# Chinese IPOs Market in Global Financial Crisis

***Faiq Mahmood**
****Xia Xinping**
*****Humera Shahid**

## INTRODUCTION

The phase of recession is a period when the growth in GDP for two or more quarters remains negative and if this period is prolonged, then it is termed as depression, while a long period of slow but not necessarily negative growth is sometimes called economic stagnation. The prevailing global financial crisis really started to show its effects in the middle of 2007 and into 2008. All over the world, stock markets crashed, large financial institutions collapsed and the government, even from the wealthiest nations, had to come with rescue packages to bail out their financial systems. The crisis started in 2007 due to a liquidity shortfall in the United States banking system, then moved towards the collapsing of large financial institutions and downturn of stock markets all over the world. Most of the economists have considered it to be the worst financial crisis since the great depression of 1930s. It contributed to the decline in consumer wealth estimated in trillions of U.S. dollars, failure of key businesses and significant decline in economic activity. Many causes have been proposed and both market- based and regulatory solutions have been implemented or are under consideration to overcome the crisis, while significant risks remain for the world economy over the 2010-2011 periods. This paper investigates the Chinese stock market performance in context of new issues during and before global financial crisis.

Most recent studies on financial market volatility are placed in perspective of transmission of volatility across economies and the contagion effects of a financial crisis. Sandeep A. Patel and Asani Sarkar (1998) argue that stock market crisis in developing and emerging markets is different from that in developed markets in certain ways. Developed market crisis have become less severe over time, in terms of both the extent of price decline and duration, but those in emerging markets have not. In both markets, prices decline for at least three years subsequent to recovery from a crisis and the effects of crisis transfers from one market to other markets in the region. Kiseok Hong et al. (2009) explains that the likelihood and severity of a recession tends to increase when it is associated with credit crunches or stock market crashes and severe financial downturn or recessions in the global economy are often coupled with financial crisis. Robert J. Weiner (2005) explains an analysis of one such crisis and found that derivative trading contributed less to market volatility during the crisis than before or afterward, the availability of market system that works well and properly can be a boon to government and companies in times of crisis. Brian h. Boyer et al. (2006) suggested that crisis spread through the asset holdings of international investors rather than changes in fundamentals by separating the stocks into accessible (foreigners) and those that are not accessible. Kyle and Xiong (2001) argue that when investors face crisis in one country, they try to liquidate their stock in one country and move to some other market, which cause equity prices to depreciate. Rigobon (2003) focused on the volatility of returns in equity and bond market surrounding the crisis period. Bekaert and Harvey (2000) focused upon equity returns in before and after financial reforms within a group of emerging markets and investigated that the volatility in returns is different from the returns before crisis. Aggarwal et Al. (1999) analyzed the volatility in returns for emerging markets by using an ICSS algorithm to identify the point of sudden shift in the variance of returns and identify the events which caused shift in returns. In following these studies, Pericli et al. (1997) investigated correlation in price changes and volatility of five major Asian markets from January 1990 to April 1995. They find that these countries have significant first and second moment time dependencies and price volatility transmission behave asymmetrically. Baig and Goldfajn (1998) used the cross-market correlation coefficients test to measure the impact of daily news in stock indices, currency prices,

**Doctoral Degree Candidate,* School of Management, Huazhong University of Science and Technology, Wuhan, P.R. China.
Email : faiq4_u@hotmail.com
***Professor and Vice Dean,* School of Management, Huazhong University of Science and Technology, Wuhan, P.R. China.
Email : hustfrc@foxmail.com
****Doctoral Degree Candidate,* School of Management, Huazhong University of Science and Technology, Wuhan, P.R. China.

interest rates, and sovereign spreads during the Asian crisis and found a significant increase in correlation across markets during the crisis. Simon Broome and Bruce Morley (2003) work upon Hong Kong, China and Japan market and investigate through bi causality test, that stock prices are the significant indicator for the crisis.

During the recent crisis in major developed and developing stock markets, the IPOs activity was also affected with only few firms step into the market over the crisis period as compared to the before crisis period. The phenomena of large positive gains to a new issue is worldwide and sometimes, is unpredictable and unexpectable when some specific events happen for an uncertain period of time, like the worldwide financial crisis. In such periods of crisis, it is very difficult for newly public going firms to maintain and sustain the value of their firms. The event of IPOs underpricing happens in almost every market. Loughran et al. (1994) documented evidence of IPO underpricing in 25 countries, with higher underpricing in developing and emerging than in developed markets. Fariborz Moshirian et al. (2008) found that initial underpricing in emerging Asian markets, China (202.63%), Korea (70.30%) and Malaysia (61.81%) exceeded those in developed Asian markets, Hong Kong (21.43%), Japan (34.04%), and Singapore (33.10%). Empirical studies traditionally show that the pattern of short run underpricing and long-run performance can be associated with IPOs. The first significant study carried out by Ritter (1991) found that the issuing firms substantially underperformed in the 3 years subsequent to going public and explained that the investors are over optimistic about the prospects of the issuing firms for first time, and firms taking advantage of these 'windows of opportunities'. Hundreds of studies have been carried in the literature. A comprehensive view can be found in Ibbotson and Ritter (1995) and Ritter (2003). Further, many studies have been carried out, as reasons of IPOs underpricing is concerned. Rock (1986) presented the winner curse model in which he argued that in every market, two kinds of investors expect to be invested, one group is of informed investors and the other is of uninformed investors. The group of uninformed investors tries to attempt every offer which causes high underpricing and then tries to exit from the market in order to minimize their risk, which further leads to fall in prices. Beatty and Ritter (1986) relate the level of ex-ante uncertainty with the level of underpricing and find a positive correlation among them: as higher is the level of ex- ant uncertainty, the higher is the underpricing . Benveniste and Spindt (1989) discuss the role of underwriters and informed institutional investors for IPOs underpricing. Allen and Faulhaber (1989), Grinblatt and Hwang (1989) and Welch (1989) present their model of signaling and relate the reason of underpricing with good taste in investor's mouth. Welch (1992) makes the advocacy of informational cascade hypothesis in which one investor along with his own information relies upon other investors' information. Loughran et al. (1994) and Chowdhry and Sherman (1996) document that IPO price mechanism is of great importance in high initial returns. The initial returns are different in countries from those where accounting information is used to set offer price. Underpricing varies over time along with the maturity of the market. It is assumed that until the happening of a certain event (conditions of crisis, window of opportunity,) with the passage of time, the market will be more mature and investors will be more informed and the level of underpricing will decrease. Ritter and Welch (2002) showed that IPOs during 1990-1994, averaged three year BHAR of -12.7%, but IPOs over 1995-1998 had an average 11.6% BHAR.

## DATA AND METHODOLOGY

The data used in this study comprises of 426 companies, which issued and listed their shares on either Shanghai or Shenzhen stock exchanges during the period of January 1, 2004 to December 31, 2009. The primary source of data for daily prices and IPO is CCER (Chinese Center for Economic Research) database. Out of the 426 companies, 114 listed their shares on Shanghai stock exchange and the remaining 312 companies were listed on Shenzhen stock exchange. Further, we divide the six years (2004-2009) into two groups based on crisis. First group relates to before crisis period (2004-2006) and the other is during crisis (2007-2009) period. To investigate the stock market performance, we also obtain daily market index before and during crisis. Further, with the help of market index, we calculate market return for both time periods. We plot the figure for both Shanghai and Shenzhen stock exchange indices and returns on the basis of their monthly averages before and during the time of crisis. The stock market adjusted first day returns $(MAR_{i,1st})$.Carter, Dark & Singh (1998) are used in the following research as the proxy of underpricing of IPOs in the first trading day. $MAR_{i,1st}$is computed as follows:

First day stock return $FR_{i,1st}$

$FR_{i,1st}=(P_{i,1st}/P_{i,o})-1$

Where $P_{i,1st}$is the price of stock $i$ on the first trading day and $P_{i,o}$ is the offer price of stock $i$.

First day stock market return $(SMR_{m,1st})$

$SMR_{m,1st} = (P_{m,1st}/P_{m,o}) - 1$

Where $P_{m,1st}$ is corresponding Shanghai (SHSE) or Shenzhen (SZSE) overall composite indexes on the first trading day and $P_{m,o}$ is SHSE or SZSE overall composite indexes on the offering day.

Stock market adjusted first day return $(MAR_{i,1st})$

$MAR_{i,1st} = FR_{i,1st} - SMR_{m,1st}$

Stock market return (SMR) is the change in the first listing date of an IPO compared with that on offering date, on the corresponding stock exchange overall composite index. It indicates market sentiment of the total stock market in the duration period. So $MAR_{1st}$ can value underpricing more accurately because it extracts the impact of the overall stock market on an individual IPO's under-pricing.

## RESULTS AND FINDINGS

The cumulative market adjusted returns for day 5th, 10th, 20th, and 30th are computed to check the short run performance of newly issued stocks, further in order to more comprehensively look at performance and sustainability of prices cumulative market adjusted return for day 50th, 100th, 150th, 200th, 250th, and 300th are computed. In addition, their corresponding median, standard deviation, and t-value are computed. As far as year 2009 is concerned, we calculate cumulative market adjusted return up to 30th day. A brief summary of IPO underpricing and their performance are given in Table 2. We include the performance of IPOs in pre crisis period for comparing and better view of performance of IPOs during crisis period. Table 1 presents the year wise issue of IPOs in pre and during crisis period. Out of 426 IPOs, 180 IPOs were launched in pre crisis period (2004-2006): with 100 IPOS in 2004, only 15 IPOs in 2005 and 65 IPOs in 2006 respectively. Remaining 246 IPOs relating to the crisis period (2007-2009): with 126 IPOs in 2007, then 77 IPOs in 2008 and 43 IPOs in 2009.

**Table 1 : Summary Of IPOs Issued (2004-2009)**

| Year | Shanghai | Shenzhen | Total |
|---|---|---|---|
| Pre crisis (2004-2006) | 77 | 103 | 180 |
| 2004 | 61 | 39 | 100 |
| 2005 | 3 | 12 | 15 |
| 2006 | 13 | 52 | 65 |
| During crisis (2007-2009) | 37 | 209 | 246 |
| 2007 | 25 | 101 | 126 |
| 2008 | 6 | 71 | 77 |
| 2009 | 6 | 37 | 43 |
| **Grand Total** | **114** | **312** | **426** |

In Table 2a and 2b, the mean market adjusted returns for both time periods i.e. pre and during global financial crisis are presented. During pre crisis period (2004-2006), mean market adjusted return for the day first is 72.62% which is far below as compared to the level of underpricing normally prevailing in the Chinese market, which shows that in normal circumstances, as the time goes on, Chinese IPOs market and its investors are becoming more mature and informed. But on the other hand, in the period of crisis (2007-2009), the mean market adjusted return for day first is 145.20%, which shows almost 73% increase in the level of underpricing as compared to the level of underpricing before the crisis period. On year to year basis, the trend for underpricing is 71.25%, 48.63%, 80.25%, 189.32%, 119.44%, and 62.00% respectively from 2004-2009. As far as short run performance and sustainability in returns is concerned, market adjusted returns shows a decreasing trend in pre crisis period. The market adjusted return continuously falls from the first day level of 72.62% and reached to the far below level of only 31.76% on its 300th day. On the other hand, during crisis, fluctuating trend in market adjusted returns is observed up to 300th day. Firstly, it shows a downward movement in market adjusted return from first day to 30th day (145.20% to 137.09%) and then sharp

upward movement to the level of 151.17% on its 50th day, but again goes down with little fluctuations up to 145.20% on 300th day. It is interesting to note that the level of market adjusted returns during crisis period first goes up but then again on 300th day, it comes down to the same level as on first day (145.20%). In 2005, only 15 IPOs were released, because China government seized the IPO activity over 2005-2006 due to massive falling in the prices of pre trading stocks. Figure 1 (a, b) shows that during this period, the stock market indices was on its minimum level of below 3000 in Shenzhen stock exchange, while it comes to the level of 1000 from 1700 on Shanghai stock exchange. The market returns in both markets are also on their minimum level (figure 2a, 2b). This action was taken to boost up the performance of pre trading stocks. The equity rising through IPOs activity was only 0.4 billion USD on Shenzhen stock exchange and only 0.3 billion USD were gathered in Shanghai stock exchange, which is just 8% of the total equity, 92% of the total equity was raised through other equity resources in such a period.

**Table 2(a) : Underpricing And Performance Of IPOs In Pre Crisis Period (2004-2006)**

| | 1st day | 5th day | 10th day | 20th day | 30th day | 50th day | 100th day | 150th day | 200th day | 250th day | 300th day |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004-2006 | | | | | | | | | | | |
| Mean | 72.62 | 69.55 | 67.68 | 65.50 | 64.06 | 60.78 | 53.76 | 44.51 | 34.06 | 31.48 | 31.76 |
| Median | 64.34 | 62.18 | 57.33 | 54.40 | 51.89 | 50.47 | 46.72 | 35.48 | 32.02 | 24.98 | 23.16 |
| t-stat | 17.60 | 17.35 | 17.21 | 16.77 | 16.04 | 15.90 | 13.84 | 10.55 | 7.76 | 7.15 | 7.25 |
| Std-deviation | 55.36 | 53.75 | 52.73 | 52.39 | 53.58 | 51.29 | 52.10 | 56.60 | 58.89 | 59.06 | 58.76 |
| 2004 | | | | | | | | | | | |
| Mean | 71.25 | 68 | 66.67 | 64.93 | 63.29 | 59.17 | 57.82 | 52.08 | 46.47 | 43.62 | 39.75 |
| Median | 60.08 | 56.40 | 54.42 | 54.01 | 51.89 | 46.77 | 50.43 | 47.20 | 40.93 | 37.63 | 34.85 |
| t-stat | 13.17 | 13.02 | 12.75 | 12.44 | 11.93 | 11.68 | 11.12 | 10.11 | 8.63 | 8.45 | 7.25 |
| Std-deviation | 54.09 | 52.23 | 52.30 | 52.20 | 53.05 | 50.66 | 51.95 | 51.52 | 53.86 | 51.59 | 54.84 |
| 2005 | | | | | | | | | | | |
| Mean | 48.63 | 46.66 | 48.88 | 51.11 | 52.31 | 51.81 | 39.67 | 22.43 | 14.16 | 22.74 | 10.23 |
| Median | 51.34 | 42.13 | 41.68 | 43.08 | 46.88 | 51.54 | 49.70 | 19.90 | 13.81 | 16.75 | .61 |
| t-stat | 5.67 | 5.24 | 5.28 | 5.62 | 5.76 | 5.70 | 3.59 | 1.86 | 1.09 | 1.45 | .71 |
| Std-deviation | 33.21 | 34.51 | 35.87 | 35.21 | 35.20 | 35.17 | 42.84 | 46.81 | 50.14 | 60.54 | 55.46 |
| 2006 | | | | | | | | | | | |
| Mean | 80.25 | 77.22 | 73.58 | 69.68 | 67.96 | 65.33 | 50.77 | 37.95 | 19.57 | 14.82 | 24.43 |
| Median | 69.59 | 66.14 | 63.45 | 59.86 | 58.48 | 58.44 | 41.64 | 31.55 | 15.05 | 5.02 | 15.52 |
| t-stat | 10.78 | 10.65 | 10.58 | 10.05 | 9.46 | 9.50 | 7.56 | 4.76 | 2.46 | 1.82 | 3.09 |
| Std-deviation | 60.05 | 58.46 | 56.09 | 55.88 | 57.94 | 55.46 | 54.17 | 64.24 | 64.16 | 65.63 | 63.80 |

**Figure 1(a) :Performance Of Shenzhen Stock Index In In Pre - Crisis Period**

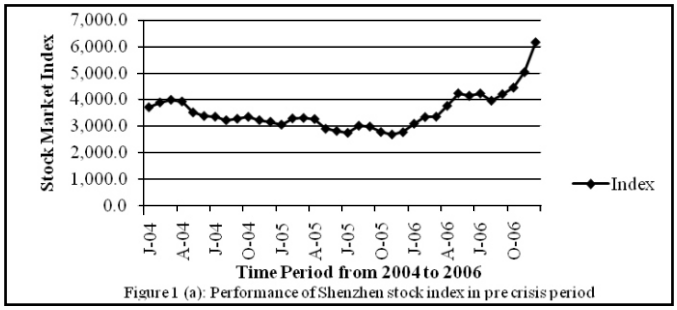

Figure 1 (a): Performance of Shenzhen stock index in pre crisis period

**Figure 1(b) :Performance Of Shanghai Stock Index In Pre - Crisis Period**

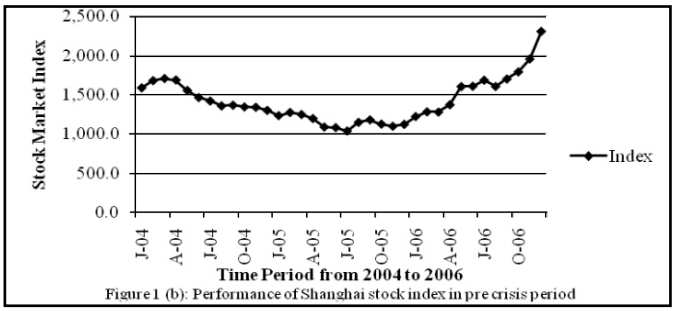

Figure 1 (b): Performance of Shanghai stock index in pre crisis period

**Table 2 (b) : Underpricing And Performance Of IPOs During Crisis Period (2007-2009)**

| | 1st day | 5th day | 10th day | 20th day | 30th day | 50th day | 100th day | 150th day | 200th day | 250th day | 300th day |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007-2009 | | | | | | | | | | | |
| Mean | 145.20 | 140.70 | 139.57 | 138.07 | 137.09 | 151.17 | 148.34 | 146.62 | 147.96 | 144.58 | 145.20 |
| Median | 110.05 | 111.31 | 109.31 | 109.65 | 109.70 | 132.83 | 127.18 | 129.36 | 130.51 | 132.25 | 127.61 |
| t-stat | 21.36 | 21.07 | 21.21 | 20.99 | 21.41 | 21.33 | 19.57 | 19.80 | 20.15 | 19.61 | 19.45 |
| Std-deviation | 106.62 | 104.73 | 103.19 | 103.17 | 100 | 101 | 108 | 105 | 104 | 105.02 | 106.07 |
| 2007 | | | | | | | | | | | |
| Mean | 189.32 | 185.11 | 183.74 | 182.25 | 179.40 | 176.65 | 171.69 | 163.18 | 161.14 | 160.42 | 160.88 |
| Median | 173.44 | 170.25 | 170.44 | 171.60 | 170.19 | 166.57 | 162.87 | 153.18 | 147.27 | 141.05 | 145.69 |
| t-stat | 19.16 | 19.14 | 19.37 | 19.25 | 19.43 | 19.34 | 17.19 | 15.88 | 16.05 | 16.55 | 16.43 |
| Std-deviation | 110.91 | 108.57 | 106.50 | 106.27 | 103.65 | 102.54 | 112.13 | 115.32 | 112.70 | 108.82 | 109.90 |
| 2008 | | | | | | | | | | | |
| Mean | 119.44 | 112.61 | 110.68 | 108.39 | 109.05 | 109.48 | 110.14 | 119.53 | 126.39 | 118.64 | 119.19 |
| Median | 84.64 | 81.52 | 82.21 | 87.32 | 90.66 | 94.05 | 98.70 | 109.85 | 106.32 | 98.45 | 97.82 |
| t-stat | 11.78 | 11.29 | 11.20 | 10.95 | 11.28 | 11.51 | 10.85 | 12.99 | 12.84 | 11.14 | 10.10 |
| Std-deviation | 88.96 | 87.50 | 86.74 | 86.89 | 84.81 | 83.50 | 89.11 | 80.72 | 86.35 | 93.49 | 94.47 |
| 2009 | | | | | | | | | | | |
| Mean | 62.00 | 60.88 | 61.87 | 61.74 | 63.31 | | | | | | |
| Median | 47.70 | 50.49 | 56.05 | 57.97 | 58.14 | | | | | | |
| t-stat | 11.52 | 11.75 | 11.78 | 10.88 | 10.76 | | | | | | |
| Std-deviation | 35.30 | 33.98 | 34.43 | 37.21 | 38.57 | | | | | | |

**Figure 2(a) :Market Returns On Shenzhen Stock Exchange In Pre - Crisis Period**

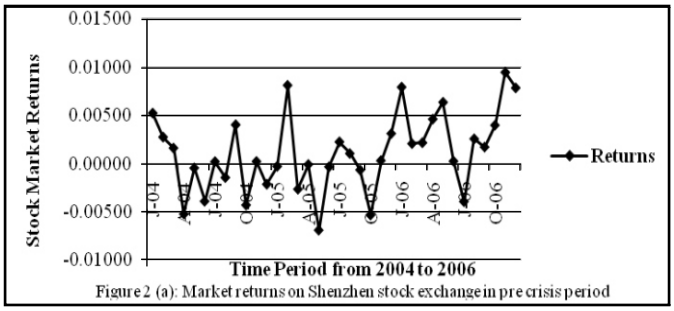

Figure 2 (a): Market returns on Shenzhen stock exchange in pre crisis period

**Figure 2(b) :Market Returns On Shanghai Stock Exchange In Pre - Crisis Period**

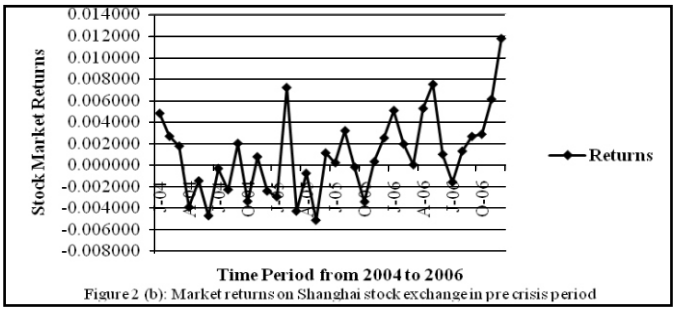

Figure 2 (b): Market returns on Shanghai stock exchange in pre crisis period

**Figure 3(a) :Performance of Shenzhen Stock Index During Crisis Period**

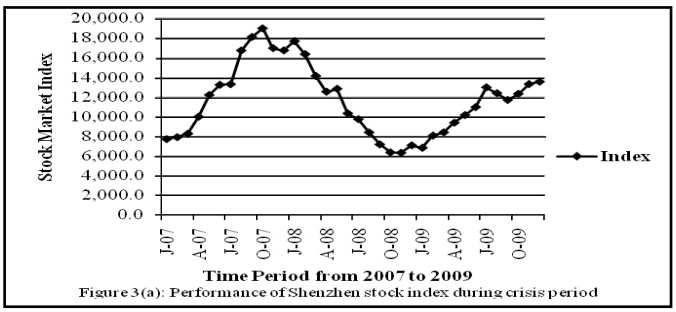

Figure 3(a): Performance of Shenzhen stock index during crisis period

**Figure 3(b) : Performance of Shanghai Stock Index During Crisis Period**

Figure 3 (b):Performance of Shanghai stock index during crisis period

**Figure 4 (a) :Market Returns On Shenzhen Stock Exchange During Crisis Period**

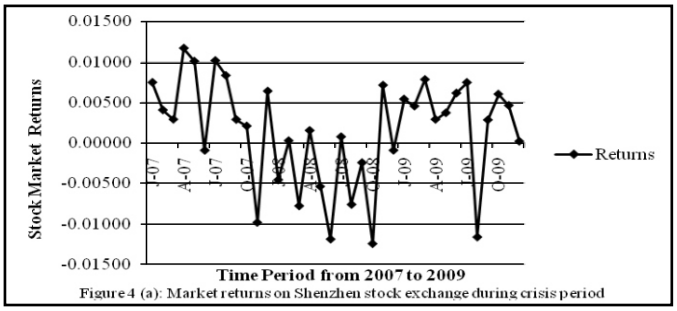

Figure 4 (a): Market returns on Shenzhen stock exchange during crisis period

**Figure 4 (b) :Market Returns On Shanghai Stock Exchange During Crisis Period**

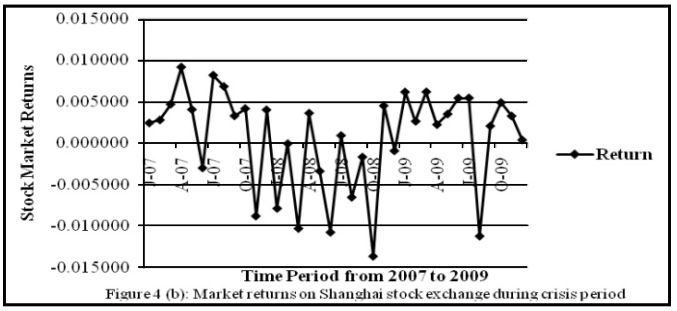

Figure 4 (b): Market returns on Shanghai stock exchange during crisis period

But in the next following year, a flourishing trend in IPO activity was observed, 65 new IPOs came into the market and stock market indices in pre crisis period reached up to their maximum point of 6000 and 2400 (figure 1a, 1b) in both Shenzhen and Shanghai stock exchange respectively. Market returns were also on their maximum point (figure 2a, 2b). Furthermore table 3(a) describes that the percentage of equity raised through IPOs significantly goes up in both exchanges, Shanghai 68% and Shenzhen 33% respectively. As stated earlier, the global financial crisis really started to show its effect in the middle of 2007, but in China, it was little late as compared to other markets over the world. The Chinese IPO market was on its maximum point with 126 IPOs in both Shanghai and Shenzhen stock exchanges as compared to the number of IPOs listed a few back years. Figure 3 (a, b) demonstrate that the level of indices in both Shenzhen and Shanghai stock exchange were at its maximum level (19000 and 6000) in the last quarter of 2007, and the percentage of IPOs equity financing as compared to other sources of equity financing was also at the appropriate point. Then the real adverse year of 2008 started, which collapsed the economy the world over. The new IPOs step into the market is 77 as compared to last year's 126 IPOs. The market indices from the point of 19000 came to its minimal point of 6000 in Shenzhen stock exchange in the last quarter of 2008 and the condition of Shanghai stock index was also not too different. It went down more than 2000 from the upper level of 6000. The position of market returns was also same, more fluctuating and touching to their bottom level. Table 3(b) shows that the percentage of equity through IPO was 33% in Shanghai (66% in 2007) and 24% in Shenzhen (35% in 2007). Like for the other economies of the world, the year 2008 also proved to be extremely bad for the Chinese economy, but here, the plus point is that China is a country who faced the crisis late and came out from the crisis much earlier than other countries. From the year 2009, Chinese market gained momentum again. During the year 2009, in both stock exchanges, a large amount of equity through IPOs financing was raised (25.5 billion USD), which was 66.3% on Shanghai and 77% on Shenzhen of total financing by means of IPOs.

**Table 3(a): Summary Of Financing Through IPOs In Pre Crisis Period (Amount Is In Billions US Dollar)**

| Amounts in USD billion | Shanghai | | Shenzhen | |
|---|---|---|---|---|
| | Amount | Percentage | Amount | Percentage |
| 2004 | | | | |
| IPO funds raised | 3.0 | 54% | 1.4 | 61% |
| Other equity funds raised | 2.6 | 46% | 0.9 | 39% |
| Total equity funds raised | 5.6 | 100% | 2.3 | 100% |
| 2005 | | | | |
| IPO funds raised | 0.3 | 8% | 0.4 | 100% |
| Other equity funds raised | 3.4 | 92% | 0.0 | 0% |
| Total equity funds raised | 3.7 | 100% | 0.4 | 100% |
| 2006 | | | | |
| IPO funds raised | 15.1 | 68% | 2.1 | 33% |
| Other equity funds raised | 7.1 | 32% | 4.2 | 67% |
| Total equity funds raised | 22.2 | 100% | 6.3 | 100% |

**Table 3(b): Summary Of Financing Through IPOs During Crisis Period (Amount Is In Billions US Dollar)**

| Amounts in USD billion | Shanghai | | Shenzhen | |
|---|---|---|---|---|
| | Amount | Percentage | Amount | Percentage |
| 2007 | | | | |
| IPO funds raised | 60.0 | 66% | 5.4 | 35% |
| Other equity funds raised | 30.6 | 34% | 10.2 | 65% |
| Total equity funds raised | 90.6 | 100% | 15.6 | 100% |
| 2008 | | | | |
| IPO funds raised | 10.8 | 33% | 4.4 | 24% |
| Other equity funds raised | 21.6 | 67% | 13.7 | 76% |
| Total equity funds raised | 32.4 | 100% | 18.1 | 100% |
| 2009 | | | | |
| IPO funds raised | 16.4 | 66.3% | 9.12 | 77% |
| Other equity funds raised | 8.34 | 33.7% | 2.72 | 23% |
| Total equity funds raised | 24.74 | 100% | 11.84 | 100% |

The condition of indices in last quarter of 2009, after gaining momentum, reached to the level of 14000 and 3200 on Shenzhen and Shanghai stock exchanges respectively and improvement in market returns can also be observed from the figures.In comparison to other studies on Chinese IPO market (Dater et al, 1997 and Gu, Y.X, 2000), the initial returns are 200-300 percent while the returns obtained here are much lower. There are some reasons for this. Firstly, the earlier research was carried out mostly before 1996. During that period, Chinese IPO market was very immature and volatile, the supply of new issues was also very limited as compared to huge demand, and the initial returns were tremendously high. Liu and Li (2000) documented that the first day's initial and abnormal returns of IPOs in China were much higher in 1991, 1992 and 1993 than those in other years. In addition, with less experience in pricing IPOs in the early years, the CSRC (China Securities Regulatory Commission) tended to be underpriced to a greater degree in order to encourage the growth of the primary market. Secondly, due to the shortage of data, some researchers calculated the initial returns without considering the growth of the whole market, while in this study, the initial returns are market-adjusted, unadjusted initial returns that do not consider market impact would be higher than real returns, while only market adjusted returns can give us accurate pictures of the degree of underpricing in the Chinese IPO markets.

## CONCLUSION

Although the crisis has been worst for many developed and developing countries, the Chinese stock market also suffered the impact of the crisis. But here, it has been encouraging that China came out from the phase of crisis much before other economies in the world. The indices of Shanghai and Shenzhen stock exchange was on its highest level in the last quarter of 2007, with 19000 on Shenzhen and 6000 in Shanghai stock exchanges and then it started to come down abruptly and at the end of the last quarter of 2008, it came to the bottom level of 6000 in Shenzhen and around 2000 in Shanghai stock exchange. So, this was the time period of real down turn of Chinese stock market and then it started to regain its momentum in first quarter of 2009, the index point of around 14000 on Shenzhen and 3200 on Shanghai stock exchange was recorded. 126 new IPOs come into market in 2007, which is highest in last six years and their degree of underpricing was 189.32%. In 2008, the IPOs activity reduced to 77 IPOs and their degree of underpricing was 119.44%, which further reduced in 2009 up to 43 IPOs with the underpricing of 62%. Inspite of little fluctuations in returns, the performance of IPOs over the period of 300 days was very consistent because underpricing comes to the same level on 300th day as it was on the first trading day. This shows that investors, even in the phase of crisis, encouraged the new companies coming into the market for financing, which keeps the IPOs activity moving. During the phase of crisis, the financing through IPOs in both stock markets can also be considered a positive feedback from investors and market point of view.

# BIBLIOGRAPHY


1) Aggarwal, R., C.Inclan and R. Leal (1999), "Volatility in Emerging Stock Markets", Journal of Financial and Quantitative Analysis, Vol 34, 33-55.
2) Allen, F., Faulhaber, G.R., (1989), "Signaling by under-pricing in the IPO market," Journal of Financial Economics, Vol 23, 303323.
3) Baig, T. and I. Goldfajn, (1998), "Financial Market Contagion In The Asian Crisis", IMF Staff Paper, No. 155.
4) Beatty, R.P., Ritter, J.R., (1986), "Investment banking, reputation, and the under-pricing of initial public offerings," Journal of Financial Economics, Vol 15, 213232.
5)Bekaert, Geert and Campbell R. Harvey. (2000), "Foreign Speculators and Emerging Equity Markets", Journal of Finance, Vol 55(2), 565-613l.
6)Benveniste, L.M., Spindt, P.A., (1989), "How investment bankers determine the offer price and allocation of new issues," Journal of Financial Economics, Vol 24, 343361.
7)BRIAN H. BOYER, TOMOMI KUMAGAI, and KATHY YUAN. (2006), "How Do Crisis Spread? Evidence from Accessible and Inaccessible Stock Indices", THE JOURNAL OF FINANCE, VOL LXI (2).
8)Chowdhry, B., Sherman, A.E., 1996. The winner's curse and international methods of allocating initial public offerings," Pacific-Basin Finance Journal, Vol 4, 1530.
9)Carter, R., Dark, F., & Singh, A., (1998), "Underwriter reputation, initial returns and long run performance of IPO stocks," Journal of Finance, Vol 53, 285−311.
10)Datar, V., Mao, D., (1997), "Initial public offerings in China: why is underpricing so severe," Unpublished working paper, Seattle University, NY.
11)Fariborz Moshirian, David Ng, ElizaWu, (2010), "Model specification and IPO performance: New insights from Asia," Research in International Business and Finance, Vol 24, 6274.
12)Gu, Y.X., (2000), "Privatization, firm size, and IPO performance: evidence from Chinese "A" share issues", Unpublished working paper, State University of New York, NY.
13)Grinblatt, M., Hwang, C.Y., (1989), "Signaling and the pricing of unseasoned new issues," Journal of Finance, Vol 44, 393420.
14)Ibbotson, R.G., Ritter, J.R., (1995), "Initial public offerings", Jarrow, R., Maksimovic, V., Ziemba, W. (Eds.), Handbooks in Operations Research and Management Science: Finance, Elsevier B.V., Amsterdam, 993- 1016.
15)Kiseok Hong , Jong-Wha Lee, Hsiao Chink Tang. (2009), "Crisis in Asia: Historical perspectives and implications, working paper, ADB Economics, No. 152, April.
16)Kyle, Albert S., and Wei Xiong, (2001), "Contagion as a wealth effect", Journal of Finance, Vol 56, 14101440.
17)Sandeep A. Patel and Asani Sarkar. (1998), "Crisis in Developed and Emerging Stock Markets", Financial Analysts Journal, Vol 54(6), 50-61.
18)Loughran, T., Ritter, J.R., Rydqvist, K., (1994), "Initial public offerings: international insights. Pacific-Basin Finance Journal 2, 165199.
19)Liu, L., Li, W.D., (2000), "Research on first day's abnormal returns of IPOs in China's securities market. China", Acc. Finan. Rev., Vol 2, 2653.
20)Loughran, Tim, Jay R. Ritter, and Kristian Rydqvist, (1994), "Initial public offerings: International insights", Pacific Basin Finance Journal Vol 2, 165-199.
21)Pericli, A., Christofi, A., and K. Nishiyama, (1997), "Correlation in Price Changes and Volatility of Major Asian Stock Markets," Financial Management Association Conference.
22)Robert J. Weiner. (2005), "Speculation in International Crisis: Report from the Gulf, Journal of International Business Studies", Vol 36(5), 576-587.
23)Rigobon, R.. (2003), "On the Measurement of International Propagation of Shocks: Is it Stable?," Journal of International Economics, Vol 61, 261-283.
24)Ritter, J.R., (1991), "The long-run performance of initial public offerings", J. Finance, Vol. 46(1), 327.
25)Ritter, J.R., (2003), "Investment banking and securities issuance", Constantinides, G., Harris, M., Stulz, R. (Eds.), Handbook of the Economics of Finance. Elsevier B.V., Amsterdam, 255304.
26)Ritter, J.R.,Welch, I., (2002), "A review of IPO activity, pricing, and allocations," J. Finance, Vol 57(4), 17951828.
27)Rock, K., (1986), "Why new issues are under-priced," Journal of Financial Economics, Vol 15, 187212.
28)Simon Broome, Bruce Morley, (2004), "Stock prices as a leading indicator of the East Asian financial crisis", Journal of Asian Economics, Vol 15, 189197.
29)Welch, I., (1989), "Seasoned offerings, imitation costs, and the under-pricing of initial public offerings," Journal of Finance, Vol 44, 421448.
30)Welch, I., (1992), "Sequential sales, learning, and cascades," Journal of Finance, Vol 47, 695732.


---


## (Contd. From Page 13 )



10. Jim Ryan and David Shu ( 2007) Bridging the risk gap, OpRisk & Compliance , 01 Dec 2007.
11. Kuhn, R. and P. Neu. 2004. "Adequate Capital and Stress Testing for Operational Risk." 273292 in Operational Risk Modelling and Analysis, ed. M. Cruz. London: Risk Books.
12. Kumar Vijay T. (2008), The methodology behind Risk and Control Self Assessments, gt news.com, www.gtnews.com/article/7032.cfm.
13. Moosa, I. A. (2007) "Misconceptions about Operational Risk." Journal of Operational Risk, Vol. 2 No.4, 97104.
14.Quick, Jeremy (2006), The Advanced Measurement Approach: Getting it Started, in the book, The Advanced Measurement Approach to Operational Risk , ed., Ellen Davis, RISK books, 9-16.
15. Rao, V. and A. Dev. 2006. "Operational Risk: Some Issues in Basel II AMA Implementation in US Financial Institutions." Pp. 273294 in The Advanced Measurement Approach to Operational Risk, ed. E. Davis. London: Risk Books.
16. RBI., (2001), "Move towards Risk Based Supervision (RBS) of Banks", Discussion Paper.
17. RBI., (2003), "Risk Management Systems in Banks", Notification.
18. RBI., (2003), "New Basel Capital Accord (Basel II)", Notification.
19. RBI., (2005), "Management of Operational Risk", Draft Guidance Note.
20. RBI., (2009), "Introduction of Advanced Approaches of Basel II Framework in India Draft Time Schedule", Notification.
21.Wei, R. (2007), "Quantification of Operational Losses Using Firm-Specific Information and External Databases." Journal of Operational Risk Vol.1No.3:334.
22. Wood Duncan (2008). , In the thick of it, OpRisk & Compliance, 1 February 2008.