
Theories in Finance Discipline: A Critique of Literature Review

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Abstract

The purpose of this paper is to create awareness of a number of existing theories in Finance area of specialization. The compilation and analyses on the theories will help scholars quickly identify theories existing in finance and application of the theories in a scholarly manner. However the theories analyzed are not exhaustive. Scholars are allowed to add to the list of analyses.

Keywords: Theories in Finance, Agency Theory, Portfolio Theory, Arbitrage Pricing Theory, Divided Theory

Introduction

As a separate subject of discipline, finance is still in its infancy. It was only the latter half of the twentieth century that witnessed most of major developments in finance with scientific rigor (Miller, 2001). This means that the whole profession of finance had to digest a very large amount of new theoretical developments in a relatively short time period. Educators, scholars, and business people have been continuously introduced to new models, theories, and empirical results thereof over the recent years and the trend continues (Markowitz, 1952).

Started out as largely a descriptive, institutional field of study, finance has quickly transformed into a science full of theoretical thrusts. While few would dispute its origin as a branch of applied microeconomics, finance now is as theoretical as its mother discipline. The rapid changes in finance have had a profound implication for business education. Especially, such extensive and rigorous theoretical developments over the recent past have made finance teaching in college classrooms increasingly challenging (Miller, 1998).

Finance is one of the most quantified and theorized disciplines in business curriculum. The dynamic and complex nature of finance requires continuous development of new theories. As intellectual advances in finance continues in the form of more sophisticated theoretical inquiries, the challenge of teaching finance theories will only grow bigger. Yet, finance is somewhat unique in terms of the correspondence between theory and evidence. While students are educated to make independent critical evaluations of the contending points of views, many finance theories are still at their developmental stage and so they are highly controversial, debatable, and subject to close scrutiny (Ball, 2001).

Aim of the Paper

The aim of this paper is to review existing theories in finance discipline. Reviewing theories in finance will help scholars quickly identify some of the existing theories in this area and develop critical thinking by evaluating important issues both conceptually and logically. It is such critical thinking ability that enables scholars to engage in “process learning,” which in turn enables them to adapt to the changes occurring in financial world. It is almost inevitable to utter a word or two about the assumptions of a theory in classroom discussion.

It is that all theories are based on a set of assumptions and they may be sometimes very crucial and unrealistic. For example, students are taught that the Dividend Discount Model is based on the assumption that the firm grows at a constant rate indefinitely. At this point, many scholars and academicians become quite concerned about the justification of the assumption. For instance much can be said about investment and stock market return theories. Stock markets have grown considerably in developed and developing countries over the last two decades. Several factors have aided in their growth, importantly, improved macroeconomic fundamentals, such as monetary stability and higher economic growth. General economic and capital market specific reforms, including privatization of state-owned enterprises, financial liberalization, the establishment of stock exchanges and bond markets, and an improved institutional framework for investors, have further encouraged capital market development. Financial globalization has also advanced in the last two decades with increased cross-border capital flows, tighter links among financial markets, and greater commercial presence of foreign financial firms in countries around the world (Barber and Odean, 2000).

An important element of the globalization trend has been the increase in the stock exchange activities that take place abroad, most notably for emerging markets, but also for developed countries. Many firms now cross-list on international exchanges, with depositary receipts being a particularly popular instrument to access international markets. Going forward, many expect these globalization trends to continue as access to information improves, standards (concerning corporate governance, listing, accounting, and others) become more harmonized, technology advances, and inter-market linkages further increase (Mishkin & Eakin, 2007).

In this regard the following are the exploration of existing theories in finance.

Modern Portfolio Theory (MPT)

Modern Portfolio Theory (MPT) is a sophisticated investment approach first developed by Professor Harry Markowitz of the University of Chicago, in 1952. Markowitz (1952) described how to combine assets into efficiently diversified portfolios. He demonstrated that investors failed to account correctly for the high correlation among security returns. It was his position that a portfolio's risk could be reduced and the expected rate of return increased, when assets with dissimilar price movements were combined. Holding securities that tend to move in concert with each other does not lower your risk. Diversification, he concluded “reduces risk only when assets are combined whose prices move inversely, or at different times, in relation to each other.” Diversification reduces volatility more efficiently than most people understand. The volatility of a diversified portfolio is less than the average of the volatilities of its component parts. While the technical underpinnings of MPT are complex, and drawn from financial economics, probability and statistical theory, its conclusion is

simple and easy to understand. A diversified portfolio, of uncorrelated asset classes, can provide the highest returns with the least amount of volatility (Markowitz, 1991).

MPT is the philosophical opposite of traditional asset picking. It is the creation of economists, who try to understand the market as a whole, rather than looking for that which makes each investment opportunity unique. The asset allocation problem is one of the fundamental concerns of financial theory (Cohen & Natoli, 2003). Asset allocation and risk are vital components in the MPT. Investments are described statistically, in terms of their expected long-term return rate and their expected short-term volatility. The volatility is equated with "risk", measuring how much worse than average an investment's bad years are likely to be. The goal is to identify the acceptable level of risk tolerance, and then find a portfolio with the maximum expected return for that level of risk (Elton & Gruber, 1997).

Arbitrage Pricing Theory (APT)

The literature on asset pricing models has taken on a new lease of life since the emergence of the Arbitrage Pricing Theory (APT), formulated by Ross (1976), as an alternative theory to the renowned Capital Asset Pricing Model (CAPM), proposed by Sharp (1964), Lintner (1965) and Mossin (1966). The robustness of the APT, which specifies there exists a linear relationship common across securities relating expected returns to a set of security specific characteristics, relies heavily on the assumption of perfectly competitive and frictionless markets with investors' homogeneous beliefs in k-factor return generating process. There are hardly any markets that entirely qualify for these requirements. However, the advanced stock markets are allegedly more superior to the emerging stock markets which are thin and suffer severely from bubble effects and speculation attacks. As a result, most of the empirical works to date have focused on examining the stock price behaviour of the advanced markets in the Western world while neglecting the developing world. The literature gap provides us with a fertile area to excavate.

The understanding of stock price behaviour in an emerging market such as Kenya's Nairobi Securities Exchange (NSE) is not less interesting and is, in fact, important for the following reasons. First, it provides academic scholars with extra information on the application of the APT under different conditions where the basic premises do not exist. Second, it grants finance practitioners such as portfolio managers, investment advisors and security analysts a decision making basis as to what extent they should rely on the validity of the APT in the emerging stock markets and what factors most significantly affect the stock returns. Third, its findings help authorities in the emerging stock markets with a way of thinking to facilitate the growth of those markets and shorten the period before maturity. Furthermore, emerging stock markets will finally become mature and that will be the time for initial research to be sought out with a view to comparing the behavioural contrariety of stock pricing at different stages of development of the security exchange.

Efficient Market Hypothesis (EMH)

Fama (1970) explains that in an efficient market stocks will always trade at their fair market value in the securities exchange reflecting all available information, making it almost impossible for investors to purchase undervalued shares or sell shares at inflated prices. In reality individuals do not think rationally, they are instead led by emotions, subjective thinking, and at times by the herd mentality (Shah & Oppenheimer, 2008). The EMH has

steadily become deficient to explain market behaviour, subsequently leading to a shift in thinking, with the understanding that the market consists of human beings whose behaviour cannot be understood solely through mathematical or economic studies (Ozerol *et al.*, 2011). In making decisions to invest individuals' behaviours will therefore be driven by personal frames, including availability of financial information to guide their selection decision. Behavioural theorists' postulate that investment decisions are to some extent influenced by personal prejudices and perceptions that fall short of the criteria of rationality as proposed in the EMH. The contemporary capital markets are therefore being analyzed from a new perspective of behavioural finance, a theoretical model applying the principles of psychology and sociology to finance (Pompion, 2008).

The IPO pricing in Kenya is inconsistent with the EMH, as evidenced by the under and overpricing phenomenon observed in Kenya. Kiplangat *et al.* (2009) examine determinants of investor confidence in Kenya; the study revealed that price movements in the NSE are significantly related to investor sentiment since the Equity Market Sentiment (EMS) Index captured capital market related news and events. It is therefore probable that investors' psychology is a potential explanation for stock activity movements. EMH has steadily become deficient to provide explanation for the market behaviour, more dramatically perhaps, the drastic drop in United States share prices by over 30 per cent during a two month period that preceded the crash of October 1987 (Mosomi & Ghayekhloo, 2011). Subsequently, there has been a shift in thinking, with the understanding that markets consists of human beings whose behaviour cannot be understood solely through mathematical or economic studies (Ozerol *et al.*, 2011).

Credit Risk Theory

Although people have been facing credit risk ever since early ages, credit risk has not been widely studied until recent 30 years. Early literature on credit uses traditional actuarial methods of credit risk, whose major difficulty lies in their complete dependence on historical data. Up to now, there are three quantitative approaches of analyzing credit risk: structural approach, reduced form appraisal and incomplete information approach. Melton (1974) introduced the credit risk theory otherwise called the structural theory which is said the default event derives from a firm's asset evolution modelled by a diffusion process with constant parameters. Such models are commonly defined "structural model" and based on variables related a specific issuer. An evolution of this category is represented by asset of models where the loss conditional on default is exogenously specific. In these models, the default can happen throughout all the life of a corporate bond and not only in maturity (Longstaff & Schwartz, 1995).

Liquidity Theory of Credit

This theory, first suggested by Emery (1984), proposes that credit rationed firms use more trade credit than those with normal access to financial institutions. The central point of this idea is that when a firm is financially constrained the offer of trade credit can make up for the reduction of the credit offer from financial institutions. In accordance with this view, those firms presenting good liquidity or better access to capital markets can finance those that are credit rationed.

Several approaches have tried to obtain empirical evidence in order to support this assumption. For example, Nielsen (2002), using small firms as a proxy for credit rationed

firms, finds that when there is a monetary contraction, small firms react by increasing the amount of trade credit accepted. As financially unconstrained firms are less likely to demand trade credit and more prone to offer it, a negative relation between a buyer's access to other sources of financing and trade credit use is expected. Petersen and Rajan (1997) obtained evidence supporting this negative relation.

Portfolio Theory

Portfolio theory of investment which tries to maximize portfolio expected return for a given amount of portfolio risk or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. Although portfolio theory is widely used in practice in the finance industry and several of its creators won a Nobel prize for the theory, in recent years the basic portfolio theory have been widely challenged by fields such as behavioural economics (Markowitz 1952).

Portfolio theory was developed in 1950s through the early 1970's and was considered an important advance in the mathematical modelling of finance. Since then, many theoretical and practical criticisms have been developed against it. This include the fact that financial returns do not follow a Gaussian distribution or indeed any symmetric distribution, and those correlations between asset classes (Sproul, 1998).

Modigliani and Miller Theory of Investment

Germinal theory of corporate finance proposed by Miller and Modigliani (1958) argues that "the value of a firm is independent of its capital structure" (Miller, 2001). Dividends and capital structure are irrelevant in the determination of stock prices in the market (Miller & Modigliani, 1958; Chew, 2001); instead the market value of a firm is based on the "earning power of the assets currently held and on the size and relative profitability of the investment opportunities" (Miller & Modigliani, 1958, p. 663)

The valuation method of a firm is based on the capitalization of operating earnings before interest and taxes, whereas Durand (1959) - one of the first critics of the theory - proposed capitalization after interest and taxes, accompanied by an adjustment for leverage (Miller, 2001, p. 185).

A review of the theory by Miller himself, offers a new view about the so called 'junk bonds' which were considered undesirable and non-tradable during the 60s when low-risk was the norm. Thirty years after the M&M proposal, junk bonds seem to provide dynamism in the market and have helped develop the preference for leveraged buyouts LBOs not only in small firms but among large firms (Miller, 2001). New characteristics in corporate governance followed the LBOs of large firms. Miller cites "strip financing" as one of them (Miller, 2001, p. 192).

Criticism against Flaws of M&M Theory (Ball, 2001)

1. Market perfection. M&M assumed information was complete and symmetric, when it was not
2. Easy acceptance of firms with high levels of debt trading off for tax deductible benefits
3. Assumption that investment decisions were not influenced by financial decisions (Ball, 2001).

This theory was revised in the eighties, and called “Tax-adjusted M&M”. It suggested that highly leveraged structures, which substitute deductible interest payments for non-deductible dividends could push optimal capital structure to 100% debt (Miller & Modigliani, 1958).

Agency Cost Theory

Germinal Theory proposed by Jensen and Meckling (1976) that analyzes the conflict between shareholders and managers - agents of shareholders. Conflict arises because shareholders require payouts for their investment, reducing internal resources controlled by managers (Jensen, 1986). Managers are compensated on the basis of accounting profits, it increases the incentives to manipulate information and/or favor projects with poor NPV if they provide immediate profits (Dogan & Smyth, 2002). This has negative consequences of potential loss in value of public corporations (Jensen & Meckling, 2001, p. 18). Dogan and Smyth (2002) conducted a study of 223 companies listed in the Kuala Lumpur Stock Exchange (KLSE) using the agent theory to test relationships between corporate performance, performance criteria and executive compensation. Results showed that the theoretically positive relationship between board remuneration and firm performance was weaker in Malaysia than in U.K. or U.S. mostly explained by concentration of ownership.

The desire for high rewards induces managers to manipulate, overestimate or underestimate indicators to make them more achievable in detriment of the value of the firm, e.g. low budgets, inefficient debt targets. Jensen & Meckling (1976) contend that the agency costs of separating ownership from control should not be excessive provided that factors such as competition, executive labour market, and incentive plans are designed to reduce the self-interest of managers. This theory relates to the Free Cash Flow theory proposed by Jensen in 1986.

Agency Costs of Free Cash Flow Theory

Current theory proposed by Jensen (1986) and built upon the Jensen & Meckling’s theory of the agency (2001), FCF is “the cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital” (Jensen, 1986; Stewart, 1991). FCF is the sum of the cash flow to equity and cash flow to debtholders after interest-tax-shield (Shrieves & Wachovicz, 2001). The theory contends that by replacing dividends for debt, managers will be forced to transfer excessive cash flows to investors and limit the allocation of resources to low-return projects (Miller, 2001).

LBOs are another way to both reduce the agency costs of free cash flow and impose discipline and efficiency (Stewart, 1991) however they increase the, agency costs of debt. NABISCO was an example of a rich firm interested in aggressive investment opportunities instead of paying out dividends to stockholders (Stewart, 1991). The theory justifies the massive substitution of debt for equity of the 80s, arguing that cash flow was going to pay interests and principal and not to “investment ratholes” (Miller, 2001, p. xix) LBOs provide additional benefits to reduce the agency costs of a firm: (1) Reallocation of resources, (2) Squeezed out capital for growth, however the media did not depict the real impact of LBOs as being beneficial (Chew, 2001, p. xxi).

The Market Timing Theory

The market timing theory is based on the argument that firms time when to issue equity stocks for subscription by the public. The theory argue that new stocks are only issued at such

a time when they are perceived to be overvalued, and bought back when they are undervalued. As a consequence, the perception about the stock price affects the capital structure of the firm. There are two separate versions of market timing theory that have led to dynamics in capital structure; first is the assumption that economic agents are rational (Myers and Majluf, 1984). Companies issue equity directly after a positive information release which reduces information asymmetry problem between the management of the firm and stockholders. Then the reduction in asymmetry coincides with a rise in the stock price. This triggers firms to create their own timing opportunities. The second theory assumes irrationality of economic agents (Baker and Wurgler, 2002) which results into time varying mispricing of a firm's stock. Therefore managers make new equity issues when they perceive their costs to be irrationally low and repurchase them when their costs are irrationally high. Baker and Wurgler (2002) provide supportive evidence that equity market timing has a persistent effect on the firm's capital structure. Their study defines a measure for market timing as a weighted average of external capital needs over a few past years, where the weights used are market to book values of the firm. Their finding was that changes in leverage are strongly and positively related to their market timing measure, so their conclusion was that a firm's capital structure was a cumulative outcome of attempts in the past to time the equity market.

The 'Irrelevance' Theory

Modigliani and Miller (1963) demonstrated in their seminal paper 'The cost of capital, corporation finance, and the theory of investment' that in the absence of taxes, bankruptcy costs, transaction costs and asymmetric information and the same rate of interest of borrowing by individuals and corporations, the value of a firm is independent of its financial structure. It does not matter if the firm's capital is raised by issuing or selling debt. It does not matter what the firm's dividend policy is. The model is based on a framework that starts with assumptions of perfect competition in factor and product markets and no transaction costs. Modigliani and Miller (1963) conclude that a firm cannot increase its value by using debt as part of its permanent capital structure. This argument is based on perfect arbitrage such that investors can assume personal debt to help financing the purchase of unlevered shares, if the value of the levered shares is greater than the unlevered ones. With perfect arbitrage any discrepancies in the value of the stocks of two hypothetical firms, one with levered shares and the other with unlevered shares, will be eliminated. Capital structure is thus irrelevant to firm value. Including tax deductibility of interest payments into their model, Modigliani and Miller (1963) show that borrowing will only cause the value of the firm to rise by the amount of the capitalized value of the tax subsidy. Relaxing assumptions in their original work and introducing imperfect competition, bankruptcy costs, asymmetric information, and monopoly power, financial structure appears to be an influencing factor on firm value. The introduction of tax deductibility of interest payments has an implication on the choice of capital structure. Profitability increases, non-debt tax shields reduce and liquidity increases.

Signalling Theory and Capital Structure

This model asserts that financial decisions made by the firm are signals to potential investors meant to compensate for information asymmetry. These signals are therefore intended to enable investors to make informed decisions concerning company investment. Ross (1977) linked the notion of signalling to capital structure theory and argue that since the

management have information on the correct distribution of the firm's returns while outsiders don't, the firm is likely to benefit if the firm's securities are overvalued and the converse is true. They also argue that managers can use higher financial leverage to signal optimistic future for the company since debt capital involves a contractual commitment to pay back both principal and interests and failure to do so could result into bankruptcy which may further result into job losses. Hence, additional debt in the firm's capital structure may be interpreted as a positive signal about a firm's future.

Pecking-Order Theory of Capital Structure

Current theory proposed by Myers and Mailuf (1984) based on the hypothesis that financing follows hierarchy, and that firms prefer internal over external financing and debt over equity. The underlying factor is the asymmetry of information: The more asymmetry, the higher the costs of the sources of financing (Brounen *et al.*, 2004). Brounen *et al.* (2004) studied firms in Europe and US to understand factors that determine their capital structure. Financial flexibility was the factor that most importantly drove capital structure, suggesting a "pecking order" model application (Brounen *et al.*, 2004, p. 94).

Typical issues observed in the application of Pecking order theory are: (a) Debt is encouraged when firm experience insufficient profits? (b) Debt is encouraged when equity is undervalued? When firms respond "yes" to these questions, it is an indication of the application of the theory. Brounen's study rejected this hypothesis (Brounen *et al.*, 2004, p. 94). Current theory that contends that firm's trade off the costs and benefits of leverage associated with tax effects, bankruptcy and agency costs, in order to generate a target capital structure for the firm (Brounen *et al.*, 2004, p. 93). Firms that respond to the static tradeoff theory, have managers whose incentive to issue stock to keep the EPS dilution (Bancel & Mittoo, 2004, p.112).

Static Trade-Off Theory of Capital Structure

Current theory that contends that firm's trade off the costs and benefits of leverage associated with tax effects, bankruptcy and agency costs, in order to generate a target capital structure for the firm (Brounen *et al.*, 2004, p. 93). Firms that respond to the static tradeoff theory, have managers whose incentive to issue stock to keep the EPS dilution (Bancel & Mittoo, 2004, p.112).

In a study by Brounen *et al.* (2004) CFOs in Europe and US were asked about the importance of agency costs and bankruptcy. Europeans considered bankruptcy costs as the 4th more important after financial flexibility, credit ratings and earnings volatility. Their results prove that static trade off theory reflects the behaviours of corporate managers (Bancel & Mittoo, 2004; Brounen *et al.*, 2004). Application of the tradeoff theory requires a two-step process: (1) Define a target capital structure (2) Choose elements to include in the trade off: financial flexibility, credit rating, volatility of earnings, tax advantage, transaction cost, debt level of other firms, potential costs of bankruptcy (Brounen *et al.*, 2004; Brounen *et al.*, 2004).

Economic Value Added Theory

Current theory of Economic Value Added EVA was designed by Stern, Stewart & Chew (1995). It is an alternative model to CAPM used in capital budgeting because it focuses on the ability of a firm to create wealth from the point of view of the economic model and not the accounting model (Abate, Grant & Stewart, 2004, p. 62). Strong competition of the

Earning Per Share EPS model that prevailed in America before the 90s (Stern, Stewart & Chew, 1995) and more real than Return on Equity ROE, Free Cash Flow FCF and other methods based in the Accounting model (Hatfield, 2002).

It is an integrated financial system used in decision making and different corporate applications: Performance measurement, determination of shareholder value, valuation of equity (Hatfield, 2002; Stern, Stewart & Chew, 1995).

In Research & Development, EVA is used to improve the treatment of outlays as investment given their value creation character. Hatfield (2002) prepared a study to demonstrate the effect of capitalizing R&D. Outlays for new products when R&D is expensed perform worse than flows of outlays of a capitalized R&D across time. Firms reported by Stern & Stewart Co. (n.d) as active users of EVA include: Bausch and Lomb, The Coca Cola Co., Georgia-Pacific Corp., Monsanto, Rubbermaid Inc. among others (Hatfield, 2002). Application of EVA requires change in the organizational culture and fiscal responsibility (Hatfield, 2002).

EVA is not a new concept, it is deemed “practical, highly flexible, a refinement of economists’ concept of residual income’ (Drucker as cited in Stewart, 1991). For other authors EVA is a financial fiction inoperable unless markets were efficient (Chen & Dodd, 2002). The formula to compute EVA is expressed (Hatfield, 2002).

$$EVA = NOPAT - CC \quad (1)$$

NOPAT= Net operating profit after taxes

CC= cost of capital x economic capital

Four steps are required : (1) Determine the Net profit after taxes plus interest charges (2) Estimate market value of company’s equity (3) Calculate the opportunity cost of the capital and (4) Compute EVA (Gonzalez, 2006).

The Sharpe-Lintner Capital Asset Pricing Model (CAPM)

Germinal theory developed separately by Sharpe (1964) and Lintner (1965) and used to identify the adequate cost of capital in project valuation (Brounen *et al.*, 2004). Ball (2001, p. 24) defines it as a “method of estimation expected returns which passive investors would otherwise have earned in the absence of the information being tested” An equation for CAPM may look as follows (Ball, 2001, p. 30): $E(R) = R_f + \beta (R_m - R_f) \quad (1)$

Stock’s expected return $E(R)$ is equal to a riskless rate R_f plus a risk premium compound by β and the expected to earn above the riskless rate (R_f). CAPM is popular because there is no any other accepted model to compute expected returns (Chen & Dodd, 2002, p. 509).

A survey conducted by Brounen *et al.* (2004) reported CAPM was used by 64.2% of U.S. firms and an average of 57% of European companies, with high occurrence in large and public firms across the data of 6,500 firms, where CEOs have long tenures, regardless of their educational background. Fama and French (1996) critique CAPM flaws in recording anomalies of the market and expected returns (p. 1948). CAPM’s major weakness is in the determination of betas in efficient markets (Ball, 2001) and the inability to explain the temporality of risk premiums and the amount of the expected changes in that risk ratio. Some theorists contend CAPM is not a valid model to compute expected returns, given the premise

that dividends and earnings are non-fundamental to stock pricing determination. Its use in the computation of EVA also has been challenged (Chen & Dodd, 2002).

Divided opinions classify CAPM as a result of the EMH (Efficient Market Theory) (Ball, 2001); others argue that the assumption that CAPM evaluates only efficient portfolios does not imply that CAPM derives from Fama's Efficient Market Hypothesis (EMH).

Current Theory of Discounted Cash

Flow (DCF) used in capital budgeting or project valuation, asset valuation (Myers, 2001; Shrieves & Wachovicz, 2001) and securities valuation (Shrieves & Wachovicz, 2001). DCF compares the future returns of potential projects by discounting the future cash flow at a rate that reflects the yield of similar securities in the market (Myers, 2001). Internal return rate (IRR), net present value (NPV), adjusted present value (APV) and discounted payback period are DCF techniques (Brounen *et al.*, 2004). Myers (2001) highlights the usefulness of NPV but cautions about the difficulties when defining discount rates, forecasting cash flows, estimating time series and dealing the stringent accounting principles (Shrieves & Wachovicz, 2001).

Brounen *et al.* (2004) surveyed 6,500 companies from the United Kingdom, Netherlands, France and Germany and U.S. to assess the behavior of financial officers regarding the use of financial techniques. Results suggested that European firms do not apply DCF techniques as much as they use payback criterion. Authors argue that most European firms are small and private, and their CEOs do not have MBA degrees which could imply an increase use of discounted techniques.

The study also found that those firms declaring that they maximize shareholder value use discounting techniques most frequently (Brounen *et al.*, 2004). In asset valuation, DCF compares the intrinsic value of a firm by discounting the expected future free cash flows (FCF) using a rate that reflects the cost of capital" (Stewart, 1991, p. 34). Bias against long-lived projects is a challenged result of DCF, reinforcing the argument of management shortsightedness in the 80s (Myers, 2001).

DCF main critiques derive from the use of traditional financial reporting (Shrieves & Wachovicz, 2001) and the vulnerability to political forces within the organization (Myers, 2001). The multi-use of DCF is achieved through a combination with Free Cash Flow (FCF) techniques and with EVA® for purposes of evaluation of managerial performance (Shrieves & Wachovicz, 2001; Stewart, 1991).

Free Cash Flow Theory

The free cash flow theory was advanced and researched by (Jensen, 1986) in a bid to explain the relationship between free cash flows and the role of debt in organizations, impact of diversification programs and factors influencing takeovers. Jensen (1986) argued that conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow as corporate management is for firm growth and against dividend payout as they reduce resources under their control. Brush *et al.* (2000) found that sales growth was most beneficial to firms lacking free cash flows. Free cash flows are associated with increases in managers' compensation because changes in compensation are positively related to the growth in sales (Murphy, 1985). To motivate managers to disgorge the cash rather than investing it at below the cost of capital or

wasting it on organization inefficiencies (Jensen, 1986) proposed increased dividend payments to shareholders, share repurchases and use of debt to promote organizational efficiency and deal with the agency conflict. The use of debt was found more suitable for firms with large free cash flows and few growth prospects than growing firms with highly profitable investments and no free cash flows. Debt was also argued to be a substitute dividend as managers are bound by debt whose holders have legal recourse on non-payment of unlike dividend. Free cash flow theory also attempted to explain previously puzzling results on the effects of financial restructuring (Jensen, 1986). Free cash flow theory predicts that except for firms with profitable unfunded investment projects, prices will rise with unexpected increases in payouts to shareholders, and prices will fall with reductions in payments or new requests for funds. The theory argues that share price declines on the sale of debt and preferred share arises because these sales bring new cash under the control of managers. According to FCF theory most leverage-increasing transactions, including stock repurchases and exchange of debt or preferred stock for common stock, debt for preferred stock, and income bonds for preferred stock results in significant positive increases in common stock prices. On the other hand most leverage-reducing transactions such as the sale of common stock, exchange of common stock for debt or preferred stock, or preferred stock for debt as well as the call of convertible bonds or convertible preferred forcing conversion into common results in significant decreases in stock prices. Rubin (1990) stated that managers in firms with high free cash flows prefer investing them in projects with negative net value over paying them to shareholders as dividends and in order to obscure these investments engage in earnings management. Jensen (1986) argued that diversification programs were likely to be undertaken by managers with large free cash flows resulting in low benefit or even value destroying mergers. Shleifer and Vishny (1991) attributed hostile takeovers in the 1980s to reversed over-investment by managers who undertook unrelated diversification programs due to large free cash flows in the 1960s. FCF theory proposed that debt creation in takeovers in organizations with large cash flows but few high-return investment projects increases efficiency and helps prevent from wasting resources on low-return projects. Jensen (1986) further predicts that takeovers financed with cash and debt will generate larger benefits than those accomplished through exchange of stock as debt and cash are associated with growth opportunities and a shortage of free cash flow.

Modern Portfolio Theory

According to Findlay and Hamilton (1979), modern Portfolio Theory (MPT) approaches investing by examining the entire market and the whole economy. The theory is an alternative to the older method of analyzing each investment's individual merits. Investors look at each investment's individual merits, they are analyzing one investment without worrying about the way different investments will perform relative to each other. On the other hand, MPT places a large emphasis on the correlation between investments. Markowitz (1952) developed a basic portfolio model that demonstrated how risk could be reduced within a portfolio by combining assets whose returns demonstrate less than perfect positive correlation. The Markowitz theory exploited the low correlation between two assets and demonstrates that as long as the correlation between the two assets is low, the risk component of a portfolio would be less than the average of the risk of the individual assets (Goslings & Petri, 1991).

Portfolio could be reduced by spreading the amount of funds available for investments into a variety of opportunities, each in a different risk class. Institutional investors have over the years achieved portfolio diversification using property and equity as their prime investments (Reddy, 2001).

The proponents of MPT argued Property's high relative management costs are increased by a globally-scattered portfolio where no scale efficiencies can be obtained; there are additional costs in monitoring the local managing agents. Gordon (1991), as a result, the tendency would be to concentrate holdings on a small number of markets (and on larger units) thus sacrificing potential diversification gains. Market access may be problematic; particularly where the market capitalization is small in relation to the size of fund there may simply be no appropriately sized buildings available. Liquidity problems make it difficult to implement and actively manage a portfolio strategy (Brown, 1991). Markets with low correlations to the global portfolio are often those with least research and most restrictive market practices. Information may be difficult and costly to obtain; it is rare that data will be of good quality and with a long time-series. Furthermore, there may be comparability problems caused by differences in ownership and legal structures, valuation methodologies and terminology. In individual asset selection, local factors may dominate, placing the overseas investor without a local partner at a relative disadvantage (Ennis & Burik, 1991).

The Modigliani and Miller Theory

The initial theory relating to Dividend policy was developed in 1958 by economists Franco Modigliani and Merton Miller known as MM Theory. The Modigliani and Miller (1963) and Miller (1977) result that firm value is independent of dividend policy has also been examined extensively. Bhattacharya (1979) and others show that firm dividend policy can be a costly device to signal a firm's state, and hence relevant, in a class of models, firstly, asymmetric information about stochastic firm earnings, secondly, shareholder liquidity (a need to sell makes firm valuation relevant), and thirdly deadweight costs (to pay dividends, refinance cash flow shocks or cover under-investment). In a separating equilibrium, only firms with high anticipated earning pay high dividends, thus signalling their prospects to the stock market. As in other costly signalling models, why a firm would use financial decisions to reveal information, rather than direct disclosure, must be addressed. As previously, taxes are another important friction which affects dividend policy Modigliani and Miller (1963), hereafter referred to as MM, put forward the irrelevance theorems, more commonly known as the MM theorems and these form the foundation of modern corporate finance theory. The two main conclusions that are drawn from the MM theorems are that firm value is dependent on its current and future free cash flow. Secondly, the level of dividends (or dividend policy) does not affect firm value given that firms maximize their value through investment. Whilst investment increases the value of future cash flows. The difference between equity issued and payouts of the firm is equal to its free cash flow. Hence, dividend policy is irrelevant when it comes to affecting firm value. Regarding the impact of dividend policy decision on investment, it is understood that firms should take all projects with a positive Net Present Value (NPV). However, the issue is that if management put more emphasis on dividend policy to such an extent that it eventually dominates investment policy decisions, it could be argued that NPV projects or projects creating firm value be cancelled or delayed for a later time. By cancelling or delaying positive NPV projects, this will obviously have an adverse effect on the future expected profits of the company. Although Fama (1974) carried out a

research on the relationship between investment decisions and dividend decisions. His findings revealed that investment decisions and dividend decisions are not correlated; that these two types of decision making do not affect each other.

Market Efficiency Theory

Theory of the stock market efficiency Fama (1965) Germinal theory discussed by Fama (1965) and again by Ball and Brown (1968). Efficient markets are characterized by competition among “profit maximizers” who attempt to estimate the value of securities in the future relying on the information they have (Fama as cited by Ball, 2001). Fama and French divided valuation portfolios in two: Value Stock firms (with high book to market) and growth stock (with low book-to market value) (Anderson & Garcia-Feijoo, 2006).

Theory predicts that portfolio with low b/m value will have an increased return before portfolio formation and then would decrease. This return to equilibrium was a key element in the model (Fama & French, 1996). Fama and French (1993, 1996) proposed a three-factor model that describes variations in time that may affect the measurement of stock return: Book-to market ratio, size and excess market return. Following the theory of market efficiency Anderson and Garcia-Feijoo (2006) conducted a study to test that firm valuation and valuation ratios respond to optimal corporate investment decisions.

The model tested consistently with the predictions of Fama and French theory but also concluded that pricing factors resulting from size and bookto-market portfolios become irrelevant when macroeconomic conditions of growth prevail. Anderson and Garcia-Feijoo suggest including a fourth factor (investment-growth factor) to the model of Fama and French, in order to help explain the anomalous returns in portfolios (Anderson & Garcia-Feijoo, 2006, p. 174, 191).

Limitations of the model include the unreal assumption that information is a commodity and is costless. International applications of the Fama and French model require a countryspecific study to observe particular patterns of corporate investment activity (Anderson & Garcia-Feijoo, 2006, p. 192).

Theory of the Stock Market Efficiency

Germinal theory is based on Fama (1965) definition of efficiency. Brown (1978, p.17) defines efficient capital markets as “one in which it is impossible to earn an abnormal return by trading on the basis of publicly available information”. Fama (1965) and Brown (1978) definitions have a common element: the assumption of available information about the earnings of a firm, traditionally expressed by Earning per share (EPS). Ball and Brown (1968) tried to explain the behaviour of the stock market which was not of main interest by economists but statisticians.

Miller and Modigliani Theory of corporate finance policy; Sharpe-Lintner Capital Asset Pricing Model (CAPM) and Black-Scholes option pricing model. In the mid-60s Ball and Brown performed a study to evaluate how stock market reacted to announcements of annual earnings. They analyzed 2300 annual earnings reports of 300 NYSE companies between 1956-1964. Ball and Brown found an upward movement in stock price after announcement of increase in earnings, and slight downwards after announcement of decreases in earnings. In a period of six months afterwards net earnings were close to 0. The conclusion was that stock prices did reflect the information announced annually (p.21).

Limitations of the theory are analyzed by Ball (2001) himself and divided in 3 categories: Empirical anomalies, defects as a model of stock market and problems in testing the efficiency of the model. Empirical anomalies include problems in fitting the theory to the data because of seasonal patterns. Defects in efficiency as a model of stock market comprise not incorporating information costs, transaction costs, oversimplifying academic analysis and ignoring market microstructure effects (Ball & Brown, 1968 p. 25) Market microstructure effect explains “how investors’ latent or hidden demands are ultimately translated into prices and volumes” (Madhavan, 2002). Problems in the model relate to definition of risk-less rates, market risk premium, individual betas and the volatility of the stock prices.

The Black-Scholes Option Pricing Model

Geminal theory proposed by Black and Scholes (1973) and developed along with Merton’s Theory of Rational Option Pricing (1973). Based on a portfolio of stocks and options on the stocks which valuation is based on the assumptions of short term horizon, fixed interest rates, prices for the underlying assets, no dividend payments, no selling or buying options and abilities to borrow and short sell (Versluis & Hillegers, 2006). Its main characteristic is its satisfactory fit to market data, but its two more criticized flaws are “moneyness (or volatility smile) and time to maturity” (Blyinski & Faseruk, 2006, p. 47; Versluis & Hillegers, 2006, p. 261).

New studies have included variables that make the model more adaptive to reality. Versluis and Hillegers (2006) proposed a modification to the model to include the effect of re-financing at the end of the short-term interval. Versluis & Hillegers (2006) add a parameter that accounts for the drift of the stock price process which applied to a study of seven Dutch stocks and showed better fit than the original model. The Chicago Board Options Exchange (SBOE) was the first one in using the Black and Scholes model in 1973 and continues to use the newly developed neural models and implied volatility variables.

REMM Theory of Human Behaviour (Resourceful, Evaluative, Maximizing Model)

Current theory proposed by Meckling (1976) addresses the concept of “man” as unit of analysis in economics. It explains man’s behaviours as a result of interactions with value systems and constraints” (Brunner & Meckling, 1977). REMM individuals are able to make trade-offs to overcome a constraint, and therefore theoretically have “no needs”, they have wants and desires which help them focus on alternatives, substitutes and costs and reduce their exposure to hidden agendas of politicians or media (Brunner & Meckling, 1977).

In general markets are always in equilibrium because REMM individuals adapt to their opportunity set and make demand and supply better off, by balancing cost/benefit (Jensen & Meckling, 2001) which help them focus on alternatives, substitutes and costs and reduce their exposure to hidden agendas of politicians or media (Brunner & Meckling, 1977). In general markets are always in equilibrium because REMM individuals adapt to their opportunity set and make demand and supply better off, by balancing cost/benefit (Jensen & Meckling, 2001).

Most economists are REMM individuals who believe that price system is a self-regulatory mechanism that responds to needs and wants. Trade-off in the costs of leverage to avoid the costs of bankruptcy is an example of a REMM action (Brounen *et al.*, 2004). Most

economists are REMM individuals who believe that price system is a self-regulatory mechanism that responds to needs and wants. Trade-off in the costs of leverage to avoid the costs of bankruptcy is an example of a REMM action (Brounen *et al.*, 2004).

Corruption in financial markets is addressed by Brunner and Meckling (1977) and explained from the REMM perspective as the result of corrupt government agencies rather than private firms. The limitations of the theory are that; REMM does not describe behaviour of particular individuals and might appear too biased towards the role of government agencies as controlling entities of corporate governance (Jensen & Meckling, 2001).

Financial Liberalization Theory of IMF

Current theory originated in the separate work of McKinnon (1973) and Shaw (1973). The hypothesis supporting this theory proposed that financial development and economic growth were strongly attached. The more liberalization of financial systems, the more growth in economic development. Arestis, Nissanke & Stein (2005). The liberalization theory was applied during the 90s in developing countries based on the idea that financial institutions would benefit from foreign capital inflows and competition among banks and financial institutions would foster efficiency (Glen & Singh, 2005); however the inflow increased the instability of these countries (Shaw, 1973).

The application of the liberalization theory resulted in chaos and crises in developing countries. In 1989 Venezuela's banking system broke and 60% of their assets were lost. In Mexico, in the late 90s government intervention to solve financial crisis represented costs of 17% of the Gross domestic product. Sahoo, Nataraj and Kmaiah (2001) studied real savings and real GDP statistics from 1950-1999 and found that the relationship was growth-to savings and not savings-to growth.

Liberalization theory was based on strong classical assumptions about the role of the interest rate. Shaw (1973) considered interest rates as a signal of opportunities of investments, and therefore an increase in economic development. For McKinnon (1973) high interest rates would increase savings flows and decrease any excess of demands (Arestis, Nissanke & Stein, 2005 p. 247). Flaws of the liberalization model resided in forgetting that markets are not sophisticated and that markets are imperfect (Arestis *et al.*, p. 249).

Institutional-Centric Theory of Finances

Current theory proposed by Arestis, Nissanke and Stein (2005) as an alternative to the flawed financial liberalization theory that increased the instability of developing countries during the 90s. Based on the theory of imperfect markets, it acknowledges the existence of imperfect information and informal and formal institutions, which efficiency is the engine of development (Arestis *et al.*, 2005).

“Norms, incentives, regulations, capacities and organizations” are five institutions of any financial system (Arestis *et al.*, 2005, p. 257) who risks have to be socialized. Empirical studies have found that in reality the transition of economies to an institutional centered model is not happening, instead takeovers by foreign commercial banks are common (Arestis *et al.*, 2005).

The study by DeMaestri and Guerrero (2003) show empirical evidence that financial regulation overcome issues of moral hazard, financial conglomerates, transparency and

accountability. A banking system that connects investment and production in a symmetric manner, with common guidelines will attract investment and accumulation (Glen and Sing, 2005). An integration of financial supervision was proposed by DeMaestri and Guerrero (2003) and theoretically suggests that effectiveness and efficacy are achieved when regulatory institutions are integrated in one.

Deflation Theory

The concept of debt deflation theory was pioneered by Fisher (1930) following the Wall Street Crash of 1929 and the ensuing great depression. Debt deflation is a theory of economic cycles, which holds that recessions and depressions are due to the overall level of debt shrinking (deflating). Fisher stated that, credit cycle is the cause of the economic cycle. Fisher developed debt deflation theory by taking hypothetical case by assuming that, at some point of time, a state of over-indebtedness exists, this would tend to lead to liquidation, through the alarm either of debtors or creditors or both. In Fisher's formulation of debt deflation, he states that, when the debt bubble bursts the following sequence of events occurs; (1) debt liquidation leads to distress selling and to (2) contraction of deposit currency, as bank loans are paid off, and to a slowing down of velocity of circulation. This contraction of deposits and of their velocity, precipitated by distress selling, causes (3) a fall in the level of prices, in other words, a swelling of the dollar. Assuming, as above stated, that this fall of prices is not interfered with by reflation or otherwise, there must be (4) a still greater fall in the net worth of business, precipitating bankruptcies and (5) a like fall in profits, which in a "capitalistic," that is, a private-profit society, leads the concerns which are running at a loss to make (6) a reduction in output, in trade and in employment of labour. These losses, bankruptcies and unemployment, lead to (7) pessimism and loss of confidence, which in turn lead to (8) hoarding and slowing down still more the velocity of circulation. The afore eight changes cause (9) complicated disturbances in the rates of interest, in particular, a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest.

Financial Theory

Minsky (1974) pioneered financial theory (commonly known as financial instability hypothesis) and attempted to provide an understanding and explanation of the characteristics of financial crises. Minsky proposed theories linking financial market fragility, in the normal life cycle of an economy, with speculative investment bubbles endogenous to financial markets. Minsky claimed that in prosperous times, when corporate cash flow rises beyond what is needed to pay off debt, a speculative euphoria develops, and soon thereafter debts exceed what borrowers can pay off from their incoming revenues, which in turn produces a financial crisis. As a result of such speculative borrowing bubbles, banks and lenders tighten credit availability, even to companies that can afford loans, and the economy subsequently contracts.

Minsky's model of the credit system, which he dubbed the "financial instability hypothesis" (FIH), incorporated many ideas. He states that, a fundamental characteristic of an economy is that the financial system swings between robustness and fragility and these swings are an integral part of the process that generates business cycles. Disagreeing with many mainstream economists of the day, he argued that these swings, and the booms and busts that can accompany them, are inevitable in a so-called free market economy – unless government steps in to control them, through regulation, central bank action and other tools.

Hyman Minsky's theories about debt accumulation received revived attention in the media during the subprime mortgage crisis of the late 2000s. Minsky argued that a key mechanism that pushes an economy towards a crisis is the accumulation of debt. He identified three types of borrowers that contribute to the accumulation of insolvent debt: hedge borrowers, speculative borrowers, and Ponzi borrowers. The "hedge borrower" can make debt payments (covering interest and principal) from current cash flows from investments. For the "speculative borrower", the cash flow from investments can service the debt, i.e., cover the interest due, but the borrower must regularly roll over, or re-borrow, the principal. The "Ponzi borrower" borrows based on the belief that the appreciation of the value of the asset will be sufficient to refinance the debt but could not make sufficient payments on interest or principal with the cash flow from investments; only the appreciating asset value can keep the Ponzi borrower afloat. Because of the unlikelihood of most investments' capital gains being enough to pay interest and principal, much of this type of finance is fraudulent.

If the use of Ponzi finance is general enough in the financial system, then the inevitable disillusionment of the Ponzi borrower can cause the system to seize up: when the bubble pops, i.e., when the asset prices stop increasing, the speculative borrower can no longer refinance (roll over) the principal even if able to cover interest payments. He further states that, collapse of the speculative borrowers can then bring down even hedge borrowers, who are unable to find loans despite the apparent soundness of the underlying investments.

Minsky stated his theories verbally, and did not build mathematical models based on them. Consequently, his theories have not been incorporated into mainstream economic models, which do not include private debt as a factor. Minsky's theories, which emphasize the macroeconomic dangers of speculative bubbles in asset prices, have also not been incorporated into central bank policy. However, in the wake of the financial crisis of 2007–2010 there has been increased interest in policy implications of his theories, with some central bankers advocating that central bank policy include a Minsky factor.

Ownership Structure Theory

Ownership structure theory pioneered by Jensen (1976) integrated the elements of theory of property rights, the theory of agency (Ross, 1973; Mitnick, 1974) and the theory of finance (Minsky, 1974). The theory explains why highly regulated industries such as public utilities or banks have higher debt-equity ratios for equivalent levels of risk than the average nonregulated firm. Jensen argues that "ownership structure" rather than "capital structure" are the crucial variables to be determined, not just the relative amounts of debt and equity but also the fraction of the equity held by the manager.

The theory posits that, if there are other individuals in the economy who have sufficiently large amounts of personal capital to finance the entire firm, capital constrained owner can realize the full capital value of his current and prospective projects and avoid the agency costs by simply selling the firm (i.e., the right to take these projects) to one of these individuals. The owner would then avoid the wealth losses associated with the agency costs caused by the sale of debt or outside equity. If no such individuals exist, it will pay him (and society) to obtain the additional capital in the debt market. One can argue that it is the project which bears the costs since, if it is not sufficiently profitable to cover all the costs (including the agency costs).

Credit Scorecards Theory

Credit scorecards theory (Altman, 1968) provides a quantitative measurement of the likelihood that a customer will display a defined behaviour (e.g. loan default) with respect to their current or proposed credit position with a lender. The theory uses observations or data from clients who defaulted on their loans plus observations on a large number of clients who have not defaulted. Statistical techniques such logistic regression or probit model of analysis are used to create estimates of the probability of default for observations based on this historical data. Credit scoring model can be used to predict probability of default for new clients using the same observation characteristics (e.g. age, income, house owner). The default probabilities are then scaled to a "credit score." This score ranks clients by riskiness without explicitly identifying their probability of default. Z-score estimation formula (Altman, 1968) is commonly used as a credit scoring technique. "As I first wrote in 1968, and it seems even truer in the late 1990s, academicians seem to be moving toward the elimination of ratio analysis as an analytical technique in assessing the performance of the business enterprise" (Altman, 2000).

Theory of the Firm

The theory of the firm was traditionally one branch of Microeconomics which studied the supply of goods by profit-maximising agents. In this theory, production costs played a crucial role. Coase (1937) was one of the first pointing out that in addition to production costs of the usual sort, one must also consider transaction costs in explaining institutions like the firm. He focused on the comparative transaction costs of alternative organizational structures, such as firms and markets. This theory was later extended by Oliver Williamson and became widely known as transaction-cost economics (Williamson, 1985) or more broadly the economics of organization. Transaction costs are costs (e.g. in terms of money or time) incurred when making an economic exchange. If we extend this term, transaction costs do not only include bilateral transactions but subsume contractual relationships between individuals. In general, transaction costs symbolise "friction losses", i.e. the lost resources for the involved parties, but which are inevitable to reach certain goals. In firms, transaction costs may include the costs of organising business activity over time, planning the future and limiting as well as allocating risks which may arise in the future. It therefore includes the elements of uncertainty and opportunism, which are both indispensable for debates in corporate governance.

Coase argued in his 1937 article that transaction costs explain both the existence of firms and their optimal size. In "The Nature of the Firm" he identified certain transactions which are prohibitively costly if the parties involved could only deal with instant market transactions. In order to carry out a market transaction it is necessary to identify the party one wishes to deal with, establishing terms and conditions, conducting negotiations and concluding a contract. After the conclusion of the contract monitoring is needed to make sure that all terms and conditions are fulfilled. If slight changes are wished, the whole transaction process needs to be initiated again. Or, to put it in other words, Coase emphasised that making contracts and purchasing assets and other property in markets incurred costs that were not accounted for by the "price mechanism". Individuals would therefore organise firms and maintain them when the organisational entity provided implicit savings in terms of assembling resources, assets, and labour internally. This describes situations in which market transactions would show their relative inflexibility to re-contracting when changes in the existing relationship arise.

Regularly recurring transactions and long-term transactions might be good examples. In such situations longer, incomplete contracts, which are typical for firms, provide much more flexibility for the parties in a world of uncertainty. These contracts can be left open to be flexible in case of a changing environment. On the other hand dissimilarities of transactions, the probability of changes in the market prices for the relevant resources as well as the spatial distribution of the relevant resources and transactions highlight factors which increase the costs of using a firm. One might argue in this context that transaction costs would be minimised in a world without transactions. This could be achieved if rights and duties would initially be assigned in the “right” way.

Based on this idea Armen Alchian and Harold Demsetz built their theory of property rights. Property can be tangible (e.g. equipment in a firm) and intangible (intellectual property), and property rights theory argues that the ownership, which includes residual rights to the benefits of ownership, of productive assets provides a foundation for explaining firms. According to Oliver Hart, one of the leading scholars in this area, a firm without property is just a phantom (Hart, 1995). In situations where ordinary contractual relationships fail, firms arise and the ownership of capital assets puts (collection of) persons in the position to organise production through the purchase of economic factors, including labour (Hart, 1995).

Applied to corporate governance, this theory provides a supplement to contract theories. The theory claims that legal systems should assign and secure property rights and additionally explains that those who invest in or own productive property and capital of the firm, have a privileged position as legal agents to bargain with other parties such as directors, employees, suppliers, and other constituencies. Coase, in his theory of the firm, built a connection between the above discussed property rights and transaction costs. In a world without the latter, the initial assignment of property rights would be irrelevant as each “error” in the assignment of these rights could easily be rescinded by additional transactions. This is the idea of the Coase Theorem for property rights. The applicability of the Coase Theorem to companies is questionable as the idea rests on the assumptions that there are no legal, strategic and informational barriers to bargaining. But in modern firms all these barriers normally exist and make transactions more expensive, i.e. incur transaction costs.

Agency Theory

The 1976 article *Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure* by Jensen and Meckling helped establish Agency Theory as the dominant theoretical framework of the CG literature, and position shareholders as the main stakeholder (Lee *et al.*, 2010, Daily *et al.*, 2003).

The adoption of the agency logic increased during the 1980s as companies started replacing the hitherto corporate logic of managerial capitalism with the perception of managers as agents of the shareholders (Zajac *et al.*, 2004). The subsequent stream of literature would break with the tradition of largely treating the firm as a black box and the assumption that the firm always sought to maximize value (Jensen 1994).

AT addressed what had become a growing concern, that management engaged in empire building and possessed a general disregard for shareholder interest, what Jensen called “the systematic fleecing of shareholders and bondholders” (1989, p. 64), through providing prescriptions as to how the principal should control the agent to curb managerial opportunism

and self-interest (Perrow, 1986; Daily *et al.*, 2003). As the market reacted positively to this change in logic, with time the agency approach became institutionalized in the practice of Corporate Governance, within business education, research and media (Zajac *et al.*, 2004; Shapiro, 2005).

Loan Pricing Theory

This theory explains why it is not prudent for financial institutions such as SACCOs to set very high interest rates to optimize profit from loan sales. If financial Institutions set up very high interest rates, they could induce the problem of adverse selection and moral hazard by attracting borrowers with very risky projects into their portfolio. The high interest rates would later act as an incentive for the risky borrowers to consider adding more risk to their investment portfolio due to high affinity for high returns (Chodechai, 2004).

Financial institutions cannot always set high interest rates, e.g. trying to earn maximum interest income. Financial institutions should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz, 1981). If SACCOs set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behaviour or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz, it is usual that in some cases we may not find that the interest rate set by SACCOs is commensurate with the risk of the borrowers.

Institutional Theory

Institutional theorists assert that the institutional environment can strongly influence the development of formal structures in an organization, often more profoundly than market pressures. Innovative structures that improve technical efficiency in early-adopting organizations are legitimized in the environment. Ultimately these innovations reach a level of legitimization where failure to adopt them is seen as "irrational and negligent" (or they become legal mandates). At this point new and existing organizations will adopt the structural form even if the form doesn't improve efficiency. Meyer and Rowan (1977) argue that often these "institutional myths" are merely accepted ceremoniously in order for the organization to gain or maintain legitimacy in the institutional environment. Organizations adopt the "vocabularies of structure" prevalent in their environment such as specific job titles, procedures, and organizational roles. The adoption and prominent display of these institutionally-acceptable "trappings of legitimacy" help preserve an aura of organizational action based on "good faith". Legitimacy in the institutional environment helps ensure organizational survival. However, these formal structures of legitimacy can reduce efficiency and hinder the organization's competitive position in their technical environment. To reduce this negative effect, organizations often will decouple their technical core from these legitimizing structures. Organizations will minimize or ceremonialize evaluation and neglect program implementation to maintain external (and internal) confidence in formal structures while reducing their efficiency impact.

Tolbert and Zucker (1996) confirmed the hypothesis that while early organizations adopt the new form to improve efficiency, later organizations adopt the structural form to maintain legitimacy. The theory is relevant to the deposit taking SACCOs as it depicts the environments the SACCOs operate in. Deposit taking SACCOs are regulated by the SACCO

act though SASRA. The regulations keep changing and SACCOs have to adhere with the directives. SASRA is a body that influences the operations of the deposit taking. It seeks to harmonize some operations by issuing some directives that SACCOs are meant to adhere to. Example of indirect regulations includes the compliance requirements.

Innovation Diffusions Theory

This theory explains how new ideas and Innovations are spread and adopted by new cultures. The theory seeks to examine critical factors in diffusion of innovations. They are what qualities make an innovation spread, the importance of peer-peer conversations and peer networks. Diffusion of Innovations takes a radically different approach to most other theories of change. Instead of focusing on persuading individuals to change, it sees change as being primarily about the evolution or “reinvention” of products and behaviours so they become better fits for the needs of individuals and groups. In Diffusion of Innovations it is not people who change, but the innovations themselves. The theory gives reasons why certain innovations spread more than others and others fail.

These reasons include the Relative advantage of the innovation in comparison to the others, the innovations compatibility with existing values and practices; Simplicity and ease of use; Trial ability and Observable results.

The theory is relevant to this study as it can make a valuable checklist to frame focus group discussions or project evaluations. They can help identify weaknesses to be addressed when improving products or behaviours. Success of SACCO products and services rests on continuous improvement. It also highlights the importance of inter-personal marketing through peer-peer conversations which financial institutions today call word of mouth from satisfied customers. The theory emphasis on the importance of understanding the needs of different users of SACCO products.

Fisher Theory

Fisher (1930) hypothesized that the ex-ante nominal interest rate should fully anticipate movements in expected inflation, in order to yield the equilibrium real interest rate. The expected real interest rate is determined by real factors such as the productivity of capital and time preference of consumers, and is independent of the expected inflation rate. In principle, the Fisher hypothesis could be extended to any asset, such as real estate, common stock, and other risky securities. The empirical relationship between inflation and common stocks was first investigated by Jaffe and Mandelker (1976), Bodie (1976) and Nelson (1976). Although employing different empirical approaches, these authors all concluded for a significant negative relationship between the proxies of inflation and stock returns. Following these pioneering studies, Fama and Schwert (1977) investigate the inflation effect on asset returns in a number of assets. They concluded that, similar to previous studies, common stocks seem to perform poorly as hedge against both expected and unexpected inflation. Since these earlier studies, the empirical literature on the Fisher hypothesis has been prolific, and the findings have been largely similar (e.g. Gertler and Grinols (1982), Buono (1989), Park (1997)). The early studies on the Fisher hypothesis mentioned above were mainly concerned with documenting and describing the nature of the relationship between stock returns and inflation, and not with any explanation of the results. Several alternative explanations have emerged. The Tax-Effect Hypothesis proposed by Feldstein (1980) argues that inflation

generates artificial capital gains due to the valuation of depreciation and inventories (usually nominally fixed) subject to taxation. This increase corporate tax liabilities and thus reduces real after-tax earnings. Rational investors would take into account this effect of inflation by reducing common stock valuation. In this sense, inflation “causes” movement in stock prices.

Fama’s Proxy Hypothesis

The theory revealed that the anomalous relationship observed between real stock returns and inflation was a consequence of a spurious relationship: the negative relationship between stock returns and inflation are induced by the positive correlation between stock returns and real activity and the negative correlation between inflation and real activity. The argument hinges on the money demand behaviour of rational agents who perceive a fall in economic activity and therefore a decrease in money demand. This causes an excess money stock and therefore inflation. In this sense, measures of real activity should dominate measures of inflation when both are used as explanatory variables for real stock returns in testing the Fisher Hypothesis.

Benderly and Zwick (1985) and Lee (1992) supported the proxy hypothesis while Ram and Spencer (1983) failed to support the theory as they felt that his explanation calls into question the conventional theories of the Phillips curve, in which a positive rather than a negative relationship between inflation and real activity is suggested. They find consistent evidence of a positive relationship between real activity and inflation and a negative relationship between real activity and stock returns.

Inflation and Money Illusion Theory

Modigliani and Cohn (1979), theory states that the real effect of inflation is caused by money illusion. Inflation illusion suggests that when there is a rise in expected inflation, bond yields rise, but because equity investors incorrectly discount real cash flows using nominal rates, the increase in nominal yields leads to under pricing of equities (Baekaert & Engstrom, 2009). Stock market investors fail to understand the effect of inflation on nominal dividend growth rates and extrapolate historical nominal growth rates even in periods of changing inflation. Thus when inflation increases, bond market participants increase nominal interest rates which are used by stock market participants to discount unchanged expectations of future nominal dividends. The dividend-price ratio moves with the nominal bond yield because stock market investors irrationally fail to adjust the nominal growth rate to match the nominal discount rate. This implies that stock prices are undervalued when inflation is high and may become overvalued when inflation falls. The dividend yield that emerges from the interaction of rational and irrational investors is positively correlated with inflation and the long term nominal interest rate.

Keynesian Economic Theory

Keynes (1930), in his *Treatise on Money*, argued for the importance of the banking sector in economic growth. He suggested that bank credit "is the pavement along which production travels, and the bankers if they knew their duty, would provide the transport facilities to just the extent that is required in order that the productive powers of the community can be employed at their full capacity". Keynesian economics focuses on immediate results in economic theories. Policies focus on the short-term needs and how economic policies can make instant corrections to a nation’s economy. Also, the government is seen as the only

force to end financial and economic downturns through monetary or fiscal policies, and providing aggregate demand to increase the level of economic output, facilitated through a stable financial system that can spur continued economic stability. Keynes later in 1930s supported an alternative structure that includes direct government control of investment and advanced that financial deepening can occur due to an expansion in government expenditure. Since higher interest rates lower private investment, an increase in government expenditure promotes investments and reduces private investments concurrently.

McKinnon and Shaw Theory

McKinnon (1973) and Shaw (1973) argued that if real interest rates are kept below the market equilibrium, this could increase the demand for investment but not the actual investment. Low interest rates are insufficient to generate savings; it can even reduce savings especially if substitution effects dominate the income effect for households. On the other hand, low rates raise the expected profitability of investment projects by raising the net present value of future earnings from the project. The theory rests on the assumptions that saving is an increasing function of real rate of interest on deposits and real rate of growth in output and that investment is a decreasing function of the real loan rate of interest and an increasing function of the growth rate. The theory posits that the nominal interest rate should be administratively fixed. They advance that emerging economies are fragmented; hence there is a greater likelihood of having investments that are less productive. Capital accumulation is discouraged by the fact that for a high inflation rate, nominal interest rates are set too low and thus real interest rates could be negative. As capital supply of banking sector is limited and banks have only specialized credit activities, people have to finance their investment projects by themselves or have to go to the informal sector where interest rates are often usurious.

The Signalling Hypothesis

A signalling model for stock splits was first proposed by Brennan and Copeland (1988). According to the signalling theory, splits acted as a means of passing information from managers to stockholders. The signalling model of stock splits showed that stock splits served as costly signals of managers' private information because trading costs increased as stock prices decreased. They built up the hypothesis from Fama *et al.* (1969), who suggested that by announcing splits, a company could reduce any information asymmetries that might have existed between stockholders and management. The stock price reduction resulting from a split then conveyed management's conviction of rising future earnings. Since a stock split usually required a significant cash outlay, and because sending a false signal would punish the company with an unusually low stock price, a stock split was often seen as a more credible form of information diffusion than road shows or press releases. Benartzi *et al.* (2005) argued that management split their stocks only if it considered the current level of stock price and earnings to be permanent. Brennan and Copeland (1988) saw the essence of signalling argument as being that managers only split their stock if they were optimistic that the future share prices would increase, or at the very least not decrease. If a manager believed that the future share prices would decrease, they would not be willing to split stock due to the increased cost of trading lower priced stocks. McNichols and Dravid (1990) noted that managers did not explicitly intend for the split to be a positive signal about future prospects of the firm, but the split could still convey information to the market.

Agreeing with the signalling hypothesis theory, Conroy *et al.* (1999) found excess returns after stock splits were considerably higher when shareholders were surprised by a larger-than-expected split. Financial analysts were also found to increase their earnings forecast notably when the split factor was greater than expected. Excess returns earned by market participants then tended to be significantly higher when a company's management decided on a split factor that the stock price would fall below an expected level.

The Optimal Tick Size Hypothesis/ Market-Maker Hypothesis

Angel (1997) came up with the market-maker hypothesis, which suggested that companies strived for an optimal tick size. The tick size was the minimum change in share prices. They noted that if there was a constant absolute tick size, the management of a company could influence the relative tick size through a stock split, that being the tick size in relation to the stock price. Recently, academics paid attention to the role of tick size on the decision of stock distributions. Most equity markets had rules on tick size; the minimum price variation. Therefore, the primary difference between equity markets was whether they used a single absolute tick size that applied to most stocks, or a tick size set that was a function of stock prices. Angel (1997) noted that the minimum price variation rules determined the minimum bid-ask spread that could be quoted. No quoted spread could then be less than the minimum price variation. Larger tick sizes were found to make trading expensive, especially for smaller traders. Admanti and Pfleiderer (1989) also noted that the relative tick size was more influential on trading decisions and could even affect stock variation. Schultz (2000) agreed with the optimal tick size hypothesis, and suggested that if there was an absolute constant tick size on the stock exchange, a company's management could influence the relative tick size relative to the stock price through a split. The tick size was then important in that a high tick size was conducive for market making, and it made it more profitable.

The Optimal Price Range Hypothesis

Copeland (1979) came up with the notion that a stock split changed stock prices to a more optimal price, which in turn increased demand for the stock. Their hypothesis of the optimal price range stated that there was a price range within which trading was most liquid for stocks of a company. Firms were found to split their stock to keep prices within an optimal trading range. Baker and Powell (1993) revealed that the main motivation for the executives to split stock was for improved liquidity. High-priced stocks were found to be illiquid due to the psychological reasons and transaction costs. Therefore, when the prices climbed up to a certain level, the executive split the stock to lower prices which facilitated trading, hence they enhanced liquidity. Conroy, Harris and Benet (1999) agreed with the optimal price range hypothesis and noted that when a stock became too expensive, a split brought it back to the optimal price range. Lakonishok and Lev (1987) argued that there existed benchmark values regarding stock prices and managers were guided by these comparative figures.

Lamoureux and Poon (1987) also in agreement with this hypothesis noted that the managers' expected stocks trading at lower prices to be generally more liquid and to attract a larger pool of potential investors. Managers were then found to make use of splits to extend their shareholder base, since the lower stock prices were more attractive to minority shareholders.

The Neoclassical Theory: The Exogenous Growth Theory

The neoclassical exogenous growth theory is also called the Solow-Swan growth model and is built upon the basic neoclassical frameworks of long run economic growth. This framework explains economic growth using four main components namely, productivity, capital accumulation, population growth and technological progress. This theory states that the long run economic growth is exogenously determined, that is, economic growth is determined by factors outside the basic model specifications. The basic building block of this theory is the production function which has constant labor (L) and capital (K) which are reproducible. Therefore the equation is Output (Y) being a function of Capital (K). The crucial aspect of the production function is the assumption of diminishing returns of capital accumulation. This means giving labor more capital goods without technological inventions will result in redundant investment of the new capital at a certain point. Another basic premise of the neoclassical growth model is that there tends to be a convergence to a steady state in the long run depending on the technological progress and rate of labor force growth. It states that a country that has higher savings than other will tend to grow faster than those with low savings. In the very long run the role of capital accumulation plays a smaller role in this model than technological progress as nations move to the steady state. The neoclassical growth model emphasizes mostly on the importance of technological innovation in the long run growth to offset the effects of diminishing returns that affect both capital accumulation and labor increases in the economy (Aghion and Howitt, 1998).

The Endogenous Growth Theory

In the endogenous growth theory, economic growth is seen to be as a result of internal and not external forces, this means that households, investing in human capital and innovation play a significant role in the growth of an economy. This theory focuses on the positive externalities and spillover effects of a knowledge based economy which ultimately leads to economic development. It is in contrast to the exogenous growth model that emphasizes the role of technological processes as a scientific exogenous process that is not determined by economic forces. The main feature of the endogenous growth model is that the broad definition of capital stock is not subject to diminishing returns as with the exogenous growth model (Fry, 1997). This therefore means that growth is a positive function of the investment ratio. It states that in the long run, economic growth will depend on the policy measures that are taken by different governments. This implies that policies that embrace openness, competition and innovation will promote growth (Aghion & Howitt, 1998).

Intermediation Theory

Financial intermediation involves matching lenders with excess funds (savings) with borrowers who need the money and this is done by a third party agent such as a bank. The intermediation theory is built on models of resource allocation that are based on perfect and complete markets. The basis of complete perfect markets which this theory is based on comes from the basic assumptions of the neoclassical model that include lack of competitive advantages and little or no transaction costs in getting information as it is freely available to all participants in the market. These assumptions are however not realized in the real world due to various market imperfections such as asymmetric information which increases transaction costs and result in other having a competitive edge over others. Financial Intermediaries therefore exist to remove these imperfections and they do it in many ways.

Intermediaries remove transaction costs by sharing or diversifying the evaluation of assets fixed costs, something individuals find difficult to do. This means that business is diversified by financial intermediaries such as banks and with that costs are able to be reduced through economies of scale. Asymmetric information is removed through intermediaries as they act as delegated monitors for the lenders through collecting information on the borrower and also doing a number of screenings (for banks they look at credit worthiness of borrowers). Financial intermediaries also signal an informed position by investing in the assets they have particular knowledge of as they do extensive research about the market that some individuals can not readily and actively do. Intermediaries like banks also provide commitments to long term relationships with customers and thereby creating a relationship with the customer, removing the problem of adverse selection and moral hazard (Gwilym, 2008). The intermediation theory however only recognizes the importance of financial intermediaries in the economy for the role of removing transaction costs and asymmetric information.

Clientele Effect Theory

According to Botha (1985), the tax induced clientele argument is based on shareholders' different tax status, which causes shareholders to have preference in respect to returns from investments. This argument implies that there are three major groups of shareholders, namely, those seeking immediate dividend income, those seeking capital appreciation and those who are indifference to both dividends and capital appreciation. A firm is thus not only faced with one clientele but with different clienteles, with preference from one dividend policy to another. Investors who want current investment income such as retirees will own shares in high dividend paying firms while investors who do not require dividends distributions owns shares in low dividend paying firms. Thus different dividend clienteles would probably be found in the following life cycles of companies, namely, maturity phase for high dividend payout companies, the growth phase for low dividend payout companies and the expansion phase for indifference between dividend income and capital growth. Allen, Bernardo and Welch (2000) suggest that clienteles such as institutional investors tend to be attracted to invest in dividend-paying stocks because they have relative tax advantages over individual investors. The purpose of this theory is to predict the decisions of investors. This will then affect the financial decisions of the firm.

Stewardship Theory

Stewardship theory has its roots from psychology and sociology and is defined by Davis *et al.*, (1997) as "a steward protects and maximizes shareholders wealth through firm performance, 14 because by so doing, the steward's utility functions are maximized". In this perspective, stewards are bank executives and managers working for the shareholders, protects and make profits for the shareholders. Unlike agency theory, stewardship theory stresses not on the perspective of individualism Donaldson and Davis, (1991), but rather on the role of top management being as stewards, integrating their goals as part of the organization. The stewardship perspective suggests that stewards are satisfied and motivated when organizational success is attained. Agyris (1973) argues agency theory looks at an employee or people as an economic being, which suppresses an individual's own aspirations. However, stewardship theory recognizes the importance of structures that empower the steward and offers maximum autonomy built on trust Donaldson and Davis, (1991). It stresses on the position of employees or executives to act more autonomously so that the shareholders' returns are maximized. Indeed, this can minimize the costs aimed at monitoring

and controlling behaviors Davis *et al.*, (1997). On the other end, Daily *et al.* (2003) argued that in order to protect their reputations as decision makers in organizations, executives and directors are inclined to operate the firm to maximize financial performance as well as shareholders' profits. In this sense, it is believed that the firm's performance can directly impact perceptions of their individual performance. Indeed, Fama (1980) contend that executives and directors are also managing their careers in order to be seen as effective stewards of their organization, whilst, Shleifer and Vishny (1997) insists that managers return finance to investors to establish a good reputation so that they can re-enter the market for future finance. Stewardship model can have linking or resemblance in countries like Japan, where the Japanese worker assumes the role of stewards and takes ownership of their jobs and work at them diligently. Moreover, stewardship theory suggests unifying the role of the CEO and the chairman so as to reduce agency costs and to have greater role as stewards in the organization. It was evident that there would be better safeguarding of the interest of the shareholders. It was empirically found that the returns improved by having both these theories combined rather than separated (Donaldson & Davis, 1991).

Stakeholder Theory

Stakeholder theory can be defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives". Unlike agency theory in which the managers are working and serving for the stakeholders, stakeholder theorists suggest that managers in organizations have a network of relationships to serve – this include the suppliers, employees and business partners. This group of network is important other than owner-manager-employee relationship as in agency theory Freeman, (1999). On the other end, Sundaram and Inkpen (2004) contend that stakeholder theory attempts to address the group of stakeholder deserving and requiring management's attention. Whilst, Donaldson and Preston (1995) claimed that all groups participate in a business to obtain benefits. Nevertheless, Clarkson (1995) suggested that the firm is a system, where there are stakeholders and the purpose of the organization is to create wealth for its stakeholders. Freeman (1984) contends that the network of relationships with many groups can affect decision making processes as stakeholder theory is concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders. Donaldson and Preston (1995) argued that this theory focuses on managerial decision making and interests of all stakeholders have intrinsic value, and no sets of interests are assumed to dominate the others.

Conclusions

Despite major advances in the theories used in finance, there has been scant impact on their use in relation to strategic financial management. Researchers need to strategically and accurately apply theories of finance correctly. The theories of finance have been extended in order to reconcile financial and strategic analysis. It can be summarized by asking how the present gaps between finance theory and strategic planning might be bridged. Strategic planning needs finance. Present value calculations are needed as a check on strategic analysis and vice versa. However, the standard discounted cash flow techniques will tend to understate the option value attached to growing, profitable lines of business. Financial management theories require extension to deal with real options. Therefore, to bridge the gap researchers need to: Apply existing theories correctly; extend the theories. It is evident that

the most promising line of research is to try to use option of theories to model the time-series interactions between investments. Both sides could make a conscious effort to reconcile financial and strategic analysis. Although complete reconciliation will rarely be possible, the attempt should uncover hidden assumptions and bring a generally deeper understanding of strategic choices.

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