



ZIBELINE INTERNATIONAL PUBLISHING

ISSN: 2616-5155 (Online)

CODEN: MECJBU

Malaysian E Commerce Journal (MECJ)

DOI: <http://doi.org/10.26480/mecj.01.2020.24.32>



REVIEW ARTICLE

THE IMPACT OF DEGREE OF FINANCIAL LEVERAGE AND DEGREE OF OPERATING LEVERAGE ON THE SYSTEMATIC RISK OF COMMON STOCK

Khadija Younas*, Muhammad Sarmad

Student of Master of Business Administration Department, University of Agriculture, Faisalabad Sub-Campus Burewala-Vehari, Pakistan.

*Corresponding Author Email: Khadijayounas561@gmail.com

This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ARTICLE DETAILS

Article History:

Received 07 March 2020

Accepted 10 April 2020

Available online 22 April 2020

ABSTRACT

The aim of this study is that the to evaluate the effect of financial leverage and operating leverage on the systematic risk of stock. In trendy competitive business era, the power to extend come of the firm is usually depends on economical use of leverage within the capital structure. Leverage is outlined as an extended term debt funding that improves the permanent financial performance yet because the success of the organization. It conjointly explained because the use borrowed funds to ascertain investment and come thereon investment however it's a lot of risky if they can't be ready to generate higher rate of come in compare with value of capital. For this reason, the determination of the proportion of debt and equity is one in every of the foremost essential choices that the organization faces, and any variability in leverage will influence a company's monetary capability, risk, return, investment, strategic call and therefore the wealth maximization of organization. During this study, financial leverage and operating leverage as independent variables and systematic risk because the variable is considered. This study used a quantitative analysis style. The population of the study was created from the 8 cement industries of Pakistan. The study used secondary knowledge that was obtained from the annual audited monetary statements that had audited and revealed by securities market of Pakistan for an amount of five years between 2014 and 2019. This study used a correlation analysis and a multiple rectilinear regression technique in analyzing the collected knowledge. The study found that financial leverage and operating leverage had a big positive relationship with systematic risk of stock. This study covers that financial leverage and operating leverage have an immediate result on the systematic risk of stock in a very companies' come. The study counseled that management of corporations listed at the securities market to draw in smart management therefore to beat the danger of stock. Whereas important at $\leq 0/05$ H0 hypothesis, is rejected. Otherwise, there's no different adequate reason for rejecting H0 hypothesis. For testing the hypothesis of this study, rectilinear regression technique has been used. In step with the results obtained, H0 is rejected because of important = zero.00 < 0.05. This analysis is 100% because of all knowledge is collected from the correct places.

KEYWORDS

Operating leverage, financial leverage, systematic risk, common stock.

1. INTRODUCTION

The main purpose of this analysis is to research the danger of common shares. Money theory is typically explicit on truth the very fact the fact that the most goal of a corporation is to maximize the worth and since of this fact, firms put together their record to attain their goal. The chosen structure of liabilities and assets determines the whole risk of a corporation. Systematic risk could be alive of the sensitively in crucial a private security's profit to the comeback of the market structure and simply systematic risk is usually connected or relevant to crucial profit of a corporation (Aharon and Yagil, 2019). This paper examines the proposition that the underlying value structure of a corporation explains the systematic risk of its income and sequent behavior of a company's stock value. Systematic risk will be arising because of company has mounted claims. Here, the mounted claims related to debt finance have engaged to attention of the principally analysis I to the character of

leverage primarily based changes of systematic risk of common shares. Within the commonplace finance, the quality risk is computed from the market-based equity risk antagonistic for leverage effects. Basically, additional claims or debts that but arises from the final operational prices of company and this has attracted with very little attention (Beaver et al., 1970). An attainable important reason for these biases within the analysis agenda is that the dominance of funding over accounting primarily based perspective within the analysis of the systematic risk of common shares.

1.1 Financial Leverage

Financial leverage conjointly named as mercantilism on the equity may be a money maneuver that encompasses the use of further borrowed fund to maximize the come back on investment. Financial leverage is concerning however entities use debt and equity as way as finance there three assets square measure involved. Money leverage explains the relation between owner's funds and borrowed funds that produces up a company's capital

Quick Response Code



Access this article online

Website:

www.myecommercejournal.com

DOI:

10.26480/mecj.01.2020.24.32

structures. money leverage may be outlined as utilization of a 3rd party's funds to finance a firm that may cause a rise in operational profit and taxes (Beaver and Mangold, 1975). Financial leverage is sort of a loan borrowed from a financial organization by the firm with a transparent intention of using the funds in an exceedingly a lot of helpful manner like investment in order that, the earnings from that investment exceeds the price of interest charged on the funds borrowed. Companies use money leverage with the intention of earning higher returns on fastened charges funds than their prices.

Shareholders returns on investment are often magnified by money leverage that most times yield a bonus as way as tax levied cares on borrowing. Consequently, the choice on money leverage is key since companies will utilize an explicit mixture of equity and debt in finance its activities like investments or general operations. Money leverage is a lot of on the debt used within the firm's capital structure (Bhattacharjee et al., 2015). The leverage arises as a hard and fast money expense of the firm. It is bearing a hard and fast obligation of interest payment. 2 totally different outcomes square measure potential with the employment of monetary leverage, either positive i.e. maximizing the profit or negative minimization. The firm is exposed to risk attributable to high debt levels that ought to be repaid at a price. Companies utilize money leverage so as to extend their returns on investment. Excessive use or employment of leverage is often a disaster if not well calculated or managed.

1.2 Operating leverage

The definition of operational leverage drivers within the context of cost-volume-profit analysis isn't unambiguous. So as to derive this ambiguity they differentiate between absolute and relative viewpoints. Absolutely the approach considers the influence of fastened prices on the relation between operational financial gain and sales, whereas the relative viewpoint considers the relative amendment of operational financial gain concerning changes in sales. The role of fastened prices in respect of absolutely the viewpoint is clear: A high level of fastened prices will increase operational financial gain once sales square measure rising. However, they forged doubt on the common assumption that higher fastened prices amplify the relative changes of operational financial gain concerning changes in sales the operational risk consists of the operational leverage, merely outlined because the distinction between value and variable prices, the demand-related behavior of shoppers and therefore the operational potency of the firm (Brenner and Smith, 1978). The definition of the operational leverage may be a simplification of formula as a result of it neglects fastened prices. Derivation an instantaneous association between operational leverage and therefore the expected come back lays the theoretical foundation for testing the influence of the operational leverage on stock.

1.3 Systematic Risk and leverages

It seems clear that the foremost necessary risk driver is that the variability of sales. A firm with heavily unsteady revenues is perceived as being further risky than one with a stable revenue development. The variability of sales is seen as a result of the affiliation between the final market movements and conjointly the behavior of earnings; it is the mechanism through that the macro-economic influences do most of their work. This may be even further therefore throughout a ceteris paribus-setting, with constant prices and constant costs. Throughout this setting, there is only 1 totally different category of risk drivers: mounted charges. Once a firm faces mounted charges or mounted commitments, the variability of earnings as a result from the variability of sales is accrued. Therefore, these mounted charges unit of measurement termed leverage. Cash leverage can be a widely known firm characteristic; it's in the main measured as a relation of debt and equity.

Operative leverage is to boot overtimes mentioned as a risk driver, but further as a qualitative indication of the worth structure than as a relation. It results from the presence of mounted costs and should ideally be measured with a relation of mounted and variable costs. The unlevered firm's stock beta in terms of operational risk and showed that that risk reflects the combined effects of operational leverage, the pure systematic

influence of economy wide events and uncertainty encompassing the firm's operational efficiency. The sample of power corporations found positive relationship between operational decisions and additionally the danger of its stocks. It showed analytically and thru empirical observation that operational leverage, measured by the extent of mounted costs is totally related to the systematic risk. By developing a model for scheming beta that embrace the degree of operational leverage (DOL) and additionally the degree of economic leverage (DFL) as specific variables and used DOL and DFL as real-asset risk measures.

Moreover, the analytically incontestable but the DOL and DFL, beside the constant of variation of revenue and a financial gain correlation, have an impression on a security's systematic risk, expected return and value. to provided empirical proof that the degrees of operational and cash leverages justify thirty-eight to forty eighth of the cross-sectional variation in beta at the portfolio level and leverage values supported accounting flow numbers rather than market stock numbers. Chung conducted every analytical and empirical study on the link between beta and DOL, DFL and demand beta, as a live of intrinsic business risk. Victimization haphazardly chosen samples from manufacturing and utility industries, an identical author showed that a serious portion of the cross-sectional variation of beta is going to be explained by the cross-sectional distinction at intervals the demand beta and additionally the degrees of economic and operational leverages. Thus, on drive substantive policy implications from analyzing the determinants of firm price, decision variables like assets, capital structures and business risk unit taken into account.

This paper uses utterly info, victimization company accounts and price statistics. It then presents associate empirical check examining the relative impact on market based systematic risk of operational and cash leverage variables derived victimization comparable profit and loss account info. An important empirical question is that the relative impact of assorted price categories on total systematic risk. If variance in total financial gain can be a perform of the presence of not merely interest based, but all mounted charges, it'd seem logical to expect operational leverage to account the extra powerfully for the firm's systematic risk. Of the little vary of studies that have examined the joint and complementary effects of operational and cash leverage, few have examined the quantitative impacts of 2 differing categories of mounted costs on a scientific basis. Associate exception is Lord whose empirical study focuses on three sectors and ends with imply any analysis in wider contexts.

Moreover, at intervals the international context, also because the main target of this study, recent proof is very restricted. The examination of operational leverage at intervals the Islamic Republic of Pakistan and international context is very fascinating for style of reasons. First, it provides a mechanism for linking the stock price return to the underlying short price structure of the firm. The presence of positive costs, like knowledge-based labor, analysis or capital-intensive activities, and scale-based production, that are joined to competitive advantage it's reaching to boot because the creation of mounted prices structures that promote shareholder risk. An additional rationalization has emerged from recent changes in company behavior, associated with the rise of the notions of the versatile firm and versatile labor markets and their impact on underlying price behavior which may be expected to attenuate stock exchange risk.

All previous studies predate the most impacts of these changes at intervals the Nineties so the and additionally the ultimate reason is so that earlier empirical findings can be receptive question... any work is of specific price given the most direction of institutional reforms at intervals the Islamic Republic of Pakistan recently with the objectives of de-regulation and additionally the creation of extra versatile markets. Consequently, a connected reason is that theories of competitive advantage suggest a degree of group action discretion in quality acquisition that operational leverage does not simply mirror business membership. A third reason is that where managers unit committed to high mounted prices investment, they might exercise larger caution at intervals the borrowing decision. Interactions between operational and cash leverage unit so in all probability necessary. To appear at these issues in extra detail, the remainder of the paper is organized as follows. Resultant section

introduces another perspective on accounting based risk activity so reviews the previous literature, notably concentrating on previous empirical analyses of operational leverage. Ulterior sections describe the hypotheses, data, and results. A final section attracts conclusions.

2. RESEARCH PROBLEM

Impact of economic leverage and in operation leverage on the systematic risk of common shares is basic problems with an organization. A best structure of capital comes a troublesome leveling of the prices that are associated with debt funding and advantage profit to be used of debt finance. Money leverage affects the firm's capital structure therein it's an effect on managers' money selections which these resolutions have a sequent effect the systematic risk. Most collapse of the many money establishments or companies in Pakistan has been because of funding problems with companies generally. The affiliation between leverage and risk of companies in terms of finance has been examined by many authors. The out their studies on money leverage mix each money and in operation leverage to see their impact on the firms' systematic risk. As such, the out their proof on the leverage and systematic risk of companies in cement trade of Pakistan are unsure. Thus, the requirement for this study, that is aims to research the results of economic leverage and in operation leverage on the systematic risk of common shares within the cement trade of Pakistan.

2.1 Objective of the Study

The main objective is to evaluate the impact of economic leverage and in operation leverage on the systematic risk of common shares to achieve this goal following objectives is needed:

1. To gauge the money leverage of various cement firms.
2. To gauge the in-operation leverage of cement firms from their record.
3. To seek out the danger of various cement trade in Pakistan
4. To seek out the impact of economic leverage on risk.
5. To live the impact of operation leverage on risk.
6. To seek out the link between in operation leverage, money leverage and systematic risk.

2.2 Importance of the Study

This study aims at examining the link between leverage and systematic risk of common shares. Thus, the end result of the analysis is going to be helpful to the mangers to supply recommendations on however companies will use debt. New and existing potential investors will have the benefit of these study findings once characteristic the extent of capital investment that they'd got to place in companies so as to lend effectively finance a number of their core activities. The study findings are going to be of significance to numerous policy manufacturers, together with the of Pakistan, to see whether or not they may develop alternative policies or build amendments to existing policies for higher policy needs and wise tips.

The study findings are going to be a good advantage to policy manufacturers just like the capital markets authority to develop effective policy framework concerning debt funding. Academicians will have the benefit of the analysis findings that they'll augment the prevailing literature on effects of economic leverage and in operation leverage on the systematic risk of common shares and additionally open up new areas which can need investigations. These study findings are going to be important to students as they check appropriate gaps that may inspire interest in any studies and well-found them with further info on leverage and systematic risk

2.3 Conceptual Framework

This study seeks to gauge the impact of economic leverage and in operation leverage on the systematic risk of common shares. The independent variables are money leverage and in operation leverages whereas the management variable is common shares and whereas the variable quantity is systematic risk.

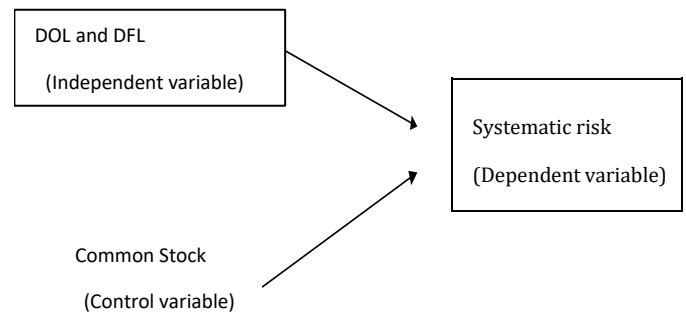


Figure 1: Conceptual framework

3. LITERATURE REVIEW

3.1 Introduction

This section outlines theoretical review, numerous monetary and in operation leverages determinants of systematic risk of stock and eventually an outline of reviewed literature. Debt finance is usually used once a firm incorporates a nice level of tangible assets whereas equity finance is usually used once a firm incorporates a nice portion or level of intangible assets. Thus, a firm ought to maintain associate degree best debt-equity quantitative relation. In this chapter totally, different researchers understood results can mentioned for the sake of evaluating one result regarding the impact of in operation leverage and monetary leverage on the systematic risk of stock supported some cement industries of Pakistan.

3.2 Literature Review

Established a negative relation between performances and leverages thence a conclusion that semi-permanent debt was dearer therefore utilization of debt in an exceedingly very high-level lands up during an occasional profit (Chung, 1989). It expressed that the possibility of associate over proportional increase on operative earnings with respect to a raise on sales, operative as associate instrumentation. He explores that Dugan and Shriver gift a good deal of dynamic conception, throughout that operative leverage may well be a operate of the mounted prices and reflects the degree of modification on the structure of production prices of a given firm, substitution mounted by variable prices. In short, it reflects the operative earnings uncertainty with respect to the sales uncertainty described the rational investment decision was taken into thought a series of variables representing the current economic-financial of the firm that supports the making of forecasts on the firm's future utility (Dagogo, 2014). Among these variables, I've reasons to expect that the degree of operative leverage might be a relevant one. The thought ion of leverage derives from the concept of lever in physics that's associated with the action of an outcome that is over proportional to the force used. At intervals the economic and cash atmosphere of firms, two forms of leverage stand out: the operative (related to the assets' structure) and so the cash (related to the capital structure) leverage.

He stated that Garrison and Noreen defined operative leverage as a result of the degree of response of earnings to changes on sales revenues. Stated the Magana and Kaila studied the impact of leverage on performance of the Republic of Kenya power and lighting company (Mohamed, 2014). The study used a sample of fifty-five respondents and structured questionnaires to gather primary knowledge and secondary knowledge was obtained from firm's annual reports. The study all over that leverage contains a nice impact on performance as so much as funding is bothered. Thus, the study disclosed that associate degree optimum debt funding is crucial in making certain that firms understand improved monetary performance.

Explored that Business enlargement additional or less heavily depends on

borrowed cash or leverage in gift competitive world (Hassan, 2016). Most of the folks use debt to finance operations as a result of it will increase the investment while not increasing equity capital within the business. It helps teach the capitalist and therefore the organization to speculate or operate their business activities. During this business world, the firm will use leverage to undertake to form wealth of stockholder, however if they can't do thus, the disbursal and credit risk of default destroy stockholder worth.

Described many definitions for come backs and basic premise of leverage in investment portfolios was to borrow at a value of capital under the return at that the capital is reinvested (Daves et al., 2000). They also stated that Firms use money leverage to form flexibility, maintain access to capital markets, and purchase equity, and ultimately produce stockholder worth. He examined impact leverage on company's performance from Karachi stock market. Panel knowledge methodology was used for firms listed at Karachi stock market for the year 2004-2009

In their study, Agatha Christie Cheung and monogram and clumsy person, found that volatility looks to rise once stock costs go down and decline once stock costs go up (Aharon and Yagil, 2019). Schwedt showed that exchange volatility will increase throughout recessions and when an oversized visit stock cost. He found that the upper the money leverage of the market, the larger the volatility. He stated that Figlewski and Wang noted a robust leverage result for falling stock costs, except for positive returns they found a weak or maybe non-existent leverage result. They know as these findings the "down market effect", because of it's a lot of stronger once the market is falling. He explores that Titman and Wessel were reportable a negative association between earnings volatility and leverage. Thespian et al. found a negative result of money flow volatility (measured by the quality deviation of historical operational income) on the leverage choices of corporations.

Stated that Two totally different however coherent sets of researches tried to supply money manager's data concerning basic determinants of systematic risk (Mseddi and Abid, 2010). The primary set of studies by trial and error investigate correlations between market-determined and accounting-determined risk measures Ball therefore the association between economics factors and beta (Rob check and chon). Myers has showed that money leverage, cyclicity, growth, and earnings' volatility were determinants of beta. These empirical works haven't sturdy theoretical footing and that they suffer from issues of significant potential model misspecification. The second set of studies is theoretical and tried to decompose mathematically the systematic risk into money and economic factors.

Explored that Brenner and Smite developed a model that describe the connection between the systematic risk of a security and therefore the characteristics of the underlying real assets and incontestable that unit sales, mounted prices, contribution margin and variance of sales area unit real determinants of systematic risk (Fabian, Andrews, & Mrkaus, 2014). However there has up another would like for estimating worth the price of capital of a business unit the ever-growing quality of the investor value thought. If a firm strives to make investor worth, it shouldn't decide the performance of its business units on accounting measures like come on equity or come on investment, however on this worth of the long run money flows to be generated by the unit.

Described in their study since 1994, the South African economy was recorded fourteen sequential years of positive real gross domestic product (GDP) growth (Mohole, 2018). Fastened investment is as a proportion of value hyperbolic from 14.2% in 2000 to some 18.0% in 2006, reaching Associate in Nursing calculable quantitative relation of twenty 1.2% in 2007 Though growing at a positive rate, value per capita has full-grown solely at a mean rate of 2.2% each year since 1994. The money crisis has had important effects on developing countries worldwide. That wasn't the primary money crisis practiced by the country.

Described Two recent studies by Hill and Stone and probability represent a lot of refined applications of the danger decomposition of Hamada and Rubinstein (Gallon and Gentry, 1982). He explores that Hill Associate in

Nursing Stone develop an accounting analogue to Hamada and Rubinstein's formula to research the joint impact of operational risk and money structure on systematic risk. Probability conducts a right of way take a look at of the Hamada and Rubinstein formula by dominant operational risk to preserve the idea of same risk category. They any derived a live of a firm's in operation leverage at any activity referred to as the degree of in operation leverage (DOL).

Stated at the foundation monetary of economic profit was coming up with that the conception of in operation leverage that underscores the axiom of risk-return trade-off in basic financial analysis (Gonads, 1973). That's to mention, at each ends of the risk-return bifurcation were in operation risk and in operation leverage severally. The upper the in-operation leverage, the upper was that the in-operation risk. That was often not novel to any money theorizer, as determined in Bier man and Hass, photographer and Brigham, Van Horne, Pander and Lowe. Photographer and Brigham mapped their baseline from breakeven analysis and outlined in operation leverage because the extent to that mounted prices were utilized in business operations to come up with over proportionate increase in operation profit.

Their findings give right smart empirical support for Hamada and Rubinstein's formula Recent analysis efforts any explore the danger decomposition of Hamada and Rubinstein by introducing the degrees of operational and money leverage into a model that explains betas of stock (Gupta et al., 2016). Though the degrees of the 2 kinds of leverage square measure extensively mentioned in normal finance textbooks regarding their impact on the volatility of stockholders' returns or of earnings per share, their relationship with the systematic risk of stock has not been totally resolved.

Described that the best decision was to justify operational leverage was by means of a package maker like Microsoft (Hamada, 1972). Most of this company's price structure was fastened and restricted to direct development and promoting prices. Whether or not it sells one copy or ten million copies of its latest Windows package, Microsoft's prices stay essentially unchanged. So, once the corporate has sold enough copies to hide its fastened prices, each further greenback of sales revenue drops into rock bottom line. In alternative words, Microsoft possesses remarkably high operational leverage. In contrast, a retailer, like Wal-Mart demonstrates comparatively low operational leverage (Hill and Stone, 1980). Described in their study that, in the past, the matter of the estimation of systematic risk was treated beneath the heading of 'divisional value of capital'.

With the increasing acceptance of the CAPM within the Nineteen Seventies, it absolutely was realized that the business units or divisions of a firm needn't face identical systematic risk because the firm as a full. Therefore, a low-risk division was at an obstacle in getting intra firm capital as a result of it comes were a lot of seemingly to realize a comet below the firm-wide hurdle rate. The matter of choosing the proper P for a project, and so the proper hurdle rate continues to be relevant nowadays, however there has up another would like for estimating worth the price of capital of a business unit.

Stated that Bier man and Hass Drew attention to the connotation of in operation leverage in terms of the firm's risk complexion (Medeiros et al., 2006). They did this by assumptive that given a relentless price structure and chance distribution of amount oversubscribed, the mean, variance and constant of variation may well be used to indicate that a rise in fixed charge will increase the constant of variation of in operation profit, that may be a relative line of business risk. They additional showed that the fixed cost to variable cost magnitude relation depends on the manager's risk-return preference operate. At a similar time, a company's costs, product combine and value of inventory and raw materials area unit all subject to alter.

In their paper, Kelly and Sussman exemplarily show that the definition of operational leverage drivers within the context of cost-volume-profit analysis isn't unambiguous (Salama, 2005). Thus, on derive this ambiguity they differentiate between absolute and relative viewpoints. Absolutely

the approach considers the influence of mounted prices on the relation between operational gain and sales, whereas the relative viewpoint considers the relative modification of operational gain relating to changes in sales.

4. RESEARCH METHODOLOGY

4.1 The Research Design

Research style could be arranging, that outlines procedures and strategies for collection and analyzing the specified knowledge. A groundwork style presents a framework or arrangement of action for a study. This study can use a quantitative analysis style. A quantitative analysis could be an analysis style that addresses the objectives of a study through empirical evaluations that entails numerical analysis and menstruation. The quantitative methodology can facilitate in getting knowledge from databases, an oversized sample and with a statistical procedure conclude the analysis drawback.

4.2 Population

A population refers to a group individuals or things with similar characteristics that an enquiry intends to review and to draw applied math inferences or conclusions. The population of the study is formed up to the eight corporations of cement business in Asian country.

4.3 Data Collection

This study used secondary information that was obtained from the annual audited money statements that had audited and revealed by the cement business firms listed at exchange in Islamic Republic of Pakistan. The information was obtained from earnings report, balance sheets and statements of money flow of the listed corporations, which included; total assets of the firm, income balances, total revenues, profits and tax paid. The annual revealed money reports were obtained from the foremost recent years for an amount of five years between 2015 and 2018.

4.4 Data Analysis

This study used a correlation analysis and a multiple regression toward the mean methodology in analyzing the collected information. Regression was accustomed establish the link whereas correlation was used in determination of the character likewise because the degree of relationship that exists between the analysis variables.

4.5 Hypothesis

Systematic risk per share by establishing linear relationship between the market portfolio returns as independent variables and share returns as the dependent variable is derived. In this study, financial leverage (FL) and operating leverage (OL) are considered as an independent variable, and systematic risk (β) is considered as a dependent variable.

H0: Financial leverage and operating leverage has negative effect on the systematic risk of cement companies in Pakistan.

H1 Financial leverage and operating leverage has Positive effect on the systematic risk of cement companies in Pakistan.

5. RESULTS AND INTERPRETATION

This chapter presents the analysis of the analysis findings from the collected knowledge. The chapter presents the response rate, descriptive statistics, correlation analysis, regression and analysis and finding interpretation of the analysis finding. The study targeted the eight-cement business of Pakistan; but, complete knowledge is obtained from the past 5 years of their financial gain statements. Operating leverage is obtained once a corporation has charge that ought to be met with sales volume. A corporation with high magnitude relation of mounted variable value means that company victimization additional in operation leverage. If a company's variable value area unit over its value area unit over its 1st

value than the corporate use less in operation leverage. Finance leverage needed once business decides to finance a large plus by taking debts.

Companies sleep with by supplying shares in market to fulfill their business wants. Associate in Nursing business that operates and money leverage makes for risk investment. A high in operation leverage implies that firm having few sales with high profit. This could be the explanation of high-risk id business didn't properly foretell of future sales. If a future sales forecast is over really accursing then it can be the explanation of giant distinction between actual and budgeted income. That with additional established on the in-operation ability of a business. A biggest risk arrived once high money leverage happens, and company's come back on assets doesn't exceed the interest on loan that extremely disturbs a company's record. Because the degrees of 2 forms of the leverage area unit recognized within the model that identifies the important determinants of the chance, this study explores 2 vital empirical problems.

I. 1st is to look at the joint Impact of degree of in operation and money leverage on the systematic risk of ordinary shares

II. Second is to deal with the problem of "trade off": between in operation leverage and money leverage, whereas work their combined effects on the systematic risk of the ordinary shares

The "trade off" possibility modify the firm to create plus or capital structure selections no matter they're on systematic risk since the resultant amendment within the degree of in operation leverage are often offset by Associate in Nursing adjustment within the degree of monetary leverage. This "trade off" hypothesis has remained a suppositional science despite its sensible implication for management. Hamada and Rubinstein gift a formula for the sake of composing systematic risk in to the in-operation risk and money risk as following below;

Systematic risk = in operation risk + Beta (1-Tax) debt/equity

Beta (1-Tax) debt/equity presents the money risk of ordinary shares. Rubinstein measure that in operation risk toss back the combined effects of the degree of in operation leverage, the systematic influence on the industry-wide event and the difference or lack of clearness relates with the firm's in operation potency, money leverage denotes this in operation risk to judge money risk.

The first stage is for evaluating the estimation of the degree of in operation and money leverage of the sample cement business additionally as evaluating the systematic risk of every business by pouting formula. The variable should be the number of units factory-made and sold out. Instead of sales in West Pakistan attributable to the number factory-made and sold isn't accessible within the financial statement of the cement business Pakistan. This study used a correlation analysis and a multiple regression methodology in analyzing the collected knowledge.

Regression was wont to establish the connection whereas correlation was used in determination of the character additionally because the degree of relationship that exist between the analysis variable. The F and T check area unit want to check t applied math significance wherever F check was wont to confirm the importance of the coefficients of the regression model wherever a T worth bigger than 2 was thought of important at five-hitter significance level.

5.1 Analysis of knowledge and Presentation of Findings

5.1.1 Response Rate

The study targeted the cement firms that square measure listed available exchange in Islamic Republic of Pakistan. However, complete knowledge was obtained from eight cement firms that had been listed for the quite 5 years since 2014 up to 2019. The companies created up a response rate 90% because all knowledge was obtainable within the annual record of every company at web, which was deemed spare for the analysis.

Table 1: Calculation of degree of operating leverage

companies' name	most recent value of Sales	Difference b/w five years of sales	percentage change in sales	most recent value of EBIT	Difference b/w five years of EBIT	percentage change in EBIT
Lucky Cement Limited (LCL)	4802100.00	493800	0.10%	1,222,100	223500	0.18%
Gharibwal cement limited	11355918	2740887	24.10%	2,935,354	299134	10.10%
power cement limited	4343240.00	3077534.00	70.00%	348778.00	86076	24.00%
kohat cement limited	13438843	2141630	15.90%	4,076,883	58370	1.43%
Flying cement company	2.91E+09	2069131898	71.00%	233,184,349	2.03E+08	87.20%
Pioneer Cement limited	1012100.3	255299.89	0.25%	221,200.69	3599.71	0.02%
Dandot Cement Company Limited	1,306,529	1073243	82.10%	762,350	205368	26.90%
Cherat cement Company limited	1585300	941200	0.59%	104800	64000	0.61%

In this table, the degree of operating leverage has been calculated by putting formula of it. In which most recent value of sales, past five years sales, percentage of sales, most recent value of earnings before interest and tax, percentage of earnings before interest and tax, last five years EBIT and change in their value has been obtain from each number of cement

industry, which are listed in stock exchange Pakistan. Whole data is entering in to the excel sheet for the sake of obtain accurate data for computing degree of operating leverage. It's the first step for calculating the systematic risk factor that is dependent variable.

Table 2: Calculation of degree of financial leverage

Companies' name	most recent value of EPS	Difference b/w five years EPS	percentage change in EPS	most recent value of EBIT	Difference b/w five years EBIT	percentage change in EBIT	DFL=percentage change in EPS/percentage change in EBIT
Lucky Cement Limited (LCL)	32.44	2.64	8.10%	25.45	8.10	0.32%	0.25
Gharibwal cement limited	1.84	0.27	14.60%	0.26	0.05	19.20%	0.76
power cement limited	0.32	0.69	215.00%	38	11	345.00%	0.62
kohat cement limited	19.29	2.25	11.60%	29.54	3.83	12.90%	0.89
Flying cement company	1.32	1.15	87.10%	0.08	0.05	62.50%	1.3
Pioneer Cement limited	7.24	0.48	6.62%	0.22	0.08	36.30%	0.18
Dandot Cement Company Limited	0.29	0.19	65.50%	0.41	0.26	63.40%	1.03
Limited	9.98	0.38	3.80%	0.51	0.37	72.50%	0.05

In this table, the degree of financial leverage has been calculated by swing formula of it. within which most up-to-date worth of earning per share, past 5 years earning per share, share of earnings per share, most up-to-date worth of earnings before interest and tax, share of earnings before interest

and tax, last 5 years EBIT and alter in their worth has been acquire from every range of cement business, that square measure listed available exchange Asian nation. Whole information is entering in to the surpass Sheet for the sake of acquire correct information for computing.

Table 4: Calculation of BETA or risk

Companies' name	(P*)the unlevered firm's common stock beta(operating)	(T) the corporate income tax rate	(D) the market value of debt	(E)the market value of common equity	(1-T)D/E	P*+P*(operating +finance)	p=
Lucky Cement Limited (LCL)	1.8	3.6	4556	49792	0.237	2.05	
Gharibwal cement limited	0.41	0.33	4009	12481	0.214	1.17	
power cement limited	0.34	0.71	13218244	11299062	0.339	0.96	
kohat cement limited	0.089	0.54	5339595	17976738	0.839	0.29	

Flying cement company	1.2	0.29	2586525984	245230204	0.749	2.5
Pioneer Cement limited	0.08	0.056	11,031.78	13628.96	0.761	0.26
Dandot Cement Company Limited	0.32	1.08	2061907	2043690	1.008	1.35
Cherat cement company limited	1.03	0.38	6196000	11756000	0.327	1.08

Table 4 shows the results of the descriptive statistics. In step with the results, the mean of degree of operational leverage magnitude relation of cement business in West Pakistan listed at stock market was 0.88 with a minimum and most DOL of 0 and 3. The results indicate that the degree of economic leverage magnitude relation is 0.88 with minimum and most ratios being 0.000 and 2, that indicates a number of the listed cement firms use zero debt whereas others finance themselves employing a terribly high debt magnitude relation. The results additionally indicate that the quality deviation size price in terms of the natural log is zero.835 and the typical BETA magnitude relation is 0.188. Severally.

	N	Minimum	Maximum	Mean	Std. Deviation
DOL(Degree of operating Leverage)	8	0	3	.88	1.246
DFL(Degree of Financial Leverage)	8	0	2	.88	.835
Beta(Risk)	8	0	3	1.38	1.188
Valid N (listwise)	8				

5.2 Correlation analysis

The correlation results are shown in table 5.

Table 5: Correlations				
		DOL(Degree of operating Leverage)	DFL(Degree of Financial Leverage)	Beta(Risk)
DOL(Degree of operating Leverage)	Pearson Correlation	1	-.292	.519
	Sig. (2-tailed)		.483	.188
	N	8	8	8
	Pearson Correlation		1	.486
	Sig. (2-tailed)		.292	.483
	N	8	8	8
DFL(Degree of Financial Leverage)	Pearson Correlation	.519	.486	1
	Sig. (2-tailed)	.188	.222	
	N	8	8	8

Source finding; Table 5 indicates that degree financial leverage has a negative correlation with degree of operating leverage. The results also indicated that degree of operating leverage is less risky than degree of financial leverage as value of risk assessment is 0.188 at degree of operating leverage but the value of risk assessment is 0.222 at degree of financial leverage, while DOL and DFL have a positive and significant correlation with systematic risk.

5.3 Regression Analysis

5.3.1 Model summary

The results of model summary have been presented in table no.6

Table 6: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845 ^a	.714	.599	.752

a. Predictors: (Constant), DFL (Degree of Financial Leverage), DOL (Degree of operating Leverage)

Source finding; The results on table no.6 indicate that the number of R-squares 0.714 which implies that the freelance variables (degree of monetary leverage and degree of operational leverage) and the management variables (Common stock) justify 71% of the variation within the dependent variable (RISK).

5.4 Analysis of variance

Table 6: Anova						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.048	2	3.524	6.232	.044 ^b
	Residual	2.827	5	.565		
	Total	9.875	7			

a. Dependent Variable: Beta (Risk)

b. Predictors: (Constant), DFL (Degree of Financial Leverage), DOL(Degree of operating Leverage)

Table 6 indicates that there's important relationship between the variables (Financial leverage and operating leverage) and therefore the management variables (common stock) and therefore the variable (BETA) this can be indicated by the f worth and therefore the significance worth of 0.044 that is a smaller amount than 0.05.

5.5 Regression coefficient Analysis

Table 7: Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.095	.499		-.191	.856
	DOL(Degree of operating Leverage)	.688	.238	.722	2.886	.034
	DFL(Degree of Financial Leverage)	.992	.356	.697	2.787	.039

a. Dependent Variable: Beta (Risk)

Table 4.5 indicates that that leverage has associate degree insignificant negative relationship with systematic risk as indicated by the beta natural depression of (-0.095) significance price of (0.856 >0.005). The results additionally indicate that operating leverage insignificant relationship with systematic risk of common stock in cement industry of Pakistan, listed at stock exchange as indicated by beta price of (0.688) and also the significance price of (0.034 <0.05). The results additionally indicate that financial leverage insignificant relationship with systematic risk of common stock in cement industry of Pakistan, listed at stock exchange as indicated by beta price of (0.992) and the significance price of (0.039<0.05).

5.6 Interpretation of findings

The findings revealed that degree of financial leverage and degree of operating leverage negatively influences the systematic risk of common stock in cement industry of Pakistan listed at stock exchange. This means that the number of units increase in financial leverage of degree of operating leverage increase the systematic risk of common stock. In short, the finding revealed that the leverage has a great effect on risk as with the increase of leverage ratio, the risk will also increase.

5.6.1 Hypotheses Testing

This section deals with hypothesis testing. The hypotheses are associated with variables known within the analysis objectives. These problems embody impact of leverage on risk. Two hypotheses were looking acted mistreatment T test at zero.05 is level of significance. Metal hypothesis is rejected if the p-value is a smaller amount than the amount of significance set by the study.

5.6.2 Hypothesis O

Degree of Financial leverage and degree of operating leverage has negative effect on the systematic risk of cement companies in Pakistan.

6. CONCLUSION

This chapter illustrates an outline of the analysis findings, conclusions, recommendations, limitations and suggestion for more analysis. This study sought-after to answer the question whether or not, degree of financial leverage and degree of operational leverage affects the systematic risk of stock in Pakistan's cement business. The study targeted on leverage because the variable and customary stock of cement industries because the management variables whereas systematic risk was the variable quantity. The study targeted cement industries of Pakistan. Out of the targeted completely different cement industries the study was ready to information from solely eight companies. The finding unconcealed that variance for beta was one.188 which the mean monetary leverage price was 0.88. The findings conjointly unconcealed that the degree of operational leverage price in terms of normal deviation was 1.246 and mean was 0.88 severally. In addition, the findings found that monetary leverage had a big indirect correlation with systematic risk of common stock. The findings unconcealed that the R- sq. price was 0.71; hence, a sign that the study variables explained seventy-one of the variation within the variable quantity whereas 29%is explained by different factors outside the model and also the error term. The multivariate analysis results found a big relationship between the study variables. In addition, the study found that leverage had a big negative relationship with systematic risk of stock. The study unconcealed degree of operational leverage and degree of economic leverage considerably and negatively influence on the systematic risk of stock. These findings could facilitate Pakistan in prediction of company behavior. For instance, a brand-new technological breakthrough that needs new capital investment, shifting the firm to a better degree of operational leverage, could signal Associate in nursing antagonistic shift within the degree of economic leverage. The findings of this study conjointly could clarify to management that, so such a policy is wide followed and should facilitate it perceives why it's therefore. Company managers then can need to sacrifice less of their time ruminative it. Another sensible benefit of this study is that it will facilitate Pakistan in

formulating prediction models for the betas of stock and also the firm.

RECOMMENDATIONS OF THE STUDY

The study thus advocate that the managers of the companies listed at exchange ought to use least debt level or use Associate in nursing optimum debt level which is able to not influence the company's systematic risk because of the inverse relationship between monetary leverage and risk. The study thus recommends that managers of the companies ought to specialize in growing their companies to confirm that they get pleasure from the economies of scale related to massive companies, conjointly to draw in smart management so to enhance their monetary performance the study.

LIMITATIONS

The study obtained complete information from solely eight cement industries of Pakistan from the whole population of cement business. Therefore, the findings area unit supported the sampled companies and should not be applicable to the companies whose information wasn't obtained. The study conjointly didn't collect information from industrial banks and insurance companies listed at exchange since monetary companies principally providing funding inform of debt (Financial leverage) to different companies. However, Associate in nursing examination of their monetary statements indicates that such monetary establishments conjointly acquire debt with different monetary establishments and debt forms a part of their capital structure despite the very fact that they're financiers.

SUGGESTION FOR MORE RESEARCH

The target of this study was to explore the link between degree of economic leverage, degree of operational leverage and systematic risk of stock. But companies conjointly use debt in their capital structure and debt one in every of their funding modes as they use debt to create extra investments. Therefore, an additional study is often carried on the result of degree of economic leverage and degree of operational leverage on the systematic risk of stock

REFERENCE

- Aharon, D.Y., Yagil, Y., 2019. The impact of financial leverage on the variance of stock returns. *International journal of financial studies*, Pp. 1-20.
- Beaver, A., Kettler, P., Scholes, M., 1970. The association between market-determined and accounting-determined risk measures. *The accounting review*, Pp. 654-682.
- Beaver, A., Mangold, J., 1975. The association between market-determined and accounting-determined measures of systematic risk: some further evidence. *Journal of financial and quantitative analysis*, Pp. 231-284.
- Bhattacharjee, A., Higson, C., Holly, S., 2015. Operating leverage over the business cycle. *Cambridge working papers in economics*, Pp. 20 - 35.
- Brenner, M., Smith, S., 1978. Asset characteristics and systematic risk. *Financial management*, winter, Pp. 33-39.
- Chung, K.H., 1989. The impact of the demand volatility and leverages on the systematic risk of common stocks. *Journal of business finance and accounting*, Pp. 343-360.
- Dagogo, D.W., 2014. Degree of operating leverage, contribution margin and the risk-return profile of emerging companies: evidence from Nigeria. *International journal of economics and finance*, 6 (12), Pp. 1 - 10.
- Daves, R. Earnhardt, C., Kuhlmeier, A., Kunkel, R., 2000. Increases in the systematic risk of large firms. *American business review*, Pp. 62-74.
- Gallon, J., Gentry, J., 1982. On the relationship between systematic risk and the degree of operating and financial leverage. *Financial management*, Pp. 15-23.

- Gonads, N., 1973. Evidence on the information content to accounting numbers: accounting-based and market-based estimates of systematic risk. *Journal of financial and Quantitative analysis*, Pp. 407-444.
- Gupta, P., Kumar, S., Versa, P., 2016. Impact of degrees of operating and financial leverage on systematic risk: evidence from India. *Article in academy of Taiwan business management review*, Pp. 4-11.
- Hamada, R., 1972. The effect of firm's capital structure on the systematic risk of common stocks. *Journal of finance*, Pp. 435-452.
- Hassan, M.J., 2016. Impact of leverage on risk of the companies. *Journal of civil & legal sciences*, 5 (4), Pp. 1-10.
- Hill, N., Stone, B., 1980. Accounting betas, systematic operating risk, and financial leverage: a risk-composition approach to the determinants of systematic risk. *Journal of financial and quantitative analysis*, Pp. 595-596.
- Medeiros, O.R., Lustosa, P.R., Dantas, J.A., 2006. The impact of the degree of operating leverage on stock returns: an empirical study in the Brazilian market, 1-20.
- Mohamed, I.B., 2014. Effect of financial leverage on financial performance of non-financial firms listed at the Nairobi securities exchange, 1-60.
- Mohole, M.T., 2018. The impact of operating leverage on the capital structure of Johannesburg stock exchange-listed firms before and after the 2008 global financial crisis. *Journal of economic and financial sciences*, Pp. 1-10.
- Mseddi, S., Abid, F., 2010. The impact of operating and financial leverages and intrinsic business risk on firm value. *International research journal of finance and economics*, (44), 11-13.
- Salama, A., 2005. The association between accounting and market-based risk measures, 1-28.

