Determinants of Capital Structure Adjustment Speed for Companies Listed On the Nairobi Securities Exchange

Davies Irungu Kamau¹ & Abdullah Ibrahim Ali²
¹Student - Jomo Kenyatta University of Agriculture and Technology
²Lecturer - Jomo Kenyatta University of Agriculture Tecnology

Abstract: Capital structure decisions have been at the core of financial research for decades. Theories such as static tradeoff theory and dynamic tradeoff theory indicate that companies have a target capital structure while pecking order theory and market timing theory argue that companies do not have preferred capital structure. Based on the existing empirical evidence in support of the former theories, this study sought to determine the factors that influence the speed of capital structure adjustment for companies listed on the Nairobi Securities Exchange. Specifically, the study sought to determine the effect of distance from the target capital structure, size, profitability, and dividend payment on the speed of adjustment. The study used a descriptive research design. The target population consisted of 42 companies listed and continuously traded on the Nairobi Securities Exchange between 2008 and 2015. A sample of thirty-four respondents was used. The sample was selected using stratified sampling. The respondents comprised of finance directors and chief finance officers of the sampled companies. The study used primary data. Data was collected using a questionnaire. Data was analyzed using Statistical Package for Social Scientists. Multiple regression technique was used to evaluate the effect of independent variables on the dependent variable. The study found that the distance from the target capital structure had a positive effect on the speed of capital structure adjustment. It found that the speed of adjustment is highest when the distance is largest. The size of the firm was found to have a positive effect on the speed of capital structure adjustment. Larger firms were found to incur lower fixed associated with capital structure adjustment. Profitability was found to have a positive effect on the speed of capital structure adjustment. Dividend payment was found to have a negative effect on the speed of capital structure adjustment. Companies with high dividend payout ratios were found to have a slower speed of adjustment. The study concluded that the speed of capital structure adjustment is a positive function of the distance from between the actual and the desired capital structure. It also concluded that the speed of adjustment is highest when the distance is largest. Secondly, the study concluded that the size of the firm had a positive effect on the speed of capital structure adjustment. The speed of adjustment is higher for larger firms than for smaller firms. It was also concluded that profitability had a positive effect on the speed of capital structure adjustment. More profitable companies relied on retained earnings to supply the equity component while less profitable companies relied on external equity issues. Finally, the study concluded that dividend payment had a negative effect on the speed of capital structure adjustment. High dividend payout caused companies to raise external in adjusting capital structure. The study recommended that since adjustment speed is a positive function of distance from the target capital structure, firms listed on the Nairobi Securities Exchange should regularly adjust their capital structure towards the target, especially when the distance between the actual capital structure and the target capital structure is large. It also recommended that since firm size has a positive effect on the speed of capital structure adjustment, firms listed on the Nairobi Securities Exchange should seek to grow the amount of assets in their balance sheet for the capital structure to adjust towards the target. Further, the study recommended that companies should enhance their profitability so as to create the flexibility of adjusting their capital structure. Finally, the study recommended that companies listed on the Nairobi securities exchange should align their dividend policies to their capital structure choices in order to minimize the negative effect on capital structure adjustment speed associated with dividend payment.

INTRODUCTION

1.1 Background
Brealey & Myers (2003) define capital structure as the firm’s mix of different securities used in financing its investments. They observe that a firm can issue dozens of distinct securities in countless combinations, but it tries to find the particular
combination that maximizes its overall market value. Roshaiza & Azura (2012) defined a target capital structure as the best debt to equity ratio for the firm in which the cost of financing is minimized and the value of the firm is maximized. They argued that financial managers always choose between debt and equity financing in a manner which is beneficial to the company. This suggests that companies have preferred level of leverage.

The seminal paper by Modigliani & Miller in 1958 put into perspective the enquiry into the firm’s capital structure decision. Modigliani and Miller (1958) showed that under a certain set of assumptions, the firm’s capital structure decisions does not affect the value of the firm, that is the capital structure decisions are irrelevant. The theorem assumed a perfect market with no transaction costs and taxes. Modigliani & Miller (1963) in yet another path setting paper on corporate capital structure showed that firm value is an increasing function of leverage due to the tax deductibility of interest payments at the corporate level. The implication was that a value maximizing firm should finance with 100 percent debt. However, Berens & Cuny (1995) pointed that the corner solution implied by Modigliani & Miller (1963) model is very much at odds with empirical observations of firm behavior. Following these publications enormous academic effort has gone into the effect of debt financing on the value of the firm and whether firms have preferred debt levels. The static trade off theory by Myers (1984) suggests that firms have target optimal capital structure attained by balancing the benefits of corporate tax of debt against the costs of financial distress associated with debt. Identifying the relevant costs associated with debt financing that firms presumably trade off against this corporate tax benefit have been a major focus of finance research (Berens & Cuny, 1995).

Graham & Harvey (2001) noted that managers seek a target debt-equity ratio. However due to random events or other changes, firms may temporarily deviate from their optimal capital structure, and then only gradually work back to the optimum. Titman & Tsyplakov (2007) noted that a firm’s financial behavior is characterized by partial adjustment to long-run financial targets. The speed of adjustment is affected by firm characteristics and, hence, is allowed to vary by company and over time. However, the long-run financial targets towards firms partially adjust are specified exogenously. Flannery & Rangan (2006) posited that in a frictionless world, firms would always maintain their target leverage. Immediate adjustment to a firms target may be prevented by adjustment costs, as the firm trades off these adjustment costs against the costs of operating with sub-optimal leverage. Dimitrov & Jain (2008) noted that shifts in the mix of debt and equity may occur when firms need more money due to various reasons, for example financing new projects, maintaining liquidity position or repaying loans. Also change in market valuation in equity and debt securities causes the capital structure to deviate from the target. Therefore the speed with which the capital structure is adjusted or adjusts to the target level is of concern to financial manager.

Kim, Heshmati, & Aoun (2003) noted that the speed at which firms adjust toward optimal leverage is a function of observable firm factors. According to Nivorozhkin (2003) random events cause the capital structure of companies to change. However firms adjust towards their desired capital structures but do so only gradually due to transaction costs. Huang and Ritter (2005) suggest that firms slowly adjust toward their target leverage with an average speed of about 4%. Fama & French 2002 based on different models noted that the adjustment speed vary between 7-18% while Flannery & Rangan (2006) observed a fast adjustment of about 34%. Mwangi, Anyango & Amenya (2012) noted that Kenyan firms do have target capital structure and on the average closes about 5.3% of the gap between the current and the desired leverage within one year. The discrepancy in the estimated speeds of adjustment between these empirical tests has different implications for the determinants of the speed of capital structure adjustment.

1.1.1 Nairobi Securities Exchange
The Nairobi Securities Exchange (NSE), formerly Nairobi Stock Exchange, is the principal Securities Exchange of Kenya. It began in 1954 as an overseas stock exchange while Kenya was still a British colony with permission of the London Stock Exchange. The NSE is a member of the African Securities Exchanges Association. It is Africa’s fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP (Iraya & Musyoki, 2013). In 1990, a trading floor and secretariat was set up at the IPS building, before moving to the Nation Centre Nairobi in 1994. Over the past decade, the securities exchange has witnessed numerous changes such as automating its trade in September 2006 and in 2007 making it possible for stockbrokers to trade remotely from their offices. Trading hours were also increased from two to six. Nairobi Securities Exchange aims at supporting trading clearing settlement if equities, debts, derivatives and other associated instruments.
It's mandated to list companies on the securities exchange and enables investors to trade in securities of companies thus it’s charged with the health of securities Exchange. It’s regulated by Capital Market Authority (Musiega et al, 2013).

1.2 Statement of the Problem
Existing capital structure theories provide different explanations about firm’s adjustment toward a target leverage level. According to the static tradeoff theory, the firm’s value is maximized at an optimal debt ratio based on a tradeoff between tax benefits and expected bankruptcy costs of debt (Dimitrov & Jain, 2008). Accordingly, when shocks cause deviations from this optimum, Firms will quickly rebalance toward the target. The adjustment would be immediate and complete in a frictionless world. However in the presence of adjustment costs, the adjustment will be incomplete (Xu, 2007). Adjustment costs may preclude firms from adjusting its leverage ratio frequently as suggested by the dynamic tradeoff theory. This is because the firm must trade off the adjustment cost against the costs of operating with a suboptimal capital structure. The firm will readjust only if the cost of operating a suboptimal capital structure outweighs the adjustment cost. The adjustment speed is relatively fast making deviations from target leverage temporary because firms value leverage target in a trade-off world (Drobetz, Pensa & Wanzenried, 2007). Theories such as the pecking order and market timing theories argue that firms do not have a market value leverage target and therefore do not adjust quickly towards the optimum (Xu, 2007). Frank & Goyal (2005). noted that studies that found a fast speed of adjustment renders support for the trade-off theories, while those indicating slow speed of adjustment are interpreted as being consistent with no target capital structure theories. The study concluded that without necessarily moving towards some target debt ratio, there seems to be consensus that companies adjust their leverage levels though differing speeds.

1.3 Objectives of the Study
The objectives of the study were as follows:

1.3.1 General Objective
The main objective of this study was to evaluate the determinants of capital structure adjustment speed for companies listed at the Nairobi Securities Exchange.

1.3.2 Specific Objective
The specific objectives for this study were:

i. To determine effect of distance from the target on the speed of capital structure adjustment for companies listed on the Nairobi Securities Exchange.

ii. To determine effect of firm size on the speed of capital structure adjustment for companies listed on the Nairobi Securities Exchange.

iii. To determine effect of profitability on the speed of capital structure adjustment for companies listed on the Nairobi Securities Exchange.

iv. To determine effect of dividend payment on the speed of capital structure adjustment for companies listed on the Nairobi Securities Exchange.

1.4 Research Questions
This study sought to answer the following questions:

i. What is the effect of distance from the target on the speed of capital structure adjustment speed for companies listed on the NSE?

ii. What is the effect of firm size on the speed of capital structure adjustment speed for companies listed on the NSE?

iii. What is the effect of profitability on the speed of capital structure adjustment speed for companies listed on the NSE?

iv. What is the effect of dividend payment on the speed of capital structure adjustment speed for companies listed on the NSE?

LITERATURE REVIEW

2.1 Introduction
This chapter reviewed various theories suggested to explain firms financing behaviors, related empirical
evidence and a discussion of the hypothesized variables. The chapter was organized to start with a theoretical review, empirical review, and discussion of research variable and presentation of the conceptual framework, followed by critical review of the literature and research gaps concludes.

2.2 Theoretical Framework
The theoretical framework of the study involved the theories expounded to explain the occurrence of firms’ capital structure decisions. The theories reviewed include: static trade off theory, dynamic trade off theory, pecking order hypothesis and market timing theory.

2.2.1 Static Trade-off Theory
The term trade-off theory is used by different authors to describe a family of related theories. In these theories, a decision maker running a firm evaluates the various costs and benefits of alternative leverage plans. Berens & Cuny (1995) noted that the original version of the trade-off theory grew out of the debate over the Modigliani-Miller theorem. When corporate income tax was added to the original irrelevance proposition this created a benefit for debt in that it served to shield earnings from taxes. Since the firm’s objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing. Bankruptcy cost is considered as an offsetting cost that limits a firm’s debt level.

In this theory, the firm is viewed as setting a target debt-equity ratio and gradually moving towards it. The firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. As Kraus & Litzenberger (1973) noted the optimal leverage reflects a trade-off between the tax benefits of debt and the deadweight costs of bankruptcy. According to Myers (1984), a firm that follows the trade-off theory sets a target debt-to-value ratio and then gradually moves towards the target. The target is determined by balancing debt tax shields against costs of bankruptcy. In particular, capital structure moves towards targets that reflect tax rates, assets type, business risk, and profitability and bankruptcy costs.

Due to the variations in firm-specific characteristics, target leverage ratios will vary from firm to firm. Target theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will disappear in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms would have more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress (Frank & Goyal, 2005).

Berens & Cuny (1995) observe that the trade-off theory yields an intuitively pleasing interior optimum for firms. It gives a rationale for cross-sectional variation incorporate debt ratios as follows; firms with different types of assets will have different bankruptcy and agency costs hence different optimal debt ratios; firms with different amounts of alternative tax shields will have different marginal tax benefits of debt, implying different levels of optimal debt ratios. They noted that while there is less than total agreement on the exact costs and benefits of leverage, and what role they explicitly play in firms’ capital structure decisions, the theory has achieved some level of acceptance among financial economists.

2.2.2 Dynamic Capital Structure Theory
Sundaresan (2013) observed that the ability to modify the capital structure at a later point in time serves to inform the optimal capital structure now. Dynamic capital structure theories are concerned with evaluating the firm’s ability to optimize their capital structure decisions at various points in time and how they go about it. Fischer, Heinkel & Zechner (1989) were first to develop a theory of dynamic capital structure model. They examined the dynamic capital structure problem facing the firm in a trade-off setting by modeling recapitalization costs and treating the firm’s investment decision as given. Their theory made two key assumptions: the value of an optimally levered firm can be greater than that of an identical unlevered firm by the amount of recapitalization cost needed to lever up; an optimally levered firm should provide a fair rate of return while an identical unlevered firm earns a return lower than the fair rate. The theory concluded that typically firms have a range of capital structure values within optimally chosen boundaries. The range depends on firm specific characteristics as well their recapitalization costs.

Titman & Tsypylakov (2007) developed a model in which the firm can alter its financial structure as well as its investment policies over time. The model took into account the interactions between financial distress and the agency conflicts of creditors and equity holders. The model showed that agency conflicts can lead the firm to initially choose a conservative capital structure. Agency
conflicts push firms away from their target debt ratios whereas the presence of financial distress costs increases the tendency to move towards the target debt ratios. Ju & Ou-Yang (2006) contend that the firm will choose the maturity of the debt as a trade-off between the gains associated with dynamically adjusting the leverage and the transactions costs associated with that dynamic adjustment. They used stochastic interest rates to represent adjustment cost. They noted that capital structure choices are dynamic with an optimal leverage of 35% which is lower than many static models of capital structure.

Strebulaev (2007) pointed that since firms adjust leverage by issuing or retiring securities infrequently, at refinancing points, in a dynamic economy with frictions the leverage of most firms most of the time is likely to deviate from the optimal leverage. As a result even if firms follow a certain model of financing, a static model may fail to explain differences between firms in the cross section since actual and optimal leverage differ. Bolton, Chen & Wang (2013) develop a dynamic tradeoff theory for financially constrained firms. The theory integrated classical tax versus bankruptcy cost considerations into a dynamic framework in which firms face external financing costs. The theory argued that external financing costs generate a precautionary demand for holding liquid assets and retaining earnings. Financially constrained firms incur debt servicing costs associated with interest payments that drain cash. In the theory these are seen as additional cost of debt beyond the ones considered under the static tradeoff theory. Given that firms face this debt servicing cost, the theory predicts lower optimal debt levels than those obtained under the dynamic tradeoff theories with no precautionary cash buffers.

2.2.3 Pecking Order Theory
Pecking order theory proposed by Myers (1984) suggests that a firm has perfect hierarchy of financing decisions by which it tries to utilize its internal financing sources first i-e; retained earnings then issues debt and then would issue equity as a last resort. The pecking order theory is a consequence of information asymmetries that exist between insiders of any firm and outsiders. Accordingly, a firm attempt to reduce information asymmetries and maintain ownership by first using internal financing, followed by external debt and equity. Gaud, Jani, Hoesli & Bender, 2005) observed that managers adapt their financing policy with the purpose to minimize the associated cost whilst maintaining financial flexibility. Explicitly they prefer internal financing to external financing, and risk debt to equity. Myers (1984) noted that there is no well defined debt equity mix, because there are two kinds of equity, internal and external, one at the top of the pecking order and one at the bottom.

Myers & Majluf (1984) explain when the equity is issued by the managers instead of riskless debt then rationally outside investors discount the stock price of a firm. To avert this kind of approach of investors, managers avoid issuing equity whenever possible. Their model predicts the same results that pecking order is followed in such a manner that managers first choose internal funds, then risky debts, and finally equity. When there are no investment opportunities, profits are retained by firms to avoid raising external financing in future.

Following the pecking order theory, optimal capital structure is hard to define as equity comes along at the top and bottom of the pecking order. The theory predicts that the optimal capital structure will not be achieved by firms but firms would follow a certain principle and choose external financing when “debt capacity” is achieved. Under the pecking order explanation observed leverage reflects primarily a company’s historical profitability and investment opportunities rather than desired or target leverage ratio. Hence according to the theory there is no optimal capital structure. If there is an optimum, the cost of deviating from it is insignificant in comparison to the alternative cost; costs associated with raising external finance (Baker & Wurgler, 2002)

2.2.4 Market Timing Theory
Baker & Wurgler (2002) developed market timing theory. The theory is founded on the observation that firms are more likely to issue equity when their market values are high relative to book and past market values. Firms do repurchase equity when their market values are low. Hence the market timing theory suggests that a firm’s current capital structure reflects its cumulative ability to sell overpriced equity shares. The fluctuations in stock prices affect firms’ capital structure. As a result observed capital structure is strongly related to historical market values. Firms with past high valuations issue equity when funds are needed while firms with low past valuations issue debt to raise funds. The intention is to exploit temporary fluctuations in the cost of equity compared to other forms of capital. Baker & Wurgler (2002) provided evidence that equity market timing has a persistent effect on the capital structure of the firm. Their findings demonstrate that fluctuations in market value have very long-run impact on capital structure. The impact of past market values was found to have a half life well over 10 years.
Consistent with the market timing hypothesis, Flannery & Ragan (2006) claim that managers routinely exploit information asymmetries to benefit current shareholders. They noted that the theory implied that managers do not perceive great leverage effects on firm value and therefore do not act to reverse changes in leverage. However, Havokimian (2006) provide confirmation that even if the market timing exists, it doesn’t encompass long run impact on corporation power and that business does keenly rebalance their leverage fractions toward several target point. Jahanzeb et al (2013) find evidence supporting market timing theory in a sense that managers wait for the market condition to get better, that stocks’ position in the market get better before the new issuance and before issuing new stocks firms try to make their performance better.

2.3 Conceptual Framework

The conceptual framework was developed from the review of literature discussed in section 2.4 and presented in the following diagram (figure 2.1). The most important task was to choose the appropriate explanatory variables. The selection of variables was based on previous relevant studies. It shows the relationship between the dependent (capital structure adjustment speed) and the explanatory (distance from target, profitability, size, income variability and dividend payout) variables.

![Conceptual Framework Diagram](image)

**2.3.1 Distance from Target**

According to Haas & Peeters (2006) distance from target is measured as the distance between the target leverage and the actual leverage at the beginning of the year. Kim et al (2003) noted that the likelihood of adjustment is a positive function of the difference between the optimal and the observed leverage. Firms with lower than optimal leverage only change their capital structure only if they are sufficiently far away from the optimal leverage. Loof (2006) pointed that the relationship

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**Figure 2.1 Conceptual framework**
between the speed of adjustment and distance from the
optimal capital structure is supposed to be
negative if leverage is adjusted slowly and
internally via the firms’ dividend policy. Drobetz,
et al (2007) argued that if fixed costs constitute a
major portion of the total costs of changing capital
structure, firms with sub-optimal leverage will alter
their capital structure only if they are sufficiently
far from the optimal capital structure. Nivorozhkin
(2003) observed that the speed of adjustment
related positively to the distance between the target
and actual leverage ratios for Bulgarian companies
while the relationship was neutral for Czech
companies.

Mahakud & Mukherjee (2011) posited that the
speed of adjustment and the distance from the
target were significantly positively related. The
study concluded that companies which are
sufficiently away from their target leverage always
want to reach the optimal very quickly. Dang et al
(2012) found that firms with a small deviation ratio
noted that distance had a negative effect on
adjustment speed indicating that it is less costly to
adjust by relatively small amounts. They argue that
it is possible for such small adjustments to be
accomplished as part of firms’ normal operations
while larger adjustments might require new issues
of securities.

Haas & Peeters (2006) measured distance from
target as the distance between the target leverage
and the actual leverage at the beginning of the year.
The firms were separated into three categories: one
for firms with a positive distance, thus
underleveraged, and another for firms with a
negative or no distance overleveraged or exactly on
target. They noted that overleveraged firms may be
expected to reach their targets faster if they can
easily pay off debt, whereas underleveraged firms
have more trouble in raising additional debt. Under
leveraged firms find easier to assume additional
debt overleveraged firms may actually have
difficulties in reducing their debt burden because of
liquidity constraints. For both distance variables, a
positive association with the adjustment speed
exists if firms that are further away from their
target adjust faster than firms that are close to their
target. Firms only adjust, when they have reached a
substantial deviation from their target capital
structure. Firms that are near their target do not
close the remaining gap because the costs of
incremental adjustments are prohibitive. On the
other hand a negative correlation would indicate
that firms that are close to their target adjust
quickly to reach this nearby target. Firms that are
far away from their target then adjust only
incrementally.

2.3.2 Firm Size

Drobetz & Wanzenried (2006) large firms are
typically mature with high tangibility, profitability
and financial flexibility, implying less severe
asymmetric information, adverse selection and
moral hazard problems, as well as better access to
capital markets. In addition, while capital structure
adjustments involve substantial transaction costs,
the fixed component of these costs is relatively
smaller for large firms. As a result external
financing is smaller for large firms. Following this
line of argument, larger firms will adjust to the
target leverage at a quicker speed. Flannery &
Rangan (2006) argued that large firms have less
incentive and external pressure to adjust capital
structure. The reasons for these include; large firms
tend to use public debt that is more expensive to
adjust, they have less cash volatility, lower
financial distress cost and fewer debt covenants.
This suggests slower adjustment speed for large
firms. Loof (2006) assumed that larger firms find it
easier than small firms to change their capital
structure by issuing debt or equity because more
information is available about larger firms.
According to Mahakud & Mukherjee (2011) the
speed of capital structure adjustment is positively
related to firms’ size.

According to Drobetz et al (2007) changing the
capital structure involves substantial fixed costs,
and these costs are relatively larger for small firms.
Consequently large firms should be able to correct
deviations from the target capital structure at a
relatively lower cost. In addition, due to better
analyst coverage, more information is publicly
available about large firms, implying better access
to capital markets and lower anticipated costs
arising from informational asymmetries upon
announcement of debt or equity issues. Banerjee et
al (2000) found that smaller firms adjust towards
their book value target leverage slightly faster than
larger firms.

According to Dang et al (2012) capital structure
adjustment cost are relatively small for large firms
and larger for small firms. As a result large firms
should be able to correct deviations from target
leverage at a relatively lower fixed cost, resulting
in quicker speed of adjustment. , large firms are
generally mature companies that have high
tangibility, profitability and financial flexibility.
They also have lower asymmetric information
costs, face a less severe adverse selection and
moral hazard problem and thus have better access
to capital markets. Empirically they find that large
capital markets. They also have low asymmetric information
costs, face a less severe adverse selection and
moral hazard problem and thus have better access
to capital markets. Empirically they find that large
firms are typically mature, rich in cash reserves,
have high leverage and highly profitable and adjust
towards the optimal leverage quickly. Banerjee et
al (2000) found that size had a positive and
significant effect on the speed of adjustment for UK and US firms. Smaller firms were found to adjust towards their book value target leverage slightly faster than larger firms.

2.3.3 Profitability

In the trade-off theory, agency costs, taxes, and bankruptcy costs push more profitable firms towards higher leverage. This is attributed to three reasons: expected bankruptcy costs decline when profitability increases; the deductibility of corporate interest payments induces more profitable firms to finance with debt and higher leverage helps to control agency problems by forcing managers to pay out more of a firm’s excess cash. The strong commitment to pay out a larger fraction of pre-interest earnings to creditors suggests a positive relationship between book leverage and profitability. However, according to the pecking order theory higher earnings should result in less leverage. Firms prefer raising capital, first from retained earnings, then from debt, and finally from issuing new equity. This behavior is due to the costs associated with new equity issues in the presence of information asymmetries. Debt typically grows when investment exceeds retained earnings and fall when investment is less than retained earnings. The pecking order model predicts a negative relationship between book leverage and profitability (Drobetz, et al, 2007).

Flannery & Hankins (2007) posit that profitability is a measure of financial flexibility that determines the speed of capital structure adjustment. Highly profitable firms have available funds so they do not suffer from severe internal financial constraints while enjoying the financial stability to issue securities at a relatively low cost. Further these firms are able to take advantage of debt tax shields and minimize asset substitution effects, especially when they are under-leveraged. Dang, Kim & Shin (2009) observed that profitability and the speed of capital structure adjustment are positively related due to the increased financial flexibility. Mahakud & Mukherjee (2011) found profitability to be positively related to the adjustment speed to target capital structure. This was noted to support the argument that higher profit increases financial flexibility of the company allowing the firm to adjust quickly.

Dang, Shin & Kim (2012) posit that profitability have a positive effect on dynamic capital structure adjustment. They argue that the increased financial flexibility and adjustment benefits, allow the speed of capital structure adjustment to be positively related to profitability. They find that firms with low profitability seldom rely on internal adjustment but change their capital structures more frequently through active external adjustment in the capital market.

2.3.4 Dividend Payout

Flannery & Hankins (2007) pointed that dividend payment are a source of internal financial constraint that affect firms’ adjustment toward target leverage. Dividends transfer wealth to shareholders thus reducing retained earnings that could be available for capital structure adjustment through mechanisms such as share repurchases or debt retirement. Firms with high payout ratios may have a high level of internal financial constraint and will have a low speed of adjustment. Mahakud & Mukherjee (2011) found a negative relationship between dividend and the adjustment speed.

Drobetz et al (2007) explained that when fixed costs of adjustment are prohibitively high, firms will avoid going to the capital market and are restricted to use payout policy to adjust towards the target leverage. As a result the cost of a suboptimal payout policy increases with the magnitude of the absolute difference between the target leverage and the current leverage. As opposed to external adjustment, internal adjustment is limited by the availability of internal funding for share repurchases and the maximal amount to be paid out as dividends. The maximal adjustment step for internal adjustment is given by the sum of all internal funds, i.e., the sum of retained earnings, reserves and actual profit. In the presence of general investment plans, firms will refrain from using all internal funds for capital structure adjustments, and internal adjustment steps tend to be smaller. Hence, if firms adjust internally rather than externally through outside financing, dynamic capital structure adjustment is slower and there should be a negative relationship between distance and the speed of adjustment.

Banerjee et al (2000) argued that if the fixed costs of adjustment are prohibitively high, most adjustment may occur without transactions in external capital markets. In this case dividend policy can be used with the objective of changing leverage. The costs of adjustment are expected to be increasing in the distance from optimal leverage, because there are costs associated with dividend policy deviating from the firm’s optimal policy. These costs would increase with the magnitude of the deviation from the desired dividend policy. The relationship between speed of adjustment and distance from optimal leverage may be either negative, indicating that firms adjust leverage in external capital markets when deviations are
sufficiently large, or negative indicating that leverage is adjusted internally.

Dang, Shin & Kim (2012) pointed that dividend payments and firm investments are a measure of financial constraints, which in turn may have a negative impact on capital structure adjustments. Dividends transfer corporate wealth to shareholders, thereby reducing the retained earnings that firms can use to change their capital structures through internal adjustment. Similarly, high-growth firms that finance new investments through internal funds also face some forms of financial constraints when they need to change their capital structures. Thus firms with a high dividend ratio or a substantial investment set have a high degree of financial constraints and therefore may not be able to adjust capital structure quickly. High dividend payout ratio thus implies slow speed of adjustment. Their empirical test confirm that firms with low dividend payouts and low investment have less cash flow deficits thus are able to adjust capital structure more readily by making debt retirements.

2.3.5 Capital Structure Speed of Adjustment

Supra et al (2016) define the speed of adjustment of capital structure as the rate at which a firm changes its leverage ratio towards its target (optimal) leverage. They note that in a frictionless world, the firms would be able to maintain their capital structures at the optimal or the target capital structure. However in the real world, the existence of adjustment costs will prevent them from adjusting immediately to the firm’s target capital structure. Flannery & Rangan (2006) found that that firms target long run capital structure and the typical firm converges on its long-run target at a rate of more than 30% per year. Typically a firm closes about one-third of the gap between its actual and its target debt ratios within one year. The speed of adjustment was attributed to targeting behavior being an important effect on firms’ observed capital structures.

Clark, Francis & Hasan (2009) provided evidence of capital structure adjustments from around the world. They noted that firm in each country do target long-run capital structures and adjust towards the long run target. The adjustment speeds were found to vary significantly around the world. The median adjustment speed around the world was found to be 30.5 percent within the range from 17.0 percent to 44.1 percent. Mwangi, Anyango & Amey (2012) noted that that firms in Kenya have target capital structure. Firms were found to close 5.3% of the gap between the current and the desired leverage within one year. At this rate it takes about 10 years to close half of the gap between a typical firms’s current and the desired leverage ratios.

2.4 Critique of Existing Literature

Whether firms adjust toward a target leverage level has become an essential question in evaluating the credibility of competing capital structure theories. The static and dynamic trade-off theories predict that firms have a target debt equity ratio and will adjust to the target whenever there are deviations in their capital structures. However the theories differ in their predictions of the speed of adjustment. As noted in (Frank & Goyal, 2005) the static tradeoff theory predict that the capital structure adjustment speed is immediate and complete. However Flannery & Rangan (2006) due the cost associated with adjusting capital structure, firm only adjust their capital structure partially each year. In contrast, the pecking order and market timing theories include the argument that firms do not have a market-value leverage target, and therefore they will not adjust toward the optimum. While this study makes no attempt at testing any of this lines of argument, it follows the argument that firms have target capital structures and tends to adjust towards this target. According to the static trade off theory, whenever the actual or observed leverage deviates from the target, a firm will adjust fully to the desired leverage level. This is contrary to the predictions of dynamic trade off theories, while the dynamic theories agree that the firms do have a target capital structure, firms only adjust partially each year towards the target. Clark, Francis & Hasan (2009) noted that country-level factors do significantly impact adjustment speed. The adjustment speeds were found to vary significantly around the world with a median adjustment speed of 30.5 percent within the range from 17.0 percent to 44.1 percent. The factors that affect the speed of adjustment are not universal and vary from company and across economies. Flannery & Rangan (2006)
documented an adjustment speed of 30% while Mwangi et al. (2011) documented a speed of 5.3%. The adjustment speed is determined by both firm’s specific factors such as distance between observed and target leverage, firm size, income variability, and growth opportunities. Macroeconomic factors that affect the speed of adjustment include; term of interest rates and short-term interest rate and the default spread.

2.6 Research Gaps
Studies evaluating the speed of capital structure adjustment speed and the factors determining the speed of adjustments such as Drobetz et al (2007); Clark et al. (2009), Mahakud & Mukherjee (2011) draw mainly from the developed markets of Europe and America. Empirical evidence on the determinants of capital structure adjustment speed from a developing market perspective such as Kenya is notably lacking. Mwangi et al. (2012) determined the speed of capital structure adjustment for companies listed on the NSE but did not identify the factors determining that speed. Given that the conditions and institutional arrangement for the developed markets cannot be generalized to the developing markets, this study sought to fill a gap in knowledge by identifying the factors determining adjustment speed for companies listed on the NSE.

RESEARCH METHODOLOGY

3.1 Introduction
This chapter addressed the research design that was used in the study. It also discussed the population from which the firms to be studied were obtained in addition to how the data used in the study was collected and analyzed.

3.2 Research Design
The study used a descriptive research design. Kothari (2004) indicate that, descriptive research includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. Zikmund (2003) notes that, the main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening. The design was appropriate for the study as it involved fact finding and reporting facts as they existed. The results were reported using descriptive and inferential statistics.

3.3 Target Population
Kothari (2004) define population as the total of items about which information is desired. The population of interest consisted of all non-financial companies listed and continuously traded at the NSE over the period 2008 to 2015. As of 31st December 2015 there were a total of 65-Appendix 1, companies listed at the NSE. Companies in the financial sector; that is, banking and insurance will be excluded since their capital structures are subject to regulatory constraints. Also companies in sectors with three or less listed companies will be excluded. This is because this study uses the sector median leverage as the target leverage for the companies in the sector. For these companies a median leverage was difficult to identify. Thus a further six companies are excluded on this basis. This leaves a target population of 42 companies. The period of 8 years was selected to provide sufficiently large number of observations from which reliable conclusion could be drawn. Also the period provide the latest data on the variables to be analyzed.

3.4 Sampling Frame
According to Zikmund (2010) a sampling frame is the list of elements from which the sample may be drawn. Sampling frame is also defined as a list of elements from which a sample is actually drawn (Cooper & Schindler, 2011). For the purpose of this study sampling frame constituted of the chief finance officers or finance directors or finance managers of the sampled companies. This sampling frame was justified on the basis that chief finance officers and finance directors make the financing decisions or advise on the financing decision.

3.5 Sampling Technique
Shaughnessy, Zechmeister, & Zechmeister (2012) explains that sampling the process of selecting a subset of a population to represent the population as a whole. Stratified sampling will be used to select the sample. According to Berg (2001) stratified sampling involves dividing the population into subgroups known as strata and selecting independent samples from each stratum. With each stratum a particular sampling fraction is applied in order to ensure representativeness of proportions in the full population. The strata used for this study are the sector classification applied by the NSE. There were seven stratum of interest. Simple random sampling was then used to select the actual sample. Simple random sampling is a probability sampling technique in which each element of the sample frame has an equal chance of being included in the sample (Howitt & Cramer, 2011).

3.6 Sample Size
Kothari (2004) defines a sample as a collection of units chosen from the universe to represent it. The actual sample size consisted of thirty four companies. The sample was selected randomly from each stratum. The number of items included in the sample from each stratum was relative to the
composition of that stratum in the population. This ensured each stratum is equally represented in the sample. The respondents sought comprised the finance manager, finance director or chief finance officer.

This study used proportional allocation to determine the size of each sample for different strata (Saunders, Lewis & Thornhill, 2007). The sample was stratified into the 6 sectors as per the Nairobi Securities Exchange classification.

The sample size in this study was determined using the following formula:

\[
n = \frac{N(c_v^2)}{(c_v^2 + (N - 1)e^2)}
\]

Where \( n \) = sample size

\( N \) = target population

\( c_v \) = co-efficient of variation which is taken as 0.7

\( e \) = Tolerance at desired level which is taken at 0.05 or at 95% confidence level

Using this formula, the sample size was computed thus:

\[
n = 42 \times (0.7)^2 / ((0.7)^2 + (42-1) (0.05)^2) = 34.27
\]

(approximately 34)

\( n=34 \) constitute 80.95% of the target population

The sample was determined as shown in table 3.1 below

<table>
<thead>
<tr>
<th>NSE Sector (Strata)</th>
<th>Companies in the stratum</th>
<th>Proportion</th>
<th>Number included in the sample (Proportion*34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>6</td>
<td>0.142857143</td>
<td>5</td>
</tr>
<tr>
<td>Commercial and services</td>
<td>11</td>
<td>0.261904762</td>
<td>9</td>
</tr>
<tr>
<td>Construction and Allied</td>
<td>5</td>
<td>0.119047619</td>
<td>4</td>
</tr>
<tr>
<td>Energy and petroleum</td>
<td>5</td>
<td>0.119047619</td>
<td>4</td>
</tr>
<tr>
<td>Manufacturing and allied</td>
<td>10</td>
<td>0.238095238</td>
<td>8</td>
</tr>
<tr>
<td>Investment</td>
<td>5</td>
<td>0.119047619</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>1</td>
<td>34</td>
</tr>
</tbody>
</table>

3.7 Research Instruments and Data Collection Procedures

This research study made use of primary data. Primary data are those which are collected afresh and for the first time, and thus happen to be original in character (Kothari, 2004). A questionnaire was used to collect primary data-Appendix 3. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. A self administered questionnaire was used for this purpose. The questionnaire was mailed or delivered to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself.

Data collection procedure involved designing a questionnaire. The questionnaire was first piloted as described in section 3.8 below. The questionnaire was then be emailed to the sampled respondents. A reminder was sent to the respondents five days after the questionnaires are delivered. The respondents were then requested to mail back the filled questionnaire.

3.8 Pilot Testing

Howitt & Cramer (2011) posit that before embarking on the main stage of fieldwork, it is crucial that the draft questionnaire is piloted. A pilot test involves testing the questionnaire on a small number of respondents who are the same type as those in your sampling frame. They suggest that piloting can be conducted on between 5-50 respondents depending upon the final sample size. Piloting enables the researcher to ensure that; all the relevant issues are included, the order is correct, ambiguous or leading questions are identified, the pre-codes are correct and no issues have been forgotten or omitted that the respondent deem would be important.

3.8.1 Reliability Testing

A measuring instrument is reliable if it provides consistent results. Reliability is concerned with securing consistent results with repeated measurements of the same person and with the same instrument. Reliability can be determined by comparing the results of repeated measurements (Kothari, 2004). To test reliability, the questionnaire will initially be administered on 5 respondents. After a period of two weeks the same questionnaire will be administered to same respondents. The result will then be correlated. If a correlation of coefficient of at least 0.9 is obtained, the instrument will be considered reliable.

3.8.2 Validity Testing

Validity indicates the degree to which an instrument measures what it is supposed to
measure. It is the extent to which differences found with a measuring instrument reflect true differences among those being tested (Shaughnessy et al, 2012). Construct validity is the extent to which the measurement questions actually measure the presence of those constructs one intended to measure (Saunders et al, 2007). In this study and for the purpose of construct validity, the questionnaire will be divided into several sections to ensure that each section assesses information for a specific objective, and also ensure that the same is closely tied to conceptual framework of the study.

Content validity is the extent to which the measurement device provides adequate coverage of investigative questions. Creswell (2003) suggests that a colleague and / or a person with expert knowledge in a subject matter can provide additional insight into the study and research findings. To ensure content validity the questionnaire will be subjected to thorough examination by two independent senior resource persons, from the investment banking institutions. Investment bankers are selected because of the role they play in arranging financing for listed companies. The resource persons will be asked to evaluate the statements in the questionnaire for relevance and whether they were meaningful and clear.

3.9 Data Analysis

Analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis starts once all the data has been captured (Berg, 2001). Data will be analyzed using statistical package for social scientists (SPSS). Descriptive and inferential statistics will be used in the analysis.

Multiple regression analysis will be used to evaluate the effect of independent variables on the dependent variable. Regression is concerned with describing and evaluating the relationship between a given variable and one or more other variables. More specifically, regression is an attempt to explain movements in a variable by reference to movements in one or more other variables. Regression technique is based on cause effect relationship between the dependent and independent variables (Brooks, 2008). Distance from optimal, income variability, size, dividend payout and profitability will be regressed against speed of adjustment. The significance of the independent variables will be tested using t-test at 5% level of significance. The adequacy of the regression will be tested using F-test while the coefficient of determination ($R^2$) will be used to evaluate the explanatory power of the independent variables.

3.9.1 Model Specification

The multiple regression model used was specified as follows:

$$SOA = \alpha + \beta_1 \text{DIST} + \beta_2 \text{PRFT} + \beta_3 \ln\text{Size} + \beta_4 \text{DivPt} + \epsilon$$

Where;

SOA=Speed of adjustment
DIST=Distance from optimal
PRFT=Profitability
$\ln\text{size}=\text{Natural logarithm of size}$
DivPt=Dividend payment
$\alpha, \beta_i=\text{Regression coefficient}$
$\epsilon=\text{Error term}$

# RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter focused on the analysis of the data collected and discussions of the findings. The chapter was organized to start with the result of pilot testing followed by an analysis of the response rates, then analysis of findings followed by a discussion of the results. Data was analyzed using SPSS and presented using tabulations. Multiple regression technique was also used in the analysis.

4.2 Pilot Test Results

To evaluate the validity and reliability of the instrument used for data collection, a pilot study was carried out. A sample of 5 listed companies was used for the pilot test. Return rate was 80%. Factor analysis was carried out with a threshold of a factor loading of 0.3. All composite measures that gave a factor loading of less than 0.3 were subsequently dropped from the questionnaire. The composite measures that were retained constituted all the questions in the questionnaire that were administered to the respondents during main study. The results of factor analysis are as shown in table 4.2.

<table>
<thead>
<tr>
<th>Composite Measures</th>
<th>Dropped Measures</th>
<th>Retained Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from target</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Size</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
To determine reliability, the study used cronbach’s alpha statistic with a threshold of more than 0.7.

Table 4.3: Reliability Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from target</td>
<td>0.909</td>
</tr>
<tr>
<td>Size</td>
<td>0.782</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.895</td>
</tr>
<tr>
<td>Dividend payout ratio</td>
<td>0.861</td>
</tr>
</tbody>
</table>

Table 4.3 above showed the result of reliability test. All variables gave a cronbach’s alpha of more than 0.7 and therefore were retained for analysis.

4.3 Analysis of Response Rates

Analysis of the rate at which questionnaires that was given out to the respondents and how they were returned for analysis in complete form is as analyzed in table 4.3 below.

Table 4.4: The response rate of respondents

<table>
<thead>
<tr>
<th>No of respondents</th>
<th>%valid</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned</td>
<td>30</td>
<td>88.24</td>
</tr>
<tr>
<td>Not returned</td>
<td>4</td>
<td>11.76</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>100</td>
</tr>
</tbody>
</table>

The target number of respondents for this study was 34 respondents. Of the questionnaires distributed 30 were returned. This represented a response rate of 88.24 percent which is considered sufficient for the study. A high response rate is helpful to ensure that results are representative of the target population. Mugenda and Mugenda (2004) assert that a response rate of more than 50% is adequate for analysis.

4.4 Analysis of Responses

The following section presents the findings on whether companies listed on the NSE have a target capital structure and whether they annually adjust towards the target. It also presents the finding on the speed of adjustment. Further the section also presents findings on the determinants of the adjustment speed. The independent variables used were; distance from target, size, income variability, profitability and dividend payout ratio. The data was analyzed using mean scores and standard deviations. To evaluate the determinants of capital structure adjustment speed, the respondents were asked to indicate the extent to which they agreed or disagreed with specific statements on each of the selected determinants of capital structure adjustment speed. A mean score of 1.5 or less implies that the respondents disagree with the statement, 1.6 to 2.5 implies respondents was not sure while 2.6 to 3.5 indicated the respondent agreed. A mean score of 3.6 to 4 implies respondents strongly agreed. A standard deviation of less than 1 means that there were no significant variations in responses while greater than 1 implies that there were significant variations in the responses.

4.4.1 Target Capital Structure and Adjustment Speed

The respondents were asked to indicate whether companies listed on the NSE had a target capital structure and whether they adjusted towards the target capital structure annually. A mean score of 0.5 or less implied that companies did not have a target capital structure and did not therefore adjust toward the target while a mean score of 0.6 or more indicated that companies had a target capital structure and adjusted annually towards the target. A standard deviation of less than 1 means that there were no significant variations in responses while greater than 1 implies that there were significant variations in the responses.

Table 4.5: Whether Companies listed at the NSE have a target capital structure

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies listed at the NSE have a desired or target capital structure</td>
<td>30</td>
<td>1.83</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>30</td>
<td>.38</td>
</tr>
</tbody>
</table>
Table 4.5 shows that the respondents agreed that companies listed on the NSE have a target capital structure (1.83). The standard deviation of 0.38 indicates that there were no significant variations in the responses.

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1.80</td>
<td>.41</td>
</tr>
</tbody>
</table>

Valid N (listwise)

From table 4.6, the respondents agreed that companies listed on the NSE adjust annually towards that target capital structure (1.8). The standard deviation of 0.41 suggested that there were no significant variations in the responses.

Table 4.7: Adjustment Speed

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>2.07</td>
<td>.78</td>
</tr>
</tbody>
</table>

Valid N (listwise)

The respondents were asked to rate the speed of capital structure adjustment for companies listed on the NSE. A mean rating of 1.5 or less indicated low adjustment speed, 1.6 to 2.5 indicated moderate adjustment speed while 2.6 and above indicated high adjustment speed. The result in table 4.7 indicated a mean of 2.07 implying that the adjustment speed was moderate. The standard deviation of 0.78 showed that there were no significant variations in the responses.

4.4.2 The Effect of Distance from Target Capital Structure on the Adjustment Speed

To determine the effect of distance from the target capital structure on the adjustment speed, the respondents were asked to indicate whether they agreed or disagreed with some statements. The results obtained are shown on table 4.8 below and table 4.9 in appendix 6.

Table 4.8: Respondent’s opinions on the effect of Distance from Target Capital Structure on the Speed of Adjustment

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The distance from the target leverage affects the speed of adjustment</td>
<td>30</td>
<td>3.2</td>
<td>1.1</td>
</tr>
<tr>
<td>When the distance from the target is largest, the speed of adjustment is</td>
<td>30</td>
<td>3.2</td>
<td>1.0</td>
</tr>
<tr>
<td>When the distance from the target is small, the speed of adjustment is</td>
<td>30</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>The fixed cost of adjusting capital structure affects the distance from</td>
<td>30</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td>the target closed in each period</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>3.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Table 4.8 shows that the respondents agree that the distance from the target leverage affect the speed of adjustment towards the target capital structure (3.2). The respondents also agree that the when the distance from the target is largest, the speed of adjustment is highest (3.2). Also the respondents agreed that when the distance from target is small, the speed of adjustment is slower (3.1). Further the respondents agreed that the fixed cost of adjusting the capital structure affects distance from the target that is closed in each period. The overall standard deviation of 1.1 indicates that there were significant variations in the responses.

Table 4.9: Respondent’s opinions on the effect of Firm Size on the Speed of Capital Structure Adjustment

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The size of the firm measured by its total assets affects the speed at</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>which firms listed on the NSE adjust their capital structure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Larger firms incur lower fixed cost associated with adjusting their capital structure towards the desired level 30 3.2 1.1
The fixed costs of capital structure adjustment are higher for smaller firms 30 3.1 1.2
The larger firms adjust their capital structure towards the target quickly than small firms 30 3.00 1.1

Overall 3.2 1.1

Table 4.9 shows that the respondents agree that the size of the firm affects the speed at which firms listed on the NSE adjust their capital structure (3.3). The respondents agreed that larger firms incurred lower fixed cost associated with adjusting their capital structure towards the desired level (3.2). Also they agreed that the fixed cost of capital structure adjustment is higher for smaller firms (3.1). The respondents agreed that larger firms adjust their capital structure towards the target quicker than small firms (3.0). The overall standard deviation of 1.1 indicates that there were significant variations in the responses.

Table 4.10: Respondent’s opinions on the effect of Profitability on the Speed of Capital Structure Adjustment

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The profitability of a company indicated by its net income affects the speed of adjusting the capital structure towards the desired level</td>
<td>30</td>
<td>3.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Highly profitable company has a higher speed of capital structure adjustment</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Highly profitable company use retained earnings to supply the equity component when adjusting the capital structure</td>
<td>30</td>
<td>3.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Highly profitable company obtains debt capital more easily when adjusting the capital structure</td>
<td>30</td>
<td>3.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Less profitable Companies have to rely on the issuance of external equity in order to adjust their capital structure</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>3.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Table 4.10 shows that the respondents agree that profitability affects the speed at which companies listed on the NSE adjust their capital structure toward the desired level (3.4). The respondents agreed that highly profitable companies have a higher speed of capital structure adjustment (3.3). They also agreed that highly profitable companies use retained earnings to supply the equity component when adjusting their capital structure (3.2). Also the respondents agreed that highly profitable companies obtain debt capital more easily when adjusting their capital structure (3.1). Further the respondents agreed that less profitable companies rely on the issuance of external equity in order to adjust their capital structure (3.3). The overall standard deviation of 1.1 indicates that there were significant variations in the responses.

Table 4.11: Respondent’s opinions on the effect of Dividend Payment on the Speed of Capital Structure Adjustment

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend payment affects a company’s ability to adjust its capital structure towards the target</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Companies with higher dividend payout ratio adjust their capital structure at lower speed</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Companies with higher dividend payout ratio results to use of external equity in adjusting their capital structure</td>
<td>30</td>
<td>3.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Companies with low dividend payout ratios rely more on retained earnings to supply the equity component of capital</td>
<td>30</td>
<td>3.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 4.11 shows that the respondents agree that dividend payment affects the speed at which companies listed on the NSE adjust their capital structure. The respondents agreed that companies with higher dividend payout ratio adjust their capital structure at a lower speed (3.3). Companies with higher dividend payout ratio results to use of external equity in adjusting their capital structure (3.3). Companies with low dividend payout ratios rely more on retained earnings to supply the equity component of capital (3.2). The overall standard deviation of 1.1 indicates that there were significant variations in the responses.
Companies with high dividend payout ratios are able to obtain debt financing more easily and quicker than those with lower dividend payout ratio (2.8). The overall standard deviation of 1.1 indicates that there were significant variations in the responses.

### 4.5 Correlation Analysis between Speed of Adjustment, Distance from Target, Size, Profit and Dividend Payment

A correlation coefficient is a statistic that describes the degree of linear association between two variables. The table below shows the correlation between speed of adjustment (SOA), distance from target (DIST), size, profitability and dividend payment (DivPyt).

#### Table 4.12 Correlation Matrix: Correlation between Speed of Adjustment, Distance from Target, Size, Profit and Dividend Payment

<table>
<thead>
<tr>
<th></th>
<th>SOA</th>
<th>DIST</th>
<th>Size</th>
<th>IncVar</th>
<th>Profit</th>
<th>DivPyt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.653**</td>
<td>.574**</td>
<td>-.577**</td>
<td>.573**</td>
<td>-.614**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>DIST</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.861**</td>
<td>.917**</td>
<td>.936**</td>
<td>.972**</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
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<tr>
<td><strong>Size</strong></td>
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</tr>
<tr>
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<td>.917**</td>
<td>.908**</td>
<td>.861**</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Profit</strong></td>
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<td></td>
</tr>
<tr>
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<td>.936**</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>DivPyt</strong></td>
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<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.000</td>
<td></td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
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<tr>
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</tr>
</tbody>
</table>

**Correlation is significant at the 0.05 level (2-tailed).**

Table 4.12 shows the correlation coefficient between speed of adjustment, distance from target leverage, size, profitability and dividend payment. Correlation coefficient between speed of adjustment and distance from target leverage was found to be 0.653 with a p-value of 0.001. This indicated that there was a strong positive correlation between speed of adjustment and firm size. Since the p-value of 0.001 is less that 0.05, the correlation was significant at 5% level of significance. Speed of adjustment and profitability had a coefficient of correlation of 0.936 with a p-value of 0.001. This indicated a strong positive correlation. Since the p-value 0.001 is less than 0.05, the correlation was significant at 5% level of significance. The correlation coefficient between speed of adjustment and dividend payment was
found to be -0.614 with a p-value of 0.000. This implied a strong negative correlation between speed of adjustment and dividend payment. Since the p-value 0.000 is less that 0.05, the relationship is was significant at 5% level of significance.

4.6 Multiple Regression Analysis
To evaluate the effect of distance from target capital structure, size, income variability, profitability and dividend payment on the speed of capital structure adjustment a regression analysis was used. The results of this regression are presented below.

Table 4.13: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.553</td>
<td>.381</td>
</tr>
<tr>
<td>DIST</td>
<td>.811</td>
<td>.173</td>
</tr>
<tr>
<td>Size</td>
<td>.202</td>
<td>.054</td>
</tr>
<tr>
<td>Profit</td>
<td>.287</td>
<td>.398</td>
</tr>
<tr>
<td>DivPyt</td>
<td>-.189</td>
<td>.075</td>
</tr>
</tbody>
</table>

Speed of capital structure adjustment was regressed on the distance from the target leverage, firm size, income variability, profitability and dividend payout. Table 4.13 present the regression coefficients. The regression model was of the form:

$$SOA = 3.553 + 0.811DIST + 0.202Size + 0.287Prft - 0.189DivPyt$$

The following sections interpret the regression coefficients in terms of their effect on the dependent variable.

From table 4.13, distance from target had a coefficient of 0.811 with a p-value of 0.015. This indicated that distance had a positive effect on the speed of capital structure adjustment. The coefficient of distance 0.811 indicates the percentage of the gap from the target capital structure that is closed for a percentage increase in the distance from the target capital structure. The effect of distance was significant at 5% since the p-value of 0.015 is less than 0.05.

The regression result in table 4.13 shows that size had a coefficient 0.202 with a p-value of 0.048. This indicated that size of the firm had a positive effect on the speed of capital structure adjustment. The coefficient of size 0.202 indicates that the speed of capital structure adjustment would increase by 0.202% for a unit increase in the size of the firm. Since the p-value of 0.048 is less than 0.05, the effect of size was significant at 5% level of significance.

Table 4.13 shows that profitability had a coefficient of 0.287 with a p-value 0.478. This showed that profitability had a positive effect on the speed of capital structure adjustment. The coefficient of 0.287 suggested that the speed of capital structure adjustment would increase by 0.287% for a percentage increase in firms’ profitability. The effect of profitability is however not significant at 5% level of significance since the p-value of 0.478 is greater than 0.05.

From table 4.13, dividend payment had a coefficient of -0.189 with a p-value of 0.008. This indicated that dividend payment had a negative effect on the speed of capital structure adjustment. The coefficient of -0.189 indicates that the speed of capital structure adjustment would decrease by 0.189% for a unit increase in the dividend payout ratios. The effect of dividend payment on the speed of capital structure adjustment was significant at 5% level of significance since the p-value of 0.008 is less than 0.05.

Table 4.14 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.673*</td>
<td>.454</td>
<td>.340</td>
<td>.63783</td>
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</tbody>
</table>

Table 4.14 provided the summary result for the regression model. From the table, the coefficient of determination ($R^2$) was found to be 0.673. This suggested that variations in distance from the target capital structure, size, income variability, profitability and dividend payment explained 67.3% of the variations in the speed of capital structure adjustment.
4.7 Discussion of Findings

The overall objective of this study was to evaluate the determinants of the determinants of capital structure adjustment speed for companies listed on the Nairobi Securities Exchange. The specific objectives of the study were: to determine effect of distance from the target on the speed of capital structure adjustment; to determine effect of firm size on the speed of capital structure adjustment, to determine effect of profitability on the speed of capital structure adjustment and determine effect of dividend payment on the speed of capital structure adjustment.

4.7.1 The effect of distance from the target capital structure on the speed of capital structure adjustment

Distance from target capital structure reflects the difference between the actual leverage and the desired leverage. The distance could be positive indicating that that a company is under leveraged or positive indicating that a company is over leveraged. Distance from target capital structure reflects the difference between the actual leverage and the desired leverage. The distance could be positive indicating that that a company is under leveraged or positive indicating that a company is over leveraged. This study found that the speed of capital structure adjustment is affected by the distance from the target. This is consistent with Kim et al., (2003) that firms change their capital structure if they are sufficiently far away from the optimal leverage. It also found that the speed of adjustment is highest when the distance from the target leverage is largest. Similar to Drobetz, et al (2007), the study found that the fixed costs associated with capital structure affects the distance from the target capital structure that is closed in each period. The result of regression showed that the distance from target had a positive effect on the speed of capital structure. The effect of distance from target on the speed of capital structure adjustment was statistically significant. This implied that the further away from the target capital structure the higher the speed of adjustment to the target leverage would be. This is similar to Kim et al (2003), Nivorozhkin (2003) and Mahakud & Mukherjee (2011) who noted that the speed of adjustment was a positive function of the distance from the target leverage. However the findings of this study contradicts those of Loof (2006), Dang et al (2012) and Banerjee et al (2000) who found that the distance from the target leverage had a negative effect on the adjustment speed.

4.7.2 The effect of firm size on the speed of capital structure adjustment

Firm size is variously measure as the firms’ total assets. It can also be measured on the basis of sales revenue. This study measured firm size as the natural logarithm of total assets. This study found that the speed of capital structure adjustment for companies listed on the NSE is affected by the size of the firm. The adjustment speed was found to be higher for larger firms than smaller firms. This contradicts the findings of Flannery & Rangan (2006) that larger firms have a slower adjustment speed. Similar to Drobetz et al (2007) and Dang et al (2012) the fixed costs associated with capital structure adjustment were found to be lower for larger firms than for smaller firms. Smaller firms were associated with higher fixed cost of capital structure adjustment. The result of regression found that firm size had a positive effect on the speed of capital structure adjustment. The effect of size on the speed of capital structure adjustment was statistically significant. This indicated that the larger the firm the bigger the higher the speed of capital structure adjustment would be. This is consistent with Drobetz & Wanzenried (2006) and Mahakud &Mukherjee (2011) that the speed of capital structure adjustment is positively affected by the size of the company.

4.7.3 Effect of Profitability on the Speed of Capital Structure Adjustment

Profitability is concerned with the ability of a company to make profitable sales. In capital structure decisions profitability provides flexibility for generating equity capital from retained earnings. Similar to Flannery & Hankins (2007), this study determined that the speed of capital structure adjustment for companies listed on the NSE is affect by the firms’ profitability. More profitable companies were found to have a higher
speed of capital structure adjustment. It was found that the more profitable companies use retained earnings to supply the equity component when adjusting their capital structure. It also found that highly profitable companies obtain debt capital more easily when adjusting their capital structure. Similar to Dang et al (2012) the study found that less profitable companies rely on the issuance of external equity in order to obtain the equity component in a capital structure adjustment decision. The result of regression indicated that profitability had a positive effect on the speed of capital structure adjustment. The effect of profitability on the speed of capital structure adjustment was statistically significant. This indicated that more profitable companies had a higher speed of capital structure adjustment. This finding is in agreement with Dang et al (2009) and Mahakud & Mukherjee (2011) that profitability is positively related to the adjustment speed to target capital structure.

4.7.4 Effect of dividend payment on the speed of capital structure adjustment
Dividend payment involves distribution of profits to shareholders. Dividend payment reduces the amount of retained earnings that would be relied upon in a capital structure adjustment decision. This study found that for companies listed at the NSE, dividend payment affects the company’s ability to adjust its capital structure towards the target capital structure. Companies with high dividend payout ratios were noted as being slow in adjusting their capital structures. It was found that companies with higher dividend payout ratios tend to use external equity in adjusting the capital structure toward the desired level. This is in accord with Flannery & Hankins (2007) in their argument that firms with high payout ratios may have a high level of internal financial constraint thus rely on more on external financing. On the other hand companies with low dividend payout out ratios relied more on retained earnings to supply the equity needed to adjust the capital structure. Further it was found that companies with high dividend payouts are able to obtain debt financing more easily and quicker than companies with lower dividend payouts. From the regression analysis it was determined that dividend payment had negative effect on the speed of capital structure adjustment and that the effect was statistically significant. This indicated that dividend payment reduced the speed of capital structure adjustment, with the speed being lower for companies with higher dividend payout ratios. This is consistent with Flannery & Hankins (2007), Mahakud & Mukherjee (2011) and Dang et al (2012) that dividend payment is negatively related with speed of capital structure adjustment.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
In this chapter the researcher summarizes the findings of the study based on the findings on each of the five objectives. In each case the researcher briefly states the findings and the effect on the speed of capital structure adjustment. At the end of the chapter, the researcher’s states the conclusions reached recommendations and highlight areas that need further research.

5.2 Summary of Findings
5.2.1 The effect of distance from the target capital structure on the speed of adjustment
The study found that the speed of capital structure adjustment for companies listed on the NSE is affected by the distance from the target capital structure. It found that the speed of adjustment is highest when the distance from the target is largest. The study found that the fixed cost of adjusting the capital structure affects the distance from the target capital structure that firms close in each year. It was further found that distance from the target capital structure had a significantly positive effect on the speed of capital structure adjustment.

5.2.2 The effect of firm size on the speed of capital structure adjustment
This study found the speed of capital structure adjustment for companies listed on the NSE is affected by the size of the firm. The speed of adjustment was found to be higher for large companies. The fixed cost of capital structure adjustment was found to be lower for larger firms than for the smaller firms. Smaller firms were found to have a higher fixed cost of adjusting the capital structure. The study found that the size of the firm had a positive effect on the speed of capital structure adjustment. The effect was statistically significant.

5.2.3 The effect of profitability on the speed of capital structure adjustment
The study found that for companies listed on the NSE the speed of capital structure adjustment is affected by the profitability of the company. More profitable companies were found to have a higher speed of capital structure adjustment. More profitable companies were found to rely more on retained earnings to supply the equity component. Lesser profitable companies were found to rely more on issuance of external equity to provide the equity component of the capital structure. Also the study found that more profitable companies obtained debt capital more easily when adjusting their capital structures. The result of regression
found that profitability had a significant positive effect on the speed of capital structure adjustment.

5.2.4 The effect of dividend payment on the speed of capital structure adjustment speed
This study found that dividend payment affects the speed of capital structure adjustment for companies listed on the NSE. The speed of capital structure adjustment was found to be low for companies with high dividend payout ratios. Companies with high dividend were found to rely on external equity to supply the equity component in adjusting the capital structure. Companies with low dividend payout were found to rely more on retained earnings to provide the equity component needed to adjust the capital structure. From the regression result it was found that dividend payment had a significant negative effect on the speed of capital structure adjustment.

5.3 Conclusions
This study sought to determine the effect of distance from target capital structure on the speed of adjusting the capital structure. The study concluded that the distance from target capital structure had a significantly positive effect on the speed of capital structure adjustment. Further the study concluded the following: when the distance from the target is largest the speed of capital structure adjustment is highest; the gap between the actual and the target capital structure that is closed in each period is affected by the fixed cost of adjusting the capital structure.

Secondly the study sought to determine the effect of firm size on the speed of capital structure adjustment. The study concluded that firm size had positive and significant effect on the speed of capital structure adjustment. The study also concluded that the speed of adjustment was higher for larger firms than for smaller firms. Further the study concluded that the fixed costs of capital structure adjustment are lower for larger firms that smaller firms.

The third objective of this study was to determine the effect of profitability on the speed of capital structure adjustment. The study concluded that profitability had a significant positive effect on the speed of capital structure adjustment. It concluded that the speed of capital structure adjustment was higher for more profitable companies. It was concluded that profitable companies utilize retained earnings to supply the equity component in adjusting their capital structures while lesser profitable companies relied on issuance of external equity. Further the study concluded that it is much easier for profitable companies to raise debt capital in a capital structure adjusting decision.

Finally, the study sought to determine the effect of dividend payment on the speed of capital structure adjustment speed. The study concluded that dividend payment had a significant negative effect on the speed of capital structure adjustment speed. It was concluded that high dividend payout reduces the speed of capital structure adjustment. Also the study concluded that high dividend payout causes companies to result to external equity in adjusting their capital structure while those with low dividend payouts rely more on retained earnings to obtain equity capital.

5.4 Recommendations
Based on the first objective the study recommends that since the speed of adjustment is affected by the distance between the target capital structure and the actual capital structure, firms listed on the NSE should adjust their capital structure only when they are significantly away from the target. The study also recommends that, because adjustment speed for companies listed on the NSE is a positive function of the distance from desired capital structure, companies which are far away from their target capital structure should regularly adjust their capital structure as they are more likely to reach the optimal more quickly.

On the basis of the second objective this study recommends that since the speed of capital structure adjustment is a positive function of firm size, companies listed on the NSE can adjust their capital structure by increasing their size. This can be done by growing the size of the business organically or through mergers and acquisition. Larger companies are more likely to reach their desired capital structure. Also the study recommends that because the fixed cost of capital structure adjustment is higher for smaller firms, the smaller firms should adjust their capital structure less frequently.

From the third objective the study recommends companies listed on the NSE, should enhance their profitability so as to create the flexibility of adjusting their capital structures and alleviate internal financial constraints of adjusting the capital structure. More profitable companies should rely mostly on retained earnings to provide the equity component in effecting a capital structure adjustment. The study also recommends that firms with low profitability should change their capital structures through active external adjustment in the capital market.
Finally the study recommends that since dividend payout ratios were found to negatively affect the capital structure adjustment speed, firms listed on the NSE should align their dividend policies to the capital structure decisions. In periods when the companies intend to adjust their capital structure towards the target, they might choose lower dividend payouts which may be expected to result in higher adjustment in the capital structure toward the target. This would reduce reliance on external financing for capital structure adjustment which is often more costly. Also companies with low dividend payouts should continue with low payouts so as have available retained earnings for capital structure adjustment.

5.5 Suggestions for Further Research
This study established that the distance from target capital structure affects the speed of capital structure adjustment. Further study may seek to examine whether the speed of capital structure adjustment is differs for firms with a positive distance from those firms with a negative distance. The current study considered only the effect of firm specific factors on the speed of capital structure adjustment. In extending this line of research, further studies may examine the effect of macroeconomic factors on the speed of capital structure adjustment. Additionally researcher may determine the effect of fixed cost of adjusting the capital structure on the speed of adjustment.

Further research may consider adding value to the specific topic studied here by subdividing the sample into sub-samples based on the firm size. The researcher would then be able to draw conclusions regarding the difference in capital in capital structure adjustment speed between small and big firms. Further study may seek to determine whether for firms listed on the NSE the speed of capital structure differs when measured using book values and market value. Such study may also determine whether smaller firms adjust their capital structure based on book value or market value. Also further research may examine the effect of corporate debt rating on the speed of adjustment.

REFERENCES


