Bank Characteristics and Dividend Payout of Selected Commercial Banks in Kenya

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Abstract

Dividend payout for Tier I banks in Kenya has remained relatively stagnant over the years even with improved financial performance. Central Bank of Kenya reports show that Kenya's banking sector is very profitable with the average return on asset being about 2.6 per cent for the years between 2016-2021. Thus, this study sought to determine the effect of bank characteristics on dividend payout of Tier I banks. The study specifically aimed at objectively quantifying effect of bank size, liquidity, and profitability on dividend payout. Target population was all nine (9) Tier I banks listed at the Nairobi Securities Exchanges (NSE). Secondary data was acquired from audited and published financial reports of the nine (9) banks for the period between 2016-2021 using document review guide. Descriptive analysis and panel regression were applied for data testing. Independent variables were bank size, liquidity, and profitability while dependent variable was dividend payout. Market capitalization was used as a measure for bank size, book-to-market value as a measure for liquidity and earnings per share as a measure for profitability. Results indicated liquidity had a small negative statistically significant effect on dividend payout while both bank size and profitability had negative statistically insignificant effect on dividend payout. The study thus determined that bank characteristics had insignificant effect on dividend payout for Tier I banks. The study recommends that Central Bank of Kenya consider reducing Cash Reserve Ratio (CRR) and NSE consider an alternative stock classification system which will categorizes stocks in same sector based on size which will give a clear insight of the risk-return trade off characteristics at the NSE.

Keywords: *Dividend Payout, Commercial Banks, Bank Characteristics, Market Capitalization, Book-to-Market value, Earnings per Share, Kenya.*

1.1 Background of the Study

Dividend payout continually remains a contentious issue in the field of corporate finance (Mui & Mustapha, 2016). When shareholders own shares of a company's stock, they expect to reap benefits of the firm's success especially the profits through dividend payout. Firm management know the importance of dividend payout especially in satisfying shareholders expectations. Consequently, management must decide on what portion of profits may be issued to shareholders as dividend payout, what portion will be retained earnings and what portion will be invested in investments having net present value that is positive and the possible effect that decision will have on the stock price (Al-Malkawi, Rafferty & Pillai, 2010).

In addition, Kiangi, William and Milamo (2022), explains that management's decision on what portion of profits may be issued to shareholders as dividend payout, particularly the decision on low dividend payout generates more retained earnings that are important in internal financing and investment which reduces dependence on external financing. On the other hand, decision on high dividend payout reduces retained earnings which increase the probability of dependence on external financing.

In Kenyan, the banking sector can be termed as very profitable since the average return on asset (ROA) was about 2.6 percent for the years between 2016 - 2021 (CBK, 2022). Ndung'u, Thugge, and Otieno (2011) identify financial sector as the sixth priority sector that would remarkably participate in attainment of Kenya's Vision 2030. They further explained that financial sector performs a critical part in enabling and transforming the economy through mobilization of savings. Due to socio-economic challenges, investors wish more and more for higher dividend payout to cushion themselves from these socio-economic challenges.

1.2 Banks Characteristics

Bank Size

Bank size is essentially the total worth of its market capitalization with respect to its total assets. According to Gambacorta et al. (2020), firms with a higher market capitalization display a greater tendency for dividend payout. Theoretically, large sized banks are projected to have a higher dividend payout compared to medium and lower tier banks since they tend to have higher cash flows, tend to have more stable profits, are more mature and can benefit from economies of scale in their operational and organizational efficiency. These factors consequently can guarantee a steady dividend payout policy. According to George (2015), a bank's size is of importance in the way it carries out its daily activities. Even with similar management across several banks, bank size would still affect the operational and organizational risk level it would face. Were and Wambua (2014) explains that large banks are more capable and have the latitude of making investments in innovations and latest technologies to increase efficiency. Onuonga (2014) posits that large firms in general will operate efficiently as well as provide services at relatively lower

costs if the firm is experiencing economies of scale.

Robinson (1964) proposed the theory of optimal firm size which postulates that optimal size of a firm is one that results in the least costs of production for each unit of output in the current circumstances of organizational ability and technology. In other words, optimum firm size indicates the circumstances under which a firm can have maximum output with minimum operating costs. Naceur and Goaied (2008) argues that size reports for economies as well as dis-economies of scale. In the long run, a cost minimizing firm size would have one worker producing the lowest possible output level if it was only dis-economies of scale that existed. Obamuyi (2013) argues that theory of banks puts a limit on the extent to which the economies of scale will work beyond which, dis-economies of scale kicks in.

Liquidity

Liquidity is the capacity of a commercial bank to readily meet its current financial commitment upon demand. If the management of a company decides on a high dividend payout yet lacks the liquidity to support the cash outflows, the management will ultimately be forced to decide whether to go with a reduced investment plan or go for debt or equity financing from investors. According to Elliott (2014), a bank can succumb if its depositors lose trust in the institution even if it is solvent. In the lead-in to the financial crisis of 2008, commercial banks preferred to invest in credit expansion by getting additional obligations, even when it lowered the book value of their equity because of dividend payout (Adrian et al., 2015). Consequently, the 2008 financial crisis underlined the significance of liquidity in covering unexpected cash outflows. It is therefore important for management not to increase dividend payout until they are assured of adequate cash flows to support the dividend payout cash out flows.

For shareholders interested in short-term returns, dividend payout is better than retained earnings for banks with a lower market value. Lower book-to-market value is linked with growth stock which have a minimal tendency for dividend payout. Moreover, the higher the book-to-market value, the better the dividend payout becomes. Therefore, one can argue that dividend payout signals that a bank's shares are undervalued. Consequently, a higher book-to-market value raises pressure on the management to payout dividends (Stein, 2003). Book-to-market value can be an important measure of banks' value since it can be used to identify overvalued and undervalued securities. Securities are considered overvalued if the value is <1 and undervalued if it is >1. Book-to-market value of <1 indicates shareholders are prepared to offer a premium than the assets worth for the firm's stocks. This would suggest strong profit projections in the future hence shareholders are prepared to offer a premium for that prospect. On the other hand, book-to-market value of >1 indicates the firm is a value stock. Value stocks are expected to have a better long term dividend payout than growth stock because of risk (Gambacorta et al., 2020).

Profitability

Commercial banks profitability and subsequently earnings per share depends largely on the loan book quality (Ongore and Kusa, 2013). For commercial banks, loans are the main assets and biggest source of earnings and income particularly interest income from loans among other fees and commissions. From a theoretical perspective, higher profitability signals higher earnings per share for shareholders. Signalling effect is important for commercial banks since their main asset, which is loans, are not transparent to external investors compared to assets of firms in other sectors. Profitability can be affected by losses from bad and doubtful debts provisions and delinquent loans. For bad and doubtful debts, CBK risk management guidelines direct commercial banks must make adequate provisions. According to Khrawish (2011) a bank is effective in profit generation if the return on equity is higher which also shows the effectiveness of the bank's management in making use of the amount of equity in the firm. Conversely, return on asset demonstrates capability and efficiency in utilizing the available resources to generate income by the management.

From a theoretical perspective, firms with steady profitability or higher profitability are inclined to pay out a bigger fraction of the profits as dividends compared to firms with unsteady profits. Consequently, it is expected that a firm will have a higher dividend payout if it has higher earnings per share with a lower variance. When profitability increases, it means there is high level of free cash flows available to management for them to increase dividend payout hence reduce agency cost (Jensen, 1986). Profitability determines the attractiveness of earnings per share for shareholders and if a bank's profitability is stable, this can better predict its future profitability to shareholders and investors. Most past studies have found a relationship between dividend payout and profitability. Fama and French (2001) observed the prospects of a firm management to decide on dividend payout was positively correlated to profitability which is one of the main determinants that affect dividend payout decisions.

Dividend Payout

In corporate finance, dividend payout is one of the important operational decisions that management face especially when they must satisfy shareholders expectations as well as convince prospective investors to invest in the firms' common stock at a premium (Mui & Mustapha, 2016). Consequently, management must decide on what portion of profits may be issued to shareholders as dividend payout, what portion will be retained earnings and what portion will be invested in investments having net present value that is positive and the possible effect that decision will have on the stock price (Al-Malkawi et al., 2010).

When shareholders own shares of a company's stock, they expect to reap benefits of the firm's success especially the profits through dividend payout. Hence, dividend payout is an important aspect of corporate finance policies especially in capital structure and dividend policy. Capital structure refers to how a firm uses the combination of equity and debt to fund investments and

activities. Firms depend on the constant investment in projects with positive net present value using internal financing from retained earnings which forms an important part of the firms' finances. Factors that affect the size of dividend payout to be distributed to shareholders include creditworthiness, liquidity, debt, investment opportunities, profitability, leverage, company size and growth factors (Pattiruhu and Paais, 2020).

2.1 Theoretical Literature Review

2.1.1 Fama-French Theory

Proposed by Fama and French (1992), the theory observes that book-to-market value and firm size have the highest descriptive control on dividend payout. They hypothesized that stock markets are affected by three factors: book-to-market value, firm size which is measured by market capitalization and beta which is the measures the market risk. The theory further argues that when book-to-market value and firm size are combined, they can replace market risk by taking up the role of leverage and profitability in dividend payout (Allen, Singh & Powell, 2009). Shah, Ghafoor and Khan (2014) while estimating this theory observed that if large firms are less risky than small firms, investors should accept lower dividends when investing in large firms. On the other hand, if book-to-market value is <1 investors will be optimistic about the firms' future profit projections but should expect lower dividends initially. Fama and French (1993) found a negative relationship between dividend payout and firm size which was referred to as size effect. They also found a positive relationship between dividend payout and book-to-market ratio which was referred to as value effect.

2.1.2 Free Cash Flow Theory

Proposed by Jensen (1986), he argues that management can reduce agency cost that accompany high level of free cash flows through issuing dividend payout and issuing debt financing. This theory further posits that management of such firms, have a preference to keep excess level of cash flows to increase the amount of liquid assets within their management, rather than issuing the surplus cash as dividend. According to Drobetz and Grüninger (2007), management may retain high level of cash because they may be averse to debt financing or because they do not wish to payout dividends which shows a relationship between dividend payout and retained earnings or cash reserves. This suggests that management may retain high level of cash by cutting or reducing the dividend payout to hold excess level of cash within the firm.

Kadioglu and Yilmaz (2017) explain that dividend payout reduces excess level of free cash flows within managements' control, reduces agency cost and increases firm value. Agency cost arises after gross misconduct on the part of management, organizational and operational inefficiencies, bankruptcy, corruption, shareholders dissatisfaction or conflicts of interest between the management and shareholders. Firms with higher dividend payout are more often finance by external capital thus they are subject to scrutiny of shareholders and the market participants.

Management of these firms are also subject to regulations and provision of information needed by market participants.

2.1.3 Pecking Order Theory

Proposed by Donaldson (1961) then advanced and popularized Myers and Majluf (1984), it explains that firm management have a preference on utilizing internal financing from retained earnings as opposed to external financing to fund investment opportunities. Due to asymmetrical information between investors and firm management, the firm management preference order for capital is internal financing from retained earnings, then debt financing then equity financing (Myers & Majluf, 1984). Myers (1984) posits that firms management will adjust dividend payout to support internal financing. Dividend payout decisions, investment decisions and internal financing decisions affect liquidity level. Firms use cash flow for internal financing of investment opportunities, debt repayments, then build up cash reserves from the unutilized cash flow. If cash flow cannot cover investment and internal financing, firms could avoid external financing by using cash reserves. Therefore, change in liquidity level is affected by cash flows (Opler, 1999).

According to Dittmar, Mahrt-Smith and Servaes, (2003), firms with high cash flows have efficient dividend payout. However, they may depend on debt financing and keeping high liquidity level. It is reasonable to assume large firms are more likely to have high cash flows and they can get debt financing easily and in large amount hence, due to high cash flows, they will borrow less when issuing bigger dividend payout. Large firms depend significantly on internal financing from retained earnings to meet their financial needs. Small deficits that remain are financed by external financing. For large firms, equity financing is not a significant source of financing. Shyam-Sunder and Myers (1999) argue this theory predicts effect of profitability accurately. Debt ratio decreases in financial surplus years and increases in deficit years. This means that firms use financial surplus to offset their outstanding debt. Higher retained earnings are more likely to be seen in profitable firms since they are likely to have more cash flow. However, if two firms have the profitability index, the larger firm will get more external financing compared to the smaller firm.

2.1.4 Dynamic Trade-off Theory

Advanced by Fischer, Heinkel and Zechner (1989), it suggests that firms take recapitalization actions only when the marginal benefits of the recapitalization can offset the marginal costs of the recapitalization. This theory further explains that the firm might not be close to its target capital structure, however it could have adjustment actions towards the target only once the benefits of the correction will compensate costs of correction. According to Dudley (2007), profitability and interest rates lowers leverage range. High profitability firms are less vulnerable to financial distress compared to low profitability firms since high profitability firms they are likely to have reserves or retained earnings with which they can use offset debts to adjust

towards target leverage. When acquiring external finance, high profitability firms also have a better chance of getting lower security issuance costs. In additional, under-levered profitable firms have powerful motivation to lever up to experience benefits of tax saving.

Large sized firms usually get preferable opportunity in capital markets compared to small sized firms since large sized firms encounter lesser degree of agency problems and information asymmetry. Secondly, large sized firms are more likely to have higher profitability due to being more mature and with asset clarity therefore they encounter smaller capital structure adjustment cost (Drobetz, Pensa & Wanzenried, 2006). Therefore, the foregoing implies that firm size and speed of adjustment have a positively relationship. In addition, large firms are more likely to have less obligations, smaller financial distress costs and less cash flow unpredictability. This implies that large firms have less external pressure and motivation to embark on adjustment.

2.2 Empirical Review

Prior findings have recorded significant correlation between various firm characteristics and dividend payout. For instance, Kiangi et al. (2022), Nyere and Wesson (2019), Ogundajo, Enyi, Akintoye, and Dada (2019), Brahmaiah, Srinivasan, and Sangeetha (2018) and Rahmadi (2020) found a significant correlation between dividend payout and firm size whereas Pattiruhu and Paais (2020), Katakwar, Tenguriya, Chhajer, and Mehta (2021) and Okoro, Ezeabasili, and Alajekwu (2018) found insignificant correlation. Furthermore, Kiangi et al. (2022), Ogundajo et al. (2019), Nyere and Wesson (2019), Abiahu, Udeh and Ogbekhilu (2018) and Brahmaiah et al. (2018) observed significant correlation between liquidity and dividend payout while Pattiruhu and Paais (2020), Okoro et al. (2018) and Katakwar et al. (2021) found an insignificant relationship liquidity and dividend payout. Moreover, study by Pattiruhu and Paais (2020), Okoro et al. (2018), Rahmadi (2020) and Abiahu et al. (2018) found zero significant correlation between dividend payout and profitability while Nyere and Wesson (2019), Kiangi et al. (2022), Brahmaiah et al. (2018) and Ogundajo et al. (2019) observed significant correlation.

Considering foregoing studies together with several others published in other emerging and developing countries, this study wanted to establish by providing empirical evidence of effects of bank characteristics on dividend payout for large commercial banks. The study was directed by the ensuing null hypotheses:

H_{01}: Bank size has no significant effect on dividend payout of Tier I banks in Kenya.

H_{02}: Liquidity has no significant effect on dividend payout of Tier I banks in Kenya.

H_{03}: Profitability has no significant effect on dividend payout of Tier I banks in Kenya.

Market capitalization was used as a measure for bank size, book-to-market value as a measure for liquidity and earnings per share as a measure for profitability.

3.0 Research Methodology

The study assumed descriptive design which employs a predetermined plan for analysis. It is also indemnified against prejudice hence high dependability. The sample was Tier I banks in Kenya. This study used census sampling technique which gathers information about all members of the population. The criteria chosen gave the researcher an opportunity to obtained accurate results since each member is evaluated therefore, there is an insignificant error. The advantages of census sampling are that it is highly reliable and suited for data that is heterogeneous. The study employed document review guide to gather secondary data which was quantitative in nature which was later employed in empirical evaluation. Secondary data was collected from audited and published financial reports of the nine Tier I banks in Kenya from year 2016-2021.

The study employed panel multiple regressions model since the dependent variables was continuous. The model employed by the current study was adopted from Kutner, Nachtsheim, and Neter (2004). It was specified as follows:

$$DP_{it} = \alpha + \beta_1(BS_{it}) + \beta_2(L_{it}) + \beta_3(P_{it})$$

Where:

DP_{it} = Dividend Payout measured by dividend payout ratio at a specified time.

BS_{it} = Bank Size measured by market capitalization at a specified time.

L_{it} = Liquidity measured by book-to-market value at a specified time.

P_{it} = Profitability measured by earnings per share at a specified time.

α = Constant term.

β = Coefficients of the explanatory variables.

4.0 Research Findings and Discussions

4.1 Descriptive Statistics Analysis

Descriptive statistics was employed to illustrate and summarize changes in bank characteristics and dividend payout. Descriptive statistics analysis offered conclusions on the data evaluation and together with graphs and tables, established the premise of all empirical data examination.

Table 1: Summary of Descriptive Statistics

Variables	Observations	Min	Max	Mean	Std. Dev.
Banks Size (Ksh. B)	54	16.63633	201.8916	70.562834	45.2885466
Liquidity	54	0.38740	4.0450	1.073257	0.5903302
Profitability (Ksh)	54	0.77000	41.4000	12.401832	10.7071786
Dividend Payout	54	0.00000	0.7600	0.348420	0.1886841

Source: Research data, (2022)

Bank size had a mean of Ksh 70.562834 billon. The minimum value and maximum value were Ksh 16.63633 billon and Ksh 201.8916 billon respectively. This finding indicated that total assets of the Tier I banks in Kenya have been growing steadily. This could be accredited to more loan facilities being advanced to customer leading to high profit margins from interest income. Liquidity had a mean of 1.073257. Minimum and maximum value of liquidity was 0.3874 and 4.0450. Book-to-market value identifies overvalued and undervalued stocks. A value of >1 implies the share price was trading for less than its assets are worth which means that it was buying and selling modestly contrasted to its book value. The findings indicate that Tier I banks in Kenya are value stocks which can explain the relatively stable dividend payout. Profitability had a mean of Ksh 12.40. The minimum value and maximum value were Ksh 0.77 and Ksh 41.40 respectively. This was an indication that the Tier I banks in Kenya have been effective in terms of profit generation. The greater the earnings per share the effective the firm in making profits.

Dividend payout had a mean of 0.34842, maximum value of 0.76 and minimum value of 0. These results indicated dividend payout of Tier I banks in Kenya have been relatively low. This could be attributed to banks retaining capital thus announcing lower dividend payout. This was driven by the need to build buffers and increase capability to soak up losses, strengthen lending and support economic activity.

4.2 Trend Analysis

4.2.1 Trend Analysis of Bank Size (Market Capitalization)

Figure 1: Bank Size Trend Analysis (Market Capitalization)

Source: Research data, (2022)

Average market capitalization was highest in 2019 at Ksh 87.4371 billion and lowest in 2016 at Ksh 57.2013 billion. Trend analysis presented average Market Capitalization growing gradually from 2016 to 2021. That can be ascribed to growth of stock price. However, share price should not be mistaken to be an accurate representation of a bank's worth or stability but rather Market Capitalization which is the correct representation since it denotes the actual value perceived by the public and the markets. There was drop in 2020 which can be ascribed to the Covid-19 pandemic.

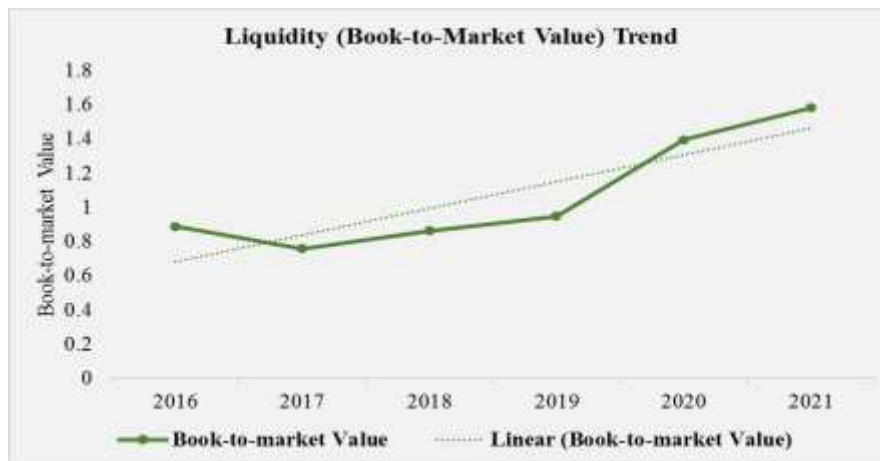*4.2.2 Trend Analysis of Liquidity (Book-to-Market Value)*

Figure 2: Liquidity Trend Analysis (Book-to-Market Value)

Source: Research data, (2022)

Average book-to-market value was high in 2021 at 1.58402 and lowest in 2017 at 0.75854. The findings further showed that book-to-market value has been increasing steadily from 2017 through to 2021. From 2016 to 2019, the average book-to-market value was <1 which indicated that the stocks were overvalued which can be attributed to speculation. From 2020 through to 2021, the average book-to-market value was >1 which indicated that the stocks were undervalued indicating that the share prices were trading for less than their assets worth which means that they were buying and selling modestly in the market contrasted to its book value.

4.2.3 Trend Analysis of Profitability (Earnings per Share)

Figure 3: Profitability Trend Analysis (Earnings per Share)

Source: Research data, (2022)

Analysis indicates the average earning per share was highest in 2018 at Ksh 13.67 and lowest in 2020 at Ksh 9.20. The trend showed that the average earning per share has been decreasing gradually from 2016 to 2021 which can be ascribed to various macroeconomic variables including interest rate, inflation, and Gross Domestic Product (GDP). For commercial banks, loans are their main assets and biggest source of earnings and income particularly interest income from loans among other fees and commissions. The drop in 2020 may be explained by losses incurred from credit losses and loan loss provisions by banks during and after the Covid-19 pandemic.

4.2.4 Trend Analysis of Dividend Payout (Dividend Payout Ratio)

Figure 4: Dividend Payout Trend Analysis (Dividend Payout Ratio)

Source: Research data, (2022)

Average dividend payout was highest in 2018 at 0.36811 and lowest in 2020 at 0.28522. The findings further showed that dividend payout was increasing at a very small rate been relatively steadily from 2016 to 2019. This could be ascribed to banks conserving capital to boost capacity to support more lending and other economic activities or building cash reserves with CBK to facilitate liquidity management. There was drop in 2020 which can be ascribed to the Covid-19 pandemic. In Kenya, during the pandemic period, CBK recommended that banks should conserve capital by suspending dividend payout (CBK, 2020). This was driven by the need to build buffers and boost banks capacity to absorb losses from bad debts, nonperforming loan (NPL), delinquent loans and loan loss provisions.

4.3 Diagnostic Tests

Before hypotheses testing, diagnostic tests were done to test the suitability of the panel data for regression analysis and to confirm Classical Linear Regression Model assumptions were not breached. If the assumptions of CLRM were not guaranteed, then the produced estimates remained at the risk of being biased, inconsistent and inefficient.

4.3.1 Normality Test

Shapiro-Wilk (W) test was employed to determine whether sample fitted a normal distribution. This test was more appropriate for conducting the normality test in this study since the size of the sample was small and Shapiro-Wilk test has more ability to identify nonnormality.

Table 2: Normality Test Results

	Statistic	df	Sig
Bank Size	0.851	54	0.000
Liquidity	0.707	54	0.000
Profitability	0.875	54	0.000
Dividend Payout	0.977	54	0.369

Source: Research data, (2022)

The null hypothesis (H_0) was that the sample came from a normal distribution. From the test results provided in table 4.2, the null hypothesis (H_0) was not rejected which implied that the residuals came from a normal distribution hence regression analysis can be employed.

4.3.2 Heteroskedasticity Test

Breusch-Pagan/Cook-Weisberg test was employed to determine presence of heteroskedasticity. The null hypothesis (H_0) for Breusch-Pagan/Cook-Weisberg test was the error term is homoskedastic. Rejection of the null hypothesis (H_0) indicated the existence of heteroskedasticity. The alternative hypothesis (H_1) was the error term is heteroskedastic.

Table 3: Breusch-Pagan/Cook-Weisberg Test Results

Fixed Effects	Chi^2	Prob> Chi^2
Bank Size	263.23	0.001
Liquidity	5.64	0.040
Profitability	143.54	0.001
Dividend Payout	33.43	0.001

Source: Research data, (2022)

From the test findings provided above the null hypothesis (H_0) was not rejected since the p-value were below the critical level of significance ($p<0.05$). Homoskedasticity assumption was thus established which indicated presence of panel-level heteroskedasticity in the panel data making the data acceptable for regression analysis since throughout the period, the error term was homoskedastic. This therefore made standard errors suitable for evaluating co-efficient significance.

4.3.3 Multicollinearity Test

The study employed correlation matrix for the test. Field (2009) recommend VIF threshold <10

and Tolerance of >0.1 for excluding likelihood of multicollinearity. Tolerance of <0.1 make an independent variable redundant which indicates multicollinearity is a problem and VIF represents the reciprocal of tolerance.

Table 4: Multicollinearity Test Results

Variable	Tolerance	VIF
Bank Size	0.763	1.311
Liquidity	0.872	1.147
Profitability	0.864	1.158
Mean VIF	0.833	1.205

Source: Research data, (2022)

The test findings indicated the independent variables of VIF were below the appropriate limit of 10 which implied fear of multicollinearity challenge was not present. Tolerance value of greater than 0.1 also confirmed that there was no fear of multicollinearity.

4.3.4 Autocorrelation Test

Durbin-Watson test was employed to examine if error terms were correlated with respect to time at different points. Regression analysis assumptions mandate that error terms must not be linked at different points with respect to time. The null hypothesis (H_0) for Durbin-Watson test was serial autocorrelation does not exist. Rejecting the null hypothesis (H_0) indicates there is covariance between several values of bank characteristics variables linked to the error terms.

Table 5: Autocorrelation Test Results

	Durbin-Watson Test (DW)	p-value
Bank Size	3.033	0.000
Liquidity	1.578	0.000
Profitability	2.001	0.000
Dividend Payout	3.453	0.000

Source: Research data, (2022)

From the findings above, the p-value of the dependent variables were observed to be below the critical level of significance ($p<0.05$) hence null hypothesis (H_0) was not rejected. Consequently, the study assumed that challenges of serial correlation were not present hence adequate for panel regression analysis.

4.3.5 Stationarity Test

The study employed Levin-Lin Chu (LLC) test to determine if variables remained non-stationary or stationary to avoid spurious regressions caused by non-stationary variables. The null hypothesis (H_0) for stationarity test was unit roots existed in the variables. The existence of unit

root suggests non-stationary variable.

Table 6: Stationarity Test Results

Variable	Levin-Lin Chu (LLC)	Statistics	p-value
Bank Size	Unadjusted t	-9.456	0.010
	Adjusted t*	-8.876	
Liquidity	Unadjusted t	-2.453	0.000
	Adjusted t*	-6.765	
Profitability	Unadjusted t	-5.654	0.040
	Adjusted t*	-4.335	
Dividend Payout	Unadjusted t	-11.807	0.010
	Adjusted t*	-2.966	

Source: Research data, (2022)

The findings above indicated that for the series, the Levin-Lin Chu (LLC) t* statistic had a p-value below the critical level of significance ($p<0.05$), hence null hypothesis (H_0) was rejected therefore fear of spurious regressions caused by non-stationary variables was removed.

4.3.6 Hausman Test

The study employed Hausman specification test to select the optimal regression model which should be employed between fixed and random effect. The null hypothesis (H_0) was the variance between fixed effect estimates and random effect estimates is not systemic.

Table 7: Hausman Test Results

Variable	Fixed (b)	Random (B)	Difference (b-B)	sqrt(diag(V_b-V_B)) S.E.
Bank Size	0.234	-0.535	0.769	0.877
Liquidity	-0.343	-0.564	-0.907	0.952
Profitability	0.654	-0.353	1.007	0.100
Dividend Payout	0.754	0.864	-0.110	0.333

b = consistent under H_0 and H_1; obtained from xtreg

B = inconsistent under H_1, efficient under H_0; obtained from xtreg

Test: H_0: difference in coefficients not systematic

$Chi^2(3) = 2.32$

$Prob>chi^2 = 0.550$

Source: Research data, (2022)

The results above shows that Hausman test had Chi^2 of 2.32 with a $Prob>chi^2$ of 0.550 which implied that the Chi^2 value was not systemic at critical level of significance. The $Prob>chi^2$ value of 0.550 is also above the significance level ($p>0.05$). Therefore, the null hypothesis (H_0) was not

rejected which implied that random effects model was the optimal regression model.

4.3.7 Correlation Analysis

The study employed Pearson's correlation coefficient for evaluation of the extent and direction of the relationship between variables.

Table 8: Correlation Matrix

		Bank Size	Liquidity	Profitability	Dividend payout
Bank Size	Pearson Correlation	1			
	Sig. (2-tailed)				
Liquidity	Pearson Correlation	-0.357**	1		
	Sig. (2-tailed)	0.008			
Profitability	Pearson Correlation	-0.368**	0.110	1	
	Sig. (2-tailed)	0.006	0.430		
Dividend Payout	Pearson Correlation	0.107	-0.303*	-0.141	1
	Sig. (2-tailed)	0.442	0.026	0.309	

Source: Research data, (2022)

Positive correlation coefficient points to a direct relationship, whereas negative correlation coefficient points to an inverse relationship. The correlation matrix findings showed correlation between dividend payout and market capitalization was 0.107 ($p=0.442>0.05$), correlation between dividend payout and liquidity was -0.303 ($p=0.026<0.05$) and correlation between dividend payout and profitability was -0.141 ($p=0.309>0.05$).

4.4 Hypothesis Testing

Research hypothesis H_{01}, H_{02} and H_{03} below based on dividend payout were examined by employing regression analysis:

H_{01}: Bank size has no significant effect on dividend payout of Tier I banks in Kenya.

H_{02}: Liquidity has no significant effect on dividend payout of Tier I banks in Kenya.

H_{03}: Profitability has no significant effect on dividend payout of Tier I banks in Kenya.

The estimation of the model summary is presented below:

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.324202[a]	0.105107	0.051413	0.1837697	1.217
a. Predictors: (Constant), Bank Size, Liquidity, Profitability					

Source: Research data, (2022)

From the estimation above, R-value, which reflects correlation coefficient, is 0.324202, which suggests correlation degree is low which implies a weak and positive correlation between bank characteristics and dividend payout. Adjusted R square value of 0.051413 represents coefficient of determination that measures amount of variability in the dividend payout that is attributed to the bank characteristics (bank size, liquidity, and profitability) which suggests that bank characteristics has low descriptive control on dividend payout. The result from model summary shows collectively bank size, profitability, and liquidity reported for 5.14 per cent of the variation in dividend payout of Tier I banks.

Table 10: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	P
1	Regression	0.198325	3	0.066108	1.957531	0.132371[b]
	Residual	1.688564	50	0.033771		
	Total	1.886889	53			
a. Dependent Variable: Dividend Payout						
b. Predictors: (Constant), Bank Size, Liquidity and Profitability						

Source: Research data, (2022)

Table 10 clearly shows how the regression model predicts dividend payout at 5 per cent significance level. F-statistics was 1.9575 ($p=0.1324>0.05$) which indicated bank characteristics (bank size, liquidity, and profitability) had an insignificant effect on dividend payout. The main objective of the study was to investigate effects of bank characteristics (bank size, liquidity, and profitability) on dividend payout and the results are as shown below:

Table 11: Effect of Bank Characteristics on Dividend Payout

Bank Characteristic	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	P
Bank Size	-0.000200	0.000638	-0.04979	-0.313670	0.751301
Liquidity	-0.097880	0.045800	-0.30686	-2.137120	0.037503
Profitability	-0.002221	0.002537	-0.12572	-0.870980	0.387928
_Cons	0.495226	0.093075		5.320741	2.43E-06

R-sq: within = 0.105107

F Statistics = 1. 957531

Prob>chi^2 = 0.132371

Source: Research data, (2022)

Established from the findings above, the subsequent equation was developed:

Dividend Payout = 0.495226 + -0.0002 (Bank Size) + -0.09788 (Liquidity) + -0.002221 (Profitability)

4.4.1 Effect of Bank Size on Dividend Payout

Bank size was proxied by market capitalization. To accomplish the first specific objective a null hypothesis, H_{01} in chapter one was developed. From table 4.11 bank size coefficient (β=-0.0002, p=0.751301>0.05) indicates negative insignificant correlation between bank size and dividend payout at 0.05 significance level. Therefore, at critical level of significance, the null hypothesis H_{01} was not rejected. The finding therefore suggested that during the study period between 2016-2021 bank size had no significant effect on dividend payout.

The study findings agrees that of Okoro *et al.* (2018) who found a negative insignificant effect of size for consumer goods companies in Nigerian. The study also agrees with Pattiruhu and Paais (2020) who found a negative insignificant effect for real estate companies in Indonesia. In India, Katakwar *et al.* (2021) as well found a negative insignificant effect for Nifty 50 Index companies listed at the National Stock Exchange.

The study findings however contradict findings by Kiangi *et al.* (2022) who found a significant effect for commercial banks in Tanzania. The study findings also contradict findings by Nyere and Wesson (2019) in South Africa who found a positive significant effect for industrial companies and Ogundajo *et al.* (2019) in Nigeria who found a negative significant effect for manufacturing firms. In Asia, the findings contradict the findings by Brahmaiah *et al.* (2018) in India and Rahmadi (2020) for banks listed at the Indonesia Stock Exchange.

4.4.2 Effect of Liquidity on Dividend Payout

Liquidity was measured by book-to-market value. To accomplish the second specific objective a null hypothesis, H_{02} in chapter one was developed. From table 4.11 liquidity coefficient (β=-0.09788, p=0.037503<0.05) indicates negative significant correlation between liquidity and dividend payout at 0.05 significance level. Therefore, at critical level of significance, the null hypothesis H_{02} was rejected. The finding therefore suggested that during the study period between 2016-2021 liquidity significantly affected dividend payout of Tier I banks in Kenya. The negative coefficient of liquidity of -0.09788 indicate that an increase in liquidity reduced dividend payout.

In Sub Sahara Africa, the study findings agrees that of Kiangi *et al.* (2022) who found that among commercial banks in Tanzania, liquidity showed negative but small effect. The study also agrees with Ogundajo *et al.* (2019) and Abiahu *et al.* (2018) whose study in Nigeria found a negative significant effect for manufacturing firms and listed companies respectively. In South Africa, Nyere and Wesson (2019) as well found a negative significant effect for industrial companies. In South Asia, the study findings also agree with Brahmaiah *et al.* (2018) findings in India.

The study findings however contradict findings by Okoro *et al.* (2018) who found positive significant effect for consumer goods companies in Nigerian. In Asia, the study findings also contradict findings by Pattiruhu and Paais (2020) in Indonesia and Katakwar *et al.* (2021) in India who found a negative insignificant effect.

4.4.3 Effect of Profitability on Dividend Payout

Profitability was measured by earnings per share. To accomplish the third specific objective a null hypothesis, H_{03} in chapter one was developed was developed. From table 4.11 profitability coefficient (β=-0.00221, p=0.387928>0.05) indicates negative insignificant correlation between profitability and dividend payout at 0.05 significance level. Therefore, at critical level of significance, the null hypothesis H_{03} was not rejected. The finding therefore suggested that during the study period between 2016-2021 profitability had no significant effect on dividend payout.

In Sub Sahara Africa, the study findings agrees that of Abiahu *et al.* (2018) and Okoro *et al.* (2018) whose study in Nigeria found an insignificant effect for listed companies and consumer goods companies respectively. In Indonesia, the study findings also agrees that of Pattiruhu and Paais (2020) and Rahmadi (2020) who found a negative insignificant affect for real estate companies and banks respectively.

The study findings however contradict study findings by Kiangi *et al.* (2022) who found positive significant effect for commercial banks in Tanzania, Nyere and Wesson (2019) who found positive significant effect for industrial companies in South Africa while in in Nigeria, Ogundajo

et al. (2019) found negative significant effect for manufacturing firms. The study findings as well contradict study results by Brahmaiah *et al.* (2018) in India who observed negative significant effect at the National Stock Exchange.

5.0 Summary and Conclusions

The empirical findings of this study concluded that liquidity had negative statistically significant effect while bank size and profitability have a negative statistically insignificant effect on dividend payout. The results of the study are related to Tier I banks in Kenya between 2016 and 2021. Panel data was collected from respective banks audited and published annual financial reports. Market capitalization was used as measurement for bank size, earnings per share as measurement for profitability and book-to-market value as measurement for liquidity. The empirical negative statistically insignificant correlation linking bank size and dividend payout shows insignificant existence of size effect in Tier I banks in Kenya. Bank size and liquidity are directed by financial distress, momentum effects, contrarian effects and growth options in the market. As much as the empirical results have undergone several robustness tests, the sample period contains a shorter time-period than earlier studies.

Retained earnings and liquidity remain the most significant determinants of dividend payout. Accordingly, if commercial banks choose to retain earnings in their capital base rather than to distribute dividends, the impact could be a boost in the bank lending capacity thereby improving its market value by maintaining an ideal capital structure since the target capital structure is that which maximizes banks' value. Consequently, additional lending supplied could lead to higher interest earnings which determine availability of profits and cash flows to support dividend payout. Higher profitability signals more earnings and cash flows which can be capable of managing larger cash out flows.

Covid-19 pandemic had a big effect on the banking sector. In addition to losses incurred from credit losses, lending also was affected by banks putting greater caution due to credit default risk. In part, lending has the propensity of being procyclical because of tightening of lending guidelines as a reaction to economic shocks. In years 2019 and 2020, several regulators including Central Bank of Kenya recommended that banks should conserve capital by suspending dividend payout. This was driven by the need to build buffers and improve banks capability to soak up losses, strengthen lending and support economic activity. This study identifies several similarities and inconsistencies with other emerging markets that bank management, regulators, investment managers, fund managers, securities analysts, and marginal investors may need to consider.

6.0 Recommendations

This study recommends banks to consider capital base as well as financial needs when deciding the dividend payout. They should consider the significance of retained earnings as a determinant of dividend payout. Additionally, they should consider the impact dividend payout has on cash

flows constraints and liquidity of the bank. Accordingly, if commercial banks choose to retain earnings in their capital base rather than to distribute dividends, the impact could be a boost in the bank lending capacity. Consequently, additional lending supplied could lead to higher interest earnings which determine availability of future profits for dividend payout. However, higher retained earnings might lead to agency problem and agency costs if the excess free cash flow is not invested in profitable ventures.

This study also recommends CBK to decrease the Cash Reserve Ratio (CRR). Reducing the CRR leads to higher lending capacity. Consequently, banks will reduce the interest rate which will encourage customers to borrow loans. In addition, reduced CRR leads to banks having more money to invest in other income generating ventures. Reduced CRR signals that bank will have higher profit margins. This study further recommends banks to plan for economic shocks which may lead regulators to recommend conservation of capital by suspending dividend payout driven by the need to build buffers and improve banks capability to soak up losses, strengthen lending and support economic activity.

The study recommends that Nairobi Securities Exchange (NSE) should consider an alternative stock classification system which categorizes stocks in same sector based on size and value. This classification system will give a clear insight of stocks risk-return trade off characteristics at the Nairobi Securities Exchange (NSE), which the current classification system does not give.

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