Initial Public Offer Pricing and Stock Returns: A Critical Literature Review

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Abstract
The widely perceived and primarily important achievement in a company’s life cycle is the Initial public offering otherwise known as IPO. This landmark achievement sanctions a company to gain entry to financial markets for supplemental capital compulsory to fund future magnification; while concurrently providing a venue for disposal of shares by investors. The study aimed at investigating the documented association of initial public offer pricing and stock returns. Empirical evidence suggests that IPOs have adverse eccentric returns over holding duration after the IPO issue date. From the empirical findings, it was noted that at the initial stage of trading, the pricing of Initial public offers at their fundamental value is unlikely to happen but ultimately the real value is mirrored in the IPOs pricing. The empirical review on the topic concludes that even though the assessment of the IPO is an important subject, only constricted extant research has addressed it. Findings revealed that within the context of developing countries with a number of theories being advanced to echo that IPO under pricing is an equilibrium phenomenon in an efficient capital market. Currently there is scarce literature proof to hypothesize to IPO pricing resolution is the central clarifying reason for long-run performance of stock returns. The present empirical studies on the link between IPO pricing and stock returns still present conflicting results, hence calls for more studies to be conducted on the topic in order to bring harmony to the work. Furthermore, most of the studies conducted on the topic have been on a global perspective and few empirical works exist in the developing economies. This is despite the importance of the topic to these economies. The paper recommends that as future scholars try to establish the effect of IPO pricing on stock returns, there should be an inclusion of an intervening variable as well as moderating variable. Further, there is a recommendation that apart from the intervening variables of firm characteristics reviewed in this paper, other variables could be used so as to compare the results. Furthermore, other moderating variables not reviewed in this paper can also be used.

Keywords: Initial Public Offer, Stock Returns,

Introduction
Initial Public Offering is by and large amongst the primary significant financial resolution which steers scores of analyst to investigate the intentions why firms seek to go public (Ljungqvist, 2004). The procedure is normally used in order to raise finances from shareholders in the IPO (Brealey, 2011). IPO is a kind of offering in which shares of an organization are sold to institutional financiers and subsequently offered to the general public, in a securities market, for the first time. The IPO receives additional funds into the listed company to support its growth and development. In the course of the allocation of resources, offering price plays an important role; the efficient market hypothesis contends that capital markets are effective and as a result the price should be equivalent to the company's fundamental value and it will allocate the scarce financial resources to the optimal producers effectively. IPO prices digress from the company's fundamental value, resulting to the emergence of inefficient pricing (Wang & Song, 2013). IPO pricing is a global phenomenon and the argument over the pricing of initial public offerings has been vigorous.
Companies’ frequently list on the securities market at a value lower than the first-day final price at the moment a market closes at the end of the day. There are several overlapping and nonexclusive theories: efficient markets hypothesis Fama (1970), the ownership dispersion theory developed by Booth and Chua (1996), the lawsuit avoidance theory (Tinic, 1988; Hughes & Thakor, 1992), herding theory by Welch (1992) and the winners curse theory proposed by Rock (1986). These are several competing theories for IPO under pricing which elucidate IPO under pricing. However, they don’t elucidate the extreme under pricing of debut companies. A desideratum to show a successful IPO rather than a price drop and the fact that debut companies may gain by selling shares at a high value motivates the study.

**Initial Public Offer Pricing**

Initial public offering is an exceptional hallmark to raise fund in a corporation’s history. Blum (2011) echoes this argument by stating that the IPO is alleged to be one of the greatest developments in a company’s life cycle. The primary issue of the IPO phenomenon for the company as well as the financiers is the IPO pricing. The increase in amount in the share price (under pricing) is the organization’s amount of money left on the table (Güntürkün, Gürarda & Erdogan, 2012). Ernst and Young (2010) articulate that an IPO is the sale of shares on a securities market by a private organization to the public for the first time. An IPO is the process in which an organization registers several of its shares on a securities market and subsequently trade to the public. This procedure is frequently exercised so as to raise finances for growth and expansion (Brealey, 2011). A company scheduling for an IPO usually assigns a lead manager to assist in determining a suitable share price at which to be issued. IPO prices can be determined by either the organization through fixed price method or through the analysis of classified financier demand data compiled by the lead manager (Robert, 2002).

Several dynamics are taken into consideration while pricing an IPO, and attempts towards achieving an offer price which is sufficiently low to draw attention in the shares, however, sufficiently high to raise enough capital for the organization. Initial Public Offering, is however plagued by price revelation tribulations. An investment bank is engaged to underwrite the share issue (Baron, 1982). Optimal price determination process usually involves underwriters scheduling share acquisition commitments from leading institutional financiers. IPO under pricing is less a purposeful act of issuers or underwriters, and more the product of an over-reaction of financiers Friesen and Swift, (2009). Peter (2003) rationale was that underwriters usually achieve a reasonable price estimate by employing multiples valuation, dividend discount models and discounted cash flow models to price the firm’s IPO. However, there is not a single assessment method that stands out being less positively partial or accurate than others.

**Stock Returns**

Stock return is the profit or loss realized by financiers on the stock securities market Fama and French (1992). The returns may possibly be inform of profits or dividends occasionally awarded to the organization’s shareholders. Stock market returns in the form of dividends are announced by the company. The financier’s expectation is stock market returns in form of dividends which is generated in the course of trading on the securities market. Stock returns indicate the gain or loss of a security in a particular period while stock market indices are designed to show the performance of the stock market (Menge, Mwangi & Kimani, 2014). Investors in stock markets desire to predict returns, work with accurate information and adequately understand market patterns while deviating from the theory or expectations (Bussetti, 2009). Furthermore, understanding how particular variables persuade the stock market, particularly whether the stocks have undergone several abnormal returns owing to investors’ response to the announcement, is consequently essential, as the time span and degree of the response might be beguiled by more astute investors (Bussetti, 2009). Charest (2008) measured stock returns by determining the end share prices of the stock and the end price from the preceding day; subtracting the preceding day’s end price from the present day’s end; adding any dividend income received. Divide the outcome by the preceding day’s end. Eugene (1981) operationalized the real stock return (RSI) as the annual progressively compounded nominal return on a value weighted portfolio of every NYSE common stock reduce annual continuously compounded price increases computed from the US CPI. Stephen and Xiao-Jun (2002) hypothesize that while an organization observes conservative accounting, discrepancies in the investments amounts can influence the quality of its profits since investments growth diminishes reported earnings and earn reserves.
Security Market

Securities market is a financial market where bonds, equity and derivatives are traded depending on demand and supply. The prices are determined by market forces where the participants both professional and non-professionals meet. The markets are split into two, the primary markets, where new securities are issued and the secondary markets where existing securities are traded in. Further, the secondary markets are divided into organized exchanges, such securities market and over-the-counter where entities and individuals trade securities directly.

Since secondary market exists, shareholders may convert their shares into cash hence motivating individuals to hold shares and Hans (2008) argues that changes in technology and regulation boast increased competition in securities market by making it possibly transparent markets to the degree that quotes and transactions prices in one market are immediately communicated to all markets. Full and instantaneous transparency foster competition and enlarges the market, which reduces the uncertainty while dropping attractiveness of the principal market as the basis of liquidity in addition to making possible competition from other markets hence increase in stock return.

This paper adds onto the existing empirical evidence on IPO pricing and stock returns. In particular, the existing studies have mainly focused on developed economies and as a result studies in the developing economies especially, in Kenya are lacking. This study is therefore timely as it enriches the existing studies. Besides enriching the empirical evidence locally, it also formed basis for scholars within the discipline to interrogate further the influence of IPO pricing on the stock returns. This study is suitable to investors as they stood to be enlightened from the findings documented in this paper. The study is of relevance to policy makers and other stakeholders such as the regulatory authorities within the stock market. The study informs them on the various IPO characteristics that influence IPO pricing which also in turn are likely to affect the stock returns. This information therefore enables policy makers to ensure that effective policies are designed that would ensure that information regarding IPO issues are availed thus minimize the information asymmetry linking the issuing firm with the potential investors. This consequently results in investors making the right choices.

Research Problem

Firms both in developed and developing stock markets have issued IPOs to the public with the view of raising capital that would otherwise have been hard to obtain. Despite, this observation IPO pricing is a phenomenon that still remains a puzzle to many scholars. Saravanan and Chandran (2014) argue that it is not explicitly clear what factors firms consider when pricing their IPOs. This has led to the examination of the interaction existing between IPO pricing and stock returns. Saravanan and Chandran (2014) further argue that the investigation surrounding the interaction existing between IPO pricing and stock returns has greatly been skewed to the developed stock markets and investigation on developing countries is scared. Studies have examined the effect of firm characteristics on IPO pricing, but its influence on stock returns is left un-examined. Initial public offering (IPO) under pricing has received a considerable measure of consideration particularly in the setting of developing nations with a few hypotheses being progressed to contend that IPO under pricing is an equilibrium phenomenon in an efficient capital market. Several emphases have been paid to the information asymmetry problem. In spite of the fact that the IPO under pricing phenomenon has received an immense consideration in securities exchanges around the world, Africa appears to fall behind. Empirical evidence designates that IPO under pricing level change from firm particular factors (profitability, size and industry), market condition and investors practices (Loughran & Ritter, 2008). The determinants of IPO pricing have never been clearly recognized (Kipngetich, Kibet, Guyo & Kipkoskey, 2011). Further IPO under pricing and factors influencing it are not consistent across countries and time frame. For instance, Fung and Che (2009) argue that under pricing is determined by interest earnings. Erdogan (2010); Tran and Jeon (2011) state that macroeconomic elements for example, IP index, S&P 500 index, CPI determine IPO under pricing.

Studies within the Kenyan perspective of IPO under pricing include those of Kipngetich, Kibet, Guyo and Kipkoskey (2011) which explored the causes of IPO pricing in Kenya, Okeyo (2015) investigated initial public offerings, secondary offerings and mispricing at the Nairobi Securities Exchange, Ongera (2014), analyzed the impact withholding shares through pre-initial public offering shareholders on the market values of firms listed at the Nairobi securities exchange, Muli (2014) investigated the impact of initial public offering on long run stock price performance of listed firms at the Nairobi securities exchange and Waweru (2010).
Investigated the effect of share prices on issue of IPOs at the Nairobi securities exchange. In view of this paucity of studies of IPO under pricing in Kenya and as well as the other developing economies further coupled with the different methodological approaches used in analyzing the factors influencing IPO under pricing and further motivated by the current position of academic facts concerning IPO under pricing, the study becomes intrigued to scrutinize this research issue after noting the extensive variations of IPO initial returns from first day trading in different countries and it therefore seeks to investigate the determinants of IPO under pricing for listed firms. The study will therefore seek to answer the question; what is the relationship between initial public offer pricing and stock returns?

**Objectives**

i. To establish the influence of IPO pricing on the stock returns
ii. To establish any possible intervening variable relating to IPO pricing and stock returns
iii. To establish any possible moderating variable relating to IPO pricing and stock returns
iv. To establish the joint effect of IPO pricing, intervening variable and mitigating variable on stock returns

**Theoretical Literature**

The study is pivoted on various theories; these are the efficient market hypothesis, ownership dispersion theory, window of opportunity hypothesis, herding hypothesis and the winners curse theory. Efficient Markets Hypothesis (EMH) was formulated by Fama in 1970. He proposed that current stock prices wholly mirror existing information concerning firm’s value, and no surplus earnings can be earned whatsoever, above the market, as a result of using the available information. The theory exhibit that stock prices correctly and hastily mirrors every obtainable information in such a manner that no one can earn surplus returns. An investigation on IPO pricing and stock returns can hinge on this theory, especially in establishing the role of information asymmetry in stock returns hence the importance of the theory to the study. The hypothesis has however been criticized for the assumption that duration-to-duration price variations are statistically free and unforecastable if they are properly anticipated. Burton (2003) contends that efficient market proposition is linked to random walk, meaning every subsequent price variation exhibit random departures from previous prices. When the flow of information is unrestricted and is directly mirrored in stock prices, then the following day’s price variation will mirror solely that day’s news in addition to being free of the price variation today.

Ownership dispersion theory implies that ownership dispersion is the main reason for under pricing of IPOs. Since reasons for IPOs under pricing is a debated topic, this theory is critical to the study as it will form the basis for testing whether ownership dispersion, captured by institutional shareholding in the current study, influences the IPO price and ultimately stock returns. The theory has been criticized by various scholars. The theory states that under- pricing results in a dispersed ownership structure. The window of opportunity hypothesis proposes that when firms are significantly overestimated, managers will probably issue equity, capitalizing on the appropriate moment to reduce the cost of capital. Expressly, when this hypothesis holds, IPO in high issue volume time are likely to be overvalued as compared with other IPOs, therefore high issue volume time ought to be connected with moderately low long run returns Ritter (1991) and Loughran and Ritter (1995). In spite of the fads proposition with the window of opportunity proposition being expressed differently, they are formed on similar overvaluation phenomenon. Celine and Kevin (2008) views were that the window of opportunity theory seeks to identify factors that might increase or reduce under pricing relative to what it would otherwise have been and that the theory take the fact of under pricing as given.

Herding Hypothesis developed by Welch (1992) illustrates investments decisions as regards information on whether other prospective investors who were earlier invited to purchase the shares are purchasing. Herding hypothesis argues that, in total, investors have perfectly accurate information and the net worth of shares regarding the issuing firm but for investors, the net worth information is exceptionally doubtful. Additionally, given the restricted distribution channels, the theory presumes investment bankers take time to propose to attracted financiers. They are able to acquire knowledge regarding the value of the issued company through observing other investors’ behaviors’, Shares are underpriced to create a cascade or herding of buyers. Subsequently new issues are subscribed overwhelmingly or several financiers may largely abstain, with hardly any case in between. Welch (1992) concludes that pricing an IPO slightly high creates a total failure for the issuer, since others are not interested.
Consequently, to stop the occurrence of the situation, IPO may have to be underpriced to persuade several prospective buyers and afterwards persuade a cascade where every successive investors’ desire to request irrespective of the information they have. The winners curse theory proposed by Rock (1986) suggests that several investors are well-versed as regards to the exact value of the IPO shares than are investors generally. According to him, well versed investors offer just for pleasantly priced IPOs, whereas the ignorant investors to offer for unpleasantly priced IPOs thereby imposing a winner’s curse on ignorant investors. The theory states that if the investors who are ignorant offer on unpleasant IPOs, they would obtain the entire shares they have offered for. If they offer on pleasant IPOs, they would not obtain the entire shares they have offered for as the well-versed investors would have offered on these IPOs as well. The theory implies that information asymmetry plays a role in the returns obtained from the stocks. The theory is relevant to the study since it explains the disparities in stock returns as a product of information asymmetry. The study relates IPO price and stock returns and it will be intriguing to examine information asymmetry’s role in the relationship. Dennis et al. (2009) critiqued the theory by examining the winner’s curse model where the investor has the option of pulling back on subscription (or on allocation). The investors’ choice to pull back lessens the information asymmetry among the well versed investors as well as the ignorant investors nevertheless increasing the firm commitment underwriting risk.

**Empirical Literature**

**Initial Public Offer Pricing and Stock Returns**

In their study Siew, Ivo and Won (1998), sought to assess the scope to which managed accruals affect the long run irregular stock return of IPO firm’s performance. They sampled domestic initial public offerings consisting of 1974 IPOs from 1980-1984 and 3197 IPOs for 1985-1992 periods, gathered at the Securities Data Co. (SDC). The IPO 3-year after effect issue BH returns is reverted on a four accrual variable and a set of control variables for additional familiar plausible forecaster in single cross-sectional regression. The study indicated that superior quality issuers can certainly give up acting as if high quality and can be paid off by being capable to reissue regularly subsequent to an IPO. Discretionary existing accruals are high during an IPO in relation to non-issuers.

Aggarwal, Liu and Rhee (2008) sought to ascertain the aftermarket IPOs pricing in Hong Kong securities covering the period of 1993 to 1997. They concentrated on the aftermarket IPOs conduct in relation to the subscription rate in addition to using descriptive as well as multivariate OLS regression. They found that IPOs attract high preliminary surplus proceeds and losses in the long-run. Further, they argued the IPOs are not able to be priced at their basic values in the initial stages of trading.

**Initial Public Offer, Firm Characteristics and Stock Returns**

Kipngetich, Kibet, Guyo, and Kipkoskey (2011) examined causes of IPO pricing in Kenya. Multiple regression analysis and descriptive analysis were used respectively to analyze and present the secondary data for the period under study in Kenya’s IPO. An under pricing of 49.44% was noticed and every variable tested was found to insignificantly influence IPO offer price at the 5% level of significance. The public information revealed in the prospectus was insignificantly mirrored in IPO offer prices in addition the rational theory cannot clarify the consequence of shareholders’ sentiment in the IPO market in Kenya given that shareholders sentiment and board reputation are negatively linked to IPO offer pricing.

A study by Latham and Braun (2010) used three sections of office hypothesis in consent to examine administrative risk taking in volatile markets. The study used a whole of 124 firms which registered to be listed on the securities market toward the end of the advancement impact (2000-2002). Panel data and Panel analysis was used to investigate the impact of CEO proprietorship in the resolution to proceed or pull out of offer of IPO in a delicate market. The study set up an inverse U-shaped association between CEOs’ quality duties despite the conclusion to proceed with an IPO: the odds of IPO disintegration in delicate markets moves up since CEOs have paltry or excessive proprietorship.

Olowoniyi and Ojenike (2012) investigated the causes of stock returns using a panel econometric approach to analyze the data from listed firms in Nigeria. This approach was used to analyze data for the period 2000 to 2009 which was gathered from the 70 listed firms. The conclusions recommended that with the exclusion of profitability and tangibility, every independent variable was positively and significantly correlated to stock return. Peter (2012) sought to examine underwriter’s ascertainment of IPO fair value of firms by means of a unique dataset from 228 records possessed by French underwriters. The Sample comprised 228 IPO firms for the period covering January 1990 to December 1999. Total assets for 12 Months as well as property in addition to equipment were reported in the prospectus.
The study found out that mature firms are linked to lower levels of under pricing while technology firms have a high level of under pricing. Further, firm characteristics seem to insignificantly influence under pricing.

**Initial Public Offer, Macro Economic Environment and Stock Returns**

Breilnliner and Glogova (2002) inquired about the logical impact of specified macroeconomic components impacting IPOs by analyzing data of yearly IPO volumes for six developed European countries over a period of 18 years and further using panel data analysis. The researchers inquired if IPOs have steady signals they rely on upon stock index returns for what they called merged periods.

This outcome demonstrated that a logarithmic change of IPO volumes results to firmly significant estimates for pooled in addition to individual country regressions. Peterle (2013) employed a unique dataset of 94 IPOs in the Eastern European Countries. He investigated the “distinctive macroeconomic and business factors that could also have had an important impact on IPO activities” in the area for the period of the 2000. However, Poland’s high IPO enterprise can be explained using four variations in common signal values which relates to Eastern European Countries signals, the maximum pension fund-to-GDP ratio and the maximum paid-in least capital for firms. In view of macroeconomic variables, Peterle (2013) wraps that rapid improvement of governance and business reorganization, rivalry guidelines, better enterprise rules in addition to a considerable retirement fund, may have had a positive effect on Poland’s IPO activities during the year of study.

**IPO, Firm Characteristics, Macroeconomic Environment and Stock Returns**

Douglas and Vance (1998) conducted a study on firm features, unexpected inflation, and stock returns. Their sample period began from November 1887-1992. There were a total 62 observations while a total of 84 firms were considered for the sample period. Unexpected inflation was computed by deducting surveyed measure of anticipated inflation of the actual announcement percentage change in the CPI. The Empirical outcome indicated that fixed and time-varying firm feature do not have an effect in the reaction while stock‟s reaction to unexpected price increases relies on the firm characteristic. Jovanovich and Rousseau (2004) examined a panel data set for a big number of privately as well as publicly held independent firms in Italy. The researchers deduced that the key internal factors influencing IPO likelihood are market-to-book ratio and firm size a typical Italian firm is at the time point of going public eight times larger and six times as old in comparison with its US counterpart.

**Findings**

IPO pricing is a phenomenon that still remains a puzzle to many scholars and has been of concern, particularly within the structure of developing economies with several theories being advanced to argue that IPO under pricing is an equilibrium phenomenon in a strong capital market with passive investors. Several emphases have been paid to information asymmetry problem. Though IPO under pricing phenomenon has attracted interest globally, Africa lags behind. Furthermore, IPO under pricing and factors influencing it are not consistent across countries and time frame. Based on paucity of studies of IPO under pricing in Kenya and as well as the other developing economies further coupled with the different methodological approaches used in analyzing the factors influencing IPO under pricing and further motivated by the current state of academic information concerning IPO under pricing, the study becomes intrigued to explore this research concern after noting a wide variations of IPO initial returns from first day trading in different countries and it therefore seeks to explore the causes of IPO under pricing for listed firms. The rationale of the research was to investigate the correlation linking IPO pricing and stock returns.

The Literature was reviewed both globally and locally, theoretically and empirically. The empirical literature reviews highlighted studies done on the study variables from the global and regional perspectives. The reviewed studies, however, haven’t combined similar intervening and control variables hence the need to intervene and moderate between the relation linking IPO characteristics to stock returns. The review of literature revealed presence of methodological, conceptual and contextual research gaps. Methodological research gaps arise where different methods of analysis can be used instead of only one method, the conceptual research gap arises where different concepts are investigated under the same topic and contextual research gap arise where different study can be conducted in different contexts. The initial IPO returns determinants vary based on different factors. As a result of inconclusive findings, there is need to conduct a study seeking to establish the relationship between IPO pricing and stock returns.

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Conclusions

Majority of firms making a share offering as a private placement devoid of the use of an investment bank are counterproductive. Floatation costs concerned in stock issuing, finding shareholders and maintaining investor relations would make offering shares one of the most expensive sources of capitals. Baker (1999) postulates that although the market price is already fixed by offers coming in before the share is released, there cannot be any under pricing and the signaling effect are decreased to a greater extent. Revised Prices that occur during the book-building period mirror several information concerning demand and the issuing firm are hesitant to regulate to IPO prices upwardly as they learn that there is a considerable surplus demand at the projected IPO price.

Present empirical materials linking IPO pricing and stock returns still presents conflicting outcome and this calls for more studies to be conducted on the topic in order to bring harmony to the work. The study concludes that even though IPO under pricing phenomenon has attracted a great deal of concern in the securities markets globally, IPO under pricing and factors influencing it are not consistent across countries and time frame hence more studies are needed to compare results from the different contexts. Furthermore, the review of literature revealed the presence of methodological, conceptual and contextual research gaps in the discipline of IPO and stock returns. The study also concludes that there still exists contradictory outcomes hence need to conduct further studies on the topic.

Recommendations

There is a recommendation that as future scholars try to establish the effect of IPO pricing on stock returns, there should be an inclusion of an intervening variable as well as moderating variable. Further, there is a recommendation that apart from the intervening variables of firm characteristics reviewed in this paper, other variables could be used so as to compare the results. Furthermore, other moderating variables not reviewed in this paper can also be used. Future studies can be conducted on the study topic, within different contexts so as to compare the findings and reach conclusions. Furthermore, there is need to conduct further studies on the same topic, but employing different methodological approaches so as to compare findings.

References


