Revisiting IPO underpricing and underperformance: Evidence from West Africa

Félix ZOGNING NGUIMEYA
Université du Québec en Outaouais
Département des sciences comptables
101, Rue Saint-Jean-Bosco, Gatineau (Québec) Canada

Abstract

This paper discusses two known phenomena in financial markets: underpricing and underperformance. We examine whether these two phenomena are also present on the West african financial market. Our results indicate that listed companies on the stock exchange in West Africa have generally experienced underpricing and underperformance. However, contrary to OECD markets, they have experienced a significant rise after the downtrend. In addition, state-owned companies have almost always shown good performance and have not experienced underperformance.

Keywords: IPO, Financial markets, Stock Exchange, Underpricing, Underperformance,

1. Introduction

The initial public offering (IPO henceforth) considered in the Anglo-Saxon terminology as the transformation from a closed to an open business enterprise requires from major companies, a set of transformations to meet the requirements of the market authorities. This is a process of legal and financial restructuring that creates direct and indirect costs (Ritter, 1987). Going public is an important step in the life of a company, it gives access to a large amount of equity for an indefinite period of time and help to raise funds for expansion. In addition, the introduction provides indirect benefits such as increased reliability, financial legitimacy and reputation of the company, a higher value for employees who may be involved and participate in the future development of the business, as well as the ability to obtain additional financing cost through new issuances or bank loans, due to the greater transparency of the company that will provide regular information on which account it will be evaluated. Given the advantages inherent in the initial public offering (IPO), a growing number of companies worldwide, particularly in developed economies, consider the admission to trading as the appropriate means to increase funding for new investments. During the 80s and 90s, the number of companies that made the choice to go public in the United States exceeded one per business day, on an average.

The existence of several procedures and introduction of various methods of evaluation determine causes for the issuing company; the combination that guarantees an optimal distribution of the shares on the market while enabling the realization of a gain.

Numerous studies have indicated that the IPO (initial public offering) of common shares were often undervalued, especially in the primary market, with some changes in the intrinsic value observed in the secondary market. This short-term phenomenon was observed in almost all countries with a stock market, and with some variation in the degree of undervaluation. The existence of this undervaluation to the introduction has been verified with a market price of the shares of companies that introduced rapidly and significantly exceeds the offering price of the shares (Loughran and al. 1994). Several reasons have been advanced to explain the phenomenon of underpricing of IPOs during its initiating different theories focusing on various aspects of the introduction process. These explanations are not mutually exclusive so far. Due to the persistence of the phenomenon and its internationality, researchers are always looking for reasons that correspond with modern financial theories. Ritter (1998) argues that underpricing has persisted for decades without any sign of its imminent demise. These positive abnormal returns observed in the short term rather tend to reverse the long term, between 3 and 5 years. Drawing on the work of Stoll and Curley (1970) which concluded that investors hardly realize a good deal in the long term, Ritter (1991) will compare the average profitability of listed companies than similar companies remained OTC (over the counter market henceforth) to then conclude of an underperformance of IPOs in the medium and long term. Besides the presentation of the theoretical framework surrounding IPOs, this study focuses on evidence from

West Africa area concerning the phenomena observed in the equity market performance of securities (underpricing and underperformance).

2. Literature Review

Two major events punctuate quasi general changes in equity market performance of listed companies: The initial undervaluation and underperformance in the long term. Phenomena that are not unique to the U.S. only market which Ritter (1991) focused his studies, especially as they are recognized on several other financial markets, and in several countries. Various interpretations have been put forward in an attempt to elucidate these phenomena, sometimes highlighted with organizational changes required by the IPO, or any accounting manipulations before the introduction, among others.

We will try for the rest of this chapter, to review the financial literature about the explanatory factors of the two phenomena observed on the stock performance of newly introduced securities (underpricing and underperformance), then we will observe the behavior of financial markets outside OCDE (OECD) space, and then to finally focus on the specific case study of the regional financial market for West Africa, whose stock market is known as the BRVM (Bourse Régionale des Valeurs Mobilières). It is a sparsely populated market (37 companies) which also presents the features of undervalued securities introduction, followed by a poor performance in the first year, but that shows the particularity of a better performance in the longer term (after the 5th year).

2.1. Underpricing

Previous studies that aimed at understanding the phenomenon of underpricing at the opening of trading in newly listed actions suggested various avenues for reflections; and identified several potential factors that may explain or be related to an initial undervaluation.

The size of the company

An important strand of literature highlights the effect of size on the outcome of a public offering. Empirical studies have shown, in their overwhelming majority, the risk of underestimation is much more prevalent in small firms than large firms. An opinion supported by Ritter (1987), Chalk and Peavy (1990), Jog and Riding (1987), Cormier, Suret and Lemay (1990) and Clarkson and Merkley (1994). Who also believe that informed investors will be interested in the uncertainty of a public offering and in its size? And that the larger the size, the greater the opportunity to acquire information related to the issuing of shares.

Market sentiment during the emission period

Referring to the passage of bubbles thesis, the assumption based on market sentiment at the time of introduction that would offer securities is significantly lower than the demand, so that aggrieved investors when introducing proceed by speculative purchases for titles. Which then causes an increase in prices and a positive abnormal return of newly admitted to trading securities. Speculative breath once fallen, abnormal positive returns should become negative over time. In essence, this hypothesis assumes that candidates for public offering firms choose the time of their IPO in order to maximize the proceeds of the transaction. Leading them to choose periods of hot Market where the market is highly responsive, rather than periods of cold Market where the market is less responsive. This is what led Derrien and Womack (2000) to suggest that the climate prevailing in the market at the moment chosen for the IPO (initial pricing offering) plays an important role in the degree of undervaluation.

In the same view Izan and Monroe (1995) confirm that, after observing the Australian market, the level of underpricing is high during periods of rising market. Euphoria market could lead investors to too optimistic about the prospects of the company; they are therefore willing to pay larger commissions to subscribers. Moreover, Louhgran and Ritter are of the opinion that undervaluation objective could be to reward the broker, more or less indirectly. Returning to its original position which wanted departing shareholders to leave money on the table at the public offering, In addition Ritter (2002) modifies his explanations that in a situation of a receptive market, companies' issuers were more interested to the increasing market value of the firm, rather than derivable products from the emission which generally benefit brokers. The money left on the table would then become an indirect compensation for introductory brokers, from the time investors cling to their offer guarantees significant gains in terms of subscriptions during emissions at attractive prices.

Prestige or reputation of the introducing broker

Several studies make suggestions on the reputation and the prestige of the introducing broker in an attempt to explain the phenomena of undervaluation. Considering that the reputed brokers of big invoice are not related to risk projects, their undervaluation would be less, than with brokers which are less reputed. Empirical results by Beatty and Ritter (1986), Carteran and Manaster (1990), and Michael and Shaw (1994) support the above theory. Another possibility concerning the relationship between the banker introducer and undervaluation resides in the maintenance of prices after subscription. According to Schultz and Zaman (1994) bankers' introducers, which are concerned about their reputation would tend to fix an introductory price to motivate subscribers, therefore proposing an introductory price which they could easily sustain.

A surge in the price of admission will cause growth in their reputation. The opinion Hanley and al. (1993) have been campaigning for after empirical studies carryout on the New York Stock Exchange. A thesis suggested by some authors amongst which Ritter (1984) admits a strong market inefficiency of IPO notably ignorance by companies of their value. Beatty and Ritter (1986) on their part think in terms of a prestigious broker, that asymmetric information between the issuing company and investors would be reduced because of the brokers' concern to maintain its reputation and not to lose parts of the markets by associating with a bad evaluation. Clarkson and Merkley (1994) indicate that in Canada the lesser emissions are those which are controlled by prestigious brokers. Cormier, Suret and Lemay (1990) supported this view by affirming that the prestige of a broker provides a positive effect but of non-significant about the threshold of 5%. Ritter (1998) on his part tries to bring forth another explanation to the relation between the brokers an undervaluation. A logic which wants the introductory banker should benefit relative to the awareness market conditions to undervalue offerings in order to supply less efforts of marketing to make a subscription for success.

Transfer of wealth from new shareholders to the former shareholders

The question of wealth transfer between former shareholders and new ones has become an alarming issue, notably since a number of technology companies trading have increased considerably. For instance in July 2000, Corvis Corp activities have increased to 135%, to a total of 84, 72$, after IPO of 31, 63 million shares up to 36 each. The transfer of wealth was about 1,5millard in dollars. Datar et al (2006) came up with the idea that emission companies are favorable to inferior introductory price to their intrinsic mathematic value; in order to give access to a larger number of investors, and also favor much more important the transfer of wealth, considering the number of former subscribers, and those who will wish to catch up on the secondary market. According to Leland and Pyle (1977), a transfer of shares would give significant signal of low earnings prospects and therefore would encourage shareholders to engage at a deep discount securities to attract investors. Brennan & Franks (1997) empirically confirm the undervaluation hypothesis of which strongly depend on the behavior of company managers who control. According to these authors, when officials who hold control yield a higher fraction of shares, they are more susceptible to undervaluation; and are therefore particularly encouraged to limit to reduce their loss of wealth. However, when they do not give shares, they become encouraged to reduce the offer price (and increase the undervaluation) to ensure the success of the operation.

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Underpricing is therefore a factor that would pay other investors the benefits of any kind can get insiders through their position of control.

2.2. Long-run performance

Like the phenomenon of underpricing found on most stock markets, financial theory is confronted with another phenomenon: that of the poor performance in the medium and long term securities listed. Loughran & Ritter (1995) show that companies that have conducted emissions during the period 1970-1990, either through a public offering initial savings, or a waiver of periodic fund performance were significantly lower than companies that did not make the public offering for five years fundraising. Jain and Kini (1994) studies show that for 682 public companies listed between 1976 and 1988, operating cash flow and asset median decreased significantly in terms of ratio between the year preceding the introduction and the third year thereafter.

The model developed by Ibbotson (1975) over the decade from 1960 to 1969 concluded that there is market inefficiency at the time of the IPO (initial pricing offering) and during the following period thereafter. Stern and Bornstein (1985) found out that from the introductory date of IPO (initial pricing offering) until the last month before their study that, the average profitability of newly issued securities was 22% lower compared to the SP 500 index trading. Ritter (1991) realizes that the average profitability of companies introduced in 1526 during the decade 1975 -1984 was 34% on the third anniversary of trading against 62% for similar companies witnesses, not having known the IPO.

Henceforth studies are addressing the issue of underperformance to try to identify explanatory factors associated. Jacquillat (1994) finds an explanation of the phenomenon on the basis of two arguments: the timing of the introduction effect and over-optimism of investors. He argues that the introduction takes place in an atmosphere of optimism or during bullish period's scholarships. Investors therefore overpay corporate securities, convinced of a bargain. What is true in the short term, but is unsuccessful in the long term.

The timing for the introduction time is also one of the explanations for the underperformance subsequent responses. Ritter (1991) suggests the existence of a window of opportunity as the date of introduction, indicating that issuers looking to enjoy a climate conducive to the spread of actions. Von Eije et al (2000), however, come to a conclusion at the end of an investigation. Indeed, companies have undergone organizational changes during the IPO appear to be better than those who do not have the same performance preparation.

2.3. Links between Underpricing and Underperformance

Several researches are dedicated to explaining the long term underperformance of business IPOs link to initial undervaluation as its quasi-systematic cause. A model built by Ljungqvist, Nanda and Singh (2001) connects short term undervaluation, the existence of speculative phases, and under-performance in the long term on the basis of a common denominator that would be the presence of irrational investors.

For instance, Jain & Kini (1995), and Cai & Loughran (1998) indicate that the operating performance of companies that enter the stock market is above the average achieved by the societies of control, and that this is a period of up to 12 months before the date of the public offering; Loughran & Ritter (1995) also found out that firms carrying out capital increases through public offerings provide a total return of 72% for the year preceding the offer of sale of new shares. A situation similar to the probative manifestation of aggressive revenue management, set to attract investors to a greater enthusiasm for securities issued; and over-optimism about the prospects of the company. An empirical study by Teoh, Welch and Wong (1998), shows that the manipulation of earnings at the time of introduction may be one reason for the over-optimism of investors. Starting from a sample of 1,649 firms, they show that the introduction whose profits were highly manipulated operations have poor performance relative to the market index, or a sample of comparable companies.

Their activity in the secondary market is also less than that of firms not having artificially increased their earnings at the time of IPO. These authors believe that if high incomes could be maintained, dissatisfied investors would reassess the company down to a level satisfactory to their fundamentals principles. Studies by Von Eije et al (2000) and Brav & Gompers (1997) suggest that the underperformance in the long term is not necessarily the result of the IPO, and lean much more on organizational adjustments of issues related to the IPO. These results emanate from studies conducted mainly in the western sky (economies) are at least contrasting. They attribute markets anomalies on the one hand, the context and the management of the operation of introduction, and on the other hand, the various changes facing companies that are publicly traded. The market culture is less advanced in developing countries or least developed financial market occupier not the same place in the economy, we believe it is appropriate to observe the behavior of stock markets outside the OECD area.

2.4. Behavior of markets outside the OECD area

Several researchers suggest the reputation of introducing broker to explain the underestimation of a public offering, indicating that prestigious brokers would join operations better evaluated. Empirical evidence is provided by Beatty and Ritter (1986), Carter and Manaster (1990) and Michael and Shaw (1994). However, it seems that this theory does not explain the under-assessments levied on Chinese markets. Tian Zhan (2000) test the relationship between the reputation of the broker and the level of underpricing, and conclude that this reputation has no explanatory about the undervaluation power, given that the government plays a very important role in the regulation, especially during IPOs.

It is also noteworthy that the Chinese market has unique characteristics, including a long delay between the issuance of securities and their trading, a period which is on an average a year and which could go up to three years. Kuan (2000) conduct a similar study on the Hong Kong market and determined with a sample of 273 operations of introduction that the most reputable brokers have on an average 8.40% undervaluation in less brokers’ low reputation.

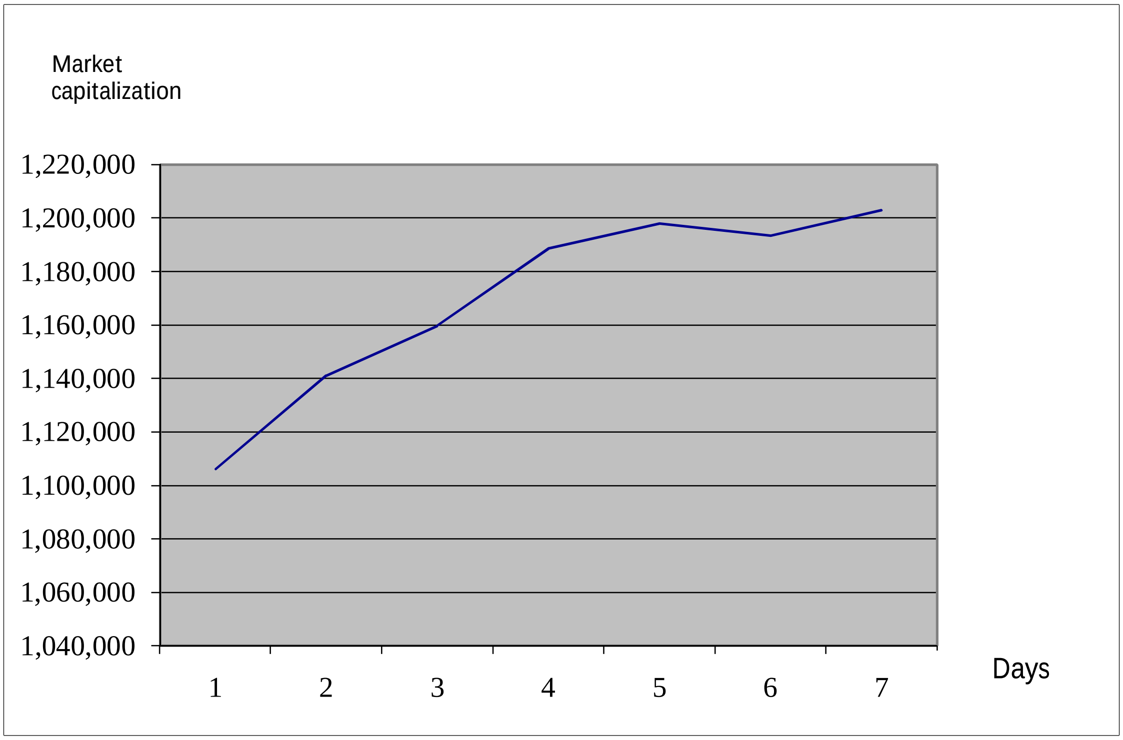
A non-statistically significant difference, which leads him to conclude that the behavior of brokers’ introducers at the Hong Kong market, is distinct from brokers present in other markets, including the Western markets. Specifically, the undervaluation is present, but is not due to the reputation of the introducing broker. Ganna Rabah and El Ammari (2008) align positions with Broye and Schatt (2003) in finding a sample of companies listed on the Tunis Stock Exchange between 1992 and 2006, that the undervaluation is largely explained by the behavior of shareholders who control, which reduce the undervaluation when giving a large number of units and favors for when they yield almost nothing in order to take advantage of a wealth transfer from new entrants, while retaining control.

Bundoo (2007) analysis on the other hand the behavior listed in Mauritius from 1989 to 2005 and finds out that, on the basis of market capitalization the largest companies have the highest undervaluation, and that small companies also have strong undervaluation as well. A position that contrasts with the results of empirical studies conducted in the western sky. The regional stock exchange serving the following West African countries (BRVM) which is the subject of our study could provide new avenues for explanations of two phenomena related to IPOs. Indeed, it has the distinction of being a sub-regional exchange, multi-country (those of WAEMU in West Africa). Sparsely populated financial center (38 companies listed on the stock market), which operates in an environment where funding from the money market is still dominant, and whose candidates for listing companies are not always motivated by financing needs, with other possibilities exercise less restrictive funds. Another salient feature of the West African stock exchange that justifies the attention that this work gives it the longer term behavior of the share price: If the market has high positive returns of the securities to the introduction, as well as a poor performance in the medium and long term, he finally out for a sustained rise in prices in the longer term.

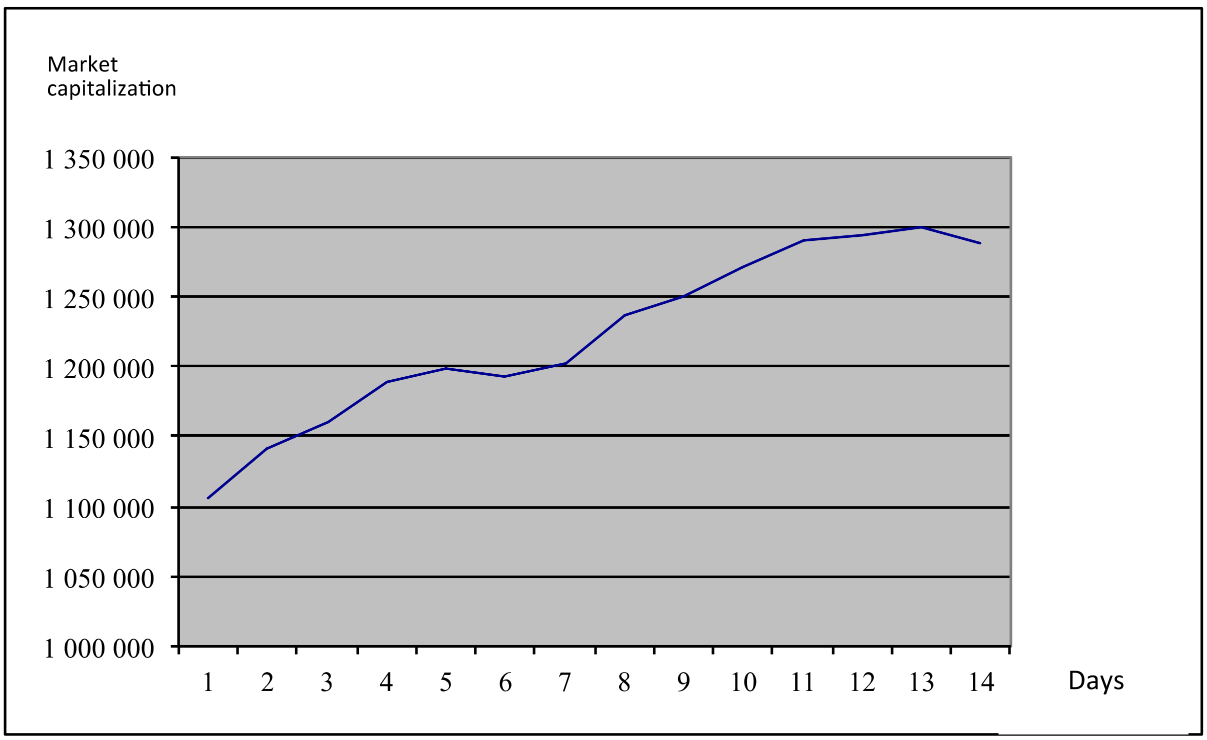
3. Evolution of stock market performance in West Africa

3.1. Underpricing

The financial literature reported a surge in surpassing significantly and positively the introduction of the title in the first few hours after an IPO price. After the transition made to transform the Stock Exchange in Abidjan Regional Stock Exchange (opening in seven other countries), the new start quotes indicates a tendency for the image of an initial undervaluation of corporate securities present at the side, as shown in the charts below:



Compound Annual Growth Rate : 8.75 %
Figure 4.1. Market developments during the first 7 days



Compound Annual Growth Rate : 16,42 %
Figure 4.2 : Market developments in the first months after the introduction. (14 days)

This price trend during the first week and even the entire first month of trading after the opening of the financial market shows that the West African financial market is no exception to the rule that the value of securities rises quite rapidly over their first quotations, demonstrating a potential underestimation of the introduction.

Various factors are cited to explain the initial undervaluation; many can be immediately discarded in the case of the BRVM. The reason seems to best explain the upward trend in the market is the climate. Other reasons come up against the fact that there is here an IPO preceded by a valuation of companies present, but rather the expansion of a national market (that of Côte d'Ivoire) to lead to a sub-regional market (West Africa). Companies formerly listed on the Stock Exchange of Abidjan views are held on the new market without making a new recovery (following a political decision to transfer block the entire portfolio BVA BRVM) during the introduction of these companies BRVM is the last price obtained on the BVA. Thus, it becomes unlikely to mention here the transfer of wealth to explain this change in course, no transfer of shares occurring within 35 companies (including 36 at the opening of the BRVM) that were from the BVA. For the same reason, the prestige of the broker cannot be advanced as an explanatory factor. The initiation of the new scholarship at a broader base has breathed new life. This thus indicates some market inefficiency.

3.2. Under performance

At the International level experiments show a negative trend in stock market performance over periods ranging from 3 to 5 years after the introduction. Underperformance are often attributed to market cycles, correcting that it brings to corporate financial data or a decrease of the wave of optimism on the market during the introductions. In this respect too, the West African financial market is no exception, as evidenced by the following figures:

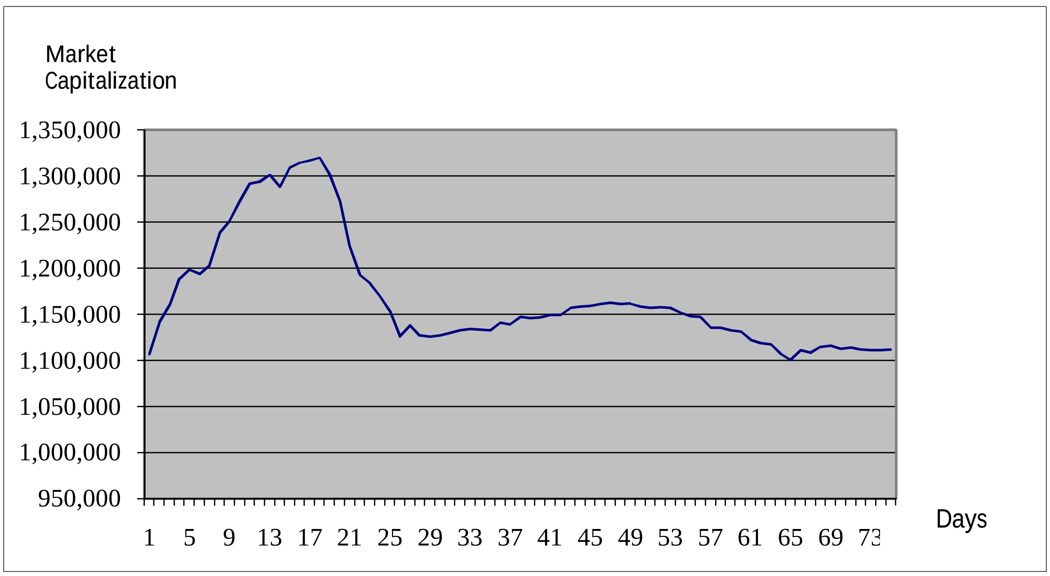


Figure 4.3. Changing prices after six (06) months

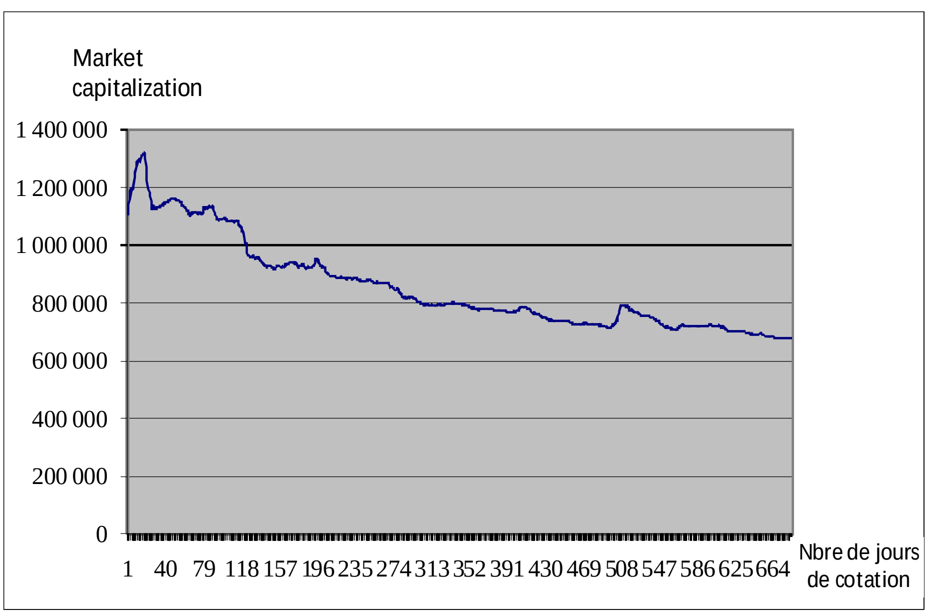


Figure 4.4. Price trends over three years

The euphoria found on the market at the opening of the BRVM in September 1998 has been somewhat leaded six months later, before giving way to a quasi-continuous plummeting during the following three years. Confirming for the BRVM (regional stock exchange serving) like the overwhelming majority of exchanges around the world, the presence of underperformance. This curve does not take into account the five companies that are listed long after the launch of the sub-regional financial market, and does not take into account either of the two companies that have left the coast since then, including the SAEC, and SDV which merged with SAGA to form SDV-SAGA Company remains listed. The major difference observed in the BRVM (regional stock exchange serving) is the significant rise over the longer term (10 years). Initiated a recovery even though the Ivory Coast, the host country of the seat of the BRVM (regional stock exchange serving) experiencing a unprecedented political crisis, which has also led to the relocation of sub-regional holdings of several multinationals investing in the country. Although the companies listed on the BRVM (regional stock exchange serving) underperformed, they are not so far off the track as those who underperform in Western markets.

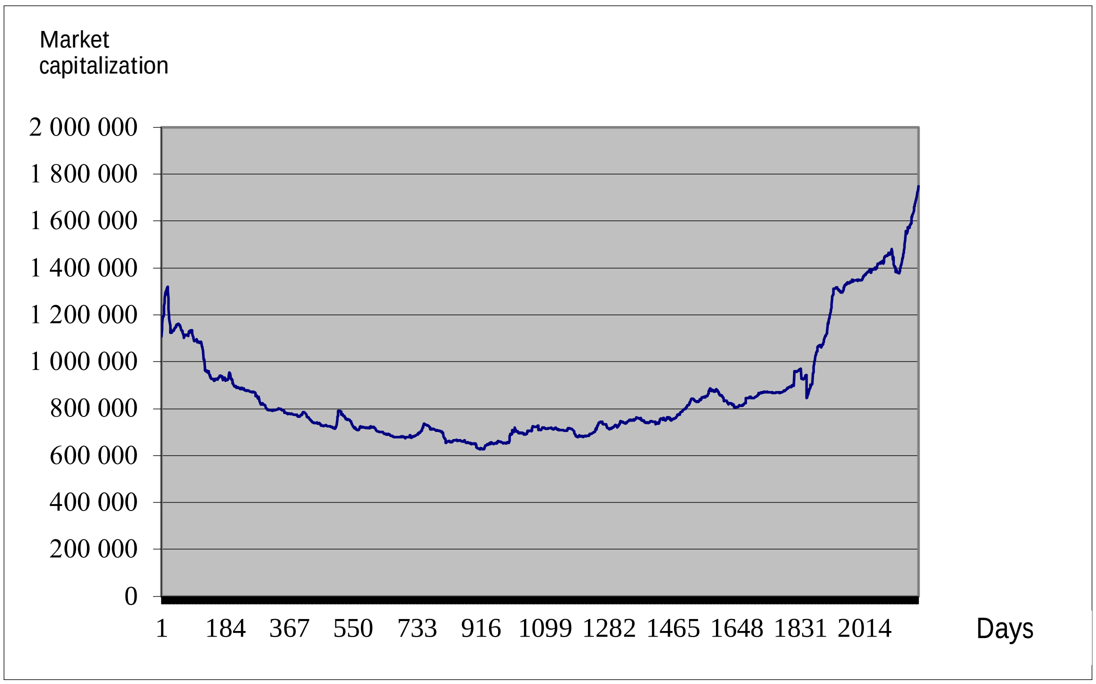


Figure 4.5. Price changes over 10 years

Furthermore, the poor performance observed in the first three years is relative. If the overall trend shown in Figure 4.4 is declining, it remains that the sector consists of state enterprises is doing quite well over the entire 10-year period (1998-2008) since the creation of sub-regional market.

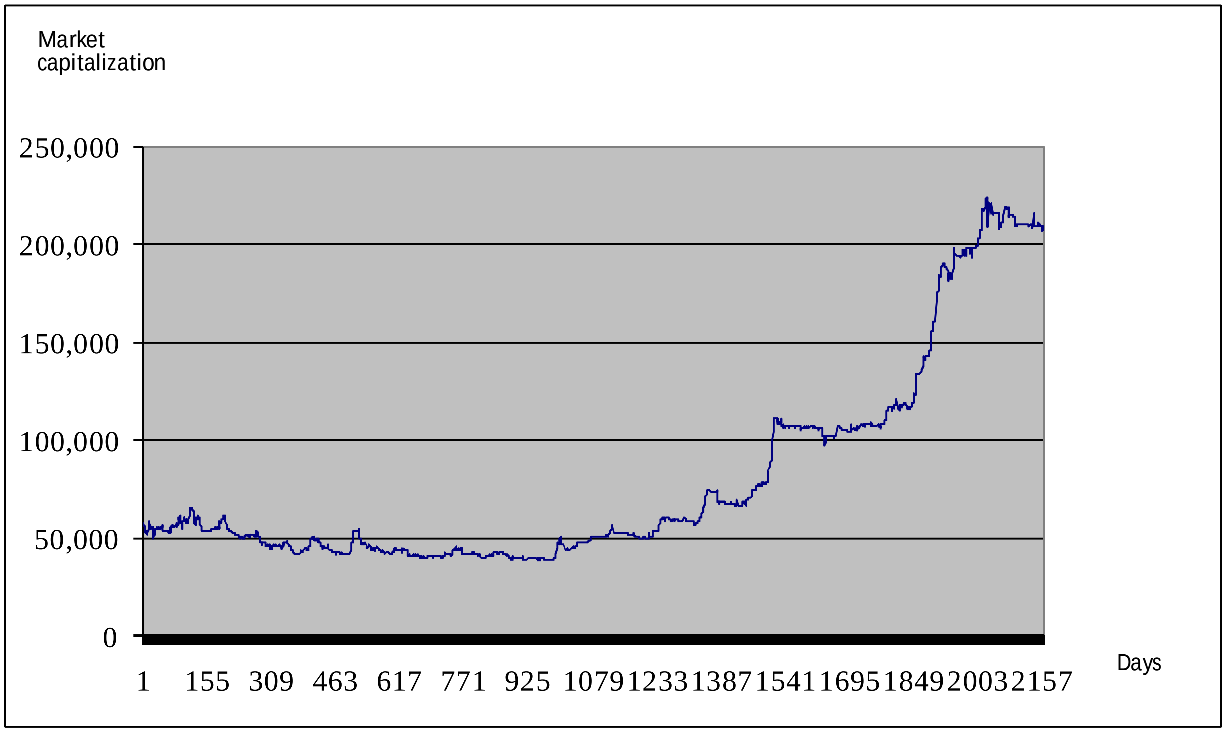


Figure 4.6. General development of SOEs (state owned enterprises)

The general trend of stock market performance of SOEs (state owned enterprises) denotes a reluctance of investors towards risk and relative confidence in securities guaranteed by the United States. In addition, the three companies involved in this category, the Ivorian Electricity Company (CIE CI), the Water Supply Company of Côte d'Ivoire (SODECI) and the National Telecommunications Company of Senegal (SONATEL) evolve monopoly for the first two and the last duopoly.

Companies certainly presented under the banner of the local States, but whose capital is in fact largely owned by private operators, mostly foreigners (CIE CI is 51% owned by Bouygues and 15% by the Ivorian government, SODECI owned 46% by FIBYSA and 3.25% for the Ivorian government. SONATEL owned by France Telecom for 42% and 28% for the Senegalese government).

4. Concluding remarks

The stock performance of companies listed on the regional stock exchange seem at first not to deny the existence of a reality of underpricing and underperformance on the stock exchanges. Are there short term a surge in prices, a few weeks after the initial public offering. A momentum that is running out of steam in the medium term, leaving note an underperformance, as advocated by the studies carried out in the countries of the OECD.

But, there is a significant improvement after the fifth year and for the subsequent years, up to the horizon of ten years which have focused our study. This significant difference compared to previous studies could be explained by operational and financial performance of companies listed in West Africa, when we know that the financial statements are almost the only source of information available for investors. The stock market performance and financial performance are therefore more associated than anywhere else. Listed Companies in this economic zone being strictly among the most prosperous or the best managed, it is almost normal that performance will continue over the longer term. A future study could examine the relationship between this evolution of the market capitalization and financial indicators of listed firms, in order to explain the revival post-underperformance. Finally, in a region where a widespread opinion is that the State can never go bankrupt, adherence to securities of States owned companies do not surprise anyone.

References

Beatty, R.P., Ritter, J.R. 1986. *Investment banking, reputation, and underpricing of initial public offerings*, Journal of Financial Economics, Vol. 15, p. 213-232.

Brennan, M. and Franks, J. 1997. *Underpricing, ownership and control in initial public offerings of equity securities in the UK*. Journal of Financial Economics 45, pp. 391–414.

Broye, G., and Schatt, A. 2003. *Sous-Evaluation à l'Introduction et Cession d'Actions par les Actionnaires d'Origine: Le Cas Français*, Finance Contrôle Stratégie, vol. (6), n°2, pp.67-89.

Bundoo, S.K. 2007. A*n analysis of ipo's underpricing in mauritius*, African Journal of Accounting, Economics, Finance and Banking Research Vol. 1. No. 1.

Carter, R.B. and S. Manaster. 1990. *Initial Public Offerings and Underwriter Reputation*, Journal of Finance.

Clarkson, P. M., & Merkley, J. 1994. *Ex ante uncertainty and the underpricing of initial public offerings: Further Canadian evidence*. Canadian Journal of Administrative Sciences, 11, 54-67.

Derrien, F., et K. Womack. 2001. *Auctions vs. book-building and the control of underpricing in hot IPO markets*, Review of Financial Studies.

Eije, J.H. Von, Witte, M.C. 2000. *IPO-related organizational change and long-term performance*, University of Groningen, Some research report 00A19.

Habib, M., Ljungqvist, A. 1999. *Underpricing and entrepreneurial losses in IPOs : Theory and evidence*, SSRN working paper.

Ibbotson, Roger G., and Jeffrey F. Jaffe. 1975. '*'Hot issue'' markets*, Journal of Finance 30, 1027-1042

Jain B.A., O. Kini. 1994. *The Post-Issue Operating Performance of IPO Firms* The Journal of Finance. December. 1699-1725.

Kuan, Cheah Wai. 2000. « The Hong Kong IPO underpricing phenomenon and the underwriter reputation ». Research Masters thesis, University of Otago (Finance).

Leland, H., and Pyle, D.H. 1977. *Informational Asymmetries, Financial Structure and Financial Intermediation*, The Journal of Finance, vol. (32), pp. 371-387.

Loughran, T., Ritter, J., Rydqvist, K. 1994. *Initial public offerings: International insights*, Pacific-Basin Finance Journal 2, p. 165-199, 1994.

Loughran, T., Ritter, J.R. (2002), *Why don't issuers get upset about leaving money on the table in IPOs?*, Review of Financial Studies 15:413−443.

Michael et W.H. Shaw. 1994. *The pricing of initial public offerings: tests of adverse selection and signaling theories*, Review of Financial Studies 7 pp. 279–319.

Pagano, M., Panetta, F., Zingales, L. 1998. *Why do companies go public ? An empirical analysis*, Journal of Finance 53-1, p. 27-64.

Rabah Ganna et El Ammari. 2008. *Performace a long terme des émissions initiales et cessions d'actions sur le marché boursier tunisien*, Congrès du réseau des IAE, Lille - 10,11 et 12 Septembre 2008.

Reese, W. 1998. *IPO underpricing, trading volume, and investor interest*, SSRN working paper.

Ritter, J. 1998. *Initial public offerings,* Contemporary Finance Digest, Vol. 2, No. 1, p. 5-30.

Ritter, J., 1991. *The long-run performance of initial public offerings*. Journal of Finance 46, 3 –27.

Ritter, J. 1987. *The costs of going public* , Journal of Financial Economics 19, p. 269-281.

Stoll, H. R. and A. J. Curley, 1970. *Small business and the new issues market for equities*, Journal of Financial and Quantitative Analysis 5, 309-322.

Suret, J., Cormier, E., Lemay, B. 1990. *Le RÉAQ et la sous-évaluation initiale du prix des titres*, Canadian Journal of Administrative Sciences 7, No. 3, p. 47-56, 1990.

Teoh S. H., Welch I. and Wong T. J. 1998 b. *Earnings Management and the Underperformance of Seasoned Equity Offerings*», Journal of Financial Economics vol 50, pp.63-69.

Tian and Zhan. 2000. *The reputation of investment bank and IPO underpricing*, The Journal of the Graduate School of the Institute of Chinese Social Science 4 (2000), pp. 33–36.