

# Capital Structure Determinants: Review, Synthesis and Critiques

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## ABSTRACT:

Financing decision is considered as important decision in corporate finance, Capital structure denotes the proportion of internal and external funds used to finance any business activity. The author intends to understand and examine the theories pertaining to capital structure and empirical works of Capital Structure, also made an humble effort to identify capital structure determinants. The important theories of capital structure and underlying assumptions were considered. The present study upholds major capital structure determinants affecting finance decisions of business furthermore, those determinants were identified from empirical works carried across the globe.

**Research Methodology:** The present study is purely conceptual and descriptive i.e, comprehensive understanding of existing literature, The literature survey was done through research publications using major data bases such as Ebscohost, proquest, JSTOR Elsevier Science direct, articles published in peer-reviewed journals, textbooks etc. The review is based on systematic analysis of research works on pertinent topic effort has been made to structure the discussion in paper in order to adequately address the research objectives, also to arrive at set of propositions which may later be used as starting point for future studies.

**Results:** It was observed that so far many research works have been conducted on capital structure in corporate finance, using secondary data. It was identified that the impact of debt-equity finance differs from industry to industry. Interesting finding of the study was developed nations rely on debt funds, on other hand, the capital structure theories are complementary rather than substitute to each other in explaining capital structure selection and determinants that affects capital structure choice. It was found that firms follow pecking order theory in explaining capital structure choices.

## KEY WORDS:

Financing decision, Capital Structure, Determinants, JSTOR, Pecking order theory, Industry.

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Date of Submission: 10-04-2023

Date of Acceptance: 24-04-2023

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## I. INTRODUCTION AND LITERATURE REVIEW:

The financing decision is considered as an important and crucial aspect in corporate finance. The financing objective contends that the proportion of debt and equity chosen to finance investments should maximize the value of investments made. The debt-equity proportion should minimize the hurdle rate allows the firm to invest more in new ventures and enhances the value of existing investments. Financing decisions of business concern is majorly concerned with procurement of funds and its effective utilization to meet the financial objectives of the firm and ensure that working capital is managed efficiently. The important principle should be considered, when firm finance its long term assets and short term assets. Long term debt is used to finance capital asset and short term debt is used to finance normal course of business activities. Financing decisions comprises of raising funds for the firms. It is majorly concerned with formulation of capital structure. Capital structure of the firm signifies the proportion of debt and equity in total capital of firm. The capital structure decision is important to firm, the optimum capital structure helps in minimizing overall cost of capital and maximize firm value. The employment of debt funds in capital structure enhance the Earning per share since, the interest payable on debt is tax deductible, also enhances share prices in the market, usage of higher debt finance in capital structure leads to higher financial risk and results in increased capital costs and decrease the share prices of firm. Hence it is very important to design and manage optimum capital structure by considering the value maximization of shareholders objective. In the present study the author has made an attempt to look over the theories and empirical works done so far on capital structure and determinants influencing capital structure decisions of firm at global level. First section of article discuss the theories, second section of research paper concentrates on determinants and finally concludes with suggestions, capital structure decisions and its implications on financing decisions.

**Objectives of the study:**

1. To scrutinize the capital structure theories.
2. To identify the major capital structure determinants from empirical reviews.
3. To discuss the major implications of capital structure decisions on firm value.

**II. Research Methodology:**

**Sources of data collection:**

The present study is Conceptual, descriptive i.e, comprehensive understanding of existing literature and deductive approach is employed. The required information has been collected from various reputed journals and databases such as Ebsco host, Elsevier, science direct, JSTOR, peer reviewed articles, textbooks and research papers published across globe were considered.

**Inclusion Criteria:**

The theories related to capital structures and empirical works pertaining to determinants were concentrated and the articles should be available in English language were included in the present work.

**Exclusion Criteria:**

Quantitative data and statistical tools are not used, the articles published in other languages were excluded from the present study.

Modigliani and Miller (1958) in his seminal paper, a theoretical model has been formulated to illustrate the decisions of financial executives for capital structure formulation and also identified some of the possible factors affecting capital structure choices of firm. According to the theory, the market value of the firm is irrelevant with its capital structure and required rate of return increases corresponding to increased debt-equity ratio. The cut-off rate of investments will in all cases be average cost of capital and it is unaffected by security used to finance investments. Modigliani Miller has ignored corporate and personal taxes, but later Miller has modified his theory by incorporating tax relief available to geared firms.

**Assumptions of Modigliani Miller theory:**

Capital markets are assumed to be perfect, There are no transaction costs, Interest rates are similar between lending and borrowing, There are no personal taxes and corporate taxes, The investors are sensible and look forward other investors to behave logically, payout ratio of dividend is 100% no retained earnings, There is no benefit to debt financing other than tax shields on interest payments on debt funds.

**Static trade of theory:**

The static trade of theory suggests that firm value will depend upon tax savings on interest payments which encourage the firms to borrow up to the margin where the present value of interest tax shields just off-set the value of loss to agency costs of debt and the possibility of financial distress. The static trade-off theory suggest that there exist a strong inverse co-relation between profitability and financial leverage, Generally high profitability of firms represents low debt, but static trade-off theory would predict the opposite relationship i.e Higher profit represents more amount available for debt service and more taxable income to shield. But in ideal situation firms prefer to avoid financial distress and situation of bankruptcy.

**Pecking order theory:**

The pecking order theory was propounded by Davidson in 1961. The theory was developed by Myers in 1984 According to the theory, there is no particular target or optimal capital structure to the firm. The theory suggests that firm capital structure rely on internal cash flows according to this theory, a firm connects its dividend decisions with its capital structure selection and investment decisions. The theory majorly focuses on costs associated with generation of required funds for investments.

**The theory is based on certain assumptions discussed below:**

No costs are incurred on usage of internal funds, since no issuing cost of securities involved in utilization of earning surplus, the theory opines raising external finance is expensive, raising debt is comparatively economical than raising equity finance, equity capital issuance is expensive method. When a firm wants to raise funds for long term investments, it has well defined order of preference to source the funds. First the companies prefer to use earning surplus i.e, internal funds rather external funds. pecking order theory recommends that dividend policy is adhere, to use internal funds rather than external funds, As the firms seeks more external funds, the pecking order theory of security recommends from highest safety to risky debt, than convertibles and quasi- equity instruments and at last equity.

### **The Signaling theory:**

The signaling theory determines the optimal capital structure which assumes that insiders i.e. managers and executives possess more information than the market does not have. Therefore, the firm capital structure choice by the insiders can signal information to external users and affect the firm value. Signaling theory highlights the intrinsic value of securities and significantly affects the cash flows of firms.

### **Agency Cost theory:**

The firm's capital structure selection depends on agency costs associated with equity and debt issue, the costs associated with equity issue includes, the maintenance of issue expenses principal, agent expenses, debt issue increases the owners funds to invest in riskier projects that reap good returns to owners and managers but increase the chances of failure that debt holders have to share if they realized. If debt holders expect this, a high premium is required which in turn increases cost of debt. Agency costs arise due to the conflicts between principal and Agents. Since the equity and debt finance incur agency costs, the capital gearing ratio involves a trade-off between different costs.

### **Capital Structure Determinants and Empirical evidences:**

From the review of capital structure theories, the researcher has identified six main factors affecting capital structure of firm with the help of Modigliani and Miller, Pecking order theory, static trade-off theory, Agency cost, Signaling theory of capital structure. Profitability, firm size, growth opportunity, tax, non-debt shields, tangibility, financial distress affects the capital structure decisions.

**Harris and Raviv (1991)** has been found that leverage increases with use of fixed assets, non-tax debt shields, investment opportunities, firm size and decreases with volatility of earnings. He found that the relationship between the factors and capital structure is inconsistent. The empirical studies have provided with contradict results. Pecking order theory supports that firms want to raise capital majorly from internal source and at last riskier funds. Firms issue debt and finally move to new issues in capital markets (**Myers and Majluf 1984**) the profitable firms should use internal funds and suggest that firms should have low debt ratio. They found a positive relation between capital structure and other variables. **Jensen (1986)** opines debt as a discipline procedure to source to enforce managers to pay out profits. they found a positive relationship correlation between profitability and dividend in a signaling frame work, profitable firms will be assumed to be more debt users as a signal of firm quality. The theory predicts positive relationship. Most of the empirical studies confirm a negative relationship between profitability and leverage (**Titman and Wessels 1988**), **Rajan and Jingles(1995)** **Wald (1999)** etc while the positive relationship were rarely supported by empirical studies. **Huang and Song (2002)** has conducted study on determinants of capital structure of 1000 Chinese listed firms from 1994 to 2000 and found that firm size, non-debt tax shields and fixed assets are found to be positive with leverage and negative significant relationship with profitability. **Chen(2004)** had examined the determinants of capital structure of 88 Chinese public-listed firm for the period 1995 to 2000 and identified that profitability, growth opportunities, size and tangibility are found to be significant with long term leverage. **Baral (2004)** has been evaluated the determinants of capital structure of the firms listed in 40 firms listed in Nepal stock exchange on July 16, 2003 and found that size, growth rate and earning rate were statistically significant to determine the capital structure and business risk, dividend payout ratio and degree of operating leverage had insignificant impact on capital structure. **Song (2005)** had examined the determinants which have significant impact on capital structure of 6000 Swedish companies from the period 1992 to 2000 the researchers have identified that tangibility, size, profitability and income variability, non-debt tax shields has found to be significant in capital structure design but growth does not have significant impact. **Frank and Goyal (2007)** identified capital structure factors on the leverage of publicly traded American firms during 1950 to 2003 they found insignificant relationship between market to book value and profits with leverage besides, log of assets, inflation, industry leverage and tangibility have significant association with leverage. **Abor (2008)** observed capital structure influencing factors of 230 firms listed publicly, large firms and small-medium enterprises quoted on Ghana stock exchange during the study period from 1998 to 2003. The author concludes long-term debt is positively associated with firm size and growth. whereas, age, profitability and tax are negative. **Bas et.al (2009)** examined the determinants of capital structure of 11,125 small and private firms in 25 developed nations and data has been collected from world development indicators and found that tangibility, profitability and size were found to be major determinants of capital structure decisions. **Ramakrishnan (2012)** has examined the capital structure determinants influence on Malaysian firms for the period 1996 to 2007 he identified that asset tangibility, size, non-tax debt shields and tangibility are major factors that affect capital structure selection of firm. **Ogbulu and Kehinde (2012)** made an attempt to explain the influence of capital structure decisions of 110 firms quoted on Nigerian stock exchange from 2000 to 2005 and they found that firm size is positive influence on capital structure while age has shown a negative but significant influence on capital structure. **Kedzior (2012)** have traced out the capital structure factors which influence significantly on capital structure

decision of 1063 firms of European Union states from 1<sup>st</sup> January 2005. Results of work revealed that size, profitability, economic growth, inflation rates, income taxes, banking sector and capital markets developments, legal frame works of member states influenced by its capital structure design. **Chandrashekhara (2012)** had examined the capital structure determinants with reference to Nigerian firms from 2007 to 2011 he concludes that size, age, growth, tangibility and profitability are found to be major capital structure determinants. **Fauzi et.al (2013)** had conducted a studies on determinants of capital structure 79 firms listed in New Zealand stock exchange during the year 2007-2011 and the findings of the study revealed that growth, asset tangibility, signaling, managerial ownership and firm size are significant with total debt. **Fernandez et.al (2013)** The capital structure factors influence on firms quoted in Muscat Securities Market and financial firms, banks and insurance companies are excluded from the study sample size of 82 listed firms in Oman during 2006 to 2011 and revealed that firms with lower profitability is negative with leverage and higher efficiency in asset turnover is positively related with the leverage of the firms. **Thippayana (2014)** has examined the factors of capital structure of select firms quoted in Thailand stock exchange a sample of 144 for firms were considered from the year 2000 to 2011. It was found that firm size and profitability are significant factors of capital structure. **Masoud (2014)** has examined the determinants that influence firms to choose equity over debt and 8 firms listed in Libyan stock exchange from the period 2008 to 2013. The author has observed that high price earnings ratio and high interest rates reduces cost of equity finance hence the Libyan firms choose equity over debt finance. **Cekrezi (2015)** had examined the determinants of capital structure on Albanian firms and they used 69 non-listed firms for the period 2008 to 2011. According to authors findings return on assets, return on equity, liquidity and tangibility are found to be important determinants of capital structure and had a significant impact on long term and short term debt. While, size, risk and Non-debt tax shields have insignificant impact on long term debt. **Baum et.al (2017)** opines that leverage evolution follows as mean reverting process, they identified firm specific factors such as difficulty of financing, firm evaluation on capital markets, firm size, leverage and profitability, macro economic factors have identified like GDP growth, risk is considered as major determinant that influence adjustment speed of leverage. **Al-Zoubi et.al (2018)** identified that firm decisions related to capital structure determines a persistent and cyclical evolution of leverages. The study was conducted on US firms for the period 1975 to 2016. During the study period the authors have experienced six business cycles and five financial crises. The results of the study revealed that capital structure is cyclical and persistent. The authors explained that leverage does not follow mean reverting process. It was identified that growing leverage when profitability is high, and leverage contracts when earnings will reduced, but it was like a business cycle. **Ramli et.al (2019)** has made an attempt to evaluate the influence determinants of capital structure on firm financial performance with mediation effect on leverage in Malaysian and Indonesian firms over the period 1990 to 2010 the results of the study revealed that capital structure determinants will directly affect the firm performance and the authors found that positive significant relationship between leverage and financial performance of firm in Malaysian listed firms. It was observed that Malaysian firms prefer external funds rather than internal funds. Leverage is an important determinant of capital structure but in case of Indonesian firms leverage has no significant on capital structure. The author have identified factors like liquidity, growth opportunity, asset structure, non-debt tax shields and interest rates, asset structure indirectly influenced firm leverage on firm performance.

**III. Determinants of Capital Structure and predicted signs summarized below:**

Authors	Capital Structure determinants	Predicted signs
Myers and Majluf (1984)	Growth opportunities, debt	+/-
Jensen (1986)	Profitability, dividend signaling	+
Titman and wessels (1988) Rajan and Jingles (1995) Wald (1999)	Profitability and leverage	-
Huang and Song	Firm size, non-debt tax shields, Profitability, leverage	+ -
Cheng (2004)	Profitability, growth opportunities, size, tangibility Long term leverage	+
Baral (2004)	Firm size, Growth, Business risk Dividend payout ratio, leverage	+ -
Song (2005)	Tangibility, size, profitability, income variability, Non-debt tax shields	+
Frank and Goyal (2007)	Market to book ratios, profits Log of assets, inflation, leverage, Tangibility	- +
Abor (2008)	Long term debt Age, profitability, Tax	+ -
Bas et.al (2009)	Tangibility, profitability, size	+
Ramakrishnan (2012) Ogubulu and Kehinde (2012)	Size, Non-debt tax shields and Tangibility	+
Kedzior (2012)	Firm Size and other variables Age.	+ -

Chandrashekar (2012)	Size, profitability, economic growth, inflation rates, income taxes, legal legislations.	+
	Size, Age, growth, profitability and Tangibility.	+
Fauzi et.al (2013)	Growth, tangibility, Managerial ownership, firm size, signals.	+
Fernandezet.al (2013)	Leverage Profitability	+ -
Thippayana (2014)	Size, profitability.	+
Masoud (2014)	Equity finance Debt finance	+ -
Cekrezi (2015)	ROA, ROE, Liquidity, Tangibility, long term debt, short term debt. Size, risk and Non-debt tax shields	+ -
Baum et.al (2017)	Firm size, leverage, profitability. GDP Growth, risk at global factors	+ +
Al-Zoubiet.al (2018)	Profitability, leverage	+
Ramli.et.al (2019)	Leverage, liquidity, growth, asset structure, non-debt tax shields, interest rates. Asset structure	+ -

#### **IV. Findings and Interpretation:**

It was found that trade-off theory support capital structure choice of the firm by considering the trade-off among tax benefits, bankruptcy costs and agency problems. The pecking order theory describes capital structure selection, by focusing on internal funding sources to external funds and debt to equity ratio represents the total requirement for external funds and suggests the firms should not have leverage targets and use only debt finance when reserves are in adequate. As per the signaling theory selection of capital structure by executives of company can signal information to external parties and firm value will change.

Author has identified some major determinants influencing capital structure decisions i.e, profitability, firm size, growth opportunities, tax benefits, non-debt tax shields, cost of financial distress, tangibility. The relationship that exists between capital structure determinants and influence of leverage policy with capital structure theories depicted in the table. There exist a significant relationship between variables and in few studies it was found that insignificant relationship among determinants. The inconsistency in relationships among determinants and capital structure theories helps the researchers to carry new research works. These insignificant relationships among variables affects capital structure choice.

#### **V. Conclusion:**

In this research article author has done substantial literature survey on capital structure theories and key factors affecting capital structure with a view to highlight the driving factors that influence selection of capital structure and financing decisions of firm. The inception of the review begins from MM irrelevance theory the propositions subsequently manifests not to hold in corporate world with frictions such as corporate taxes and transaction costs such affects capital structure choice and firm value.

Firstly author have traced the reliable important firm characteristics that affect capital choice of firm they are profitability, growth opportunities, firm size, tax shields, tangibility and age, financial distress costs their impact on firm leverage was demonstrated. Then authors have made an effort to trace out the predictions of major capital structure theories. Those theories compete with each other. It was found that assumptions of the capital structure theories complement with each other rather than substitute in illustration of financing decisions of firms. Further, the author reviewed empirical studies that have been carried out across the globe to examine the capital structure decisions of firm the authors reviewed works carried out in developed countries as well as developing countries. It was found that trade off theory dominates the pecking order theory to explain the financing decisions of firm. It was identified that firms from developing countries depends on external funds as compared with developed nations. The variations in empirical findings are due to differences in institutional policy pertaining to capital structure choice of firm. The present study concludes with significant theoretical insights and empirical reviews related to capital structure selection and major influencing factors from global and national context.

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Dr. Sathvik S. “Capital Structure Determinants: Review, Synthesis and Critiques.” *International Journal of Business and Management Invention (IJBMI)*, vol. 12(4), 2023, pp. 137-142. Journal DOI- 10.35629/8028