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**CHINESE STOCK MARKET BUBBLE:
INEVITABLE OR INCIDENTAL?**

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Summary

Chinese stock markets have been extremely volatile since the middle of 2006. Within 18 months, the Shanghai Stock Exchange (SSE) Composite Index had risen more than three-fold, reaching 6,124.04 on 16 October 2007. By the end of 2007, 1,530 companies had been listed on the Shanghai and Shenzhen Stock Exchanges with a total market value of 32.71 trillion RMB. However, the SSE Composite Index plummeted 56% in the following eight months to 2,651.61 on 30 June 2008. The combined market value of the two stock exchanges dropped to 17.8 trillion RMB.

During the bullish period, market growth was characterised by rapid gains in the prices of bank stocks, particularly after the listing of the Industrial and Commercial Bank of China (ICBC) on the Shanghai and Hong Kong Stock Exchanges in 2006. Steady improvements in the Chinese financial sector and the heavily-weighted banking stocks gave the listed banks a prominent market position. Some analysts however have argued that the bullish period merely reflected euphoric sentiments associated with Beijing's 2008 Olympic Games.

From 5 November 2007, Chinese stock markets turned bearish immediately after PetroChina moved its listing to the Shanghai Stock Exchange from Hong Kong. Investors suddenly realised that PetroChina, and other large companies listed since, had been "mega cash vampires" targeting ignorant prudent savers throughout China, from Beijing down to the grassroots level. While there was no doubt that the bearish market has been influenced, to an extent, by US financial woes, the sharp downturn in the Chinese stock markets was also likely caused by some China-specific factors.

One important factor is the unique psychology of Chinese investors, amplified by their lack of experience and poor understanding of the principle of a free market economy, which results in share prices going up as well as down. In a bullish market, prices can rise beyond their 'real' market levels, creating the so-called market bubble. In every market economy, market bubbles may be inevitable, but the size of a bubble can vary significantly according to different market environments and the psychologies of investors. In China, however, the market bubble could have been caused by 'greed', 'envy' and 'speculation'.

'Greed' resulted in investors wanting to become rich quickly. Economic reforms in China have led to many people becoming rich within a short period of time, bringing about a culture of greed. The bullish market provided the only avenue for accumulating wealth for ordinary people who have not managed to get rich over the last 30 years of reforms. Consequently, as share prices soared in a matter of months, many investors decided to make even bigger gains by injecting more cash into the stock markets and/or refusing to take profits by selling the stocks that had earned them a large fortune.

'Envy' resulted in numerous investors, irrespective of their age, gender and occupation, entering the stock market for fear of missing out on a fortune-making opportunity. However, most of these investors, which included farmers, cleaners, taxi drivers and house maids, knew little about stock markets and how share prices were determined. Many of these people started investing in the stock markets when prices had already risen rapidly to peak levels, just before the market bubble burst. The participation of these 'envious' investors artificially prolonged the bullish market and created a much larger market bubble than would have occurred had they not become involved.

'Speculation' occurred as a result of the relatively few investment channels available to Chinese investors. As bank deposits normally earn negative real interests, savers have been frustrated by the lack of other investment opportunities in the country. Therefore, when the stock market improved abruptly and offered some lucrative opportunities, many savers decided to gamble their money in stocks. Their speculative activities were driven significantly by a desire to make a positive real return on their savings. This gambling mentality led many savers to withdraw their savings from their bank accounts to buy shares, which inflated the market bubble that was developing in the bull market.

If 'greed', 'envy' and 'speculation' were the three key elements shaping China's stock market bubble, the lack of investment capital was the needle that burst the bubble. Within 10 months, investors had pushed the total market value of the Shanghai and Shenzhen Stock Exchanges up by more than eight-fold, from less than 4 trillion RMB to 32.71 trillion RMB by early December 2007. At that time, the total market value of tradable shares was 9.31 trillion RMB, compared to only 17.6 trillion RMB in total bank deposits. This suggested that approximately half of all bank deposits had been invested in the stock markets. As such a high proportion of savings had been channelled into the stock markets, even the most

risk-loving investors would not have been able to put more cash into stocks as savers had to reserve a certain proportion of their cash for mortgage payments, education, health care and other daily necessities. Consequently, when the “mega cash vampires” such as PetroChina, China Life, China Mobile, and other large state-owned companies, started moving their listings from November 2007, the market had already run out of steam as the funds available for investing in these companies dwindled. This helps to explain why the stock bubble burst so quickly and so unexpectedly. Many analysts had not expected the markets to turn bearish before the August 2008 Beijing Olympic Games.

The most important reason for the bursting of the Chinese stock market bubble was however the overvaluation of listed state-owned companies and their fundamental weaknesses. The three large state-owned banks -- Bank of China (BOC), China Construction Bank (CCB) and ICBC -- had been heavily recapitalised by the government, who stripped off their non-performing loans worth over 3.1 trillion RMB and injected capital of more than US\$75 billion before they were listed on the stock markets. With such massive support, the balance sheets of these three banks looked healthy; however their real ability to function as truly global financial institutions was in doubt.

By the end of 2007, rocketing share prices resulted in five of the Chinese listed enterprises, including PetroChina, ICBC, Sinopec, China Life Insurance and China Mobile, joining the ranks of the world’s largest 10 companies in terms of market value. However, the profitability and productivity of these Chinese giants were well below those of their counterparts in the US and Europe. For example, on 5 November 2007 when the SSE Composite Index reached its peak, the market value of PetroChina’s market value amounted to US\$1.08 trillion, then the largest in the world. It was also more than 2.2 times as large as the then-second largest company in the world, ExxonMobil, which had a market value of US\$0.48 trillion. However, in 2006, PetroChina’s profit and revenue were less than one-third of the respective profit and revenue of ExxonMobil, although its labour force was over 10 times larger. In real terms, PetroChina’s labour productivity was only one-thirtieth of ExxonMobil and it was overvalued by at least six times compared with ExxonMobil in terms of their price-to-earnings (P/E) ratios.

Chinese Stock Market Bubble: Inevitable or Incidental?

Shujie Yao and Dan Luo*

Chinese Stock Market Bull Run and the Role of Banking Stocks

- 1.1 The Chinese stock markets have been extremely volatile since the middle of 2006. After seven years of bearish performance in the late 1990s and in the first five years of the 21st century, a bullish market emerged in China in early 2006, accelerating dramatically from the middle of that year. Within 18 months, the Shanghai Stock Exchange (SSE) Composite Index had risen more than three-fold, reaching 6,124.04 on 16 October 2007. By the end of 2007, 1,530 companies had been listed on the Shanghai and Shenzhen Stock Exchanges with a total market value of 32.71 trillion RMB¹.
- 1.2 This round of market growth was characterised by rapid gains in the share prices of listed banks, particularly after the listing of Industrial and Commercial Bank of China (ICBC) in 2006. On the stock's first day of trading, its share price rose 5% on the Hong Kong Stock Exchange (HKSE) and 15% on the SSE². By December 2006, the domestic market value of ICBC had reached US\$250 billion, making up more than 20% of the SSE Composite Index then. Together with other nine listed banks, they accounted for approximately half of the SSE index. In addition to their weighting on the SSE index, the banks' price performances and trading volumes were also the strongest among all the listed companies. On 23 July 2007, ICBC's A-share price reached 5.75 RMB, making it the world's largest bank, overtaking Citigroup of the US.
- 1.3 In response to the prominence of these bank stocks, some financial analysts claimed that the development of the financial market was the primary impetus for the growth of Chinese stock markets. Others argued that the growth merely reflected euphoric sentiments associated with

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¹ Source: Shenzhen Stock Exchange fact book, 2007; Shanghai Stock Exchange monthly statistic, Dec 2007.

² *Xinhuanet*, 27/10/2006, "ICBC's A+H listing make it the world's biggest IPO", http://news.xinhuanet.com/stock/2006-10/26/content_5252104.htm, accessed on 16 July 2008.

Beijing's 2008 Olympic Games. To address this issue, Yao et al.³ (2008) applied the Granger causality test and found some evidence in support of the first claim that banking shares and the overall index were highly correlated. The variation of the SSE Composite Index had been a trigger for almost all price movements of banking stocks, suggesting that increases in the SSE Composite Index impacted on market expectations of higher bank stock prices the next day, including Hong Kong-listed CCB (H) share prices. This is consistent with previous studies which found that investors' psychological factors help explain the closely-linked stock markets in the greater China region. A lack of professional knowledge and the intrinsic characteristics of 'greed', 'envy' and 'speculation' had motivated these investors to buy shares randomly in order to become rich quickly without paying adequate attention to a potential market crash. As a result, not only banking sector stocks, but all other stocks, were driven by the market regardless of their actual performances.

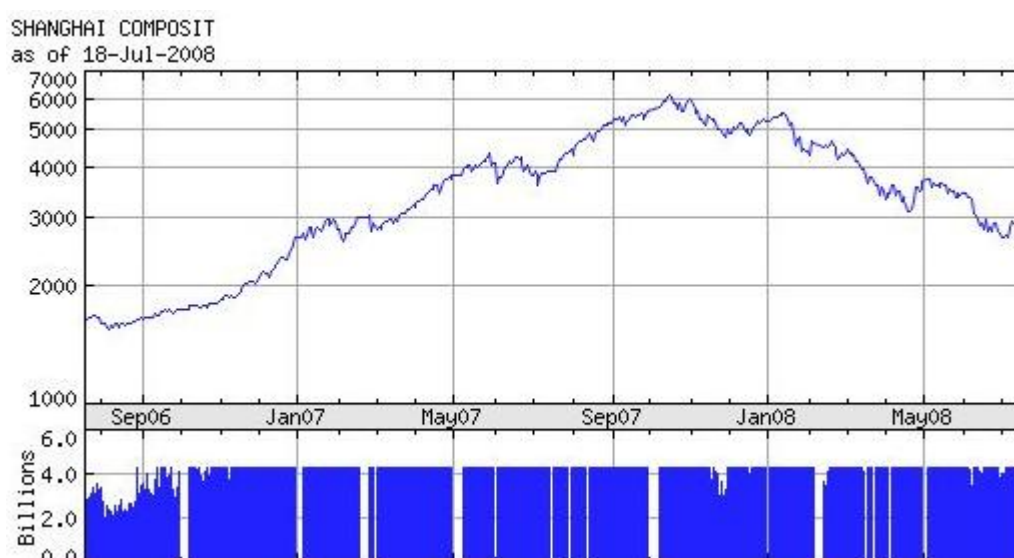
- 1.4 On the other hand, the share prices of eight out of eleven banks such as ICBC, CCB (A), PDB, and CMB have been found to exert a strong influence on the SSE Index. This was a result of their large market capitalisation and the signalling effect. The strong performances of these banking shares drove up the expectations of investors who believed that a well-functioning banking sector would stimulate the financial market, thereby improving the efficiency of capital allocation and the performances of all the other companies. Consequently, when share prices of banks increased, the share prices of other companies followed suit, resulting in the overall gain in the SSE Index.

Burst of the Chinese Stock Market Bubble

- 2.1 After gaining for almost one and a half years, China's stock markets suffered a serious setback after November 2007. Figure 1 shows the trend of the SSE Composite Index in the past two years. It rose dramatically from its lowest point in late 2005, increasing 129.8% and 96.6% respectively in 2006 and 2007. However, when PetroChina moved its listing back to Shanghai from Hong Kong on 5 November 2007, the market dropped sharply the following week.

³ Yao, Shujie, D. Luo and S. Morgan (2008), "Shanghai stock exchange composite index and bank stock prices in China: A causality analysis", *GEP Research Paper*, 08/25.

Figure 1 Shanghai Stock Exchange Composite Index: 2006-2008



Source: SSE Composite Index, <http://finance.yahoo.com>

- 2.2 The SSE Composite Index plummeted more than 56% from its highest level in mid-November 2007 to reach 2,651.61 on 30 June 2008, practically wiping out all the gains of this round of increases⁴. The combined market value of SSE and SZSE slumped by 34% to 17.8 trillion RMB. Investors withdrew money from the stock markets, putting it back into bank deposit accounts, which directly reduced the volume of transactions. The total turnover declined 52% between October 2007 and June 2008⁵. Share prices of some of the more recently-listed large state-owned enterprises, such as PetroChina and China Railway, dropped below their IPO levels. The share price of PetroChina jumped 161% on the day the stock was moved from Hong Kong to Shanghai on 5 November 2008, reaching 48.6 RMB per share before closing at 43.96 RMB. By 30 June 2008, it had dropped by over 70% to only 14.47 RMB per share.
- 2.3 Financial sector stocks were also unable to disengage themselves from the sharp market downturn. Affected by the US sub-prime crisis, banking stocks performed worse than other shares, driving the overall market down to its trough. The benchmark of financial stocks -- CSI 300 Financials Total Return Index -- dropped by almost 60% from its high in November 2007 to 3,850 in July 2008⁶. Stocks which had posted

⁴ Source: SSE Monthly Statistic, June 2008. At the time of finishing this paper, the SSE Composite Index dropped to 2,453.71 on 12 August 2008, the fourth day of the Beijing 2008 Olympics (<http://finance.people.com.cn/GB/71364/7652511.html>)

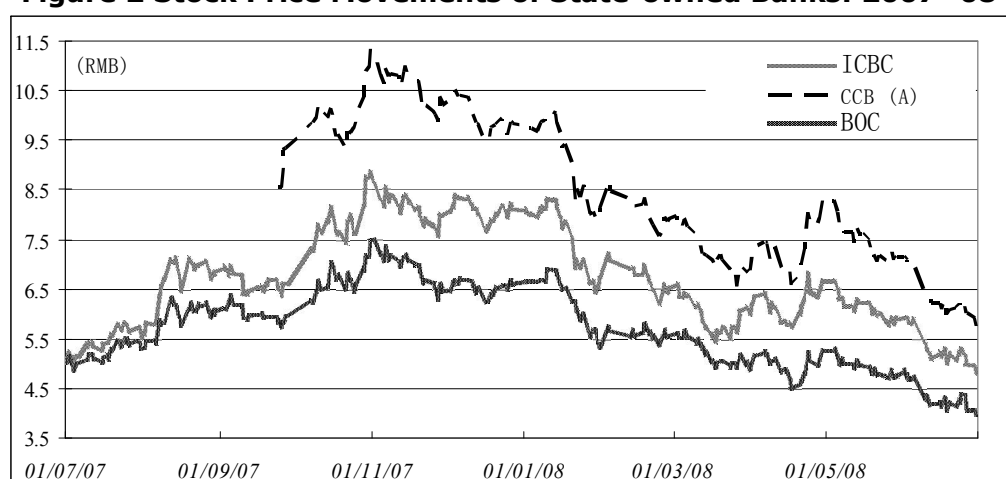
⁵ SSE Monthly Statistic, October 2007 and June 2008.

⁶ Source: CSI Indices, China Securities Index Co., <http://www.csindex.com.cn>.

significant gains in previous months saw steep declines. For example, shares of China Merchant Bank (CMB) and Pudong Development Bank (PDB), which had surged to 45.55 RMB and 59.68 RMB respectively in October 2007, plunged by 54% and 66% respectively towards the end of June 2008.

- 2.4 Apart from the joint-equity banks, the performances of listed state-owned banks were even more dramatic. Figure 2 shows the price movements of three listed state-owned banks. All of their values practically halved from their peak levels, particularly after they were found to be substantially exposed to US sub-prime mortgage securities.

Figure 2 Stock Price Movements of State-owned Banks: 2007- 08



Source: Shanghai Stock Exchange, <http://www.sse.com.cn>

Factors Responsible for the Chinese Stock Market Crash

- 3.1 Many people believe that the current stock market crash is more likely to be a correction after the market's apparent overheating. There are others however who blame the US for causing the worldwide turmoil. There is no doubt that the further globalisation of China's financial markets makes it less likely for it to fully disengage from the pessimism evident in the industrialised world. However, some China-specific factors are also important in attempting to explain this stock market downturn.
- 3.2.1 The most important explanation for China's stock market bubble is the specific **psychology of Chinese investors**. The specific **psychology**

can be best described by three key words: 'greed', 'envy' and 'speculation'.

3.2.2 'Greed' resulted in investors wanting to become rich quickly. As economic reforms have produced a large number of rich people within a very short period of time, a restless and greedy culture had emerged. For people who had not been able to become rich, the share markets provided a unique opportunity. Driven by the bullishness of the markets in late 2006 and the first 11 months of 2007, many investors were able to make large amounts of paper profits (profits appearing on stock trading accounts). To further increase their gains, many investors did not hesitate to pump more cash into shares. They were not prepared to simply sell the shares to cash the profits that had already been made. Their eagerness to pour more cash into the market and their refusal to take profits were two important characteristics of greediness. Such behaviour led to the huge market bubble which saw the price-to-earning ratios of most companies increase to more than 70. The P/E ratios of industrial stocks listed on the London or the New York Stock Exchanges, in contrast, were typically less than 20. The dramatic increase in the share price of PetroChina on its first day of trading in Shanghai provided a good example of greed.

3.3 'Envy' led many investors, irrespective of their age, gender and profession, to take part in the stock markets for fear of missing out on a unique opportunity to make 'easy money'. By June 2008, 134.9 million trading accounts had been registered with the SSE and SZSE⁷, suggesting that one in 10 Chinese was directly involved in stock trading and many more indirectly. However, their lack of professional knowledge meant their investments were highly speculative in nature. They either purchased shares randomly or followed others without analysing the performance of listed companies themselves. In order to catch up with index fluctuations, huge amounts of money flowed from banks to stock markets during the bullish period, and *vice versa* during the bearish period⁸. Such fund transfers significantly increased market volatility. In the US, it took more than five years for the Dow Jones Industrial Index to reach its peak of 14,279.96 on 11 October 2007, whereas in China, it took less than 18 months for the SSE Composite Index to rise 514% to

⁷ SSE and SZSE Monthly Statistic, June 2008.

⁸ Yao, Shujie and M. J. Chen (2008), China's economic review in 2007, Policy Paper, China Policy Institute, School of Contemporary Chinese Studies, University of Nottingham.

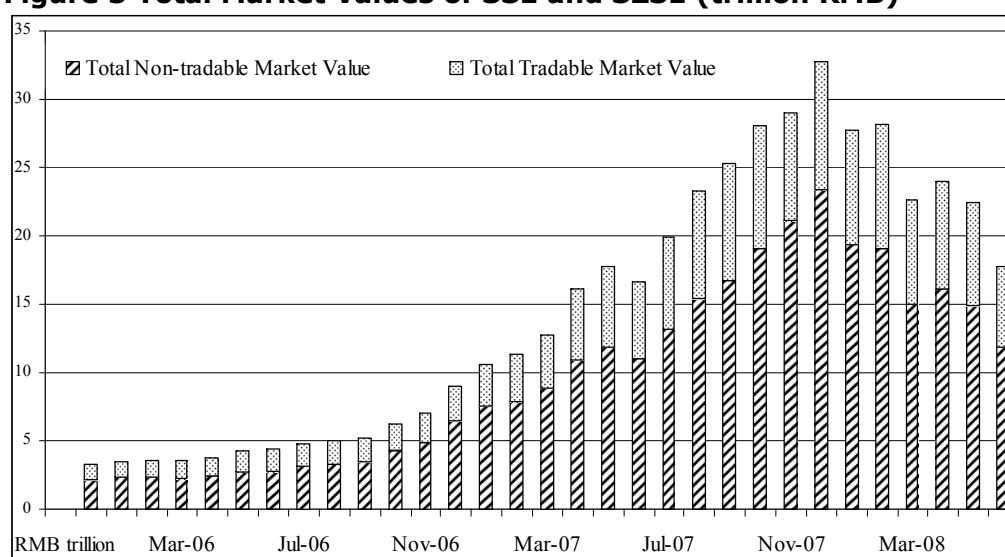
its highest level of 6,124.04 on 16 October 2007. Thereafter, it took less than eight months for the SSE Composite Index to drop by 56% and return to its 2006 starting level. Such big fluctuations have not been matched by any other stock market in the rest of the world. Facing sudden transformations, investors had no time to respond and protect themselves adequately, incurring massive losses as a result. Many investors had fallen victim to their 'envy', and had hence become extremely vulnerable to market abuses and other deliberate acts of major market players.

3.4 'Speculation' occurred as a result of the relatively few investment channels available to Chinese investors. In the US by contrast, various financial instruments, such as bank savings, corporate securities and insurance services are readily available to all investors. Rather than investing heavily in a single product, people generally prefer to hold a mixed portfolio and look to achieve a long-term stable return on their investments. In China, however, bank savings were the only way to invest. Bank deposits tended to earn negative real interests due to market imperfections resulting from government intervention that was biased towards state-owned banks at the expense of private savers. Therefore, when stock markets revived abruptly, presenting some opportunities to gain profits, people rushed to withdraw money from banks to invest in stocks on the hope of making positive returns on their savings. During the bullish period, they pooled all their available funds, which not only included savings deposits, but also mortgages or even pensions, to trade in stocks. When the markets turned bearish, few investors however wanted to exit immediately. They preferred to hold on to their shares and hope for further gains. Therefore, as the situation deteriorated, the value of their shares shrank even further. As their financial activities were no longer sustainable, an irreversible downturn resulted across the entire market.

3.5 **The lack of further investment capital** was a principal explanation for the rapid and abrupt burst of the stock market bubble. If 'greed', 'envy' and 'speculation' were the psychological reasons for creating such a large market bubble in the Chinese stock markets within a short time period, then the lack of investment capital was the needle that burst the bubble. Within 18 months of the bull market, market indices in both Shanghai

and Shenzhen had increased three-fold, giving rise to a combined market value of 32.71 trillion RMB by the end of 2007. At that point in time, the Chinese stock markets accounted for more than 6% of the global stock market value, becoming the world's fourth biggest stock market in terms of market capitalization⁹. On 9 August 2007, the total market value of the two stock exchanges reached 21.14 trillion RMB, surpassing China's GDP for the first time¹⁰. Figure 3 represents the total market value and the value of tradable shares on both the SSE and SZSE between the end of 2005 and June 2008.

Figure 3 Total Market Values of SSE and SZSE (trillion RMB)



Note: Total market value = total non-tradable market value + total tradable market value.

Source: SSE monthly statistic, <http://www.sse.com.cn/sseportal/ps/zhs/yjcb/fact.shtml>, SZSE monthly statistic, http://www.szse.cn/main/marketdata/tjyb_front/.

- 3.6 Less than 30% of a company's total issued shares can be traded freely on the Chinese stock markets, differing from those of listed companies in the US or other European countries. Therefore, when the market value peaked in December 2007, the total tradable market value was only 9.31 trillion RMB. At the same time, the total value of bank deposits of urban and rural residents was 17.6 trillion RMB¹¹, suggesting that Chinese savers had invested more than one-third of their cash savings in the

⁹ "Ten biggest news of the Chinese stock market in 2007", <http://cashisking520.bokee.com/viewdiary.22243744.html>, accessed on 22 July 2008.

¹⁰ China's GDP was RMB 21.08 billion in 2006. Source: *China Securities Daily*, 28/12/07, "10 biggest news of China 2007 securities market", <http://business.sohu.com/20071228/n254345722.shtml>, accessed on 22 July 2008.

¹¹ Sources: Statistical Data, 2008, National Bureau of Statistics.

stock markets. The stock market capital to cash savings ratio was only 7% and 15% at the end of 2005 and 2006 respectively¹². As people had invested a large proportion of their savings in the stock markets, they were not willing or able to invest more because they had to reserve a certain proportion of cash for paying mortgages, school fees, healthcare fees and other needs. A market report¹³ suggested that on average a typical household in Shanghai would not invest more than one-third of its total savings in the stock market because further investments in shares would lead to unbearable risks and financial distress. The overall stock market investment/savings ratio in 2007 suggested that on average, Chinese households may have already reached their maximum ability to invest in the stock market. Therefore, as no other sources of free capital were available to support the ballooning stock markets, the share prices of heavily weighted stocks such as PetroChina plummeted soon after reaching their peak.

- 3.7 However, the most important explanation for the burst of the stock market bubble has to be **overvaluation and low efficiency of listed companies**, particularly “mega cash vampires” such as PetroChina, China Life, China Railway and other companies that were listed from November 2007. By the end of 2007, soaring stock prices had resulted in five of the Chinese listed state-owned enterprises -- PetroChina, ICBC, Sinopec, China Life Insurance and China Mobile -- joining the ranks of the world’s largest 10 companies in terms of market value¹⁴. On 23 July 2007, ICBC overtook Citigroup of the US to become the world's largest bank with a market value of over US\$251 billion¹⁵. Subsequently, on 5 November, the share price of PetroChina rose 161% and closed at 43.96 RMB on its first trading day on the SSE. With its H-shares in Hong Kong, it was more than twice as large as ExxonMobil and the only company in the world to exceed US\$1 trillion in market value¹⁶. By that point, Chinese enterprises had replaced their western counterparts to become

¹² Sources: Statistical Data, 2006, 2007, National Bureau of Statistics; SSE and SZSE Statistic Year book 2005, 06.

¹³ *Sichuan Finance News*, 19/11/2007, “Investors still interested in stock investment”, <http://finance.newssc.org/system/2007/11/19/010560329.shtml>, accessed on 12 July 2008.

¹⁴ Kuang Kaiwen (2007), “Chinese companies account for half of the world’s top ten companies”, *Shanghai Securities Daily*, http://special.qljr.com/rsdt/2007-11/2/11_57_02_448.htm, accessed on 20 July 2008.

¹⁵ *Sina Finance*, 10/08/2007, “ICBC became the world’s largest bank by market capital value”, <http://finance.sina.com.cn/stock/s/20070810/16343871907.shtml>, assessed on 15 July 2008.

¹⁶ *News Release center of PetroChina*, 06/11/07, “PetroChina listed on SSE successfully”, <http://news.cnpc.com.cn/system/2007/11/06/001135223.shtml>, accessed on 16 July 2008.

world leaders in a variety of sectors, including the financial, telecommunications, energy and insurance sectors.

- 3.8 However, in terms of profitability and productivity, these Chinese giants were dwarfed by their US and European counterparts. For example, the labour force of PetroChina was more than 10 times larger than ExxonMobil, yet its revenue or profit was less than one-third compared to the US company. The labour productivity of PetroChina was one-thirtieth of its US competitor¹⁷. Table 1 lists several financial indicators of the world's top 10 companies by market value on 5 November 2007.

¹⁷ Yao, S. J. and S. Morgan, (2008), On the new economic policies promoted by the 17th CCP Congress in China, *The World Economy*, Forthcoming.

Table 1 World's 10 largest companies by market value, 5 November 2007

Company	Market value	P/E Ratio	Revenue (2006)	Profit (2006)	Labour (2006)
	US\$billion		US\$million	US\$million	(persons)
PetroChina	1,079.40	59	110,520	13,265	1,086,966
Exxon	484.69	12.1	347,254	39,500	106,400
GE	412.92	20.3	168,307	20,829	319,000
China Mobile	378.79	53	35,914	6,260	130,637
ICBC	371.49	35	36,832	6,179	351,448
Microsoft	344.84	23	12,542	8,922	79,000
Gazprom	307.79	7.2	81,115	20,321	432,230
Sinopec	301.97	41	131,636	3,703	681,900
Shell	268.30	6.8	318,845	25,442	108,000
CLI	257.78	69	33,712	174	77,660
China 5	2,389.42	--	348,613	29,581	2,328,611
China 5/Exxon	4.93	--	1.00	0.75	21.89

Sources: Yao and Morgan, (2008), On the new economic policies promoted by the 17th CCP Congress in China, *The World Economy*, Forthcoming.

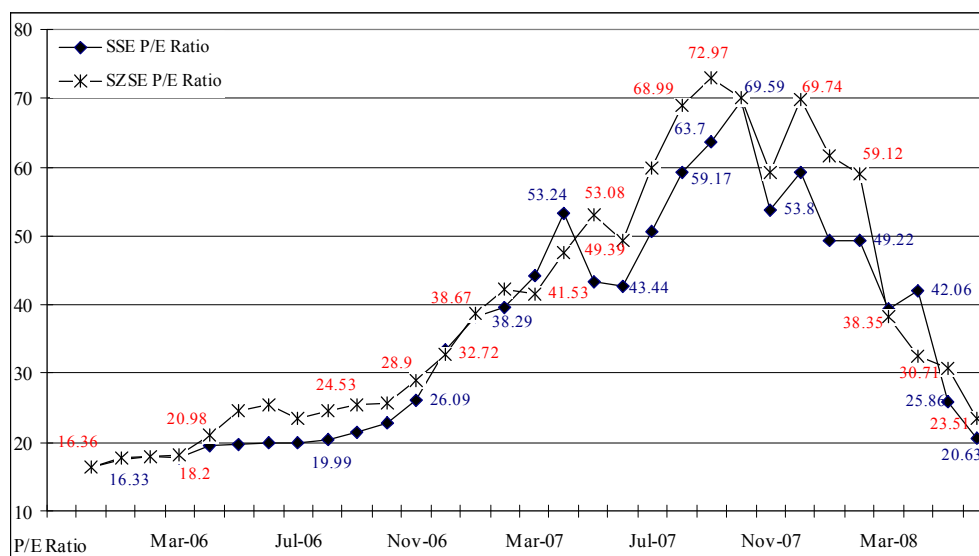
Notes: Market capitalization is calculated based on share values on 5/11/07; P/E ratio for Chinese companies is based on 5/11/07 while the ratio of other foreign companies are their 5-year average P/E ratio, available at: <http://finapps.forbes.com>; Revenue, profits and labour are for 2006; 1\$=7.4538 RMB. ICBC = Industrial and Commercial Bank of China, GE = General Electric, CLI = China Life Insurance. China 5 = PetroChina, China Mobile, ICBC, Sinopec and CLI.

- 3.9 The total market value of the top five Chinese companies was US\$2.4 trillion, approximately five times the market capitalization of ExxonMobil. However, they utilised 21 times more labour resources to generate a combined profit of only 75% of that of ExxonMobil. *"Measured by labour productivity, the Chinese companies are over-valued by 30 times compared to ExxonMobil"*¹⁸. Soaring stock prices also pushed the price-earning (P/E) ratios of the

¹⁸ Yao, S. J. and S. Morgan, (2008), On the new economic policies promoted by the 17th CCP Congress in China, *The World Economy*, Forthcoming.

Chinese listed companies to a record high. Figure 4 shows the average P/E ratios of the SSE- and SZSE-listed companies between December 2005 and June 2008.

Figure 4 Average P/E Ratio of SSE and SZSE listed Companies, 2005-08



Source: SSE monthly statistic, <http://www.sse.com.cn/sseportal/ps/zhs/yjcb/fact.shtml> and; SZSE monthly statistic, http://www.szse.cn/main/marketdata/tjyb_front/.

3.10 The P/E ratio of many established western companies is normally kept at around 10-15, whereas in China, it increased to 73 during the bullish period. For example, the estimated P/E ratio of China Life Insurance A-shares in 2007 was 76 while those of the US and European's largest insurance companies, American International Group (AIG) and Allianz Insurance Ltd, were only 9.2 and 8.4 respectively¹⁹. This suggested that even if the Chinese companies' performances were as good as their western counterparts, their share prices had already been over-valued by six to eight times. In addition, in reality, the profitability and productivity of the Chinese companies were unlikely to match their foreign competitors. Therefore, when the market plunged, the value of these Chinese giants evaporated just like a water bubble. Consequently, ignorant investors had to endure massive losses. To build a mature stock market in China as a long-term and secure platform for investors, more lessons are needed before Chinese investors

¹⁹ Xinhuanet, "Five of the top ten companies in market value comes from China", 30 October 2007.

know how to control 'greed', 'envy' and 'speculation' and the government learns how to prevent key market players from abusing their market power.

Conclusion

- 4.1 This paper suggests that three psychological factors -- 'greed', 'envy' and 'speculation' -- on the part of Chinese investors were the principal explanations for the development of the Chinese stock market bubble which developed so quickly during 2006-07. The lack of further investment capital was the needle that burst this bubble. Excessive valuations and fundamental weaknesses of listed Chinese companies, particularly large state-owned enterprises, were ultimately responsible for the stock market crash in the first eight months of 2008. The government assisted three large state-owned banks by stripping off 3.1 trillion RMB of their non-performing loans and injecting over US\$75 billion to improve their balance sheets before these banks were listed on the stock exchanges in order to attract investors. This had triggered the booming stock markets in China.
- 4.2 By November 2007, as more, and even larger, state-owned companies, such as PetroChina, China Life and China Railway were listed, the bullish market had run out of steam, leading to a sudden slump in share prices which caused many ignorant small investors to incur huge losses. On the whole, the dramatic boom and bust of the Chinese stock markets from the beginning of 2006 to the middle of 2008 could be regarded as China's most significant episode of wealth redistribution in recent history. The government, bankers, stock brokers, fund managers, listed state-owned enterprises and their managers were the biggest winners, while small and medium investors, especially the most 'ignorant and greedy' share holders, were the biggest losers. This round of wealth redistribution has had a critical social and political implication as the rich inevitably became richer and the poor poorer in China. An increasingly unequal society goes against the Party's goal to build a 'harmonious society', as promoted at the 17th National Congress of the Chinese Communist Party Central Committee held in Beijing in October 2007.
- 4.3 Finally, as the stock market bubble was largely inflated by 'greed', 'envy' and 'speculation', the current downturn represents not only a market correction

but also a depression caused by the psychological factors of 'fear', 'disappointment' and 'lack of confidence'. These psychological factors underpin the difficulty of a quick market recovery even if current share prices are lower than the 'true' market values of listed companies. This means that it will take a rather long time for the market to become bullish again.

- 4.4 In the long term, as most Chinese investors become more aware of the potential risks and returns, the stock markets will be less volatile, avoiding the dramatic boom-and-bust cycle seen over the last two years. By then, the stock market will be a more reliable avenue of investments, helping China to become a mature market economy. The government can play an important role in this process, through providing more information and legal protection to investors and preventing listed companies, especially state-owned companies, from deliberately acting against the interests of small investors.