Initial Public Offering Timing and Equity Puzzles in Nigeria Capital Market: Evidence from Quoted Small and Medium Scale Enterprises

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DOI: 10.56201/ijbfr.vol.11.no2.2025.pg54.79

Abstract
The study empirically examines initial public offering and the equity puzzle of quoted small and medium scale enterprises in the Nigerian Capital Market for a period of 3 years from 2022-2024. The equity prices variation in the Nigerian Stock Market and the Nigerian Treasury Bill Rate were used to ascertain the existence or otherwise of equity risk premium puzzle. The equity prices variation was measured as the log of current price index as a ratio of lagged price index of quoted small and medium scale enterprises. The empirical results generally reveal the adjusted R-squared (R2) value is 0.516450 that is 51.6 percent implying that the independent variables The F-statistic value is 5.599440 and its p-value is 0.000009 indicating that the independent variables jointly can impact significantly in equity puzzles of the quoted small and medium scale enterprises of the quoted enterprise firms. The Durbin-Watson reveals that there is no serial correlation in the variables. The beta coefficient of constant is positive with the value of 0.663698 and its p-value is 0.0000 indicating that when all the independent variables are held constant, there will be a positive variation up to the tune of 0.6 units in equity prices puzzles of the quoted SMEs of the quoted enterprise firms and it is significant. Additional, the coefficient value of fixed price initial public offer is 0.080704 band p-value is 0.0000 implying that price initial public offer has a positive coefficient and significant to influence equity prices puzzles of the quoted SMEs. The coefficient value of book building initial public offer is 0.017991 and its p-value is 0.9099 meaning that book building initial public offer is positive and not significant to impact on equity prices puzzles of the quoted SMEs. The Cross-section random effects test comparisons shows that there are significant differences between the fixed and the random effect models. The outcome of the results is therefore rather inconclusive, suggesting that generally long run co-movements cannot be established between initial public offering and Equity Risk Premium. Thus, the Equity Risk Premium cannot be confirmed in the study in Nigeria. The study recommends, among others, that appropriate policy that will take into account these differences in investors' preferences should be vigorously pursued.

Keywords: Initial Public Offering, Equity Price Puzzles, Nigeria Capital Market, Small and Medium Scale Enterprises

INTRODUCTION

The issue of equity puzzle has remained in the front burner of academic, finance and economics discus in journals and literature across the globe till date, the reason being that, it is a puzzle that still puzzle the global financial circuit and has attracted several studies attempting to explain it in several countries-specific studies. Equity premium puzzle is a term coined by Mehra and Prescott (1985) described the improbably high risk aversion an investor must have to own bonds given the immense equity return premium offered by equity markets. In their study on the US market, they observed that between 1889 and 1978 the average risk free rate was less than 1% and while the average equity returns was 7%. The equity risk premium otherwise known as the equity premium is the return that an investor expects over and above the risk-free rate of return in exchange for investing in common stock instead of government bonds (Mehra & Prescott, 1985). The equity puzzle is the differential between return to equity and return to safe assets in excess of the premium that can be explained on the basis of a reasonable degree of risk aversion. In addition to relative volatility and risk aversion some macroeconomic fundamentals can explain the return differential, such as consumption smoothing, liquidity constraints, financial sector development, age composition of investors, and differences between the tax rates applying to equity earnings and safe asset returns. After accounting for the impact of such fundamentals on equity and safe asset returns, the observed differential between the two returns still be large to the extent that it implies an extreme degree of risk aversion, which is empirically unsupported.

The new issue puzzle has been researched in Loughran and Ritter (1995). The operating performance of firms, conducting the seasoned equity offering, has been investigated in Loughran, Ritter (1997). The uniformly least powerful tests of market efficiency have been completed in Loughran and Ritter (2000). An empirical investigation of the impact of the initial public offerings mispricing on the underwriter market value has been conducted in Nanda. The timing and subsequent performance of the initial public offerings on the Johannesburg stock exchange have been described. The analysis of valuation changes of the initial public offerings has been presented in Rajan and Wulf, (2006). The effect of the market conditions on the initial public offerings has been described in Rajan, Servaes (1997b). The initial public offerings underpricing as the tax-efficient compensation has been discussed in Rydqvist (1997).

From the behavioral finance perspective, the following explanations for this irrational behavior are plausible. First, given the problem of the winner's curse, firms (in conjunction with their underwriters) may have to under-price shares, on average, to keep the market for IPOs functioning by providing liquidity to investors and owners. This market is vital to entrepreneurs who wish to harvest the value in their startup firms. Generally, relatively unsophisticated investors receive larger allocations of the initial public offerings with negative returns and smaller allocations of those with positive returns. Unless these investors receive winners at an acceptable frequency, they would eventually cease participating in the market. Another theory is that the information advantage of investment banks over initial public offerings issuers can be utilized to under-price the issue. Arguably the underwriter knows the market and what it will bear. An oversubscribed offering increases their attractiveness to the issuing firm. As a result, underwriters have an

incentive to under-price the initial public offerings to ensure that investors will fully subscribe to the offering and maybe even want more. On the down side, if an offering is not oversubscribed, the reputation of the underwriting syndicate may be damaged.

Theory is a generalized statement that asserts a connection between two or more types of phenomena or any generalized explanatory principle. It is a system of interconnected abstractions or ideas that condenses and organizes knowledge about the world. Theory allows the researcher to make links between the abstract and the concrete; the theoretical and the empirical; thought statements and observational statements. Theories relevant to this study are: Efficient-market hypothesis, fundamental analysis market value, technical analysis theory of equity price, rational expectation theory and macro variable Model, portfolio theory and dividend relevance theory. Early researchers explained initial public offer underpricing by pointing to information asymmetry among the principal initial public offer stakeholders-issuers, investors, and underwriters as the primary cause (Baron, 1982; Leland & Pyle, 1977; Rock, 1986). Moreover, much of the existing research on this topic sampled companies and IPOs primarily from developed, emerging, and large developing economies (Ritter, 2017). Chen, Wang, Tong, and Zhu (2017) who investigated the relationship between initial public offer underpricing and economic freedom across countries questioned why the degree of initial public offer underpricing vary so widely between developed and developing countries. Initial public offer underpricing can negatively impact a company's initial public offer proceeds, its capacity to capitalize on growth prospects, and by implication, employment opportunities (Miloud, 2014; Ritter, 2015).

Rock (1986) attributed underpricing to asymmetrically distributed information but his analysis focuses on the advantage informed investors enjoy over the uninformed. In his framework, only uninformed investors submit purchase orders for overpriced issues and they receive 100 percent of the issue, whereas both informed and uninformed investors submit purchase orders for underpriced issues and the shares are subsequently rationed between them. Thus, uninformed investors face a "winner's curse" because they have a greater probability of being allocated shares in overpriced and undersubscribed issues rather than in underpriced and oversubscribed issues. Allen and Faulhaber (1989), Grinblatt and Hwang (1989), and Welch (1989, 1992) proposed that initial public offer underpricing is a mechanism for signaling firm quality: high quality issuers purposely underprice initial public offers for more successful seasoned equity offerings (SEOs) in the future. This study examined the effect of Initial Public Offering Timing on Equity Puzzles in Nigeria Capital Market with focus on Quoted Small and Medium Scale Enterprises.

LITERATURE REVIEW

Initial Public Offering

Initial public offering referred to the first time a company offered its shares of capital stock to the general public. The objectives for "going public" are found in a demand to raise funds from the market to invest in a project, in promotional purposes, or in order to diffuse ownership structure. The results of an IPO noticeably improve the financial situation of a company. From an accounting point of view, the debt-to-equity ratio is improved, resulting in an easier attraction of debt capital.

Viewed from an internal perspective, the capital attracted through an IPO may be used to stimulate innovation and expansion financing. For investors, an IPO helps the current shareholders to "cash out" on their early investments in the firm.

The desire to have a publicly traded stock, hence having a market-based valuation, also makes it easier to facilitate stock-financed acquisitions by conducting interviews with CFOs, Brau & Fawcett (2006) found this acquisition motive to be the primary motivation for going public. A number of researchers have more closely examined companies' desire to make acquisitions after going public. Celikyurt, Sevilir, & Shivdasani (2010), Brau & Fawcett (2006) Hovakimian & Hutton (2010), Hsieh, Lyandres, & Zhdanov (2009) all reported similar findings about a high frequency of acquisitions made by companies that had recently gone public. Shareholders benefit from an IPO by the increase in their shareholder value, and by gaining an opportunity to diversify their portfolio. However, the main reason for "going public" is found in a demand for building a stronger equity base as a starting point for financing further company growth. A stronger equity position often counts as a prerequisite for higher future leverage (Hamer, 2007). 1.2 IPO process A typical IPO in the U.S. starts with the company choosing an investment bank to manage its IPO (Ritter, 2011). In order to lawfully offer and sell shares, a company has to register its offerings with the Securities and Exchange Commission (SEC).

Once given the status of "Offer effective", the investment bank brings the company in contact with institutional investors. Based on management-based pitches, the institutional investors provide feedback. Investors provide indications of interest during this "road show". In a process called "book building", all of these indications are combined in a "book", after which the investment bank prices the company. Based on this road show and the interest of potential investors, both the issuer and book-runners decide to alter the first price range. Research has shown a downward revision resulting in less underpricing, and vice versa for upward revision. Hanley (1993) showed the altered prices compared to first-day returns, and found a first-day return of 3%, 11% and 50% for adjustments below, within and above original price range, respectively. The final step in the preparation of an IPO is a validation of the interest of the institutional investors, followed by an allocation of shares. Shortly after allocating the shares, the trading begins (Sec, 2013). The IPO process (along with IPO underpricing) is influenced by specific details of institutional frameworks.

Equity Price Puzzle

In corporate financial analysis, equity premium puzzle (EPP) is a phenomenon of the enigma of the observed anomalously higher historical real returns of stocks that exceeded government bonds, that standard asset-pricing model could not explain. EPP signifies the incapability of essential class of standard models of economics to provide valid explanations to the average premium associated with a well-diversified U.S. equity portfolio that exceeded the U.S. Treasury Bills detected over a period of more than 100 years. It connotes the empirical reality of the outperformance of stocks over bonds over a period exceeding 100 years by a surprisingly large margin. The puzzle represents the inability of standard inter temporal models of economics to give explanations to the extremely large magnitude connected with the perceived return that a risky security received above that of Treasury bills (Mehra & Prescott, 1985; 2003).

The term was coined by Mehra and Prescott in a celebrated study 'The Equity Premium: A puzzle', that was published in 1985. EPP is a descriptive phenomenon of the uncharacteristic extremely large historical stocks real returns in excess of government bonds than would otherwise be expected. It refers to the exceptionally large average equity returns over bonds returns. Specifically, it connotes the very high or astonishing average stocks real return rates over bills (treasury bills) above the theoretically expected or assumed, culminating in a puzzle that needs to be unravelled (Kocherlakota, 1996). The differential that subsists between the stocks rate of return and the return rate on bills-the equity premium astonishingly averaged 6.18% each year (i.e 6.98% - 0.98%). According to Abel (1991), if the difference between the stocks return rate- the riskier assets and the less risky assets (safer assets)- and treasury bills per year, on the average, is astronomically higher than would have been the case, observed or expected, it is an equity premium puzzle. Such astonishing differential rate of return between equity (stocks) and bonds is a violation of the optimal allocation of resources-based competitive general equilibrium theory by Pareto and Arrow-Debreu (Gomes, et al., 2013).

The equity premium puzzle, a term coined by Mehra and Prescott (1985), is the inability of a standard representative consumer asset pricing model, using aggregate data, to reconcile the Historical Equity Premium (HEP). To reconcile the model with the HEP, individuals must have implausibly high risk aversion according to standard economics models. The Required Equity Premium (REP) of an investor is the incremental return that the investor requires, over the risk-free rate, for investing in a diversified portfolio of shares. It is a crucial parameter in valuation and capital budgeting because the REP is the key to determining the company's required return to equity and the required return to any investment project. The term "equity risk premium puzzle", has been a subject of discussion in finance literature in recent years. There is yet to be a unified conclusion by researchers about the existence or non-existence of this puzzle in most economies studied. The equity premium puzzle refers to the fact that common equities have offered a very high real risk premium over that of risk free T-bills, which leads to unexplainable high risk aversion of the investors. It is defined as the reward that investors require to accept the uncertain outcomes associated with owning equity securities. The equity risk premium is measured as the extra return that equity holders expect to achieve over risk-free assets, on average. The Capital Asset Pricing Model (CAPM), an asset-pricing model based on equilibrium with agents having mean-variance preference, gives us basic intuition about the trade-off between risk and return. Usually, the riskiness of an asset is compensated by a higher return, which can be illustrated by the CAPM.

Mehra and Prescott (1985) originally referred to it as the inability of standard neoclassical economic theory to reconcile the historically large realized premium of stock market return over the risk free rate with its low covariability with aggregate consumption growth. By now, the term encompasses a number of empirical regularities in the prices of capital assets that are at odds with the predictions of standard economic theory. Over the last two decades, as one of the most famous puzzles in asset pricing, the equity premium puzzle has been intensively investigated by many economists and researchers. Consequently, there have been several explanations and theories

developed concerning the equity premium puzzle, for instance, market segmentation (Mankiw and Zeldes, 1991), myopic loss aversion (Benartzi and Thaler, 1995), survival bias (Brown and Goetzmann, 1995), habit formation of investors (Campbell and Cochrane, 1999) and disappointment aversion (Ang, Bekaert & Liu, 2005).

Constantinides (1990) argued that the equity premium puzzle could be resolved by habit persistence. He proved that "the equity premium puzzle is resolved in a rational expectations model, once we relax the time separability of preferences and allow for adjacent complementarily in consumption, a property known as habit persistence." Investors tend to be more sensitive to short-term consumption fluctuation and thus then require a higher premium given the degree of risk aversion because of the time non-separability of consumption and positive subsistence rate of consumption. Constantinides's findings were further developed by Campbell and Cochrane (1999). In their habit formation model, utility function with both consumption growth process and a slow-moving external habit is "independently and identically distributed". Moreover, Campbell and Cochrane (1999) claimed that investor require higher premium due to stocks' bad performance during recession periods, rather than the price fluctuation itself which may reduce investors' wealth. They used this model to explain a wide variety of dynamic asset pricing phenomena.

Another explanation comes from Mankiw and Zeldes (1991). They pointed out that only one quarter of U.S. families own stock and used 17 years of data from the Panel Study of Income Dynamics to examine consumption differences between stockholders and non-stockholders. Consequently, Mankiw and Zeldes (1991) proved that aggregate consumption of stockholders substantially differs from that of and non-stockholders, despite the limitations of substantial measurement error, a relatively short time series and the availability of only food consumption. Moreover, Mankiw and Zeldes (1991) also pointed out that stockholder consumption is more volatile and highly correlated with excess return than non-stock consumption. The differences between stockholders and non-stockholders give an explanation of the size of equity premium. These findings became the keystone for further research in resolving the equity premium puzzle. Brown, Goetzmann and Ross (1995) assessed that the available data for the empirical analysis may suffer from a so-called survival bias, making estimates of the equity risk premium too high. This bias was the result of simply missing data, since most stocks which survived during those time periods were recorded, whereas stocks which had low earnings and were abolished were missing. For instance, it is possible that a longer period of time would include severe crises, implicating discontinuous data series. The effect of survival bias turned out to be substantial but largely insufficient to explain the equity premium puzzle.
Benatzi and Thaler (1995) attempted to rationalize the equity premium puzzle under behavioural explanation. The solution to the puzzle is myopic loss aversion, proposed by Benatzi and Thaler (1995). The myopic loss aversion combines loss aversion with frequent evaluations. Based on the prospect theory, developed by Kahneman and Tversky (1979), loss aversion refers to the larger sensitivity that individual investors have to losses than to gains, making people demand higher premium to compensate the larger return variability. On the other hand, investor's decision-making is largely influenced by how frequent check the performance of purchased stocks. Benatzi and Thaler (1995) performed several tests to determine whether myopic loss aversion explains the

equity premium puzzle. The results turned out that investors are myopic loss aversion and short-sighted. Investors ask for higher return when investing. Furthermore, Benatzi and Thaler (1995) based their research not only on individual investors but also on institutional investors, such as pension fund and endowments. They showed that institutional investors present more myopic loss aversion than individual investors, mostly because of agency problem.

Another explanation from behavioural finance view is disappointment aversion. Ang, Bekaert and Liu (2005) relied on the axiomatic Disappointment Aversion framework of Gul (1991). According to Ang, Bekaert and Liu (2005), "Gul's preferences are a one-parameter extension of the expected utility framework and have the characteristic that good outcomes, i.e., outcomes above the certainty equivalent, are down-weighted relative to bad outcomes." They pointed out that investors do not invest into stock market even though there is a large premium, because their expectation is less likely to be met. Nevertheless, Investors turn to another investment which has lower expected return in absolute terms but higher possibility to fulfil expectation. Ambiguity aversion also contributes to rationalize the equity premium puzzle, Olsen and Troughton (2000) provided evidence to explain the equity premium puzzle caused by ambiguity aversion. When investor knows less about the profit distribution, the investor is more ambiguity averse. They used questionnaire from professional investment managers to gather data. The findings indicated that even professional investment managers are ambiguity averse. As a consequence, investors need higher return to compensate ambiguity of stock market. Moreover, Erbas and Mirakhor (2007) conducted an empirical study in order to find out whether equity premiums may reflect ambiguity aversion. They used Word Bank institutional quality indexes and other proxies for the degree of ambiguity in the sample countries. They found out that indeed equity premiums reflect ambiguity aversion. The outcome was statistically significant, which proposes that ambiguity aversion may be a possible explanation for the equity premium puzzle.

Campbell (1998) investigated the equity premium puzzle in 11 western countries, including Australia, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States. He reported that the average real returns of stocks are almost 5%, whereas short-term debt has seldom delivered average returns above 3%. Also, he showed that the correlations between real consumption rate and stock returns are variable in different countries. Finally, Campbell (1998) concluded that the equity premium puzzle is a robust phenomenon in these countries, mainly because the coefficients of risk aversion, much greater than 10 (the upper boundary set by Mehra and Prescott (1985)), are very large. Nevertheless, the data used in this study has several flaws, especially the fact that measure of quarterly consumption does not exclude durable goods, except for the data for the U.S. . Consequently, the assumptions of the model might be violated leading to low validity of the findings.

Applying the Mehra and Prescott model, Hibbard (2000) examined the existence of the equity premium puzzle in New Zealand. He used quarterly financial security returns and consumption data from 1965-1997. Moreover, Hibbard (2000) excluded durable goods consumption by using non-durables plus services consumption. However, the data is still limited. Since Treasury bill data are not available in New Zealand prior to 1978, in this paper, Hibbard (2000) used government

bond as risk-free rate, while Mehra and Prescott (1985) employed yields on 90 day Treasury bill. The results of this paper indicated that calibration of Consumption Based Asset Pricing Model is unable to explain the high equity premium in New Zealand, which means that the equity premium puzzle existed in New Zealand during the researched period.

There are empirical studies of the equity premium puzzle in emerging countries, such as Brazil. Cysne (2005) used quarterly data from 1992:1-2004:2 to test the existence of the equity premium puzzle in Brazil. In the paper, based on the model of Mehra and Prescott (1985), Cysne (2005) applied two different methods which are approximations under lognormality and calibration. Moreover, the model used by Mehra and Prescott (1985), either with additive or recursive preferences, is not able to rationalize the equity premium observed in the Brazilian data. Namely, the results indicated that the equity premium puzzle existed in Brazil.

The equity premium puzzle has been studied to a much less extent in Asian countries than in the western countries. Park and Kim (2009) pointed out that markets in Korea are much different from those in the U.S. The differences result from a short history of market data, no representative risk-free rate proxy and small equity premium in Korea market. However, Park and Kim (2009), based on Generalized Method of Moments and Hansen-Jagannathan bounds, showed that the equity premium puzzle exists in Korea despite the small equity premium, suggesting that the volatility of consumption and the correlation between consumption and asset returns matters more than the absolute magnitude of equity premium. Xiao and Wang (2004) concluded that there is no equity premium puzzle in China by adopting Generalized Method of Moments (GMM). They used sample period data from July 1993 to December 2003. In the end, Xiao and Wang (2004) found that the degree of risk aversion is significantly lower than the bound set by Mehra and Prescott (1985). However, confirming the existence of the equity premium puzzle in China, Liu and Wang (2005) employed A-share return of Shanghai Stock Exchange as equity return and adopt one-year deposit rate as proxy of risk-free rate, from 1992 to 2001. In their study, Liu and Wang (2005) got the coefficient of risk aversion of 52, indicating the existence of the equity premium puzzle in China.

Mehra and Prescott (1985) showed that the average annual return on the stock market over the last 110 years has been an estimated 8.06%, while the average annual return on short-term debt was only 1.14% over the same period. This difference between stock market return and short-term debt return is called the equity premium and took a value of 6.92% an average over the last 110 year. This high difference is relatively interesting, because from a logical point of view it would mean that investors receive a higher compensation for buying shares than for lending money (issuing short-term debts). Consequently, this would imply that stocks are much riskier than issuing short-term debts. The conventional approach to these puzzles enriches the theory of required returns while maintaining rational expectations of future dividends. In the time series, required returns are assumed to vary due to changes in risk preference (e.g., Campbell and Cochrane 1999), or in long run or disaster risk (Rietz 1988, Bansal and Yaron 2004, Barro 2006). In the cross section, required returns are assumed to vary due to exposure to characteristics-based “risk factors” (Fama and

French 1993). A challenge for this approach is that investors should rationally expect low future returns during a stock market boom. In survey expectations of returns, however, the opposite is the case (Greenwood & Shleifer, 2014). A deeper problem is that changes in risk preference and risk are hard to measure, and cross sectional risk factors remain a black box

Mehra and Prescott (1985) posited that the equity premium (the return earned by a risky security in excess of that earned by a relatively risk-free T-bill), was an order of magnitude greater than could be rationalized in the context of the standard neoclassical paradigms of financial economics as a premium for bearing risk. The idea of equity risk premium puzzle was plainly explained by Grétarsson & Snorrason (2011). According to them, it refers to the empirical fact that risky equity has been outperforming default free debt with about 6 percentage points for the U.S. market. The fact that the historical equity premium has been about 6 percentage points means that we have a puzzle on our hands. The puzzle stems from the fact that the perceived risk related to the equity returns is not high enough to explain these high returns. Investors would need to have unlikely high risk-aversion coefficients to have such high premiums. However, unless the risk aversion coefficient is large, a high equity premium is impossible since the growth rate of consumption just does not vary enough. Another striking aspect of the puzzle is that, although the risk aversion has been high, the risk free rate of returns has been extremely low over a long period of time. The equity premium puzzle could, just be simply called, "the risk-free rate puzzle" (Grétarsson & Snorrason, 2011). The Wikipedia (2015) defines equity premium puzzle as the phenomenon that, observed returns on stocks over the past century are much higher than returns on government bonds; adding that it is a term coined by Mehra & Prescott in 1985.

Based on extensive survey of the extant literature in this regard, equity risk premium puzzle is simply a term that seeks to explain the shocking results that challenged orthodoxy or established theory in the field of finance and economics relating to the observed return on equity and treasury bill rate over a long period of time in the United State. It was observed that the average returns on common stocks in the US for a period of 90 years (1889 to 1978) was far much higher than those of government bonds as measured by the risk free rate of return. While the average returns on common equity was approximately 7% that of government bonds was 1% with equity-risk premium for the common equity over the period at 6%. Ordinarily, on the basis of economic theory, it is expected that the returns on government bonds/treasury bills which is less risky than the common stocks should yield the highest returns on investment to the investors, any time any day. But the result proves otherwise. Hence, it was coined a puzzle by Mehra and Prescott (1985), and has since attracted a lot of studies across the globe till date.

Signaling Theories

The signaling model was first enunciated by Leland and Pyle (1977), found support from Allen and Faulhaber (1989), Welch (1989), and Hidayat and Kusumastuti (2014). According to Wu (2014) the signaling theory built on the assumption that information inequity exists between the investor and the issuer and Lee, Jin, and Li (2015) opined that IPOs are among the few corporate events that provide the firm with a distinct information advantage relative to investors and the firm may choose to capitalize on that advantage. This asymmetric information affords internal stakeholders of the IPO firm exclusive access to information about the prospects of the firm and

therefore can apply extensive control over the internal decision-making process (Hull, Kwak, & Walker, 2014).

The more informed IPO issuers are aware of the information gap that the average investor faces and understand that this information gap limits the investor's ability to assess the firm value and IPO quality (Wu, 2014). Wu also indicated that investors therefore, cannot distinguish between high-quality and low-quality firms because of the limited or no access to private insider information. As a result of this information deficiency, the financial markets and the investors will value all IPOs at an average price and force out of the market any IPO priced above this average price (Hidayat & Kusumastuti, 2014). Accordingly, issuers disclose their otherwise private information by sending overt signals to the investors to address information asymmetry, allay risk concerns, spur demand, generate interest in, and differentiate their IPO from the other IPOs in that market (Miloud, 2014). The issuing firm, therefore, increases the disclosure of verifiable quantitative information via the financial statements and prospectus to reduce uncertainty (Miloud, 2014; Thompson, 2006). Miloud (2014) also pointed out that soft qualitative information, though more difficult to verify externally and can be more easily manipulated, may also be available, while Loughran and McDonald (2014) suggested regulations such as the plain English rule, which US regulators require, should help to provide investors with information devoid of legal terminologies and complex information.

Like Miloud (2014), Widarjo, Rahmawati, Bandi, and Widagdo, (2017) concluded that intellectual capital disclosure had a significant negative effect on underpricing. Intellectual capital disclosure may reduce information asymmetry and hence provide potential investors with a basis to assess the quality, value, and future of a prospective IPO firm (Widarjo et al., 2017). Barth, Landsman, and Taylor (2017) explored the effect of the reduced disclosure provisions under the US-based Jumpstart Our Business Startups Act (JOBS Act) on information uncertainty in IPO firms. Using a sample of 376 firms, 158 emerging growth companies which benefit under the JOBS Act and 218 non-emerging growth firms, found that reduction in mandatory disclose regarding some aspects of the business resulted in higher IPO underpricing (Barth et al., 2017). SMEs that trade on the JSE junior market must comply with more lenient disclosure rules, similar to what the US-based JOBS Act seeks to achieve, and therefore the findings from this study may be able to shed some light on the level of underpricing experienced by IPO firms operating under these conditions in the Jamaican IPO market. According to Hidayat and Kusumastuti (2014), the high-quality firm can signal to the market its firm's condition, and the market will react to these positive signals along with other announcements available at the time of the IPO.

Hidayat and Kusumastuti argued further that it is important that these signals are costly and difficult to be replicated by low-quality firms. Even though Leland and Pyle (1977) initiated the first discourse on signaling and identified IPO share retention ratio as the primary signal, 66 subsequent studies isolated or suggested other signals including IPO underpricing (Allen & Faulhaber, 1989; Welch, 1989), corporate governance (Hidayat & Kusumastuti, 2014), dividends payments (Allen & Faulhaber, 1989; Chen, Chou, & Lee, 2014), and research and development (R&D) projects (Hull et al., 2016). In this study, the discussion includes two of these signals,

underpricing in the segment below and IPO share retention ratio included earlier in the discussion of the independent variables IPO underpricing as a signal.

Using a similar underlying argument as Leland and Pyle (1977), Allen and Faulhaber (1989) explored underpricing as a signal of IPO quality. The underpricing signal will attract investors to the market because of investors' belief that only strong, high-quality companies can absorb the costs associated with underpricing (Miloud, 2014; Welch, 1989). Despite the importance of the signaling model as the economic rationale for explaining IPO underpricing, the empirical evidence provides mixed results (Michaely & Shaw, 1994). Michaely and Shaw (1994) tested three of the proposals put forward by Allen and Faulhaber's (1989) model and found no support for any. Contrary to the model, Michaely and Shaw found that firms that pay dividends or experience higher earnings during IPO's first two years of trading show significantly lower underpricing. Based on the result of their study, Michaely and Shaw concluded that underpricing did not appear to signal high-quality firms because greater underpricing relates to lower subsequent earnings, not higher as predicted by Allen and Faulhaber. Additionally, firms that underprice less paid higher dividends not lower as predicted and market reactions to dividend announcements did not depend on the initial underpricing of the firm's IPO (Michaely & Shaw, 1994). Small developing countries with small dependent economies tend to have segmented financial markets, as defined by Francis et al. (2010). Accordingly, the findings from this study which investigated underpricing as an outcome (in other words, the desired and undesired outcomes for the investor and the issuer respectively) may point to the extent to which the underpricing holds as a market signal in this small economy.

Certification Theories

The theorists who purport or support the certification argument, Logue (1973), Booth and Smith (1986), Beatty and Ritter (1986), Carter and Manaster (1990), and Michaely and Shaw (1994) followed a premise similar to that outlined in the signaling theories. Information asymmetry exists between investors and issuers and that both the investors and the issuers are aware of this information gap (Beatty & Ritter, 1986; Booth & Smith, 1986). The investors understand that insiders are in a position to selectively present information that can support the overpricing of the issue (Katti & Phani, 2016). Accordingly, Katti and Phani (2016) suggested that potential investors require third parties to act as observable indications of the quality the issue, to validate the information released by the issuer regarding the value of the IPO, and to address the inherent issuer bias.

Certification indicates the achievement of a minimum level of quality and can reduce asymmetric information (Van Der Schaar, & Zhang, 2015). The third parties required by investors to act as certifiers of IPO issues included prestigious underwriters, usually investment bankers who primarily provide underwriting services to IPO issuers (Booth & Smith, 1986; Bangsund, 2014). Reputable auditors also act as certifiers and according to Chipeta and Jardine (2014), auditors may improve IPO performance. Chipeta and Jardine found that South African firms that use the dominant international auditors tend to have improved performance as measured by post-market adjusted returns.

The final group of certifiers is venture capitalists and according to Heo, Sohn, and Ji (2014) this group tends to invest in firms especially SMEs based on the strength of IPOs. Venture capitalists have a tendency to retain equity positions after an IPO (Cao, Tang, & Yuan, 2013; Miloud, 2016; Tanda & Anderloni, 2014), bring much to the investment including time commitment, managerial services, monitoring, and networking skills through access to key industry stakeholders (Bhagat, 2014), and can use the IPO as a vehicle to exit the investment (Guo, Jiang, & Mai, 2015). According to Handa and Singh (2014), the reputation of these third parties provides the investors with insights about the quality and risk level of the firm. Reputable certifiers also bring legitimacy and credibility to the issue and issuers at the time of IPO, thus strengthening market valuations and performance (Handa & Singh, 2014). In addition to these external third-party certifiers, Bansal and Khanna (2013) added 69 regulators, stating that the mandatory grading of IPOs, as is the case in India, also acts as a source of credible certification.

However, the results of the investigation indicated that the grading of the IPOs impacted the demand by institutional investors but not retail investors (Jacob & Agarwalla, 2015). In this study I have confined the discussion of the certification models solely to the role and impact of the underwriter. Logue (1973), who was among the first to suggest that underwriters played a certification role in the IPO process, used a sample of 250 IPOs issued between 1965 and 1969 to model IPO market performance as the dependent variable against ten independent variables including underwriter prestige Logue (1973) found that IPOs underwritten by non-prestigious underwriters outperformed the market when compared to those supported by prestigious underwriters, implying that there was a greater level of underpricing with the former than the latter.

Beatty and Ritter's (1986) certification model incorporated Rock's (1986) premise that asymmetric information exists between the informed and uninformed investors. However, unlike Rock (1986) who argued that underpricing is an incentive to lure the uninformed investors back to the IPO market, Beatty and Ritter suggested that the market value of the IPO is more important to the investor, and therefore predicted a positive relationship between underpricing and uncertainty (risk) associated with the IPO market value. Beatty and Ritter assumed that the issuer is aware of the fundamentals of the company and introduced the underwriter as part of the oversight mechanism. Beatty and Ritter conducted their research over two distinct periods and determining that of the underwriters examined in the first period, 25 underwriters priced in alignment with the risk of the IPO issues, while the other 24 mispriced.

In the subsequent period, the 25 71 underwriters who applied efficient pricing experienced a 50% less erosion of their market share relative to the underwriters who mispriced issues (Beatty & Ritter, 1986), suggesting that the market value of the IPO is important to the investor who will stay with the underwriter who prices the IPO close to its market value. Subsequent studies including that of Carter and Manaster (1990) explored the assertion of their predecessors that less underpricing occurs when information asymmetry declines. In their model, underwriters were the conduits through which information asymmetry declined because reputable underwriters will only represent high-quality IPOs (Carter & Manaster, 1990). The outcome of their research in which they found a statistically significant negative relationship between underpricing and underwriter

reputation supported the premise that less underpricing occurs when information asymmetry declines.

The findings from Michaely and Shaw's (1994) study of a larger sample of 947 companies that issued IPOs from 1984 to 1988 confirmed these results. As implied by Ritter (2003b) in his work on European and American IPO markets, even with consistent research findings across theoretical and empirical studies, generally accepted answers to questions relating to market phenomenon such as IPO underpricing raised in literature may not suffice beyond the current period. Ritter indicated that new questions will continue to surface because no steady state exists for the financial markets nor the IPO ecosystem. This study may, therefore, add to the literature by providing some answers but also raising some questions about businesses in small economies seeking to understand the relationship between IPO underpricing, IPO share retention ratio, and the reputation of the IPO underwriter. Accordingly, this study may contribute to improved business operations by helping potential IPO firms to more effectively manage the IPO process, improve the interaction with the IPO underwriter, attract potential investors, and maximize IPO proceeds.

Empirical Review

Dolor and Oshevire (2022) investigated whether the equity premium puzzle (EPP) exists in the Nigerian Capital Market, using evidence from eight major sectors, consisting of agriculture, conglomerates, construction and real estate, consumer goods, financial services, health care, industrial goods, oil and gas, examined over the period 2000 to 2019 due to available data. Equity stock was used as risky asset, while treasury bills were used as risk-free assets (riskless asset). Consumption growth was included being a core intervening variable in inter- temporal and utility based asset price modelling. Employing descriptive statistics, correlation analysis, and, joint system-GMM estimation approach, the empirical results show no evidence of EPP in Nigeria, as the treasury bill rate (return on risk-free asset) outperformed the return on equity stock (risky asset) throughout the period and cross-section; and the risk aversion found to be statistically insignificant, even though it was high, implying a highly risk averse investment environment, but with no evidence of EPP in the Nigerian Capital Market. Further evidence shows an insignificant relationship between risk and return; a further validation of no evidence of EPP in the Nigerian Capital Market. Consumption growth is positively and significantly related to asset return and positively correlated with risks. Against the backdrop of the foregoing findings, continuous empirical investigation is important in the subject matter, given the unfolding dynamics, and volatile nature of the Nigerian economy and capital market. Also, a strong regulatory framework and institutional mechanisms aimed at achieving enhanced optimal investment decisions and operations, efficiency, penetration, deepening and development of the Nigerian Capital Market are also important recommendations.

Mohammed, Sabastine and Bala (2020) empirically examined stock market reaction to the announcements of equity issues by companies in Nigeria. Employing the event study methodology abnormal returns were computed as the residuals of the market model. Utilising a total of 62 announcements by 47 companies listed on the Nigerian stock exchange from 1st January, 2006 to 31st December, 2013. The study documented negative significant cumulative abnormal returns

prior to the announcement date, a positive significant cumulative abnormal return on the announcement date and negative significant cumulative abnormal returns in both the 20 days after announcement and the 512 trading days observation after the announcement. The significant cumulative abnormal returns recorded in the period prior to the announcement date could as well be driven by insider dealings and the presence of abnormal return suggests the semi-strong form inefficiency of the Nigerian market. Consequent upon that, the study recommends among other things that regulatory authorities should intensify efforts to ensure strict compliance to insider trading laws by market participants and that capital market authority in Nigeria should organize seminars in order to increase awareness about stock market activities. This will attract institutional and foreign investors into the market and the presence of institutional and international investors will guarantee the conduct of extensive security analyses so that information asymmetry amongst market participants is reduced to the barest minimum.

Mehra and Prescott (2005) others argued otherwise. For instance, Weil (1989) examines the implications for general equilibrium asset pricing of a recently introduced class of Kreps-Porteus non-expected utility preferences, which is characterized by a constant intertemporal elasticity of substitution and a constant, but unrelated, coefficient of relative risk aversion. The results from the analysis show that the solution to the equity premium puzzle documented by Mehra & Prescott (1985) cannot be found by simply separating risk aversion for intertemporal substitution. If the dividend growth process is independently and identically distributed, the risk premium, is independent of the intertemporal elasticity of substitution, and thus is the same whether or not the time-additive, expected utility restriction is imposed.

Welch (2000) carried out two surveys with finance professors in 1997 and 1998, asking them what they thought the expected market risk premium would be over the next 30 years. He found an average arithmetic EEP of 7% above treasury bonds. But when he compared the result with that of August 2001, the consensus for the 30-year arithmetic EEP was 5500, much lower than just 3 years earlier. In an update published in 2008 Welch reports that the MRP used in class in December 2007 by about 400 finance professors was 5.8900 and 9000 of the professors used equity premium between 400 and 8.500.

Akdeniz and Dechert (2006) combined dynamic programming methods to solve Brock's asset pricing model with a different parameterizations in order to determine higher equity premium relative to the different consumption patterns. Their empirical finding indicate that, equity premium can be higher in a production based asset pricing model than it is in the consumption based asset pricing model, *even* when the real output level is the *same* in both models. Jobert, Platania and Rogers (2006) employed the a Bayesian solution to the equity premium puzzle, that is, the inability of standard intertemporal economic models to account for the magnitude of the observed excess return earned by a risky security over the return on T-bills. They concluded that coefficients of relative risk aversion lie in the interval (1,2) with high probability - in other words, there is no equity premium puzzle.

Erba and Mirakhor (2007) computed an average equity premium across a range of emerging markets which also include South Africa. Their findings show that equity risk premium is higher than the premium justified by risk aversion in equity premium puzzle. But the positive average premium they found could mask low or negative premium in individual countries (which are not reported); and, above all, their sample period, 1996-2005, is inappropriately brief for examining the equity premium (Dimson, Marsh & Staunton, 2008). Kyriacou, Madsen and Mase (2008) investigated the equity risk premium for several countries using one century data. Their empirical analysis indicates that, the realized US equity premium is in line with the premium obtained elsewhere. Also, current estimates of the equity premium were close to those observed during the pre-1914 era. This again is a clear evidence of a current equity risk premium that is considerably lower than consensus forecasts (Welch, 2001).

Park and Kim (2009) empirically examined the existence of equity risk premium puzzle in Korea, as well as comparing same with that of the US. Using the Generalized Method of Moments (GMM), Hansen-Jagannathan bounds, and long-run risk approach, the empirical analysis revealed the existence of equity risk premium puzzle Korea. The study also finds that low consumption growth volatility and asset returns contributed to the equity premium puzzle. Hassan & Biljon (2010) empirically tested for equity premium puzzle in the South African stock market over a period of 105-year, using the canonical inter-temporal consumption-based asset-pricing model under power utility. The empirical findings revealed that South African Stock Market produced average returns of between 6% and 8% above bonds and cash; Even the maximum equity premium rationalized by the consumption-based model was 0.4%. The hypothesized model over the horizon was also seen to closely match the average risk-free rate, using realistic parameters for the coefficient of risk aversion and a positive rate of time preference.

Grétarsson and Snorrason (2011) conducted a study in Icelandic on the existence or otherwise of equity premium puzzle, using data covering a period of 15 years (1996 to 2010) and those of the U.S. for the period 1889 to 2010. The empirical investigation showed that, the recent financial crisis has had huge impact on the Icelandic equity market while the bigger U.S. equity market has not been so affected. It was also observed that, the default free debt has been outperforming the more risky equity in the last 10 years, which has not been the case in the last 100 years. Does this mean that the puzzle has vanished? However, when looking at the puzzle from an historical perspective the excessively high equity premium relative to risk-free short term debt still remains a puzzle.

METHODOLOGY

Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). Specifically, panel data were adopted in data analysis. The secondary data that were used in this study which were sourced from the financial statement of the quoted firms, Stock Exchange

Facts Book, firm annual statements and reports are deemed to be reliable because they are statutorily required to be audited by a recognized auditing firm before publication.

Model Specification

These analytical techniques enabled the researcher attain justifiable and robust results.

$$Y = \beta_0 + \beta_{1Xit} + \mu \quad (1)$$

Where Y = Dependent Variable

β_{1Xit} = Independent variable

β_0 = Regression Intercept

μ = Error Term

Disaggregating Equation 3.1 to form the multiple regression models, we have, the model specified in this study was adopted from Babalola (2012).

$$EP = F(FPIPO, BBIPO) \quad (2)$$

Transforming equation 2 to econometrics form, we have

$$EP = \beta_0 + \beta_1 FPIPO_{it} + \beta_2 BBIPO_{it} + \mu_{it} \quad (3)$$

Where:

EP =Equity price puzzle

$FPIPO$ = Fixed price initial public offer

$BBIPO$= book Building initial public offer

α_0 = Intercept

$\alpha_{1-}a_7$= coefficient of independent variables to the dependent variable.

et = error term

Technique for Analysis

To obtain the observed values on the expectation of the impact of financial information on market value, panel data survey over a ten year period will be employed. Panel data structure allows us to take into account the unobservable and constant heterogeneity, that is, thespecific features of each quoted firm. The researcher will employ pooled Ordinary Least Square (OLS), Fixed Effects and Random Effects regression models to test the various hypotheses. Pooled OLS regression

technique is popular in financial studies owing to its ease of application and precision in prediction (Alma, 2011).

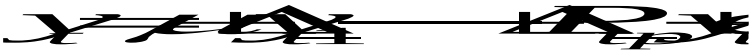
Pooled Regression (OLS) Model (PRM*)*: is equally known as the constant coefficient model (CCM). It is the simplest among the three models in panel data analysis. However, it disregards the space and the time dimensions of the pooled data. In a situation where there is neither significant cross-section unit nor significant temporal effects, one could pool all of the data and run an ordinary least squares (OLS) regression model.

Fixed Effects (FE) Model: in the FE technique, the slope coefficients, are constant but the intercept, varies across space i.e. the intercept in the regression model is allowed to vary across space (individuals). This is as a result of the fact that each cross-sectional unit may have some special characteristics.

Random Effect (RE) Model: the RE technique which is equally known as the Error Components Model (ECM) is an alternative to FE technique. Basically, the RE estimator assumes that the intercept of an individual unit is a random component that is drawn from a larger population with a constant mean value.

Cointegration Test

For the cointegration test, the maximum likelihood test procedure established by Johansen and Juselius (1990) was used. In the test, if Yt is a vector of n stochastic variable then there exist a P-lag vector auto regression with Guassian errors. Johansen methodology takes its starting point in the Vector Auto Regression (VAR) of order of P given by;



(4)

Where yt is an (nX1) vector of variables that are integrated of order commonly denoted (1) and is an e_t(nx1) vector of innovations. In order to determine number of co-integration vectors, Johansen (1989) and Johansen and Juselius (1990) suggested two statistic tests, the first one is the trace test (trace). It tests the null hypothesis that the number of distinct cointegrating vector is less than or equal to q against a general unrestricted alternatives q=r the test calculated as follows:

(5)

T is the number of usable observations, and the β_I is the estimated eigenvalue from the matrix. The second statistical test is the maximum eigenvalue test (β max) that is, calculated according to the following formula; max(r, r+1) = T In (1-β_r + 1). The test concerns a test of the null hypothesis that there is r of co-integrating vectors against the alternative that r +1 co-integrating vector.

RESULTS AND DISCUSSION

Table 1: Analysis of Panel Unit Root

Series: D(EP) Method	Statistic	Prob.**	Cross -sections	Obs
Panel A: Panel Unit Root at Level				
Levin, Lin & Chu t*	-3.73927	0.0001	10	70
Im, Pesaran and Shin W-stat	-2.42048	0.0078	10	70
ADF - Fisher Chi-square	41.0253	0.0037	10	70
PP - Fisher Chi-square	102.735	0.0000	10	80
Series: FPIPO				
Levin, Lin & Chu t*	-5.38873	0.0000	9	72
Im, Pesaran and Shin W-stat	-2.24146	0.0125	9	72
ADF - Fisher Chi-square	38.1121	0.0037	9	72
PP - Fisher Chi-square	38.6818	0.0031	9	81
Series: BBIPO				
Levin, Lin & Chu t*	-9.24210	0.0000	10	80
Im, Pesaran and Shin W-stat	-1.72131	0.0426	10	80
ADF - Fisher Chi-square	34.4322	0.0233	10	80
PP - Fisher Chi-square	31.9953	0.0433	10	90
Panel B: Panel Unit Root at Difference				
Series: EP				
Levin, Lin & Chu t*	-4.07077	0.0000	10	80
Im, Pesaran and Shin W-stat	-1.76031	0.0392	10	80
ADF - Fisher Chi-square	33.1692	0.0323	10	80
PP - Fisher Chi-square	38.1747	0.0084	10	90
Series: D(FPIPO)				
Levin, Lin & Chu t*	-8.17835	0.0000	8	56
Im, Pesaran and Shin W-stat	-3.71362	0.0001	8	56
ADF - Fisher Chi-square	47.5075	0.0001	8	56
PP - Fisher Chi-square	59.6653	0.0000	8	64
Series: D(BBIPO)				
Levin, Lin & Chu t*	-5.84815	0.0000	10	70
Im, Pesaran and Shin W-stat	-2.14383	0.0160	10	70
ADF - Fisher Chi-square	38.3275	0.0081	10	70
PP - Fisher Chi-square	117.434	0.0000	10	80

Source: Computed by Researchers from E-view 9.0

The stud accepted the alternative hypothesis and rejected the null hypothesis for the following reasons. First and foremost, the output file of the results indicates that all the variables are the stationary first difference. This has an implication of the rejection of the null hypothesis and acceptance of the alternative hypothesis because of no significant trend yet availability of stationary data.

Table 2: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Coefficient	Std. Error	t-Statistic	Prob.
	PANEL A: FIXED EFFECT MODEL				**PANEL B: RANDOM EFFECT MODEL**			
FPIPO	0.036778	0.092677	0.396835	0.6925	0.108592	0.080704	4.345554	0.0000
BBIPO	0.065921	0.165540	0.398220	0.6915	0.017991	0.158578	0.113454	0.9099
C	0.621957	0.141604	4.392219	0.0000	0.663698	0.145758	4.553420	0.0000
R2	0.461541				0.624618			
Adj R2	0.380146				0.516450			
F-Stat	5.670388				5.599440			
F-prob	0.000000				0.000009			
DW	1.233765				1.118785			
	Cross-section random effects test comparisons							
FPIPO	0.036778	0.108592	0.002076	0.1150				
BBIPO	0.065921	0.017991	0.002256	0.3130				
	Correlated Random Effects - Hausman Test							
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.				
Cross-section random		6.567080	4	0.1606				

Source: Computed by Researchers from E-view 9.0

Table 2 presents the result of Hausman test. The result shows the chi-square value of 6.567080 alongside the probability value of 0.1606 which implies that there is no enough evidence to reject the null hypothesis of random effect model is appropriate. From the foregoing, it thus stands that among the two estimators (fixed effect model and random effect model) used for analysis in this study, random effect estimates presented is most efficient and consistent estimate that can track the true nature of the nexus between capital structure and enterprise value.

The result of random effect estimation reveals that the adjusted R-squared (R2) value is 0.516450 that is 51.6 percent implying that the independent variables However, the F-statistic value is 5.599440 and its p-value is 0.000009 indicating that the independent variables jointly can impact significantly in equity puzzles of the quoted small and medium scale enterprises of the quoted enterprise firms. The Durbin-Watson reveals that there is no serial correlation in the variables.

Furthermore the beta coefficient of constant is positive with the value of 0.663698 and its p-value is 0.0000 indicating that when all the independent variables are held constant, there will be a positive variation up to the tune of 0.6 units in equity prices puzzles of the quoted SMEs of the quoted enterprise firms and it is significant. Additional, the coefficient value of fixed price initial public offer is 0.080704 band p-value is 0.0000 implying that price initial public offer has a

positive coefficient and significant to influence equity prices puzzles of the quoted SMEs. The coefficient value of book building initial public offer is 0.017991 and its p-value is 0.9099 meaning that book building initial public offer is positive and not significant to impact on equity prices puzzles of the quoted SMEs. Furthermore, the Cross-section random effects test comparisons shows that there are significant differences between the fixed and the random effect models. The analysis above enables us to test for cointegration.

Table 3: Presentation of Cointegration Test

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-11.55646	0.0002	-11.78905	0.0033
Panel rho-Statistic	12.99710	0.0086	1 2.46618	0.0032
Panel PP-Statistic	10.07859	0.0071	-3.075510	0.0011
Panel ADF-Statistic	10.40544	0.0467	-11.08750	0.0059
	Statistic	Prob.		
Group rho-Statistic	13.87314	0.0099		
Group PP-Statistic	-5.922980	0.0000		
Group ADF-Statistic	0.086672	0.5345		

Cross section specific results

Phillips-Peron results (non-parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Afrik Pharmacuetical Plc	-0.082	0.002343	0.000560	7.00	9
Anino International Plc	Dropped from Test				
Capital Oil Plc	0.056	0.020849	0.006271	8.00	9
Chellarams Plc	0.243	0.106266	0.061133	4.00	9
Juli Plc	-0.248	0.004957	0.005874	1.00	9
Mc Nichols Plc	-0.537	0.006860	0.000978	7.00	9
Omoluabi Mortgage Bank	0.192	0.016081	0.016081	0.00	9
Rak Unity Pet Coy Plc	0.471	0.006576	0.006576	0.00	9
Smart Products Nig. Plc	-0.505	0.002972	0.003800	1.00	9
The Initiates Plc	-0.029	0.013612	0.013826	2.00	9

Augmented Dickey-Fuller results (parametric)

Cross ID	AR(1)	Variance	Lag	Max lag	Obs
Afrik Pharmacuetical Plc	-0.581	0.001937	1	--	8
Anino International Plc	Dropped from Test				
Capital Oil Plc	-0.596	0.011943	1	--	8
Chellarams Plc	-0.049	0.103803	1	--	8
Juli Plc	-0.274	0.004015	1	--	8
Mc Nichols Plc	-1.315	0.005686	1	--	8

Omoluabi Mortgage Bank	-0.097	0.015927	1	--	8
Rak Unity Pet Coy Plc	0.183	0.005330	1	--	8
Smart Products Nig. Plc	0.072	0.002785	1	--	8
The Initiates Plc	-0.368	0.009093	1	--	8

Source: Computed by Researchers from E-view 9.0

Also, the are seven test results (panel v-Statistic, Panel rho-Statistic, Panel PP-Statistic, Panel ADF-Statistic, Group rho-Statistic, Group PP-Statistic, Group ADF-Statistic). In this seven test, there are eleven outcomes. And we shall consider the entire outcome. In this outcome result shows that probability value is more than 5%, meaning that we cannot reject the null hypothesis and six results shows that probability value is less than 5% meaning that we can reject the null hypothesis. Our null hypothesis is, there is no co-integration and the alternative hypothesis is there is co-integration. Here out of eleven corresponding probabilities, 10 can reject the null hypothesis meaning that majority can reject the null hypothesis. So we can take the decision that we should reject null hypothesis and can accept the alternative hypothesis meaning that our independent variables such as (capital structure) are co-integrated, meaning that they have long run associations. From the above results, we test for causality using Granger causality test.

Discussion

The estimated regression results from the model proved that the independent variables explains 51.6 percent of variation in Equity price puzzle only 48.4 percent of the variation in the model is captured by the error term. The value of F-statistics is 5.599440 and the value of the probability of Fstat is 0.000009. The estimated regression coefficient proved that the independent variables have a positive impact but statistically insignificant over Equity price puzzle only. The positive effect of the variables on Equity price puzzle only confirms the expectation of the study. As shown in table 2, value of 0.663698 and its p-value is 0.0000 indicating that when all the independent variables are held constant, there will be a positive variation up to the tune of 0.6 units in equity prices puzzles of the quoted SMEs of the quoted enterprise firms and it is significant. Additional, the coefficient value of fixed price initial public offer is 0.080704 band p-value is 0.0000 implying that price initial public offer has a positive coefficient and significant to influence equity prices puzzles of the quoted SMEs. The coefficient value of book building initial public offer is 0.017991 and its p-value is 0.9099 meaning that book building initial public offer is positive and not significant to impact on equity prices puzzles of the quoted SMEs. The findings confirm the objectives of financial market reforms such as recapitalization and the objectives of branch banking. It could be recall that the regulatory authorities over the years have formulated different measures to increase performance of the stock market such as the internationalization of the capital market. This findings confirm the findings of Dolor and Oshevire (2022) that insignificant relationship between risk and return; a further validation of no evidence of EPP in the Nigerian Capital Market. Consumption growth is positively and significantly related to asset return and positively correlated with risks. Against the backdrop of the foregoing findings, continuous empirical investigation is important in the subject matter, given the unfolding dynamics, and volatile nature of the Nigerian economy and capital market, the findings of Mohammed, Sabastine

and Bala (2020) negative significant cumulative abnormal returns prior to the announcement date, a positive significant cumulative abnormal return on the announcement date and negative significant cumulative abnormal returns in both the 20 days after announcement and the 512 trading days observation after the announcement.

Conclusion

This shows that 51.6 percent of variation in the dependent variable while the remaining 48.4 percent of the variation in the model is captured by the error term. And this shows that the line of best fit is highly fitted. The Durbin-Watson statistic is 1.233765 which shows that there is autocorrelation in the model. The value of F-statistics is 5.599440 and the value of the probability of Fstat is 0.000009. This result implies that the overall regression is statistically significant at 5% level of significant given that probability of F-stat is 0.000 is less than 0.05. From the findings, the study concludes that there is significant correlation between initial public offering and equity puzzles in Nigeria capital market.

Recommendations

i. Proper understanding of the policy implications of differences in investor's preferences and behaviours with respect to investment decisions is very important in this direction, the reason being that, it can help in the design and development of the Nigerian stock market regulations in the area of new financial products. Thus, appropriate policy that will take into account these differences in investor's preferences and behaviours should be vigorously pursued.
ii. Since the shallow nature of the total number of the Nigerian equity listing, sectorial market concentration coupled with the high level of risk aversion as demonstrated by investors who generally preferred Treasury bill instruments to those of equity investments accounted for the non-existence of equity risk premium puzzle (ERP), market regulators must formulate the right policies that will help deepened the current structure of the market such that it can attract more investors and thus minimize investors' fear.

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