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Njuguna, Tabitha Wanjiku

Prof. Cyrus Iraya Mwangi (Ph.D)

Dr. Winnie Iminza Nyamute (Ph.D)

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By: Njuguna, Tabitha Wanjiku[1], Prof. Cyrus Iraya Mwangi (PhD)[2], Dr. Winnie Iminza Nyamute (PhD)[3] & Dr. Joy Kiiru (PhD)[4]

Abstract

Volatility of corporate cash flows exacerbates reduction in investments, increases external cost of finance and adversely affects firm value. There is a dearth of studies on cash flow volatility, and its impact on firm value and extant literature provide mixed findings. This study sought to examine the relationship between cash flow volatility and value of nonfinancial companies. A census survey was conducted on a population of 42 nonfinancial companies listed at the Nairobi Securities Exchange for the period 2002 to 2019. Secondary data was collected from 36 companies which had consistent listing for at least three consecutive years. Random Effects model robust for standard errors was applied to analyse the data. Results from hypothesis testing showed an inverse and statistically significant relationship between cash flow volatility and firm value. The study cautions management to monitor closely their operational costs and enhance risk management measures to minimize cash flow volatility which impacts negatively on firm value.

Keywords: *Cash flow volatility, firm value, information asymmetry, panel random effects model.*

1.1   Introduction

Cashflow volatility increases incidences in which firms have shortfalls in internal cash resulting in delays in debt repayments, postponement of corporate investments or diversion of management's focus from productive work (Minton & Schrand, 1999). Volatile cashflows exacerbate information asymmetry which directly impacts on firm value. Cashflow volatility is an indicator of business risk which is driven by a range of factors such as changes in economic climate, government regulations, fluctuations in sales volume, selling price or operating costs (Shahid, 2018). A company with high business risk ought to maintain low leverage levels to ensure it meets its financial obligations as they fall due. Business risk is associated with cashflow volatility in that when the risk is high, the cashflows are highly volatile and when business risk is low, the cashflows tend to be stable. Investors are construed to shun investing in firms with high business risk and prefer firms with smooth cashflows (Rountree, Weston & Allayannis, 2008). This study examined

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[1] *Ph.D. Candidate, Department of Finance and Accounting, University of Nairobi, Email:nwtabby@yahoo.com*
[2] *Professor, Department of Finance and Accounting, University of Nairobi*
[3] *Senior Lecturer, Department of Finance and Accounting, University of Nairobi*
[4] *Senior Lecturer, Department of Economics, Population and Development Studies, University of Nairobi*

whether investors value smooth cashflows by analysing the association between cashflow volatility and firm value.

The link between cashflow volatility and firm value may be attributed to asymmetry of information between management and investors. Investment analysts rely on financial reports to evaluate firm performance and make decisions on potential stocks to invest while lenders use the financial reports to evaluate the financial stability prior to extending credit to the firms. Thus, high cashflow volatility sends negative signals to investors, due to the uncertainty on firm performance, leading to an adverse effect on firm value. Moreover, when there is excessive free cashflow in a firm, managers tend to overinvest in projects whose present value of cash inflows is less than present value of cost. Thus, the projects favour the interest of managers over the shareholders which results in reduced shareholder returns and negatively affects firm value.

Cashflow volatility (CFV) has been measured using different approaches. Minton and Schrand (1999) estimated cashflow volatility as a coefficient of variation, measured as volatility of cashflows from operations on quarterly data for six years preceding the sample period divided by absolute mean value over a similar period while Shipe (2015) measured cashflow volatility as standard deviation of cash holdings. CFV is estimated using cashflows from operations which is a better indicator of operating risk compared to using earnings that can be smoothed through discretionary accruals and are subject to potential manipulation and measurement error to influence firm value (Rountree et al., 2008; Mäkelä, 2012).

Firm value reflects the effectiveness of an organization's management and indicates the long-term growth prospects of the organization. Firm value has been measured using various indicators including Tobins Q, market value, and stock returns. Tobins Q, determined as the proportion of market value to book value of a company's assets, is widely applied in literature to evaluate firm value (Chi & Su, 2017; Kodongo et al., 2014; Mäkelä, 2012 and Rountree et al., 2008). Although market value and stock returns provide information about a company's future prospects, these measures are driven by factors beyond management's control resulting into a lot of randomness and noise (Bacidore et al., 1997). Moreover, they are subject to manipulation by management when they have superior information to investors (Hax, 2003).

Cashflow risk is priced by investors especially during economic downturns. In the period 2016 to 2019, the Nairobi Securities Exchange (NSE) encountered shocks both from domestic and external sources including

introduction of interest rate capping, uncertainty due to general elections and post-election violence and droughts that led to counters linked to agricultural sector drop in prices. At the international front, there was increased protectionism that culminated to the Brexit referendum and the United States of America presidential elections (Financial Sector Regulators, 2020). These shocks translated into volatility of cashflows which impacted corporate performance at the NSE. Furthermore, the performance of several nonfinancial firms was affected by high debt burden. Unlike financial companies, the debt-equity mix of nonfinancial firms is not stipulated by the regulators thus providing a leeway for the firms to accumulate high debt levels (Financial Sector Regulators 2021).

1.2 Research Problem

A critical role for managers is to create value for shareholders using existing resources in a firm. Cashflow is essential in creating shareholder value as it provides liquidity for the firm to meet its day-to-day needs. Cashflow volatility intensifies incidences of internal cash deficits resulting in postponement of capital expenditure, delay in debt repayments or diversion of management attention from productive work (Minton & Shrand, 1999). In the year 2016, eleven companies listed at the NSE released profit warnings, rising to twelve in 2017, fifteen in 2018 and seventeen in 2019. The firms cited low business activity following prolonged electioneering period, poor weather conditions and low private sector credit growth due to interest rate capping. The profit warnings led to negative investor sentiments resulting in a decline in share prices and dampening of overall performance in the stock market (Cytonn Investments, 2018; Financial Sector Regulators, 2020).

An empirical review of literature indicates conflicting findings on the effect of cashflow volatility on corporate value. Rountree et al. (2008), Mäkelä (2012) and Altuntas et al. (2017) observed an inverse association whereas Sawalqa (2021), Gworo (2019) and Shipe (2015) observed a positive association. Rountree et al. (2008) contend that companies with low CFV are priced at a premium compared to those with high volatility due to information asymmetry. Similarly, Minton, Schrand and Walther (2002) contend that CFV has a negative relation with future firm performance due to underinvestment problem: a situation where firms financed with risky debt shun valuable investment opportunities because debt holders stand to benefit more than shareholders (Myers, 1977). On the contrary, Chi and Su (2017) postulate that cashflow volatility is directly related to firm value because as firms grow, they progressively invest in their growth

opportunities and their book value grows faster than market value thus Tobin Q as well as cashflow volatility decreases due to diversified investments.

Empirical studies have employed cross sectional regression models to examine the link between CFV and firm value (Minton et al., 2002; Rountree et al., 2008; Huang, 2009; Gworo, 2019). However, this approach does not control for unobserved heterogeneity thus if variables are mis-specified, the findings may be biased. The current study aims to bridge the gap by analysing data using panel regression model. Panel regression allows for the use of broad data set which grant blended characteristics of cross section and time series data and provides comprehensive data with more degrees of freedom, efficiency and flexibility and less multicollinearity amongst predictor variables (Baltagi, 2005). This study examines whether firms with low cashflow volatility are priced at a premium. Therefore, the study sought to respond to the research question, what is the effect of cashflow volatility on firm value?

1.3 Research Objective

The objective of this study is to determine the relationship between cashflow volatility and value of nonfinancial corporations listed at the Nairobi Securities Exchange.

2.1   Theoretical Background

The cashflow volatility and firm value relationship is founded on the theory of information asymmetry and free cash flow theory. The Nobel Laureates Akerlof, Spence and Stiglitz are recognized as the progenitors of the information asymmetry theory due to their seminal contributions on the analysis of markets with information asymmetry. Akerlof (1970) contends that market imperfections arise due to discrepancies in information between economic agents engaged in a transaction leading to adverse selection and moral hazard. Asymmetry of information creates an opportunity for economic agents to undermine the value of a commodity or securities in the financial markets which would otherwise realize a competitive price (Akerlof, 1970). When evaluating potential stocks to buy, investors analyse the financial information provided by the firms. Discrepancy of information between market participants leads to inefficient allocation of resources, mispricing of securities and hence managers can influence the investors' decision through earnings management. This can be achieved through earnings smoothing to minimize volatility of earnings which investors abhor and pay less for firms with higher earnings volatility (Goel & Thakor, 2003).

The free cashflow theory, promulgated by Jensen (1986), explains the link between cashflows and firm value. It shows that excessive cashflows in a firm is value destructing as managers tend to overinvest in suboptimal projects. The more the free cashflows in a firm, the higher the likelihood that directors will invest in investment projects that elevate their profile at the expense of shareholders. Such projects are not competitive, and the present value of their returns is likely to be less than present value of cost. This implies that shareholder's return and thus firm value is reduced by such investments.

2.2   Empirical Literature

Mixed findings have been observed among empirical studies assessing the link between cashflow volatility (CFV) and firm value. Rountree et al. (2008) examined the effects of earnings and CFV on value among US nonfinancial firms from 1987 to 2002 using OLS regression model. They found a strong negative effect despite controlling for leverage, firm size, sales growth, profitability, and investment expenditure. Similarly, Mäkelä (2012) determined the effect of CFV and earnings volatility on corporate value by examining 778 European firms from 2000 to 2010 and observed that earnings and CFV adversely impact firm value even after accounting for size, debt level, investment opportunities and profitability. The findings by Mäkelä (2012) and Rountree et al (2008) are based on a measure, CFV per share, which creates a mechanical negative linkage between CFV, and corporate value as measured by Tobin Q. This is because larger firms tend to have larger per share CFV, larger per share size and smaller Tobin Q. Moreover, they applied ordinary least squares (OLS) regression approach which fails to account for firm fixed effects thus may result in misleading inferences.

Shipe (2015) opines that firms should regularly adjust their cash holding to an optimal cash level to reduce overinvestment, cash hoarding, to smooth effects of economic cycles and to enable firms to withstand harsh economic times. The adjustment of cash holdings results in increased volatility of cashflows which enhances firm value. CFV was measured as quarterly standard deviation of cash holdings and firm value using Tobin Q. Empirical testing of the relation provided evidence for the propositions of a positive association between CFV and firm value. Furthermore, the findings infer that the volatility is higher among younger and smaller firms which require constant adjustment of cash holding to the optimal level as they have limited access to external funding and low profitability.
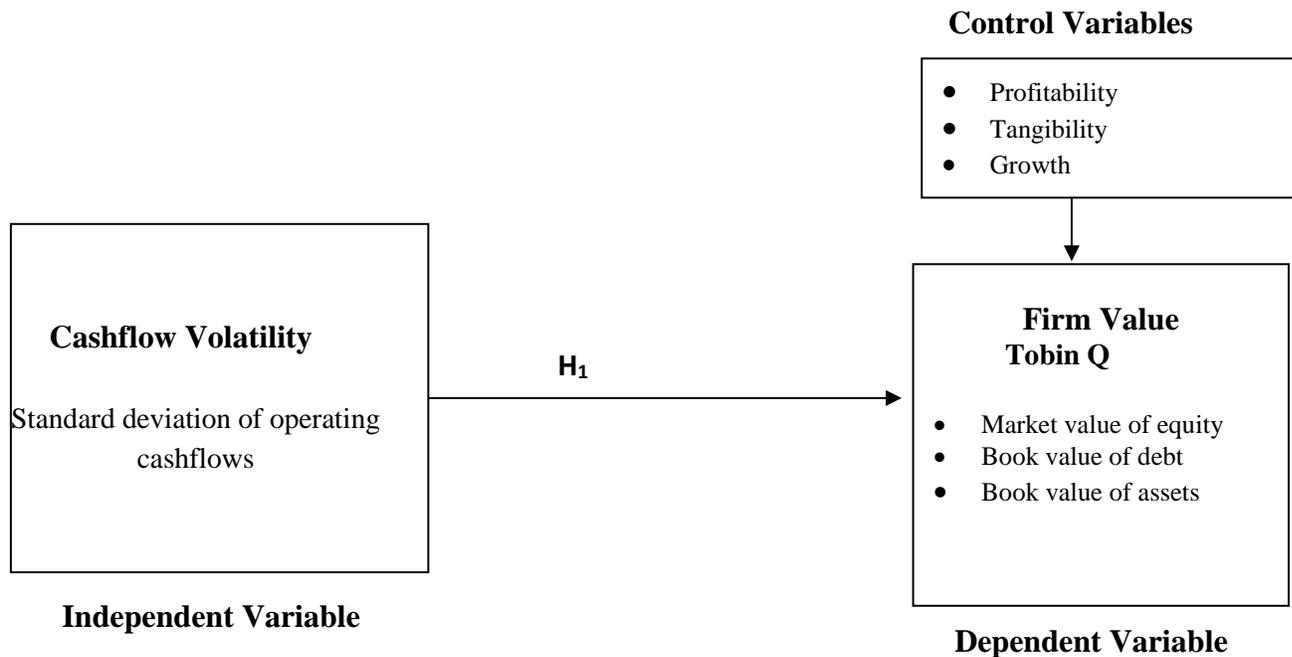
Altuntas et al. (2017) contend that CFV is the mechanism through which derivative usage impacts firm value. They interacted CFV and hedging variable to analyse the influence of hedging on firm value of publicly traded life insurers. Results indicated that derivative hedging is inversely associated with firm value and performance of life insurers. However, when the impact of hedging was considered on CFV, firm value was less sensitive to CFV compared to non-hedgers. This study was an extension of Froot, Scharfstein, and Stein's (1993) model of the interrelations among hedging, cashflows, and corporate value. Corporate value was measured using Tobin Q, CFV using variance of operating cashflows for the past five years scaled by total assets. Firm size and investment opportunities were included as control variables. This study evaluates an approach to defuse the impact of CFV on firm value whereas the current study will examine how uncertainty impacts firm value.

The significance of financial reporting in the African context, was examined by Mostafa (2016). The study specifically examined the significance of operating cashflows, earnings and book value using pooled regression for 51 firms over the years 2003 to 2008 in Egypt. Results showed that earnings are significantly related with stock returns although, operating cashflows and book values had no significance. These results imply that income statement is preferred by investors compared to cashflow statement and balance sheet in firm valuation. This study however measures the effect of earning and cashflow fluctuations using percentage changes instead of volatility. CFV captures succinctly the riskiness of the business which is anticipated to impact on firm value.

In the Kenyan context, Gworo (2019) examined the correlation between earnings volatility and firm value among 30 NSE listed firms from 2011 to 2015. He observed a weak positive link even after controlling for pay-out ratio, firm size, and profitability. This study is however limited to a five-year duration, which is short to observe volatility especially using annual data. Secondly, the use of earnings to measure volatility may be biased since earnings can easily be manipulated and smoothed through discretionary accruals. Thirdly, using market value alone to measure firm value may present biased results as the share price is influenced by several unobservable factors. Furthermore, this study used a cross-sectional regression approach which is unable to account for unobserved heterogeneity thus may lead to incorrect estimates.

2.3 Conceptual Framework

This study sought to assess the relationship between the explanatory variable cashflow volatility (CFV) and the response variable, firm value. High CFV increases the periods in which firms have shortfalls in internal cashflows thereby sending negative signals to investors and impacting on firm value. CFV is therefore anticipated to be inversely related to firm value. CFV is calculated as the standard deviation of operating cashflows scaled by total assets while firm value is estimated using Tobin Q, which is calculated as the summation of equity market value and book value of debt scaled by the total value of assets.

Control Variables

- Profitability
- Tangibility
- Growth

Cashflow Volatility

Standard deviation of operating cashflows

H_1

Firm Value
Tobin Q

- Market value of equity
- Book value of debt
- Book value of assets

Independent Variable

Dependent Variable

Figure 2.1   Conceptual Framework

2.4 Research Hypothesis

H_0:   The relationship between cashflow volatility and the value of nonfinancial corporations listed at the Nairobi Securities Exchange is not significant.

3.1 Data and Variable Description

The target population of the study comprised of 42 nonfinancial companies listed at the Nairobi Securities Exchange and a longitudinal descriptive research design was adopted to analyse the effect of cashflow volatility on firm value. Financial firms comprising of banks, insurance and investment corporations were

omitted because their capital structure is not analogous to those of nonfinancial firms and their capital composition is highly regulated. This approach is similar to previous studies which excluded nonfinancial firms (Flannery & Rangan, 2006; Elsas & Florysiak, 2011, Kodongo et al., 2014).

A census study was undertaken as the number of firms in the target population is small. The analysis was carried out over 18 years, from 2002 to 2019. This period was sufficient to cover macroeconomic shocks that translate to cashflow volatility including changes in government, political tension, interest rate capping and the Brexit referendum. To be included in the analysis, firms were required to have a least three years of consecutive listing to provide sufficient data points to compute historical cashflow volatility. Six nonfinancial firms were excluded from the analysis due to suspension, delisting, and insufficient data points to carry out the analysis. This resulted to an unbalanced panel data of 36 nonfinancial firms observed over 18 years.

Secondary data was obtained from corporate reports of nonfinancial companies listed at the NSE. The data was collected from financial reports of the companies maintained by the Capital Market Authority and Bloomberg database. The independent variable, cashflow volatility, was operationalized as standard deviation of historical operating cashflows as applied by Minton and Schrand (1999). The dependent variable, firm value, was operationalized as market value of equity plus book value of debt divided by total assets as applied by Rountree et al. (2008) and Kodongo et al. (2014). Control variables applied include profitability, growth opportunity and tangibility.

3.2   Data Analysis

Descriptive analysis using mean, standard deviation, minimum and maximum was carried out to visualize the distribution of data, detect outliers and identify associations among variables prior to conducting inferential analysis. Pearson correlation analysis applied to measure the direction and intensity of relationships and diagnostic tests were conducted to examine normality, multicollinearity, stationarity, homoskedasticity, autocorrelation and model specification. Panel regression analysis was applied to test the hypothesised relationship as it provides large data sets and blended features of time series and cross-sectional data that allow the use of efficient instruments to control for endogeneity. Thus, panel models were applied as follows:

$$FV_{it} = \beta_{01} + \beta_{1it}CFV + Z_{it} + \varepsilon_{it} \ \text{.................................. (3.1)}$$

Where:

FV_{it} = firm value for i^{th} firm, in t^{th} year

CFV= cashflow volatility

β_0= intercept

β_1it= coefficient

Z_it= control variables (profitability, tangibility, and growth)

ε_it= error term

4.0 Findings and Discussions

To obtain the general outlook of the data, the researcher computed the mean, standard deviation, minimum and maximum a descriptive analysis was conducted. The summary statistics of the key research variables, cash flow volatility and firm value and control variables, profitability, tangibility and growth opportunity is presented in table 4.1 below.

Table 4.1: Overall Summary Statistics of Study Variables

Variables	Obs	Mean	Std. Dev	Min	Max
Tobin Q	580	1.325	1.384	0.091	12.656
Cashflow volatility	580	2.930	6.364	0.001	47.019
Profitability	580	0.096	0.120	-0.386	0.473
Tangibility	580	0.575	0.212	0.048	0.960
Growth opportunity (MBVE)	580	2.808	7.016	-18.719	85.49

The dependent variable, Tobin Q, was used as the proxy of firm value and was measured as the ratio of market value of equity plus book value of debt all divided by book value of total assets. When Tobin Q ratio is greater than one, it implies that investors are keen to give more for the assets of the firm compared to the current book value. The study findings indicated that the mean Tobin Q of the nonfinancial corporations was 1.325 times with a maximum value of 12.66 times. This suggests that on average, investors are ready to pay a much higher value for the assets of nonfinancial firms compared to their book values. However, some firms had a Tobin Q ratio of less than one implying a negative perception by the market or an undervaluation of assets. There was a low variability on the market appraisal of target firm assets as

indicated by the standard deviation of 1.384. Kodongo et al. (2014) found a mean Tobin Q of 1.846 times among the NSE listed nonfinancial firms suggesting that the firms were overvalued.

The predictor variable, cashflow volatility (CFV) was estimated as the standard deviation of operating cashflows five years prior to the reporting period. To be included in the analysis, a firm was required to have operating cashflows of at least two years prior to the reporting period. CFV measures the variations in the operating cashflows, indicating the level of operating risk or ability of the firm to generate revenue to cover operating costs. Study results show that the NSE listed nonfinancial companies had a mean CFV of 2.93 times which indicates moderate volatility. The standard deviation of 6.36 times on CFV indicates that most variations of the operating cashflows are centred around the mean. However, during certain periods, some firms manifested very high volatility as evidenced by the maximum value of 47.02 times while others had negligible volatility as indicated by a minimum value of 0.001 times. The high cashflow volatility may be attributed to the uncertainty observed during the study period which was characterized by shocks emanating from post-election violence in Kenya and the global financial crisis which emerged from the United States of America and spread to other economies thus leading to the high cashflow volatility.

Profitability is estimated as earnings before interest and tax divided by total assets. It shows how much operating income has been generated and how efficiently operating costs were managed. The mean value indicates that on average the target firms generate operating profit of 9.6% from their revenue during the study period. This reflects inferior performance among the listed firms as the operational profit does not account for financing costs and taxes which tend to be fixed and beyond the control of management. The standard deviation of 12% however indicates wide variation in profits which is evidenced by huge disparity between the profit and loss-making firms.

Tangibility which measures the proportion of non-current assets to total asset, is used as a proxy for debt capacity of firms. It also indicates the ability of the firm to minimize cost of financial distress. It has a mean of 57.5% which shows that on average the target firms have more than 50% investment in fixed assets indicating strong collateral for debt. The maximum of 96% and minimum of 0.5% points to the distinct firm types in the target population that is, capital intensive firms (manufacturing, construction, and energy sectors) and non-capital-intensive firms (commercial and services sector). The disparity between firm types is further evidenced by the high standard deviation of 21.2%.

Growth opportunity is estimated as market value of equity divided by book value of equity (shareholder's equity). It signifies the market perception of the firm based on its current performance and future earnings capacity. In the current study, growth opportunity had a mean of 2.81 times which indicates that on average investors price shares of the target firms more than twice their book values. There is a wide disparity however on the market perception of the stocks indicated by the standard deviation of 7.016 times, a minimum of -18.72 times and a maximum of 85.49 times. The negative values suggest poor firm performance or significant undervaluation while the high positive may signify an overvaluation of the stocks.

Pearson correlation analysis indicated a negative relationship between cashflow volatility and firm value while findings from diagnostic tests indicated violation of some classical linear regression assumptions that is, non-normality and serial correlation and heteroskedasticity in the error terms. To correct for the violations all the variables in the study were transformed using natural logs and panel regression models, robust for standard errors, was applied. Furthermore, the model specification tests indicated that random effects model was the most suitable to examine the correlation between the study variables.

Table 4.2 below presents the Stata output of the random effects (RE) model robust for standard errors. The response variable is natural log of Tobin Q (LnTobin Q), and predictor variable is natural log of cashflow volatility (LnCFV). Natural log of profitability (LnProfit), natural log of tangibility (LnTang) and natural log of market to book value of equity (LnMBVE) were included to control for other determinants of firm value and enhance the model specification. The chi-square statistic (233.672, p-value 0.000) in shows that the overall model is statistically significant at 99% confidence level and the beta coefficients are jointly significant. The overall r-squared is 0.855 implying that 85.5% of the changes in firm value are explained by the predictor and control variables.

The beta coefficient of LnCFV, -0.024, indicates that as volatility of cashflows increase by 1%, the value of the firm decreases by 0.024%. This relationship is statistically significant at 95% confidence level. This implies that as the level of operating risk rises, firm value declines. Furthermore, all the control variables were observed to be statistically significant at 95% level of confidence implying that they have an influence on firm value. Profitability, LnProfit, has a coefficient of 0.060 which is statistically significant at 95% confidence level. It indicates that as profitability of the firm increases by 1%, the value of the firm increases

by 0.060%. This result is intuitive as investors prefer firms whose earnings tend to be higher as they anticipate higher returns. Market to book value of equity, LnMBVE, proxy for growth prospects, has a coefficient of 0.647 and is statistically significant at 99% confidence level. This implies that as growth prospects increase by 1%, firm value increases by 0.647%. Tangibility, LnTang, a proxy of debt capacity, has a coefficient of -0.104 and is statistically significant at 95% confidence level. This indicates that as tangibility increases by 1%, the value of the firm declines by 0.104%.

Table 4.2   Output of the Relationship between CFV and Firm Value

LnTobinQ	Coef.	Std. Err.	t-value	p-value	[95% Confidence Interval]		Sig
LnCFV	-0.024	0.012	-2.010	0.045	-.047	-.001	**
LnProfit	0.060	0.026	2.280	0.023	.008	.111	**
LnMBVE	0.647	0.048	13.500	0	.553	.74	***
LnTang	-0.104	0.052	-2.010	.045	-.205	-.002	**
Constant	-0.205	0.090	-2.280	.023	-.381	-.028	**
Mean dependent var		-0.027	SD dependent var				0.847
Overall r-squared		0.855	Number of obs				483.000
Chi-square		233.672	Prob > chi2				0.000
R-squared within		0.803	R-squared between				0.872
*** p<.01, ** p<.05*							

Alternative panel regression models were applied to check for robustness of the random effects model. All the models are all robust for standard errors. The models had R-squared greater than 80% and the F-statistics statistically significance at p-values of 0.005. Furthermore, the beta coefficients of the alternative models point to the same direction of relationships in the respective models and corresponding to the random effects model findings. This indicates that the random effects model is robust for the analysis of H_0. Table 4.3 below shows the results of the comparative models.

Table 4.3   Alternative Panel Regression Models Outputs of Testing Hypothesis (H$_0$)

	(1) Random	(2) POLS	(3) Fixed	(4) LSDV	(5) AREG
VARIABLES	LnTobinQ	LnTobinQ	LnTobinQ	LnTobinQ	LnTobinQ
LnCFV	-0.024**	-0.067***	-0.018	-0.018*	-0.018*
	(0.012)	(0.012)	(0.013)	(0.010)	(0.010)
LnProfit	0.060**	0.065***	0.057**	0.057**	0.057**
	(0.026)	(0.024)	(0.027)	(0.024)	(0.024)
LnMBVE	0.647***	0.657***	0.644***	0.644***	0.644***
	(0.048)	(0.021)	(0.050)	(0.027)	(0.027)
LnTang	-0.104**	-0.070	-0.112**	-0.112***	-0.112***
	(0.052)	(0.044)	(0.048)	(0.038)	(0.038)
Constant	-0.205**	-0.169**	-0.207**	0.129	-0.207***
	(0.090)	(0.074)	(0.085)	(0.102)	(0.073)
Company dummy				Yes	Yes
Observations	483	483	483	483	483
Chi square/ F statistic	233.67***	373.45***	52.05***	206.27***	179.27***
R-squared	0.855	0.862	0.804	0.929	0.929
Number of Company	37		37		

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The outputs of the analysis above show that the best predicting model was the random effects model whose p-value of the chi-square statistic predicting the joint significance of the beta coefficients and the p-value of the individual beta coefficients were less than 0.05. The null hypothesis (H$_0$) was therefore rejected implying that there is an inverse and statistically significant relationship between CFV and firm value. The resultant model is framed as:

$$LnTobinQ = -0.205 - 0.024 LnCFV + 0.060 LnProfit + 0.647 LnMBVE - 0.104 LnTang$$

The finding of inverse correlation between CFV and firm value is intuitive since investors are risk averse thus increase in uncertainty is shunned. CFV represents operating risk which emanates from the macroeconomic environment in which firms are operating or internal business activities and managerial

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decisions. Investors use indicators from the financial statements to deduce such risks prior to buying a firm's stocks. Thus, fluctuations in operating cashflows may be perceived as risk and the firm is negatively rewarded. These findings are similar to results obtained by Rountree et.al (2008), Huang (2009), Makela (2012) who observed a negative association between CFV and firm value and contrary to Shipe (2015), Gworo (2019) and Sawalqa (2021) who observed a direct association between CFV and firm value.

The control variables, growth opportunities (MBVE) and profitability were observed to have a direct relation with firm value. These observations are innate since increase in profits and growth opportunities project favourable firm performance and hence high shareholders' returns. The results are consistent with Shahid (2018) and Rountree et al (2008). The inverse correlation between tangibility and firm value is similar to findings by Kodongo et. al (2014). This finding suggests that although debt capacity should be attractive, investors negatively value additional investments in tangible assets. This observation may be attributed to the proportion of service-based companies among firms in the target population. Service-based firms tend to rely less on fixed assets to generate revenue, thus an increase in fixed assets may be perceived negatively as tying up funds which would otherwise be used to generate more returns for investors.

5.0 Conclusion and Recommendations

The aim of this study was to ascertain the relationship between cashflow volatility and value of nonfinancial companies listed at the NSE. Findings from hypothesis testing provided evidence of a statistically significant and inverse relationship between cashflow volatility and firm value. This finding implies that nonfinancial companies listed at the NSE are adversely affected by cashflow volatility which connotes operating risk that emanates from the macroeconomic environment or internal business operations. The value of listed firms is normally driven by supply and demand forces in the market as investors participate in buying and selling the stocks of the firms. Thus, adverse information about a firm such as high cashflow volatility, signals weak performance leading to disposal of the stocks and a decline in the share price which is directly associated with firm value. This finding also indicates that investors are keen to analyse cashflow information reported by companies to make investment decisions and that they value smooth cashflows.

The results of this study aids in reducing controversy on the volatility to firm value relationship by providing evidence of an inverse relationship. This implies that shocks from macroeconomic factors such as inflation rate, exchange rates, tax rates and economic growth or internal business factors such as operational and

managerial inefficiency could destabilize a firm's revenue and operating expenses leading to volatile cashflows which affects the capacity to pay debt obligations, undertake investments hence adversely impacting firm value. Therefore, this study provides a tool to sensitize various stakeholders including management, shareholders, regulators, and government on their role in enhancing firm value. It provides a point of reference to sensitise management on the need to set up proper risk management framework to mitigate the effects of macroeconomic shocks on the firm's cashflows. The findings also provide a tool to sensitize policy makers to draw policies on macroeconomic factors such as taxes and interest rates that provide a favourable working environment for businesses.

Although various measures were applied to mitigate inherent limitations in the study, there are two factors that need to be considered when applying this study. First, the results may not be generalizable since the study was conducted among listed nonfinancial firms. The listed firms however represent a small fraction of nonfinancial companies in the country and tend to be highly scrutinized and regulated hence their performance may not be representative of private companies. Secondly, the study was based solely on secondary data due to ease of access and ability to obtain a broad data set with blended characteristics of cross section and time series data which provides more flexibility with data analysis tools. Primary data however provides an opportunity to obtain rich insights on managerial decisions and firm performance as well as to triangulate the results.

Cashflow volatility is a significant indicator of business risk, and it can be influenced by external factors from the macroeconomic environment or internal business factors thus, future research should examine the antecedents of cashflow volatility. Secondly, future studies should consider including primary data to examine the relationship between cashflow volatility and firm value to triangulate the findings from secondary data.

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