquidation. Distress costs, is also classified under bankruptcy cost, it is a cost associated to the firm when non-financing stakeholders anticipate insolvency [14]. When clients and customers perceive that a business is on the verge of collapsing, they may cease to do business with the firm, or initiate panic withdrawals of their deposits, in the case of banks and financial institutions. Distress cost, also manifest in employee turnover/resignations, it raises insecurity among suppliers while the corporate body may lose grip of its strategic objectives.

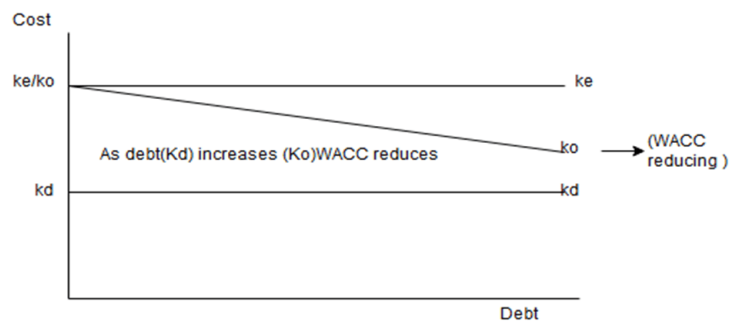
These negative happenings among a firms internal and external stakeholders contribute to reducing the value of the firm and also add to cost. However, firms that anticipate higher distress costs associated to their businesses and industry would go in for less debts in order to reduce impact of these costs and risks (see Figure 2). On the other hand, there are other costs such as the operational risks which is also closely associated with bankruptcy cost, and it influences the choice of capital composition, since firms with higher operational risks would obviously encounter greater bankruptcy costs, and an indication of high cost of debt capital [13, 15]. Even multinational firms exhibit such characteristics and tendencies towards operational risks. On top of that, agency cost could also determine the choice of capital, it relates to the relationship between the firms and its stakeholders, better still owners and their agents. In most firms it is shareholders and managers or directors of the firms who take decisions in the best interest of the owners. Research has found out that, debt capital is associated with high agency costs. Nadarajah [4] argued that debt holders may perceive an unfair financial benefit in which the firm may turn to favour equity holders therefore, debts holders may intensify their controls and attempt to introduce conditions that will limit authority of the agents, in other words they monitor and shape the behavior of the firm towards a particular direction.



Source: Modigliani and Miller (1958)

Figure 2 MM Approach to firm value with tax shield

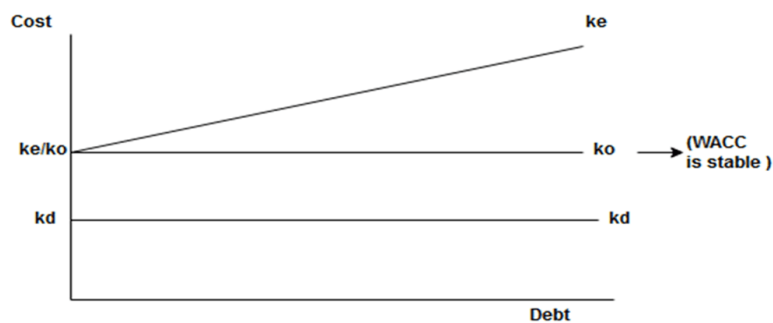
The above conditions contribute to higher agency cost, and it has a direct linkage with the cost of capital proposed to the firm by its lenders [16]. In principle, firms that encounter a rather increasing agency cost as a result of conflicts emanating from their relationship with debt financiers may have to reduce the percentage of debt in the capital structure and remain leveraged [1, 17]. Aside the hard conditions, firms also consider the tax relief and benefit accrued to firms as a result of debt financing. This is one of the highly celebrated principles found in the static trade off theory. Even today firms base their major financing decisions on calculating the tax deductible elements, since the interest or the cost of debts payments reduces the interest payments unlike cost of equity or dividend to equity holders which calculated based on profits [18]. The tax-deductible element makes it attractive for firms to use debts and earn higher profits after tax. The fundamental assumption is that the value of the firm remain unchanged irrespective of the capital, the value of a levered and unlevered firm are the same, as denoted by  $V_L = V_U$  [19]. This theory estimates a perfect association between tax and leverage as a result of the benefit to owners and the firm. However, the above theory contradicts the net income approach (see Figure 3). Myers [20] explained that the firm value is directly influenced by capital, and it's determined by a low cost of capital WACC ( $K_0$ ). More so firm relies of debt, investors perceive less risk in the short-run due to cheap cost of debt compared to equity in the absence of corporate taxes.



Source: Fama and French [22]

Figure 3 The net income approach

Fama and French [22] proposed that from the order of preference the pecking order theory suggest that, firms must align to a particular order when prioritizing available sources of finance to support their operations. As a result of disagreements and unwarranted demands by potential lenders and investors of a firms, the cost of borrowing greatly varies across different sources. The perking order theory prioritizes, available list of financing sources according to; internal funds, followed by debt, preference share before relying on ordinary share [23]. It holds a slight consistency with the net income approach which considers debt ahead of equity whereas the traditional approach simply emphasizes on optimal capital.



Source: Myers [20]

**Figure 4** Net operating income approach

From Figure 4, the MM approach is consistent with the net operating income approach base on the negative relationship between capital and value of the firm. It also sides with the net operating income approach where both theories agreed that, the high cost of equity will cancel the gains from cheap debt capital, consequently ,the capital structure will remain balanced and will not be influence value of the firm [22]. Both theories agree that, the market value of the firm can only depend on returns and not the source of funding and in effect investors are at liberty to purchase or sell securities in a free market. Depending on how one sees it, the traditional approach still remain supreme since it does not predict any extreme measures but focuses on the best mix that will not cause the WACC( $k_o$ ) to rise abnormally (Myers, 1984). Reasoned that, in the capital market while, exiting shareholders may be privy to the material information, new shareholders come expecting higher returns on their investments, which obviously add to cost of capital. Most CFO's tend to avoid such costly sources of finance by resorting to internal funds, surpluses and reserves [24, 25]. This is what perking order theory advocates and it is cheaper and convenient to acquire without necessarily incurring associated costs. The same logic applies to the use of retained earnings as compared to newly acquired debt capital [26]. Conclusively, apart from retained earnings, any higher risks connected to information asymmetry related to any sources of capital would attract a higher cost by creditors. In that case pecking order theory suggest that, the firm may rely on internal sources in the short-term over debt and equity.

### 3 Theoretical literature review

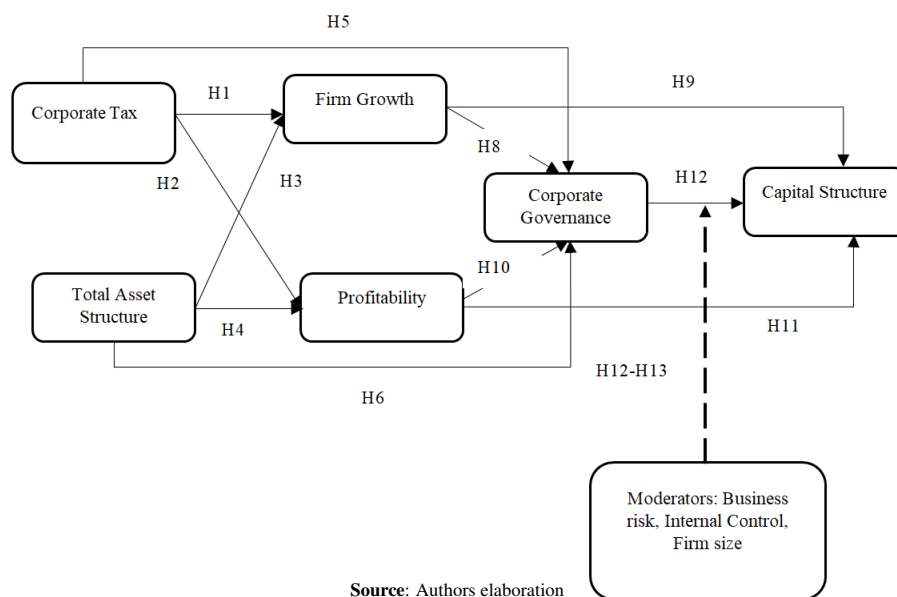
#### 3.1 Composition of capital structure, distress and value of the firm

Authorities in corporate finance maintain that the relevance of capital structure means maintaining an optimum sources of funding [9, 16, 17, 26]. It also means having a good percentage of debt and equity in the capital structure to represent an optimum financial position on the balance sheet. Beirne and Friedrich [27] concluded that among US banks' lending reduces when capital and liquidity diminish. It is an indication that, the capital mix affects the financial operations and solvency position of a firm. However, in the midst of financial complexities, Arslanalp & Liao [26] and Khan [28], opined that financing decisions are influenced by both internal and external factors including relevant economic fundamentals, industry competitiveness , corporate governance, firm credit rating and fund availability in the money market or the capital market .

#### 3.2 Internal characteristics of the firm

Internal characteristics are mostly considered in empirical research examining the factors affecting financing decisions instead of over relying the macroeconomic fundamentals [29, 30]. These features are best described as indicators hypothesized base on the firm operations, industry and risk factors [31]. These internal factors when identified would help the firm maintain

adequate ratio of capital and liquidity in order to maintain a consistent margin of safety of liquidity to fall on, in time debts, demands of creditors and depositors [32]. Keeping this balance is referred to as solvent, meaning the bank will be in position to absorb risks or losses and could even create buffers [20]. Financial experts including the World Bank, central and reserve banks and insurance companies across the world initiated what they termed the Basel Accords [33]. The policy recommendation introduced measures to maintain a positive capital adequacy ratio in order to protect the savings of depositors. The committee’s recommendation became a global code that shaped banking operations and the financial sector since it was introduced in 1988. The committee’s recommendation has also influenced the choice of variables in performing empirical research on the subject. On this note, the study emphasizes extensively on firm characteristics (see Figure 5), to advance the discussion on the determinants of capital structure decision. The conceptual framework proposes a set of hypotheses that could be applied in future empirical research.



Source: Authors elaboration  
**Figure 5** Conceptual framework

### 3.2.1 Firm profitability

From corporate finance perspective, profitability remains a perfect scale for measuring the performance and efficiency of a firm. It is as well mentioned by many scholars and industry professional as good influence of capital composition. Booth [3] noted firms with relatively higher profitability tend to use more debt in order to escape high taxes and reduce the risk going bankrupt. Myers [5] rather observed an inverse correlation between debt financing and profitability, arguing that, it is only unsuccessful firms rely heavily on debts for tax relief purposes. All things being equal, from the European perspective, Nadarajah [4], Batuo [8], Ararat [12], Beirne and Friedrich [27] provided evidence that successful banks, introduce minimum leverage and instead rely on internal sources of funding in according with perking order theory. It can be seen in the assumptions under the perking order theory as explained in Myers [34], clearly the theory explains the relevance of profitability on capital decisions, and relates profitability to capital funding. Also, Bradley [21] assumed a firm having a high returns and profit would ideally fall on internal funding at the expense of debts, preference shares and even equity funds. What happens when a firm gets access to cheap external funding? A brief clarification by Myers and Majluf [35], cleared our doubts, thus, highly profitable firms that are entrenched would only sought for external funding when there is urgent need to capture investments opportunities during a period of low cash flow, all things being equal. The arguments confirms the views of many scholars who saw a negative relationship between profits and debt financing. Nadarajah [4] estimated that profitability remain the less influential factor in debt financing, claiming it is rather a component of perking order theory.

### 3.2.2 Firm growth

With reference to pecking order theory, successful firms may prioritize retained earnings over other sources of finance according to Wald [18]. Growth is an indication that the firm is

recording high returns, value creation as well as meet required capital and access to financiers. Arguably, firms with positive growth indicators turn to exhibit complex features, for example a firm hitting high returns may tend to source funds from outsiders [16]. While, traditionally positive growth indicators should restrict a firm to internal funding whether it operates in the world of taxes or without taxes. Shyam-Sunder and Myers [17] noted that, if a firm's market value is largely measured on growth proportions, such firms may be qualified to use more debts. But Jensen [36] proposed that, tax leverage may not be a good measure of growth, hence fast rising firms are less inclined to sought after tax benefits which may be insignificant as they can survive their costs without tax shields to avoid bankruptcy. There were diverse views, Arslanalp and Liao [26] observed that, firm growth is significantly associated with leveraging and the use of debt but Bellavite Pellegrini [37] disagreed based on evidence from the UK financial market in which they reported that, there isn't a conclusive truth about the right measure of growth on capital structure, many factors are still unknown in literature.

### 3.3 Corporate tax

Conventionally, the element of tax may not be clearly ascertained by new firms prior to operations, however, projections and estimates can inform CFO's about how to interpret the effect taxes on capital structure [38]. For older firms it is easy to ascertain the relationship between sources of funds and taxes based on trends. Many scholars have digested the issue and settled on a positive relationship between tax and corporate financing decision [6]. The effects of tax on profitability depends largely on the tax policies being practiced in different jurisdictions. Beirne and Friedrich [27] surveyed a couple of firms in the UK, and concluded that taxes play significant role in financing decisions and there is additional evidence that most of the firms preferred debt to equity and internal sources even when they make higher returns on investments. Myers [34] recommended that the minor effects that taxes will add to profit should not be ignored, hence financing decisions should be tied to tax policies offered to any firm and industry. We found a good analysis in Modigliani and Miller [19]. At the same time firms that enjoy higher tax benefits are less inclined to use long term debts. For the reason that, tax relief may reduce their real marginal tax rate on the interest to be deducted. Williamson [39] addressed the issue by saying that, the general impact of taxes on the choice of capital is relevant however, does not constitute a significant determinant in the views of many CFO's cross the world. This argument is consistent with DeAngelo and Masulis [23], who said, tax relief adds to profit however, its relationship with capital decision is insignificant. Corporate leaders should rather concern themselves about the economic impacts and finds, since it is challenging to digest how significant tax deductions could influence capital acquisition when there is no accurate measure of the real impacts of depreciations the tax shields.

### 3.4 Total assets structure

The firm's assets accounts for and represents a larger component of its financial position on the balance sheet. Fixed and current assets positions are just as good as the capital structure and they are relevant and also matters in making financing decisions, a practice commonly used by new firms [14]. The value of tangible and intangible assets of a firm determines the value of liquidation in the event that the firm experiences major financial distress. Therefore leverage has a significant correlation with total assets [40]. There is a consistency between other scholars who says a firm can rely on the efficiency of its assets to support more debt. In other words, firms operating with more tangible assets can include higher debts ratio, however, the same logic worked against firms that rely heavily of intangible assets. It clarifies that, these category of firms often base their financing decisions on projections, financial estimates, positive expectations and non-existing opportunities, and may not consider assets as good determinants of capital structure [25]. This argument attracted reactions from many scholars including Abor and Biekpe [41], who indicated that, if a firm relies on assets as the basis of capital acquisition (ie. debt or equity), these class of assets must be valued based on its intrinsic cost and book values at that material moment but not expected projections, such as future growths and associated opportunities. When we argue on the relevance of assets as a determinant of capital structure, this notion often exclude intangible assets, because potential lenders and creditors may rely on physical assets as collaterals to advance loans and credit facilities [8]. In the same way, the value of total fixed assets may constitute a bargaining tool to reduce agency cost and even liquidation cost that may accompany debt capital, as it is explained in the static trade off framework. Meanwhile, Dimitras [42] current empirical investigations provide evidence that there is a positive linkage between debt acquisition and fixed assets across major banks in EU, America and Latin America. however, there is no evidence to support the



claim whether the fixed assets of those firms were used to pledge as collaterals .

### 3.5 Business risks

Every business entity is exposed different categories of risks in terms of operation risks, organizational risk, and bankruptcy risk, markets risk *etc.* [43]. The ability to minimize the impacts of these risks could spell success or failure for a business. Most importantly is the accuracy in estimating these risks and even managing them in manner that the impact will be minimal on capital and earnings. In the static model, debt was closely associated with all manner of risks, those that featured prominently include liquidity and bankruptcy [44]. These risks form major determinants of capital structure of a firm, Demirguc-Kunt and Maksimovic [9] added that, it will pose a great disadvantage if firm ignores negative signals associated with debt financing . Additionally, tax incentives may not be sufficient proof to employ debts in the capital structure, therefore as a firm grows, it is exposed to all manner of risks, which should send positive signals to reduce the percentage of debts in the capital structure or take corrective measures. In a highly competitive and volatile market, firms competing on similar key success factors and industry competitive drivers are likely to experience inconsistent returns and could result in default. Inconsistent earnings could result from industry competitions which could destabilize returns [29]. Rashid and Naeem [45] cautions that capital financing decision taken in anticipation of higher operating profits could plague the firm into risk, especially when efficiency falls to meet higher returns to defray the cost of capital. In consequence, there are convincing arguments connecting business risks to leverage.

### 3.6 Firm size

One of the items that will influence the decision of lenders and fund providers is the size, arguably consists of the resources in general, scale of operations ,industry representations , total number of employees, international outlets and footprints [3]. How this manifest itself into capital acquisition is not only about volumes and numbers. Scholars in corporate finance tried to understand how this affects capital structure of old and new firms. There were diverse views, in which a collection of literature has it that, larger firms are less inclined towards risks because they mostly diversify operations and spread risks [4–6]. Such firms are more qualified than new and smaller firms who are barely dependent on tax benefits to caution against the impact of debts. The size of firms also influences the amount of debts and equity, but in the case of large successful firms, though they have positive credit rating, in exceptional cases may rely heavily on internal sources if the ownership policy is limited to existing shareholders [46]. Financiers tend to favor larger firms than smaller firm that survive on tax benefits to lessen the cost of debts moreover they seem riskier. However lenders examines the relative solvency probabilities associated with potential borrowers and in most cases the relationship between bankruptcy risks and large firms is always negative [4]. Those who reported a contrary view believed that neither large nor smaller firms have the ability to influence lenders attitude to size, provided the firm demonstrate convincingly that it could meet expected returns. Therefore firm size and debt ratio are negatively correlated [8]. This view is supported by Banya and Biekpe [47], where they observed that, lenders often ignore the size of the firm and rather focus attention on the future prospects , in order not to disadvantage smaller and growing firms that may not meet the requirements to enable them raise funds on the capital market . On this note the reality about size and debt capital will only be a matter of continues empirical investigation to expand existing knowledge.

### 3.7 Internal controls

A non-traditional element that is often not considered among the determinants of capital structure is the internal controls of a firm. Internal control can be likened to the vehicles that conveys an organization to its desired destination. Internal controls are a set of principles and policies that an entities board and management develops to guide the operations and activities to reflect its strategic objectives and ensures that the organization remains within the confines or the necessary laws [48]. Lenders and fund providers need not ignore the indicators of internal control systems. In fact, in most successful firms, internal control systems are continuing process, and changes overtime to suit current developments. Decisions bothering on the long term survival and , profitability , governance and risks revolves around the effectiveness of internal controls [11]. This characteristic of a firms over shadows all other determinants in the proposed framework published by COSO . It is evident that no matter how successful an organization may be, if the present control mechanism fails, all other aspect of the firm may cease to be effective [49]. Most scholars prior to the emergence of the biggest financial scandals

involving Enron in the US, relied heavily on other characteristics of the firm to determine a suitable ratio of capital structure in which profitability dominated the list [50]. Recently, in Ghana the central bank noted that internal control weaknesses and bad governance accounted for the collapse of seven indigenous banks, raises concerns over the reliance on profitability as a major determinant of capital financing. The emphasis on this determinant could address risk, corporate governance, compliance and reporting issues, hence the need to include a non-traditional determinants of optimal capital structure that has not previously been considered.

### 3.8 Corporate governance

A firm financing decision depends on a large number of indicators which finally ends up in the boardrooms. The board of directors are mandated to engage in consultations to decide on the best mix of their capital after taking critical accounts the implications of operational risk, business risk, markets risk, microeconomics and macroeconomic factors [12]. In the beginning of modern governance theories, board of directors relied extensively on best corporate governance principles and codes to develop business financing strategies. Good governance manifests into better corporate financing and ensures compliance to standards, based on transparency and accountability to stakeholders. Scholars have emphasized on the positive relationship between capital structure and corporate governance. According to Batuo [8], Baumgartner and Rauter [51], the relationship is based on firms having a well-balanced board size. Anginer [52] also observed CEO's having a high-risk appetite are likely to favor debt financing. CEO's having a duality role concurrently tend to have a high influence in capital decisions, and in most cases the firm's capital policies results in high gearing ratios. On the other hand, Apergis [53] opined that, the CEO's influence on capital acquisition could be controlled based on the ratio of nonexecutive directors. They argue that non-executive director who are technically outsiders may be dissatisfied with risky financing policies, since they are determined to protect the interest of owners and stakeholders more. Possible conflicts may also emerge between executive directors and the owners as a result of high free cash flow. The introduction of debts element in the capital structure limits the cash flows accrued to the firm's management. Moreover, shareholders experts believe the use of debts is a good measure of managers efficiency as they may have to proof their competence in managing the finances and meet the long and short term financial obligation on time [35,36,54]. Taking into account the propositions cited in Modigliani and Miller [1], how do firms behave under the assumption of taxes, bankruptcy and agency costs in a competitive market where there is adequately free flow of information? Does it really matter to the board whether the value of the firm could be impacted by the ratio of debt and equity? Well, this study will examine whether or not there is any relationship between corporate governance and capital structure composition. Nonetheless, an effective and independent board is charged with the responsibility to deliver efficiency, accountability and good leadership and maximize shareholders value, therefore their influence over how the firm is financed should be a matter of concern.

## 4 Material and methods

This study applied a systematic review of a variety of academic literature in the domain of capital structure which is a subject under corporate finance. The center of the review is structured into two main sections; the first section contained the theory of capital structure while the second captured the theoretical literature review on the composition of firm capital structure and the internal Characteristics affecting the choice of capital in the financial sector. The sections, detailed relevant factors and the peculiar situations under which they determine financing decisions as presented by previous researchers in qualitative and quantitative studies by applying the following steps:

- (1) Resorting to reliable databases *i.e.* Science direct, Web of Science, Directory of open access journals, PubMed and Scopus.
- (2) Sampled only academic papers published with evidence of rigorous peer review evaluation.
- (3) Sampling abstracts, keywords and titles of papers capturing "capital structure"

The review is restricted to 8 internal firm characteristics namely; corporate governance, firm internal control practices, profitability, firm size, taxation, business risk, firm growth and total assets. These are quite similar with the Titman and Wessels [2], who discussed the combination of Firm size, earnings volatility, profit, non-debt tax shields, industry type, firm growth, uniqueness and total assets to arrive at a meaningful conclusion. The lack of data to perform empirical research did not forced the authors to rather do a qualitative study which perhaps could help expatiate the topic in detail. Consequently, this approach also escaped a



common limitation associated with empirical research in which researchers applying quantitative studies select only variables that produce significant statistical significance and goodness of fit to support the interpretations of the inferential judgment.

## 5 Discussion and conclusion

There is sufficient evidence in literature suggesting that the capital structure of firm is influenced by; corporate governance, profitability, asset structure, internal controls, firm size and corporate taxes. It implies that, financing decisions of banks could be determined by a combination of several models such as the Perking order theory, agency theory, the trade-off theory and the net income approach to form a single financing strategy.

However, there are other principal factors which are having negative impact on financing decisions which include industry volatility, competition, government regulations, and instability, and firm reputation, natural disasters such as the Covid 19 global pandemic and similar factors affecting the corporate behavior in recent time.

Policymakers in the financial sector require a great caution when planning a better choice of capital. The relevance of this conclusion is emphasized in a more recent study by Saif-Alyousfi [55], that between Malaysian firms, profitability, growth, tax shields, cash flow and liquidity do have a negative impact of debt financing when all other determinants are held constant, whereas firm earnings volatility, collateral and non-debt tax remained positive. Under similar circumstances, inflation, business risk, firm age and interest rates significantly affect debt financing and the overall capital structure. However, from an African institutional context Bolarinwa and Adegboye [56] opined that among Nigerian firms, efficiency is the main determinants of capital structure decisions across all sectors according to a recent survey. It also implies that efficient utilization of researches affects the choice of capital.

Finally, this study advances capital structure discussions beyond a couple of exiting findings by Awunyo-Vitor and Badu [29], Abor and Biekpe [41], Amidu [15], Musah [57] and Akomeah [58] in the context of Ghana based on the factors considered.

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