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EXPLORING THE IMPACT OF FINANCIAL MARKET FRICTIONS ON THE PERFORMANCE OUTCOME OF THE NIGERIAN BOURSE

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ABSTRACT

Financial market frictions have continued to be a key factor limiting the ease of trading n securities in the capital markets of developing countries globally. It is on this premise that this study investigated the implications of financial market frictions on the Nigerian capital on the empirical fronts using time series data from 1992 to 2021. The aim of the choice of this period is to ascertain the presence or not of financial market frictions and how they impact on the Nigerian capital market. The time series data where sourced from the Central Bank of Nigeria (CBN) statistical bulletin, world development indicators (WDI) and the Nigerian Stock Exchange Fact Book. The data were analyzed using the ordinary least squares (OLS)multivariate regression technique.Findings arising from the data analysis showed that asymmetric information and transaction costs exerted a negative and significant impact on the capital market of Nigeria. Tax and regulation exerted a positive and negligible influence and was statistically significant on the capital market of Nigeria. The study therefore concluded that financial market frictions are risky and stunt the growth and size of the capital market in Nigeria. The study recommends that there is need to examine the effects of financial market frictions on the money market in Nigeria by future researchers. The transaction cost in the capital market is a determinant of the financial market friction and should be properly handled to encourage investment in shares and full participation in the capital market.

Keywords: Financial Market, Frictions, Transaction Costs, Market Efficiency, Tax, Information Asymmetry, Capital Market.

1.0 INTRODUCTION

Financial market frictions are anything that prevents investors from taking advantage of those opportunities and they can also be regarded as those factors that interfere with trades in the financial markets and in turn adversely impact on economic activities in a country (Oshadere, Idolor&Adelowotan, 2022). Financial market frictions are key variables which often influence driving both short-run economic fluctuations and long-run economic growth. The minimization of financial market frictions has the potency to drastically enhance capital market efficiency, reduce macroeconomic volatility and enhance economic growth potential (Poyry, 2014).The effective functioning of smooth functioning of financial markets is crucial for the health of the whole financial system and for the well-being of the economy in general. One of the primary functions of capital market is to channel funds from the surplus units to the deficit units, and by so doing, the financial markets is able to channel funds within an economy. Most times, the ability of the capital market to effectively undertake these functions is limited due to financial market frictions. Financial market frictions by their nature hamper

the efficiency of the capital market such that price do not reflect publicly available information. In other words, the fundamental effect of financial market frictions is to drive market inefficiency. According to Ogbeide and Osamwonyi (2021), capital market is inefficient if the stock price is not accurately reflecting new information. This may be because the investors or participants in the capital market are not able to interpret the new information correctly or there is high financial market friction such as transaction cost which serves as an obstruction for trading freely in the market. This portends that lower the degree of financial market frictions such as transaction cost, brokerage fees, asymmetric information cost/agency cost, floatation costs, and among others, the higher the level of operational efficiency and by extension, the higher the level of information and efficiency of the capital market.

The bane of every markets particularly the Nigerian capital market, just like every other capital markets in the world is financial market frictions which do occur in form of asymmetric information, floatation costs, high/unequal brokerage fees charge by stock brokers to investors, environmentally unfriendly government regulations, high cost of taxation, such as unfavourable capital gain tax, withholding tax, etc.

Regulations and taxes in the context of this study are the rules and laws passed by legislative bodies as well as rules imposed by government agencies and industries over transactions in the capital and non- capital markets. For example, in Nigeria, some firms in some industries are highly regulated and taxed. Examples of those firms are banks and tobacco companies which the Federal government is seriously keen about, regulates and also subject to taxation. The end points of all these, create cost of doing businesses by these firms, thus resulting to financial market frictions.In the context of Nigeria, having access to cheap cost of funds from the capital market affects investment in securities in the stock market generally. The Federal Ministry of Finance and the Central Bank of Nigeria (CBN) saddled with the responsibility of setting and regulating the monetary policy rate (MPR) have not done fairly well as expected. The interest rate charges from commercial banks and capital market participants are practically unfriendly to potential and exiting investors. They serve as frictions in the smooth access to obtaining investible funds for securities and capital investments by individual investors, corporate bodies and the governments at large. Again, capital market participants do charge high brokerage fees, the Securities and Exchange Commission(SEC) and other bodies do charge high listing fees, and floatation costs, given the unstable macro-economic environment in Nigeria are furtherheightening financial frictions in the capital market. The import is that all these financial frictions affect securities transactions, reduce volume and value of shares traded in the Nigerian capital market, and consequently affect the market capitalization and All Share Index (ASI). It is this premise that form the justification for assessing the association between financial market frictions and the Nigerian capital market, with emphasis on market capitalization.

Statement of the Research Problem

This study is unique and peculiar in that unlike previous researches such as Ogbeide and Osamwonyi (2021) on literature exploration of financial market frictions; Ikponmwosa and Edo-Osagie (2021) which focused on financial market frictions and capital market inefficiency in Nigeria; Oshadare et al. (2022) which examined financial market frictions and stock market performance, using market capitalization. This study takes a departure from the aforementioned studies and focuses on how financial market frictions impact on the All Share

Index in the Nigerian capital market. Additionally, studies involving financial market frictions and the capital market in developing climes like Nigeria are relatively scanty to the best of the knowledge of the researchers. Even few of the prior studies on the subject area in both developed and developing countries have produced mixed and glaring inconclusive findings (see Oshare et al. 2022;Ikponmonsa& Edo-Osagie, 2022; Quadrini, 2011; Levin, Perill&Zakrajseck, 2018). This study therefore seeks to investigate the research topic by raising the following specific research questions.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Financial Market

Financial markets are markets where companies and individuals with excess funds lend them out to companies and individuals that need the funds. The lenders in the financial market include the government, individuals, firms and foreign institutions such as the World Bank and international Monetary Fund (IMF) while the borrowers also include corporate bodies, individuals and the governments. Financial markets are where buyers and sellers, lenders and borrowers interact to buy and sell transact financial assets such as shares, bonds, gold, foreign currencies, etc.The size of a financial market differs from one country to another. For example, the financial markets of more developed nations such as London, Canada, Japan and Germany are larger than those of developing countries like Nigeria, Egypt, Ghana, among others.

Financial markets instruments are goods traded in the financial markets. Financial instruments are means through which provision and borrowed funds can be accessed in the money and capital markets and other markets which make up the financial markets. Financial market instruments are the claims of the investors such as shares and bonds securities. Financial markets instruments can both be assets and liabilities in operation. This is because the assets of one become liabilities to another. For instance, when an investor buys units of shares in a company, it is assets to the investor but liabilities to the company invested into. Similarly, a huge sum of money lent out by a creditor to a firm is an asset to the creditor but a liability to the borrowing individual/company.

2.1.2 Financial Market Frictions

Financial market frictions are factors that measure the difficulty, quantified as a cost or time, with which an asset is traded on a financial market (Stoll, 2000). As noted by Zhu (2013), a financial market friction could be any factor that impacts how long it takes to trade a given amount of an asset at the optimal price. Financial market frictions are synonymous with market imperfections. In the context of this study, the researcher considers market imperfections, defined as market features that contradict the assumptions of traditional efficient market theories (Oshadare, Idolor&Adewolotan, 2022). Financial market frictions or market imperfections cause a market participant to deviate from holding the market portfolio. Transaction cost is an integral aspect of financial market frictions (Ikponmwosa & Edo-Osagie, 2021). Taxes and transaction costs are common and obvious examples of financial market frictions as they irrefutably affect virtually every transaction.

It was Ogbeide and Osamwonyi (2021) who averred that a financial market friction is anything that interferes with trade. Financial market frictions by their nature do influence participants in the market to easily deviate from holding portfolios and also affects the

efficiency of the capital market generally. This is so since they interfere with trading in securities in the stock market. Capital markets in developing countries are mostly susceptible to serious financial market frictions because of macro-economic instability and weak institutional framework. Obviously, financial market frictions affect investors' confidence, induce fear, panic, emotion as well as influence their sentiments.

Stoll (2000) defines financial market frictions or imperfections as those factors that measures the difficulty with which a financial asset is traded in the financial market. The author identifies these factors to include time and cost of transaction. Taxes and transaction costs are common examples of market frictions as they undeniably affect most transactions (Keyness, 1936, Summers & Summers, 1989; Wurgler, 2000). However, Lippman and McCall (1986) noted that a friction could be any element that affects the length of time it takes to consummate transaction on a given amount of asset at the optimum price. Recall that most assets can quickly be sold at fire-sale price. Poyry (2014) consider market imperfections as a similar concept to frictions and defines it as market features that contradict the basic assumptions of efficient market theories.

2.1.3 The Concept of Capital Market

Capital market is a segment of the financial market. It is the long arm of the financial market. The capital market is a market for medium and long term financial assets investments. It is the market for buying and selling of equity and debt instruments. Capital market channels savings and investment capital from suppliers of capital such as individual investors, government or corporate investors and users of long term funds which also include the governments, corporate organizations and individuals. Capital market can be regarded as the engine of economic growth. The capital market is a source of generating huge capital for investment thereby promoting the generation of economic output, reduction of unemployment. Capital market is primarily classified into equity market and bond market. In the equity market, equity (stocks) of listed firms are sold and bought; while in the bond market, bonds (government and corporate bonds) are traded by investors. In the capital market, both equity and debt (bonds) are traded as a capital by investors; it is referred to as capital market.

2.1.4 Segments of the Capital Market

2.1.4.1 The Primary Market

In the primary market, stocks and bonds are sold directly to companies, potential and existing individual investors and institutional owners through underwriting. The primary market is where securities are sold and bought for the first time through intermediaries in the capital market. In the primary market, equities are sold for the first time to potential and existing investors by publicly quoted (registered) companies in the stock exchange. Companies not quoted on the stock exchange cannot sell shares or bonds in the primary market directly to investors for the first time. It is against the Securities and Exchange Commission rule.

2.1.4.2 Secondary Market

The secondary market is the market where existing securities such as shares and debts are sold and bought over the counter (OTC). Secondary market is a segment of the capital market where trade over – the – counter takes place. In over – the – counter market, buyers and sellers transact with each other not through a stock exchange but through negotiations. The price at

which securities (shares and bonds) are bought over e counter may not be the same as the corresponding transactions in stock exchange. In the secondary market, the buyers and sellers do agree upon the most competitive price based on constant contact through computers with other market participants. The secondary market enables investors to easily sell their securities if they wish to do so. This why the marketability of securities is a very vital aspect of the capital market in that investors are more willing to buy stocks if they know that they could sell them easily if they wish to do so. Through this the capital market is said to facilitate liquidity trading of stocks.

2.3 Classes of Financial Market Frictions

De Gennard and Robotti (2007) grouped financial market frictions broadly to include transaction costs, taxes and regulation, asset indivisibility, non-traded assets, agency and information problems. The study further divides transaction costs into cost of trade and the opportunity cost of time. The costs of trade include telephone charges, postage, computer power, data analysis, internet subscription, and similar out of pocket expenditures (DeGennaro and Robotti, 2007; Ogbeide &Osamwonyi, 2021; Oshadare et al. 2022). With advancement in communication technology and proliferation of hand – held devices, these costs have been declining in recent times. For the opportunity cost of time, it is observed that trading takes time, which includes the cost of searching or the time required to gather information, (including seeking a counter party for a given trade) and the time to make and monitor the trade. Efforts to minimize these costs represent profit opportunities. Since the dawn of the twenty first century exchanges and markets have been making more efforts to leverage on automation. The beliefin this study is that in the near future, exchanges will take advantage of Blockchain Technology, Artificial Intelligence (AI), Robotic Engineering, Big Data Science, Internet of Things (IoT) among others to enhance their operational efficiency and reduce costs of transaction. Taxes and regulations are another major class of market frictions which might be explicit as in the case of company income tax, capital gains tax or even implicit, such as when a given regulation like the prohibition of short selling. Inability to implement short selling strategy can cause investors to incur portfolio loses in a bearish market. This is usually very pronounced in Nigeria, where there are strict rules against short selling as at present.

2.4 Consequences of Financial Market Frictions

In his essays on financial market frictions, Poyry (2014) addressed the primary objective of the financial markets, which is financial intermediation and risk management. In other words, the aim of the financial market is to harness and channel capital from those with low marginal returns to invest to those with high marginal returns (that is from surplus units to deficit units). This is typically done by the former saving and the latter borrowing, but this channel is limited when the wedge between interest rates of savings and credit is sizable (high spread) as well as when the cost of consummating financial markets transaction is relatively high or prohibitive.

i. Financial market frictions cause an investor to deviate from holding the market portfolio..
ii. Financial market frictions generate costs that interfere with trades that rational individuals make or would make in the absence of such frictions.
iii. Financial market frictions cause a market participant to deviate from holding the market portfolio

iv. Financial market frictions prevent investors from holding the market portfolio or optimal portfolio.

2.5 Empirical Review

Oshadere, et al. (2022) empirically examined the various components of financial market friction and how they affect the Nigerian capital market with emphasizes on variables like transaction cost, taxes and regulations, asset indivisibility, non-traded assets and agency with information problems on stock market performance. Ex-post facto research design was used while the time series data from 1981-2018 was employed. The study used unit root test, co-integration test, correlation and regression estimation methods to analyze the time series data. The study found that the various components of market frictions affected the stock market performance in different ways and is also real determinants of the various responses to issues in the stock market. Gonatha and Juliana (2021) empirically investigated the effect of financial market frictions on the level of firm diversification in Indonesia from 2008 to 2017. The finding from the study reveals that well – diversified firm can mitigate the stocks arising from external market frictions. Onyesonimazun (2020) empirically examined the relationship between financial market frictions and the Nigerian capital market for a period of 25 years, precisely from 1992 to 2017. The specific aim of the study was to explain the behaviour of gross capital formation (GCF), foreign direct investment (FDI), total value of domestic shares traded (TST) and inflation rate (INFR) and their individual impact on market capitalization (MKTCAP). The study used the ordinary least square econometric technique. Findings from the study revealed that positive and significant relationship exists between gross capital formation (GCF) and market capitalization in Nigeria.

Bougheas and Falvey (2010) study the impact of financial market frictions on trade flows, capital flows and economic development. The study finds that underdeveloped financial markets are replete with agency costs and week institutions which prohibit economic specialization in sectors where finance is important. Conversely, capital tends to flow easily to countries with more robust financial institutions which in turn allow their economies to develop sectors that are financially dependent. In Nigeria for example, it has been recognized that the private sector plays a pivotal role in economic development and this research is inclined to the fact that the financial markets is the prime motor of the economy. However, it appears that high cost of transaction, high interest, and interest rate spread, weak institutions and regulatory obstacles tend to obstruct the wheel of business and economic progress. Businesses in the agricultural, industrial goods, transportation and healthcare sectors among others are constantly struggling to cope with the high cost of capital. Based on the stylized fact that financial friction drive wedges between savings and investment, Hall (2011) empirically investigated the relationship between high sensitivity of economic activity to financial frictions, using data from 2002 to 2009, using a dynamic model. The study finds that increased financial friction played an important role in the dramatic drop in global economic activities experienced between 2008 and 2009. In other words, the study lends credence to the argument that financial frictions essentially lead to market inefficiencies and mal-adaptions, causing prices to deviate significantly and persistently from their intrinsic value.

Deng, Zeng and Zhu (2019) studied the relationship between market frictions and political connections in determining financial constraints in China. Specifically, the study finds that firms facing severe market frictions are not as financially constrained as expected. This is

because these firms also possess strong personal costs, which alleviate the costs of market frictions. The research also ascertained that financial market frictions significantly affect financial constraints in Chinese firms.

Muai (2017) investigated the effect of market frictions on savings decision among members of Maasai Group Ranches in Kajiado county in Kenya. The study employed descriptive statistics and the ordinary least squares regression estimation method. The study established that market frictions were negatively and significantly related to saving decisions. This implied that an increase in market frictions such as transaction costs, lack of trust and regulatory barriers led to a decrease in saving decisions.

Karlan et al. (2014) observe that market frictions such as transaction costs, lack of trust and regulatory barriers affect provision of saving products especially among the poor. They noted that the use of formal saving products attracts costs such as account opening fees, minimum balance requirement, withdrawal fees, transport and other related costs. These costs are usually a large proportion of poor people's savings. If the cost associated with opening and running formal bank accounts is subsidized, the rate of up-take of formal savings accounts usually increases especially among the poor. In addition, there are other non-monetary costs which discourage mostly the poor from engaging in formal saving. For instance, opportunity cost in terms of time and forgone wages can discourage potential savers if they have to physically travel to the financial institutions offering saving products.

Aysun et al., (2011) examined the effect of financial frictions on the strength of the credit channel of monetary transmission using a DSGE model characterized by financial frictions as emphasized by Bernanke, Gertler, and Gilchrist (1999). They calibrated the model using parameter values for countries with different levels of financial frictions. The study found that the credit channel was stronger in countries with high levels of financial frictions. The stand of the study is that in the countries examined, external finance premiums are more sensitive to firms' financial leverage. By affecting asset prices and borrower leverage, monetary policy has greater impact on external finance premiums and output. The study also ascertained a positive relationship between various measures of financial frictions and the strength of the credit channel, confirming the predictions of the model.

Levin et al. (2005) examined the determinants of market frictions in the corporate market in the U.S. They constructed an empirical measure of market frictions in the corporate market based on the difference between the credit default swap spread and the corporate bond spread for a large number of firms in a new large dataset. The authors found that the causes of market frictions are both systematic and firm- or bond-specific factors. Mamaysty and Wang (2004) showed that even small transaction costs can have a substantial effect causing investors to refrain from trading. Hou and Moskowitz (2002) characterized the impact of market frictions on a stock's price via its delayed response to information using regression methodology. Findings show that small, volatile, and neglected stocks exhibit significant delay.

3.0 METHODOLOGY

This study used the longitudinal research designs. The population of the study is the Nigerian financial market. While the sample period constitutes the period 1992 to 2021). The time series data were generated from the Central Bank of Nigeria (CBN), the Nigerian Stock Exchange

Factbook; and the World development indicators. The data were subjected to analysis using the ordinary least squares multivariate regression estimation method. The ordinary least squares multivariate regression method in order to show the impact of financial market frictions on the Nigerian capital market. The model used in the study is modified and adapted from the study conducted by Aysun et al. (2011); and Levin et al. (2005). .

The mathematical form of the model is stated as:

Capital Market= f(Asymmetric information, Transaction cost, Taxes and Regulations)……...……...(1)

The stochastic form of the model is specified as follow:

$$Mcap_t = \beta_0 + \beta_1 BF_t + \beta_2 FC_t + \beta_3 CGT_t + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where; Mcap represents market capitalization; AIP represents agency and information problem, proxy with value of equity sold; FC represents floatation cost, proxy for transaction cost; CGT represents capital gain tax, a proxy for taxes and regulations. β1, β2, and β3 are the predictors. ε - is the error term.

EMPIRICAL ANALYSIS

Table 1: OLS Multivariate Regression Result showing the Impact of Financial Market Frictions on the Nigerian Capital Market

Dependent Variable: MCAP
Method: Least Squares
Date: 02/22/23 Time: 11:26
Sample (adjusted): 1993 2021
Included observations: 27 after adjustments
Convergence achieved after 9 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.700648	1.623544	1.663427	0.1104
BF	-0.585638	0.496309	-1.179987	0.2506
FC	0.007589	0.007266	1.044409	0.3076
TC	-0.068159	0.039674	-1.717982	0.0001
AR(1)	0.525391	0.168853	3.111523	0.0051

R-squared	0.542410	Mean dependent var	1.627159
Adjusted R-squared	0.459212	S.D. dependent var	3.148204
S.E. of regression	2.315136	Akaike info criterion	4.682390
Sum squared resid	117.9168	Schwarz criterion	4.922360
Log likelihood	-58.21227	Hannan-Quinn criter.	4.753746
F-statistic	6.519488	Durbin-Watson stat	1.532931
Prob(F-statistic)	0.001283		

Inverted AR Roots	.53

Source: Researcher's Compilation (2023)

Examination of the result in table 1, shows that the coefficient value of information asymmetry problem is negative (-0.585) and is statistically not significant on the Nigerian capital market. The implication is that asymmetric information, which is a component of financial market

friction adversely affects the growth and size of the capital market Nigeria. The study finding is in line with Ogbeide and Osamwonyi (2021) which stated that agency costs and asymmetric information have been the bane of the Nigerian capital market. These asymmetric information problem for example between investors and market participants like the stock brokers may hinder volume of transaction, especially equity traded, thus limiting the growth and size of the capital market in the context of Nigeria. Once the transactions in equity shares of firms are low, it makes the market bearish and thus affects the size of the market, which in this case is the market capitalization, and consequently the economic activities and performance in a country. The finding is somewhat consistent with the research outcome of Oshadere et al. (2022).

Tax and regulation, proxy with capital gain tax exerted a negative influence (-0.068) and is statistically significant on the capital market of Nigeria. The import is that tax serves as a market friction which impacts on businesses and investment, and thus affects adversely the capital market activities in Nigeria. For instance, any decrease in capital gain tax can potentially have a negative impact on institutional and individual investors, in that it erodes their capital gain value. This may further send negative information to the stock market and thus reduce the stock price value. The finding is in tandem with the research conducted by Gale et al. 2015; Ojong et al. (2016); Eragbheand Ogbeide (2018)

Floatation costsis observed to have a significant positive coefficient value of (0.007) on the Nigerian capital market. The result is a pointer that the value of floatation costs has not contributed adversely to the growth and size of the capital market in Nigeria. This may be because the amount and value of securities sold and bought in the capital through initial public offering is low; and that case, floatation costs are also expected to be low; consequently its impact is negligible on the growth and size of the capital market. The finding agrees with the study of Ogbeide and Osamwonyi (2021); Oshadare et al. (2022); Ajibola and Oluwole (2018). The adjusted R-square values indicate all the explanatory variables of financial market frictions jointly contribute about 45% adversely on the Nigerian capital market. Despite this, the F-statistics connotes that the variables were statistically significant. The Durbin-Watson statistics value is approximately 2, suggesting the removal of autocorrelation and usefulness of the result for policy implications in the context of Nigeria

5.0 CONCLUSION AND RECOMMENDATIONS

The study extensively examined the impact of financial market frictions on the Nigerian capital market using time series data from 1992 to 2021. The aim of the choice of this period is to ascertain the presence or not of financial market frictions and how they impact on the Nigerian capital market. Financial market frictions indicators like agency and information asymmetry, taxes and regulation and transaction costs were employed to assess the impact on the capital market of Nigeria. Findings arising from the data analysis showed that asymmetric information and transaction costs exerted a negative and significant impact on the capital market of Nigeria. Tax and regulation exerted a positive and negligible influence and was statistically significant on the capital market of Nigeria. The study therefore concluded that financial market frictions are risky and stunt the growth and size of the capital market in Nigeria. The study recommends that there is need to examine the effects of financial market frictions on the money market in Nigeria by future researchers. The transaction cost

in the capital market is a determinant of the financial market friction and should be properly handled to encourage investment in shares and full participation in the capital market.

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