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CAPITAL STRUCTURE AS DETERMINANT OF FINANCIAL PERFORMANCE: REVIEW OF LITERATURE

Keywords: capital structure, financial performance, conceptual model, literature review.

J E L Classification: G30, G32.

Abstract: One of the most critical decisions in corporate finance is to decide about the source of fund to be employed. The mix of debt – equity used to generate funds is termed as Capital Structure (CS). Research on Capital Structure and its impact on financial performance has gained momentum from the pioneering article of Modigliani and Miller (1958). Since then it has been one of the most debated and controversial aspects of corporate finance. Researchers have contributed in form of theories as well as empirical findings to study the relation between capital structure and financial performance. Current paper reviews the existing studies in the area of CS and financial performance

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and also propose a conceptual model that describes the interrelationship between CS and financial performance based on detailed discussion of widespread literature. This model reckons important variables of financial performance affected by CS which help research scholars in further investigation. Researchers can use this model to perform empirical testing to fill the research gaps identified and enrich the existing literature.

Introduction

Economic activities are carried out by coordinated efforts of four factors of production i.e. Land, Labor, Capital and Entrepreneurship. Capital is categorized as real and monetary (financial). Conventionally, financial capital can be raised through owned and borrowed sources and such mix of funds is called CS. The choice of debt-equity is not easy to make as equity holders expect higher return whereas debt holders need regular interest payments. Every manager needs to assess the effect of financing source on firms' profitability and value. Franco Modigliani and Merton Miller (MM) (1958) have ignited this discussion and concluded irrelevance of CS and value of firm. The MM approach was contradicted and criticized due to assumptions like absence of tax, perfect capital market, no transaction cost etc. David Durand (1959) has suggested 'Net Income Approach' of CS according to which debt funds are cost effective than equity hence a firm should employ 100% debt to maximize its market value. Later, MM has modified their argument of irrelevance and incorporated the effect of taxation in determining value of firm. MM (1963) have presented tax-based view and concluded that levered firm are eligible for tax advantage and thereby are valued higher. Besides interest cost and tax benefit, debt issue inherently has several other features associated with it. Baxter (1967) has introduced the concept of bankruptcy cost in CS decision which arises due to nonpayment of interest and principle. Every firm strives towards an optimal debt-equity ratio which is calculated by comparing benefits and costs associated with use of debt (Myres, 1984). An optimal CS can be obtained at a point where present value of interest shield is equal to present value of cost of financial distress (Myers, 2001). Another important behavioral phenomina allied with CS is Agency Cost as propounded by Jensen and Meckling (1976). Agency cost approach considers the conflicting issues of managers and owners indicating that managers, taking major financial decisions including CS, may not act in the best interest of investors and accept the project with suboptimal results.

From above discussion it can be referred that capital structure is a maltifacet decision which requires consideration of financial as well as non-financial aspects. This paper reviews the existing literature relating to CS and its impact on financial performance of firm. Introduction is followed by review of empirical findings categorised based on measure of performance. Based on findings of past research, conceptual model has been developed and discussed the end.

The research methodology and the course of the research process

Current paper primarily focuses on analyzing past studies conducted in the field of capital structure and its impact on financial performance. Below mentioned objectives are intended to be satisfied as outcome of research.

- Studying and investigating empirical research highlighting the effect of capital structure decision on financial performance of firms.
- Identifying the factors selected by research scholars as proxy of capital structure and financial performance.
- Developing a theoretical model which can be used for empirical testing in future.

Present research study follows qualitative design of research. On the similar lines, the findings and conclusions of this paper are based on revising and examining the existing literature hence qualitative research design is found to be appropriate.

Capital Structure and Financial Performance

This section summarizes experiential discoveries of various researchers who have analyzed the impact of CS on market value and profitability. Although financial performance can be indicated by variety of measures, the current paper focuses on five measures namely Return on Asset, Return on Equity, Earnings per Share, Market Value and Tobin's Q ratio.

Return on Asset (*RoA*)

One of the most commonly used measures of firms' performance is ratio of its operating profit to total assets popularly known as RoA (Abor, 2005 & 2007;

Adewale & Ajibola, 2013; Azhagaiah & Gavoury, 2011; Ebaid, 2009; Pandey, 2004; Saeedi & Mahmoodi, 2011; San & Heng, 2011; Zeitun & Tian, 2007; Oke, Saheed, & Quadri, 2019). Authors have carried their research work in different countries and with different industries by employing various capital structure variables. Outcomes of various studies reveal contradictory results pertaining to relation of RoA and CS variables. Ross (1977) has argued profitable firms can afford to mitigate the interest obligation of borrowings which indirectly provide signal towards firms' financial health. Borrowings further reduces tax liability and therefore results into higher profitability hence findigs suggest positive impact of debt financing on RoA. (Adewale & Ajibola, 2013; Mujahid & Akhtar, 2014; Nirajini & Priya, 2013). On the contrary, researchers such as Pouraghajan and Malekain (2012), Riaz (2015), Velanampy and Niresh (2012), and Vijaykumar and Karunaiathal (2014) have deduced inverse relationship between RoA and CS (measured by Debt-Asset Ratio). Probable reasons for such consequence could be inefficient utilization of funds, higher cost of interest and cost of financial distress. Eriotis, Frangouli and Neokosmides (1997) have used economic measure of profitability to assess the impact of financial structure on it. They have concluded inverse relationship between debt financing on profit margin.

Authors have used long-term debt ratio and short-term debt ratio as CS variables as maturity of debt is an important moderator (Abor, 2005 & 2007; Ahmad, Abdullah & Roslan, 2012; Chavali & Rosario, 2018; Emin, 2016). Long-term debt is having higher cost associated and require securities to be pledged whereas short term borrowings are available at lower cost and without mortgage. Due to such differences long-term debt has negative impact on RoA (Abor, 2007; Emin, 2016; Kodongo, Mokoteli & Maina, 2014; Nawaz & Ahmad, 2017; Oke, et. al., 2019) and short-term debt improves profitability (Abor, 2005; Goyal, 2013; Oke, et. al., 2019). Table 1 provides summarized view of various studies conducted by taking RoA as dependent variable.

Table 1. Impact of CS on RoA

	Source	Control Variables	Impact on RoA
RoA and Debt – Asset Ratio	Azhagaiah & Gavoury (2011); Gupta (2015)	NA	Negative
	Banerjee & De (2014)	Business Risk, Financial Leverage, Operating Leverage, Age, Growth, Payout Ratio	Negative
	Chavali & Rosario (2018)	Interest Coverage Ratio	Positive
	Ebaid (2009)	NA	No Impact
	Fosu (2013)	Competitive Force	Positive
	Adewale & Ajibola (2013)	Asset Turnover Ratio, Size, Tangibility, Growth	Positive
RoA and Debt – Equity Ratio	Velanampy & Niresh (2012); Vijaykumar & Karunaiathal (2014); Chadha & Sharma (2015); Yadav (2018)	NA	Negative
	Adewale & Ajibola (2013)	Asset Turnover Ratio, Size, Tangibility, Growth	Positive
	Basit & Hassan (2017)	Size, Advertising & Marketing	Positive
RoA and Long-term Debt Ratio	Abor (2005 & 2007); Oke, et. al. (2019)	Growth, Size	Negative
	Ahmad et al. (2012)	Asset Growth, Size, Sales Growth, Efficiency	No Impact
	Ebaid (2009)	NA	No Impact
	Emin (2016)	NA	Negative
	Kodongo et al. (2014)	Tangibility, Size, Sales Growth	Negative
RoA and Short-term Debt Ratio	Abor (2005 & 2007); Oke, et. al. (2019)	Growth, Size	Positive
	Ahmad et al. (2012)	Asset Growth, Size, Sales Growth, Efficiency	Negative
	Ebaid (2009)	NA	No Impact
	Goyal (2013)	Asset Growth, Size	Positive

S o u r c e : compiled by author.

Return on Equity (RoE)

Various stake holders use different indicators to analyses financial health of organization. For equity shareholders, RoE is one of the key determinants of profitability and it indicates return generated on equity funds. RoE has been used by scholars to measure how much value addition is made by managers towards the wealth of shareholders. (Abor, 2005; Azhagaiah & Gavoury, 2011; Gill, Nahum & Mathur, 2011; Krishnan & Moyer, 1997; Majumdar & Chhibber, 1999). Modern corporate functions on agency principle i.e. funds are provided by one party and management and decisions are taken by other. Such agency relationship creates a possibility of conflicting interests of creditors and owners (Jensen & Meckling, 1976). Debt holders expect regular interest payment and principle, so they prevent organizations to take up risky but profitable projects. On the other hand, equity providers are risk takers who expects higher return to compensate the risk. Debt financing improves profitability as tax advantage and lower cost of debt improves earnings available to equity holders (Myres, 1984). Like RoA, empirical findings relating to RoE and CS are also of mix opinion. Adewale and Ajibola (2013) have concluded a strong positive impact of debt ratio on RoE which further supported by Danis et al., (2014); Ebrati, Emadi, Balasang and Safari (2013); Fosu (2013). As against this, pecking order theory pioneered by Donaldson (1961) and modified by Myres and Majluf (1984) suports contradictory view. The notion of inverse relation between RoE and borrowings is argued by Vijaykumar and Karunaiathal (2014); Singh and Singh (2016); Puwanenthiren (2011); and Pouraghajan and Malekain (2012) based on their empirical research work on various industries and countries.

Considering debt maturity as mediating factor, Abata, Migiro, Akande and Layton (2017) have argued that long-term debt has strong negative impact on RoE. Model based study carried by Emin (2016); Kodongo, et al., (2014); Salim and Yadav (2012); Shubita and Alsawalhah (2012); and Twairesh, (2014) concludes negative impact of both long-term as well as short-term borrowings on RoE. Abor (2005 & 2007) have tested the relation between CS and RoE for large size as well as SMEs and concluded that long-term debt has unfavorable impact on RoE whereas short-term debt has positive relation with RoE. Such findings were also validated by Gill, Nahum and Mathur (2011); Goyal, (2013); Tailab, (2014) who reported similar results. Abridged view of relation between RoE

and CS variables has been potrayed in table 2 which highlights major findings along with moderating variables used by scholars.

Table 2. Impact of CS on RoE

	Source	Control Variables	Impact on RoE
RoE and Debt – Asset Ratio	Adewale & Ajibola (2013)	Asset Turnover, Size, Tangibility, Growth	Positive
	Ebati et al., (2013)	NA	Positive
	Fosu (2013)	Competitive Force	Positive
	Gupta (2015)	NA	Negative
	Pouraghajan & Malekain (2012)	Asset Turnover, Size, Tangibility, Growth, Age	Negative
RoE and Debt – Equity Ratio	Azhagaiah & Gavoury (2011); Chadha & Sharma (2015); Abata et al., (2017)	NA	Negative
	Basit & Hassan (2017)	Size, Advertising & Marketing	Neutral
	Velanampy & Niresh (2012); Nirajini & Priya (2013)	NA	Positive
RoE and Long-term Debt Ratio	Ahmad, Abdullah & Roslan (2012)	Size, Asset Growth, Sales Growth, Efficiency	Neutral
	Chavali & Rosario (2018)	NA	Positive
	Abor (2005)	Growth, Size	Negative
	Shubita & Alsawalhah (2012); Salim & Yadav (2012)	NA	Negative
RoE and Short-term Debt Ratio	Ahmad, Abdullah & Roslan (2012)	Size, Asset Growth, Sales Growth, Efficiency	Negative
	Tailab (2014); Chavali & Rosario (2019)	NA	Positive
	Abor (2005)	Growth, Size	Positive
	Shubita & Alsawalhah (2012)	NA	Negative

S o u r c e : compiled by author.

Earnings per Share

EPS is an alternate measure of evaluating financial performance from the viewpoint of equity shareholders. In contrast with ROE which gives percentage, EPS provides absolute rupee value. Researchers have used EPS as supplementary along with RoA and RoE (Basit & Hassan, 2017; Goyal, 2013; Gupta, 2015; Mujahid & Akhtar, 2014). EPS provides better view of equity returns as calculation of RoE includes retained earnings that may deflate equity returns of a given accounting year. Borrowed funds come along with compulsory payment of interest that reduces the net earnings available to equity holders hence it negatively affects EPS (Gupta, 2015; Salim & Yadav, 2012; Vijaykumar & Karunaiathal, 2014; Yadav, 2018). Size of the firm can moderate the relationship between CS and EPS as large firms can avail funds at economical rate whereas small and medium size firms struggule while getting credit from finanical institution. San and Heng (2011) have used size as moderator to test the effect of CS on EPS and concluded that leverage affects EPS of large size firms in a positive way. Such positive relation between EPS and CS was concluded by Vijaykumar and Karunaiathal (2014), Saeedi and Mahmoodi (2011); Mujahid and Akhtar (2014). Hence, it can be inferred that CS variables have varied influence over EPS and the same has been portrayed in table 3.

Table 3. Impact of CS on EPS

	Source	Control Variables	Impact on EPS
EPS and Debt – Asset Ratio	Gupta (2015)	NA	Negative
	San & Heng (2011)	NA	Positive for Large Size firms only
EPS and Debt – Equity Ratio	Basit & Hassan (2017)	Size, Advertising & Marketing	Neutral
	Gupta (2015); Yadav (2018)	NA	Negative
	Vijaykumar & Karunaiathal (2014); Mujahid & Akhtar (2014)	NA	Positive
EPS and Long-term Debt Ratio	Goyal (2013);	Asset Growth, Size	Negative
	San & Heng (2011)	NA	Positive for Large Size firms only
	Salim & Yadav (2012)	NA	Negative

Table 3. Impact...

	Source	Control Variables	Impact on EPS
EPS and Short-term Debt Ratio	Saeedi & Mahmoodi (2011)	NA	Positive
	Goyal (2013)	Asset Growth, Size	Positive
	Salim & Yadav (2012)	NA	Negative

S o u r c e : compiled by author.

Market Value of Firm

Market price of share is a function of financial performance of any business undertaking hence it is imperative to study the effect of CS on market value of firm computed as product of market price and number of outstanding shares. Several researchers have directly employed market value as dependent variable (Dhankar & Boora, 1996; Hatfield et al., 1994; Fama & French, 1998) whereas proxy variables such as stock returns (Artikis & Nifora, 2012), market price per share (Chemutai, Ayuma & Kibet, 2016; Chowdhury & Chowdhury, 2010; Vijaykumar & Karunaiathal, 2014) and P/E ratio (Zeitun & Tian, 2007) are also used. MM (1958) proposition without taxes supports the fact that value of firm and its CS are independent which further coincides with findings of Bhayani (2009); Hatfield at el., (1994); Chemutai, Ayuma and Kibet (2016). Dhankar and Boora (1996) have concluded that CS and market value of firm are separate only at micro level and are positively related at macro level. Such positive relation between market price and debt financing was reported by Vijaykumar and Karunaiathal (2014) and Chowdhury and Chowdhury (2010). High level of debt and leverage increases risk of insolvancy making the firm unattractive. Share holders expects higher return while investing in excessively levered firms which reduces market value of the firm (Fama & French, 1998).

Tobin's Q Ratio

As proposed Nicholas Kaldor (1966) and later elaborated by James Tobin, Q ratio measures the market value of the firm in relation with its replacement cost. Q ratio is one of the frequently used indicator of market based performance (Abata et al., 2017; Abor, 2007; Chadha & Sharma, 2015; Ebrati, et al., 2013; Kodongo et al., 2014; Pandey, 2004; Saeedi & Mahmoodi, 2011; Salim & Yadav,

2012; Zeitun & Tian, 2007). Empirical findings of Ebrati, et al., (2013); Kodongo et al., (2014); Saeedi and Mahmoodi (2011); Salim and Yadav (2012) suggest that Tobin's Q ratio is positively affected by debt financing whereas Zeitun & Tian (2007) confirms this relation only for short-term debt. The argument of positive relation between said variables is contradicted by Abor (2007), Pandey (2004) and Abata et al., (2017). The impact of CS variables on various measures of market-based performance has been summarized in table 4.

Table 4. Impact of CS on Market based Performance Indicators

Source	Performance Indicator (Market based)	CS Variables	Impact on Performance
Bhayani (2009); Hatfield at el., (1994)	Market Value of Firm	Financial Leverage, Debt Issue, Industrial Debt Level	Neutral
Fama & French (1998)	Market Value of Firm	Debt Ratio	Negative
Chemutai, Ayuma & Kibet (2016); Vijaykumar & Karunaiathal (2014) and Chowdhury & Chowdhury (2010)	Market Price per Share	Debt Ratio, Equity Ratio, Bond Proportion, Retained Earnings, Debt-Equity Ratio	Positive
Zeitun & Tian (2007)	P/E Ratio	Total Debt to Asset, Long--term Debt to Asset, Short Term Debt to Asset, Total Debt to Capital	Negative
Artikis & Nifora (2012)	Stock Returns	Leverage	Negative
Ebrati, et al., (2013); Kodongo et al., (2014); Saeedi & Mahmoodi (2011); Salim & Yadav (2012)	Tobin's Q Ratio	Financial Leverage, Debt to Equity Ratio, Long term Debt to Assets, Short Debt to Assets Ratio, Total Debt to Assets	Positive
Abor (2007); Pandey (2004); and Abata et al., (2017)	Tobin's Q Ratio	Long term Debt to Assets Ratio, Short Debt to Assets Ratio, Debt to Asset Ratio, Debt to Equity Ratio	Negative

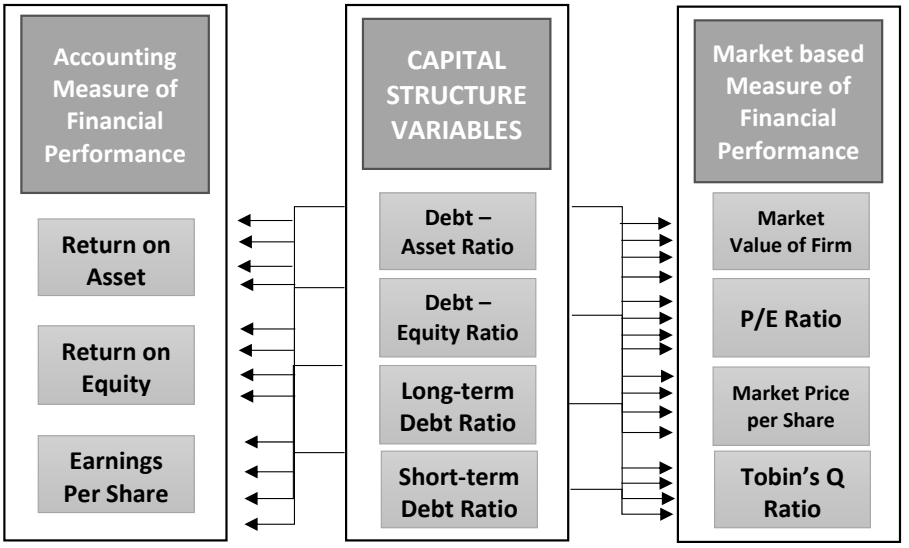
S o u r c e : compiled by author.

Conceptual Model

Based on review of existing below mentioned a conceptual model has been developed for further investigation. Model is framed into three broad section i.e. (i) Accounting Performance Indicators, (ii) Capital Structure Variables, (iii)

Market based Performance Indicators. In first section factors like RoA (Abor, 2005; Chavali & Rosario, 2019; Ebaid, 2009; Tailab, 2014), RoE (Adewale & Ajibola, 2013; Ahmad, Abdullah & Roslan, 2012; Emin, 2016; Mihaela & Claudia, 2017) and EPS (Mujahid & Akhtar, 2014; San & Heng, 2011; Saeedi & Mahmoodi, 2011; Yadav, 2018) are categorised as accounting indicators whereas Market Value of Firm (Bhayani, 2009; Hatfield at el., 1994; Fama & French, 1998) P/E Ratio (Zeitun & Tian, 2007) Market Price per share (Chemutai, Ayuma & Kibet, 2016; Vijaykumar & Karunaiathal, 2014; Chowdhury & Chowdhury, 2010), Tobin's Q Ratio (Ebrati, et al., 2013; Kodongo et al., 2014; Abor, 2007; Pandey, 2004; Abata et al., 2017) are grouped as market based indicators. Rationale to differentiate indicators lies in the fact that accounting measures present historical view of financial position which may not be attractive to current investors. Performance of company is reflected by indicators of capital market provides real time information.

Figure 1. Conceptual Model developed by Author



S o u r c e : compiled by author.

Discussion and Research Extension

Though extensive research work is carried on CS and financial performance, below mentioned are several areas that require further investigation.

- Inconsistency and contradictions are main landscapes of research outcome of various studies though they are in same country. There is no concluding evidence on the effect of CS on profitability hence there is a scope of further research.
- Surprisingly, very few studies are concentrated on small and medium enterprises which are significant mode of employment and industrial output for developing countries like India. Correct source of financing plays vital role in survival of SMEs hence research in this area is inevitable.
- A vast amount of research is carried out by including multiple industries at single point of time rather than focusing on specific industry. Such studies may provide biased results as financial performance governed by operating industry becomes non-comparable. Hence, it is important to consider industry wise differences while analyzing effect of CS and profitability.
- It is observed that most of the studies are focused on accounting measures and limited attention is given to market-based performance measures. Though market value of the firm is dynamic and affected by numerous factors, its importance cannot be ignored. Researchers may study how investors react to change in CS of firm by analyzing effect of such announcement on share price.
- Availability of funds depend on banking regulations, capital market norms and government policies which alter the effect of CS on value of firm. Supply of money is also an important factor which is ignored by most of researchers. Further research can be called for by considering these factors.

Conclusion

Capital structure has found to be one of the highest researched topics in the field of corporate finance which leads to abundand theotrical as well as empirical contributions. Research work reviewed under this paper mainly focuses on

how the choice of debt and equity affects the financial performance of an economic entity. This article compares and contrast outcomes of various studies conducted and attempts to enumerate important areas which require further exploration. Assessment of available literature discloses contradicting results which demands more inclusive research. Besides varied results, limited research articles emphasis market based financial performance and role of regulatory framework. In addition to this, the present paper also propose a conceptual model that describes the interrelationship between CS and finanical performance based on detailed discussion of widespread literature. This model reckons important variables of financial performance affected by CS which help research scholars further investigation. Researchers can use this model to perform empirical testing to fill the gaps identified above and enrich the existing literature.

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