Citation for published version (APA):
Lu, L., & Lu, L. (2017). Unveiling China's Stock Market Bubble: Margin Financing, the Leveraged Bull and Governmental Responses. *Journal of International Banking Law and Regulation*, *32*(4), 146-160. https://www.sweetandmaxwell.co.uk/Catalogue/ProductDetails.aspx?productid=6997&recordid=436

Unveiling China's Stock Market Bubble: Margin Financing, the Leveraged Bull and Governmental Responses

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Citation: Lu L and Lu L, 'Unveiling China's Stock Market Bubble: Margin Financing, the Leveraged Bull and Governmental Responses' (2017) Journal of International Banking Law and Regulation, Vol.32(4), pp. 146-160.

Abstract : From 2014–15, China witnessed a super bull in its stock market, as the major SSE Composite Index was more than doubled, but it was followed by an unprecedented crash triggering a global sell-off. This article argues that margin trading, which means investors that borrow money from stock brokers or shadow banks to purchase shares, accounted for the stock bubble.

Introduction

Since China started its market-oriented economic reform in the late 1970s, entrepreneurs across the country have established millions of privately owned businesses, whilst dominant state-owned firms have been shut down or transformed into modern corporations.[1] It is clear that the growing financing demand from both private and public sectors can only be satisfied with the establishment of a modern securities market.[2] Therefore, in the early 1990s, the authority decided to open the stock market to allow Chinese businesses to raise funds from the public; a vital step in the country's ongoing financial reform. In 1990 and 1991, the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) were opened respectively with the objective to facilitate the transactions of stocks, bonds, funds and derivatives, and to support the growth of real economy.[3] Being China's economic heartland, Shanghai naturally became the first city in mainland China to hold a stock exchange. Shenzhen, the country's entrepreneurship hub in which many world-class technology companies like Huawei, Tencent and Dajiang Innovation are located, won the opportunity to operate the second stock exchange in China. In 1992, the China Securities Regulatory Commission (CSRC) was set up by the State Council as the watchdog for securities and future markets. There are three main functions for the CSRC: to maintain a transparent, fair and equitable market; to strengthen the protection of investors, in particular retail investors; and to facilitate the sound development of capital markets.[4]

After more than two decades of rapid development, China now has the most dynamic capital market in the world. Thousands of successful businesses floated their shares on the SSE and SZSE (831 public companies listed in Shanghai and 1,700 in Shenzhen) whilst millions of retail investors joined the equity market to take a bet on the rising economy. Recently, Shanghai and Shenzhen were ranked as the fourth and seventh largest stock exchanges in the world in terms of their total market capitalisation (see the table below). Moreover, according to the World Bank, the Chinese stock market is the second largest one in the world, just next to the US.[5]

Table 1: Market Capitalisation of the World's Top Stock Exchanges (March 2016)[6]

Ranking	Stock Exchanges	Market Capitalisation (US $billion)
1	US (NYSE Euronext)	18,171.31
2	US (Nasdaq OMX)	7,048.55
3	Japan (Japan Exchange Group)	4,602.10
4	China (Shanghai)	3,930.17
5	UK (London Stock Exchange Group)	3,805.18
6	Europe (NYSE Euronext)	3,353.62
7	China (Shenzhen)	3,094.78
8	China (Hong Kong)	3,023.54
9	Canada (Toronto)	1,767.31
10	Germany (Deutsche Börse)	1,655.37

Despite its enormous size, China's stock market is still in its nascent stage of development as inexperienced retail investors dominate the trading and regulatory loopholes can be widely seen. The most recent example of market failure is the stock market crash in the middle of 2015, when the majority of Chinese investors suffered great losses in a period of several weeks. It also lead to market

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1 For the convenience of international readers, the Chinese currency (yuan or CNY) in this article is accompanied by a conversion into US Dollars. The exchange rate between Chinese yuan and US dollar is 6.69:1, on 10 July 2016.

2 After the People's Republic of China was founded in 1949, the Communist Party implemented the centrally planned economic model (similar to that of the Soviet Union) for nearly three decades. During that time, all economic and financial activities were organised under the State's plans rather than by the market discipline. The securities exchanges in China, therefore, were shut down in 1952. See Robin Huang, *Securities and Capital Markets Law in China* (Oxford: Oxford University Press, 2014), pp.4–5.

3 Shanghai Stock Exchange (SSE) available at: *http://www.sse.com.cn/aboutus/sseintroduction/introduction/*; Shenzhen Stock Exchange (SZSE), *http://www.szse.cn/main /aboutus/bsjs/bsjj/index.shtml* [Accessed 1 November 2016].

4 China Securities Regulatory Commission available at: *http://www.csrc.gov.cn/pub/csrc_en/about/* [Accessed 1 November 2016].

5 World Bank, "Market capitalization of listed domestic companies" available at: *http://data.worldbank.org/indicator/CM.MKT.LCAP.CD* [Accessed 1 November 2016].

6 World Federation of Exchanges and the Bloomberg. See Hong Kong Securities and Futures Commission, Market Capitalisation of the World's Top Stock Exchanges (December 2016) available at: *http://www.sfc.hk/web/EN/files/SOM/MarketStatistics/a01.pdf* [Accessed 1 November 2016].

turbulence in other major markets in Asia, Europe and the US.[7] Although market observers around the world have already realised the increasing importance of the Chinese market, most of them still have limited knowledge about how it works and what kind of regulation it is subject to.

Therefore, this article attempts to provide some discussion and analysis regarding China's recent stock market bubble as well as relevant regulatory issues. It will proceed as follows. The second section looks into the details of the 2014–15 equity bubble, whilst the third section continues to examine the sudden burst of the speculative bubble in June 2015. Next, the fourth section tries to reveal the driving force behind the boom-and-bust of China's stock bubble. The stock market speculation was largely inflated by the rising margin financing activities in China as numerous investors borrowed money to purchase shares. Therefore, it was referred to as the "leveraged bull" by some media, driven up by CNY 4 trillion (US $598 billion) margin loans.[8] After that, the fifth and sixth sections introduce two popular forms of margin finance in China respectively: the margin lending service provided by official securities brokers, and the *Peizi* (money-matching) business which refers to margin loans offered by grey-market money houses or online peer-to-peer lending platforms. Finally, the seventh section assesses how the Chinese regulator reacted to the stock market crash, with a particular focus on the regulation of margin finance.

China's stock market mania

In recent years, an extremely high level of volatility has been seen in China's stock market, with the benchmark indices swinging up and down as much as 10% in a single trading day.[9] In July 2014, China entered a strong bull market as the major SSE Composite Index rose by two-and-a-half times in less than one year. It climbed from around 2,000 points in July 2014 to the peak of 5,166.35 points on 12 June 2015, marking an equity bubble and attracting many investors to participate in the speculation.

Figure 1: Shanghai Stock Exchange Composite Index (January–July 2015)[10]

A similar bullish trend was also observed in the SZSE, in particular its ChiNext board—China's equivalent to the NASDAQ of the US. ChiNext is a second board market in Shenzhen where most listed companies are high-tech firms or those in emerging industries of strategic importance. As of February 2016, there were 495 companies listed in the ChiNext with a total market capitalisation of CNY 4,282.38 billion (US $660 billion).[11] One year later in June 2015, the ChiNext Index nearly tripled from around 1,300 points to 3,899.71 points.[12] Clearly, the overheated speculation of Chinese technology stocks is similar to the US dotcom bubble in the late 1990s. The share price of recently listed companies on the ChiNext board posted an average gain of 500%,

[7] Andrew Walker, "China share turmoil: How it affects the rest of the world", *BBC News*, 7 January 2016 available at: *http://www.bbc.co.uk/news/business-34040679* [Accessed 1 November 2016].
[8] See, for example, "Reflection on the leveraged bull", *Caixin Weekly*, 6 July 2015 available at: *http://weekly.caixin.com/2015-07-03/100824828.html* [Accessed 1 November 2016].
[9] The stock exchanges in China has imposed a daily price change limit of 10% on the trading of listed companies' shares, so normally share price as well as relevant indices can only rise or fall up to 10% in a day.
[10] Google Finance available at: *http://www.google.com.hk/finance/historical?q=SHA:000001&gl=cn* [Accessed 1 November 2016].
[11] Shenzhen Stock Exchange, "About ChiNext" available at: *http://www.szse.cn/main/en/chinext/* [Accessed 1 November 2016].
[12] ChiNext Price Index, *Bloomberg* available at: *http://www.bloomberg.com/quote/SZ399006:IND* [Accessed 1 November 2016].

making it the most valuable market in the world in 2015.[13] For example, Beijing Baofeng Technology Company, an Internet video platform listed in ChiNext, launched its IPO on 24 March 2015 with its shares 291 times oversubscribed by investors.[14] On its debut date, the share price of Baofeng jumped by 44%, the maximum ceiling allowed by the Chinese regulator.[15] Since its floating, the stock price kept rising by the 10% ceiling every day for two months. The price increased by 40 fold from CNY 7.14 (US $1.07) to more than CNY 300 (US $44.84) at the end of May, before its trading was suspended. At the peak, the market value of Baofeng was CNY 36.9 billion (US $5.69 billion) and its price-to-earnings ratio (P/E ratio) reached a surprisingly high level of 881.79 times.[16] Evidently, the share price of the Baofeng far exceeded its real value.

It is clear that the dramatic rise in share prices of most public companies indicated a speculative bubble in China. In June 2015, the P/E ratio of the entire ChiNext board reached 130, which was considered as more than twice a reasonable level for companies with strong business prospects.[17] Moreover, the stock market fever also spread from mainland China to Hong Kong. The arrival of billions of dollars from Chinese retail investors in 2015 pushed the Hong Kong stock market to a record high, as the trading volume in Hong Kong alone was more than double of that of the combination of London, Frankfurt and Paris.[18] Due to the fast expansion of Shanghai and Shenzhen stock markets, China now has the world's second largest securities market in the world. According to the World Federation of Exchanges, the global equity trading volume in 2015 surged by 55%, mainly driven by the strong performance in China.[19]

In addition to the soaring stock price and trading volume, there was other evidence showing the formation of an equity bubble. For instance, the best sign of a financial bubble might be the rapid increase in the number of share trading accounts. From June 2014 to May 2015, more than 40 million share dealing accounts were opened by Chinese retail investors.[20] Currently, the number of individual investors in China amounted to 90 million, surpassing the number of members of China's ruling Communist Party which stood at 87.8 million in 2014.[21] Therefore, we can say it is the new investors carrying a huge amount of money that pushed the stock market to a seven-year high. Having seen a lot of relatives, friends and colleagues who became rich overnight by purchasing shares, more and more investors were attracted to the market by the bull euphoria. The reason why the Chinese population is enthusiastic about buying shares is that the interest rate of savings has been kept very low by the central bank, which is even unable to beat the inflation rate.[22]

In contrast to capital markets in countries like the US or the UK, where institutional investors play a dominant role in trading, retail investors in China contributed to more than 90% of daily turnovers.[23] However, according to a widely cited survey, 67% of new investors in China did not even complete the high school education—they are generally ordinary working class, farmers, housewives and retired people.[24] Clearly, it demonstrates the wide participation of unsophisticated investors in the recent stock rally.[25] The truth is that many Chinese households have switched their money from savings, properties and wealth management products to the stock market in order to make quick money in the bull run. However, most of them do not have sufficient financial knowledge and skills to carry out the investment, nor professional financial advisors to provide investment advice.

During this stock market boom, a large number of young people, born in the 1980s and 1990s who had begun to work in recent years and had accumulated some savings, began to invest. Unlike their parents or grandparents who prefer to buy shares of blue chip companies, the younger generation tend to use a more radical investment strategy and favour smaller businesses with a strong growing prospect, such as companies listed on the ChiNext board. According to a survey of *Xinhua*, China's State media, 31% of undergraduate students in China have taken part in the stock market investment in

[13] Saikat Chatterjee and Elzio Barreto, "China's IPO market undaunted by ghosts of dotcom boom and bust", *Reuters*, 20 May 2015 available at: *http://www.reuters.com /article/us-china-chinext-idUSKBN0O52O420150520* [Accessed 1 November 2016].

[14] "China's IPO froth bubbles over", *Financial Times*, 30 April 2015 available at: *http://www.ft.com/cms/s/2/d788db72-ef53-11e4-87dc-00144feab7de.html* [Accessed 1 November 2016].

[15] "China's IPO froth bubbles over", *Financial Times*, 30 April 2015.

[16] "Baofeng Technology rose 10 times in a quarter: how long will the legend last?" *Sina Finance*, 3 July 2015 available at: *http://finance.sina.com.cn/stock/s/20150703 /130522584262.shtml* [Accessed 1 November 2016].

[17] "China's stock market: A crazy casino", *The Economist*, 26 May 2015 available at: *http://www.economist.com/blogs/freeexchange/2015/05/chinas-stockmarket* [Accessed 1 November 2016].

[18] Gabriel Wildau and Josh Noble, "China investors: Stock market fever", *Financial Times*, 10 April 2015 available at: *http://www.ft.com/cms/s/0/6a83b534-df30-11e4-852b - 00144feab7de.html* [Accessed 1 November 2016].

[19] World Federation of Exchanges, "2015 Market Highlights" available at: *http://www.world-exchanges.org/home/index.php/files/18/Studiespercent20-percent20Reports /293/2015percent20Marketpercent20Highlights.pdf* [Accessed 1 November 2016].

[20] "There Are Now More Stock Traders in China Than Communist Party Members", *Bloomberg*, 30 June 2015 available at: *http://www.bloomberg.com/news/articles/2015 -06-30/in-communist-china-stock-market-capitalists-now-rule* [Accessed 1 November 2016].

[21] "There Are Now More Stock Traders in China Than Communist Party Members", *Bloomberg*, 30 June 2015.

[22] For instance, in China the interest rate for current deposit is 0.30–0.35%, and the rate for one-year fix-term deposit is 1.5–2%. See "Deposit Rates of Major Banks in China", *Hexun* available at: *http://data.bank.hexun.com/ll/ckll.aspx* [Accessed 1 November 2016].

[23] "China's stock market: A crazy casino", *The Economist*, 26 May 2015.

[24] Orville Schell, "Why China's stock market bubble was always bound to burst", *The Guardian*, 16 July 2015 available at: *http://www.theguardian.com/world/2015/jul/16 /why-chinas-stock-market-bubble-was-always-bound-burst* [Accessed 1 November 2016].

[25] It remains uncertain that whether the figure of the above survey is accurate or not, and in response to this, the Shenzhen Stock Exchange clarified that 46.9% of its investors hold at least a college degree. See "Half of China's stock market investors have college degrees", *Xinhua*, 7 April 2015 available at: *http://news.xinhuanet.com/fortune/2015 - 04/07/c_127662898.htm* [Accessed 1 November 2016].

2015.[26] A quarter of student investors put more than CNY 50,000 (US $7,474) into the equity market and the money primarily came from their parents as living fees.[27] Dreaming of getting rich fast, college students are in fact amateurs who lack proper financial knowledge, investment skills and risk awareness. Many of them simply believed that "even though there exist risks and bubbles in China's share market, the state is able to maintain its health to prevent the collapse".[28]

In the eyes of many investors, the 2014–15 bull market was implicitly endorsed by the Chinese Government, as the Xi-Li administration is determined to deepen the economic and social reform in China, which can be good news for the long-term stock market investment.[29] Besides, the State media even played a cheerleader role in the stock rally. For instance, *People's Daily* in April 2015 released a commentary article saying that 4,000 points (of the SSE Composite Index) was just the beginning of a bull market.[30] The news of this kind seemed to pass a message that the Government was in fact supporting the rally, which encouraged more investors to join the speculation regardless of the overvalued share price.

Further evidence indicating an equity bubble might be the prevalence of "concept stocks". In the Chinese stock market, the word "concept" refers to some investment storylines which are linked to recent hot economic, financial or political news, and the share price of a certain company associated with such concepts can rise drastically in a short time. These kinds of bullish concepts and themes range from the state-owned enterprise reform—President Xi's "New Silk Road" Eurasian infrastructure plan—to titanium dioxide, 3D print and Industry 4.0.[31] Instead of analysing the fundamentals of listed companies, a large number of Chinese investors simply pick up their stocks according to popular stock concepts. For instance, one overheated investment concept in 2015 was the reform of state-owned enterprises in China which dominate the country's key industries such as banking, telecom, energy and railway. Thus, when the rumour of merging China's two largest train manufacturers, the CSR Corp and the CNR Corp, started to circulate, the share price of them rose by more than 200% in a couple of weeks.[32] Investors believed that the concept stocks can bring them extra profits so they rushed to buy the same stock at the same time, which often pushed prices higher in a short space of time. However, when investors lost interest in it and pulled out money, the share price fell quickly in the same way.

The burst of the bubble

After the SSE Composite Index reached its peak of 5,166.35 on 12 June 2015, it began to slump at an unprecedented speed. The Index fell by nearly 30% within three weeks. By 3 July 2015, the market capitalisation in the SSE and SZSE had lost value worth CNY 18.6 trillion (US $3.78 trillion). As it suddenly ran into a bear market, in early July, more than 1,000 public companies in China decided to suspend the trading of their shares in order to prevent their share prices from falling further.[33] Such a large scale of trading suspension had never been seen before in the history of the Chinese market. Clearly, the temporary measure to suspend trading was able to calm down nervous investors while the entire market was waiting for a government bailout.

The Chinese stock market was on a roller coaster in the following months. In the period from June–August 2015, 40% of the market value was wiped off. In particular, on 24 August 2015, which was dubbed as "Black Monday" by the State media *Xinhua*, the SSE Composite Index fell by 8.49% in a trading day, the largest fall so far.[34] Moreover, Black Monday triggered a global fear about China's diming economic prospect, as the country might face a potential hard landing, which could lead to a new round of recessions around the world. Therefore, the woeful performance of Shanghai and Shenzhen stock markets had an immediate impact on major financial markets in Asia, America and Europe. The Dow Jones Industrial Average in the US dropped 1,000 points when it opened on Black Monday.[35] The share prices of blue chip American companies such as the General Electric and Pepsi fell by more than 20% at one point during that day. On the following Tuesday, the Chinese market continued to slump as the SSE Composite Index fell by 7.6%, which again caused sharp falls in most global markets.[36] Some commentators, therefore,

[26] "Stock Investment Became A Trend in Universities", *Xinhua*, 3 June 2015 available at: *http://news.xinhuanet.com/comments/2015-06/03/c_1115496945.htm* [Accessed 1 November 2016].

[27] "Stock Investment Became A Trend in Universities", *Xinhua*, 3 June 2015.

[28] "Stock Investment Became A Trend in Universities", *Xinhua*, 3 June 2015.

[29] The Xi-Li administration, through a series of new economic and social reforms, aims to achieve social equity, provide the economic dividend of China's growth for most people, as well as reform the sluggish state-owned enterprises. See Tom Mitchell, "Xi's four-point plan gives reason for optimism", *Financial Times*, 15 November 2013 available at: *http://www.ft.com/cms/s/0/4469ec2c-4e06-11e3-8fa5-00144feabdc0.html* [Accessed 1 November 2016].

[30] Tom Mitchell, Gabriel Wildau and Josh Noble, "A bull market with Chinese characteristics", *Financial Times*, 10 July 2015 available at: *http://www.ft.com/cms/s/0 /082499ca-2658-11e5-9c4e-a775d2b173ca.html* [Accessed 1 November 2016].

[31] For a full list of recent stock concepts in China, see 10jqka Finance available at: *http://q.10jqka.com.cn/stock/gn/* [Accessed 1 November 2016].

[32] Wildau and Noble, "China investors: Stock market fever", *Financial Times*, 10 April 2015.

[33] "A rare scene in the 24-year history of A-stock market: thousands of companies suspended trading to avoid risks", *Global Times*, 8 July 2015 available at: *http://finance .huanqiu.com/gsjj/2015-07/6941603.html* [Accessed 1 November 2016].

[34] The term "Black Monday" was first used to describe what happened to the US's stock market on 19 October 1987, when the Dow Jones Index fell by more than 22% in a day. See Scott Cendrowski, "China's 'Black Monday' as stock market slides 8.5 per cent", *Fortune*, 24 August 2015 available at: *http://fortune.com/2015/08/24/chinas -black-monday-as-stock-market-slides-8-5/* [Accessed 1 November 2016].

[35] Matt Egan, "After historic 1,000-point plunge, Dow dives 588 points at close", *CNN*, 25 August 2015 available at: *http://money.cnn.com/2015/08/24/investing/stocks -markets-selloff-china-crash-dow/* [Accessed 1 November 2016].

[36] "Chinese stocks tumble for a second day after global fall", *BBC News*, 25 August 2015 available at: *http://www.bbc.co.uk/news/business-34048084* [Accessed 1 November 2016].

compared China's stock market crash in 2015 to the Wall Street crash in 1929 and the global financial crisis in 2007–08, as all of them resulted in great economic turmoil.[37]

Nonetheless, it is Chinese investors, particularly the emerging middle class who suffered most from the stock market crash. During the first three weeks of the stock market turbulence, the average loss per trading account in China amounted to CNY 420,000 (US $62,782), making the total loss equal to the market capitalisation of Shenzhen-listed companies at the peak of the bull market.[38] As said previously, a large number of retail investors entered into the market when the SSE Composite Index was already at the 4,000 points or higher, so they soon lost one-third to half of their money when the market started to crash. Despite the rapid fall, many investors still had strong confidence in the market since they expected the Government would intervene, rescue the market and make it rebound. For instance, according to the *Financial Times*, a young investor from Suzhou whose loss equalled the value of a luxurious car, still believed that 6,000 or even 8,000 points is not a fantasy and that the market will finally bounce back.[39] However, the Chinese market has been falling steadily since June 2015, and the SSE Composite Index reached a 13-month low of 2,638.30 points on 27 January 2016.[40] Clearly, the share prices of most Chinese public companies were more than halved during the crash.

What accounts for China's recent stock rally?

Generally speaking, the share price of public companies will go up during economic booms and go down during economic recessions. Nevertheless, this round of bull market in China from 2014–15 saw the contrary side of the rule. The rapid rise in share price was neither supported by the development of real economy nor the improvement in the fundamental of Chinese businesses. In fact, the year of 2015 witnessed the slowest growth of Chinese economy in the recent decade.

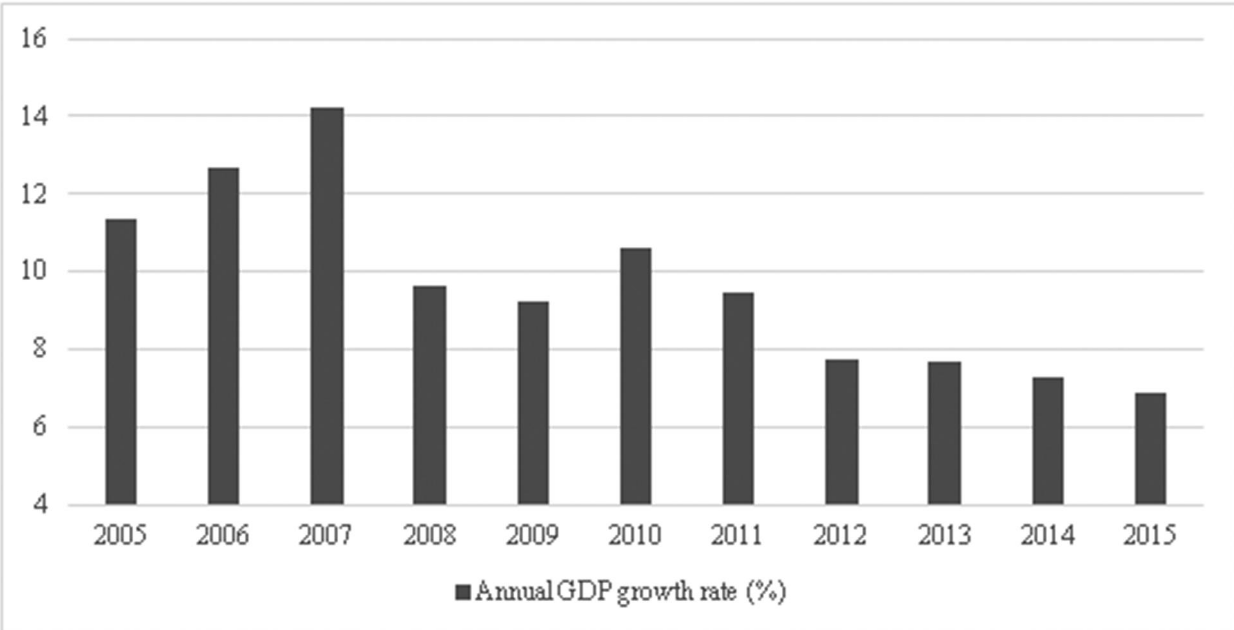

Figure 2: China's Annual GDP Growth[41]

According to the chart above in fig.2, China's gross domestic product (GDP) grew by 6.9% in 2015 compared with one year earlier. Although the growing rate is perceived as a decent figure, it is much slower than the double-digit growth rate in the previous three decades. Clearly, China's economy is facing multiple challenges at the moment. For example, manufacturing activities, which have been a vital pillar in the country's economy, have been in a difficult situation due to the weakening global and domestic demands after the global financial crisis. The Caixin purchasing managers index (PMI), an indicator for observing the manufacturing industry, always fell below the threshold of 50 points in 2015, suggesting

[37] See, for example, Larry Elliott, "China's Black Monday is worryingly similar to Wall Street's 1929 crash", *The Guardian*, 25 August 2015 available at: *http://www .theguardian.com/business/2015/aug/25/parallels-new-york-1929-shanghai-2015-wall-street-crash-china-stock-market-crisis* [Accessed 1 November 2016].
[38] Tencent Finance available at: *http://finance.qq.com/a/20150704/009361.htm* [Accessed 1 November 2016].
[39] Mitchell, Wildau and Noble, "A bull market with Chinese characteristics", *Financial Times*, 10 July 2015.
[40] Laura He, Enoch Yiu and Xie Yu, "China stocks end wild session slightly lower as state funds return to prop up market", *South China Morning Post*, 27 January 2016 available at: *http://www.scmp.com/business/markets/article/1905794/china-stocks-end-wild-session-slightly-lower-state-funds-return* [Accessed 1 November 2016].
[41] National Bureau of Statistics of China, "National Data—GDP" available at: *http://data.stats.gov.cn/ks.htm?cn=C01&zb=A050* [Accessed 1 November 2016].

a continuous contraction of the industry.[42] Therefore, since 2011, an increasing number of Chinese businesses have become insolvent as a result of declining sales and profits—so they started to default on bank loans or private loans from shadow lenders, leading to a massive credit crisis in China with many bosses running away to evade debts.[43] Apparently, the weak macroeconomic environment in China seemed impossible to support the bull market from 2014–15.

Therefore, market observers have been searching for what accounts for the irrational exuberance in the Chinese securities market, and the answer may be debts. During the stock rally, millions of Chinese investors borrowed money to purchase shares, whether from their securities brokers or from grey-market shadow banks. The practice of buying shares by borrowing money is called margin trading, which amplifies the potential gains as well as losses. Even though margin trading is a common practice in most developed markets, it had been totally banned in China until recently. In 2010, the CSRC relaxed relevant rules regarding margin trading and short selling in order to promote investments in a bear market lasting for many years.

In the recent stock rally, the amount of outstanding margin loans rose from CNY 698 billion (US $104 billion) in October 2014 to a peak of CNY 2.7 trillion (US $404 billion) on 18 June 2015.[44] It clearly explained where the money came from. If investors meet certain requirements, they will be able to borrow up to twice of their own capitals from securities brokers. In addition, investors can choose to borrow money at very high leverage from some semi-legal *Peizi* companies (money-matching firms). It has less rigid requirements but charges higher interest rates. Moreover, margin financing businesses often employ complex financial structures such as the umbrella trust, which will be discussed later. In summary, through margin financing, a large amount of credits has been injected into China's stock market, which pushed up the share price. Such a bull market fuelled by debts is therefore called the "leveraged bull".

Table 2: Two major forms of margin finance in China

	Official Margin Finance	**Underground Margin Finance**
Who is lender?	the 125 official securities firms authorised and supervised by the CSRC.[45]	Money-matching firms or peer-to-peer online lending platforms.
Annual interest rate	Around 8.5%, depending on the amount of investors' self-own capitals.[46]	18–24%.[47]
Capital threshold for investors	Investors shall have cash or securities worth more than CNY 500,000 under their share dealing accounts.	No capital threshold for investors.
Other requirements for investors	Investors shall have been using the account to trade securities for more than 6 months; passing a series of credit and risk checks.	No other requirements for investors.
Limitation on shares that can be purchased	Investors can only borrow money to buy shares of certain companies which are on a list approved by the CSRC (most blue chip companies).	No limitation.
Maximum leverage ratio	1:2	1:5

Margin financing service provided by official stock brokers

Official Margin trading is a kind of securities credit transaction that allows investors to borrow loans from their securities brokers to buy shares, funds or other securities. Investors have to provide cash or securities under their share trading accounts as collateral in order to borrow funds, and once the loans are issued, investors will be obliged to pay back the principals and interests on the maturity date. If investors are optimistic about the stock market and believe the share price of a certain company will increase in the future but lack funding, they can build up a leveraged long position through borrowing money from securities firms.[48] On the contrary, investors who believe that the share price of some public companies will drop but want to profit from the falling market, can borrow a certain amount of shares from their brokers and sell them immediately. They will wait to buy the same amount of shares back in the future at a lower price and return them to brokers. This kind of financial trading activity is called short selling.

42 "Caixin's China PMI contracts 10th-straight month", *Financial Times*, 4 January 2016 available at: *http://www.ft.com/fastft/2016/01/04/caixins-china-pmi-contracts-10th -straight-month/* [Accessed 1 November 2016].

43 Lerong Lu, "Runaway Bosses in China: Private Lending, Credit Crunches, and the Regulatory Response" (2015) 18(9) *Financial Regulation International* 1.

44 Mitchell, Wildau and Noble, "A bull market with Chinese characteristics", *Financial Times*, 10 July 2015.

45 For a full list of securities companies in China, see Securities Association of China, "2015 Securities Firms Operating Performance Ranking" available at: *http://www.sac .net.cn/ljxh/xhgzdt/201606/P020160606393113547678.pdf* [Accessed 1 November 2016].

46 Wind Info, (22 March 2016) available at: *http://114.80.154.46/ns/findsnap.php?ad=0&sitetype=1&sourcetype=1&id=363090856&t=1* [Accessed 1 November 2016].

47 "The Investigation of A-share Leverage Investment", *Sina Finance*, 24 March 2016 available at: *http://finance.sina.com.cn/roll/2016-03-24/doc-ifxqsxic3073401.shtml* [Accessed 1 November 2016].

48 Zhaojing Chen, G. Nathan Dong and Ming Gu, "The Causal Effects of Margin Trading and Short Selling on Earnings Management: A Natural Experiment from China", First Annual Volatility Institute at NYU Shanghai (VINS) Conference (2015), *SSRN* available at: *https://ssrn.com/abstract=2795640* [Accessed 22 February 2017].

Table 3: Revenues of top securities companies in China[49]

Securities Companies	Total Revenue in 2015 (A) (in CNY million)	Income from Margin Finance and Short Selling Service (B)	Percentage (B/A)
CITIC Securities	34,093.00	7,227.18	21.20%
Guotai Junan Securities	29,828.84	7,407.05	24.83%
Guosen Securities	27,360.79	5,894.06	21.54%
GF Securities	27,242.65	7,497.86	27.52%
Haitong Securities	25,692.08	6,645.92	25.87%

China started to introduce margin finance and short-selling services for its retail investors in 2010. They have become a major source of income for China's securities firms, in addition to traditional services like stock brokerage, investment banking and asset management. From Table 3 above, we can see that amongst the largest Chinese securities firms (in terms of revenue), the income from making margin loans and short selling contributed to over 20% of their revenues in 2015. For instance, the GF Securities experienced a rapid growth in its margin finance and short-selling services as the total outstanding loan balance hit CNY 66.9 billion (US $10 billion) by the end of 2015.[50] The interest income from making margin loans amounted to CNY 7.49 billion (US $1.12 billion), an increase of 191.76% from one year earlier.

Margin finance not only benefits securities brokers by bringing more revenues but also provides Chinese investors with a brand new investment strategy. It enables investors to use borrowed money to wager on the rising of share price. Clearly, as a leverage investment tool, it can inject more funding into the securities market and largely increase the trading volume, which supports the bullish trend. When the share price continues to rise, investors can multiply their gains through the use of margin loans. In June 2015, when the Chinese market was on top, the amount of total outstanding margin loans was around CNY 2 trillion (US $299 billion), showing the popularity of investment with margin finance.[51] However, margin finance is a double-edged sword since, under certain circumstances, it may cause huge economic losses for people using it. For instance, if too many inexperienced investors have the access to margin finance, like what happened in China's recent stock rally, the share price and relevant indices will be pushed upward to an unreasonable high level with the input of excessive funding from the whole financial system. This is how a stock bubble was created this time. Moreover, when the market starts to fall, investors will suffer multiple losses depending on the leverage ratio, but usually the risk of losing money is often ignored or underestimated by investors when they first borrow money. In some cases, the broker will ask investors to deposit more cash as security if the price of their equities falls to a certain level, making the total value of their shares less than the amount of margin loan. If investors cannot add enough money into the account on time, the broker will sell securities and liquidate the account to repay the margin loans immediately. (It is called "margin call".)

Taking a margin loan to buy shares is similar to taking a mortgage loan to buy a property. Investors borrow money from security brokers with the loan being secured against investors' cash, shares, fund units or other securities. The purpose of employing margin financing is to magnify potential gains, particularly during the bull run when share prices of most public companies rise quickly. For instance, Investor A and Investor B both have CNY 100 in their trading accounts. A uses the money to buy 100 shares of X Company (CNY 1 per share * 100 shares). If the share price rises by 20% to CNY 1.2, A will have a profit of CNY 20 (CNY 100 * 20%). Meanwhile, Investor B also buys CNY 100 worth shares of X Company, and then use his shares of X company as security to borrow another CNY 100 from the broker. B uses the borrowed money to buy another 100 shares of X Company and he has shares of X company worth CNY 200. If the share price still increases by 20%, Investor B will gain a profit of CNY 40 (CNY 200 * 20%, deducting any fees and interests paid to the stock broker). Therefore, the investment return rate of B is 40% compared to the 20% return earned by A who does not borrow money. It shows how margin trading can increase your returns if the market is a good condition. However, if the share price falls, investors borrowing margin loans will suffer multiple loss. In the same scenario, if the share price falls 50%, Investor A will suffer 50% of loss, or CNY 50. In contrast, Investor B will lose CNY 100 (CNY 200 * 50%), which means that B nearly loses all of their capital as they have to deposit more cash into the account or are subject to the margin call to liquidate their account to pay off the CNY 100 debt owed to the stock broker.

The development of margin finance in China and the bull market

Despite being a common investment tool in securities markets in developed countries, margin trading is relatively new in China. On 8 January 2010, the State Council of China decided to introduce both margin trading and short-selling practices to the market.[52] In February 2010, the CSRC launched a long-awaited pilot scheme, allowing shares of 90 blue chip companies on the

[49] The data is compiled based on Securities Association of China, "2015 Securities Firms Operating Performance Ranking".
[50] GF Securities, *2015 Annual Report* (2016), p.39 available at: *http://www.cninfo.com.cn/finalpage/2016-03-19/1202058936.PDF* [Accessed 1 November 2016].
[51] "In June 1.13 Trillion Yuan Flooded Into The Stock Market", *Securities Times*, 2 July 2015 available at: *http://www.stcn.com/2015/0702/12331556.shtml* [Accessed 1 November 2016].
[52] Paget Dare Bryan, "Index Futures Trading, Margin Trading and Securities Lending in China Finally Launched" (2010) 11 *Journal of Investment Compliance* 23, 23.

approved list to be sold short or purchased on margin.[53] In December 2011, the CSRC decided to increase the number of constituent securities to 280, including 7 exchanged-traded funds (ETFs) as the original pilot programme turned out to be successful. With the attempt to enhance market efficiency by the introduction of margin trading and short selling, the Chinese regulator regarded it as a significant step in the ongoing capital market reform.[54] As discussed, in the recent bull market from 2014–15, margin finance was widely employed by China's retail investors and the chart below compiled by the authors demonstrates how margin financing affects the stock prices and indices.

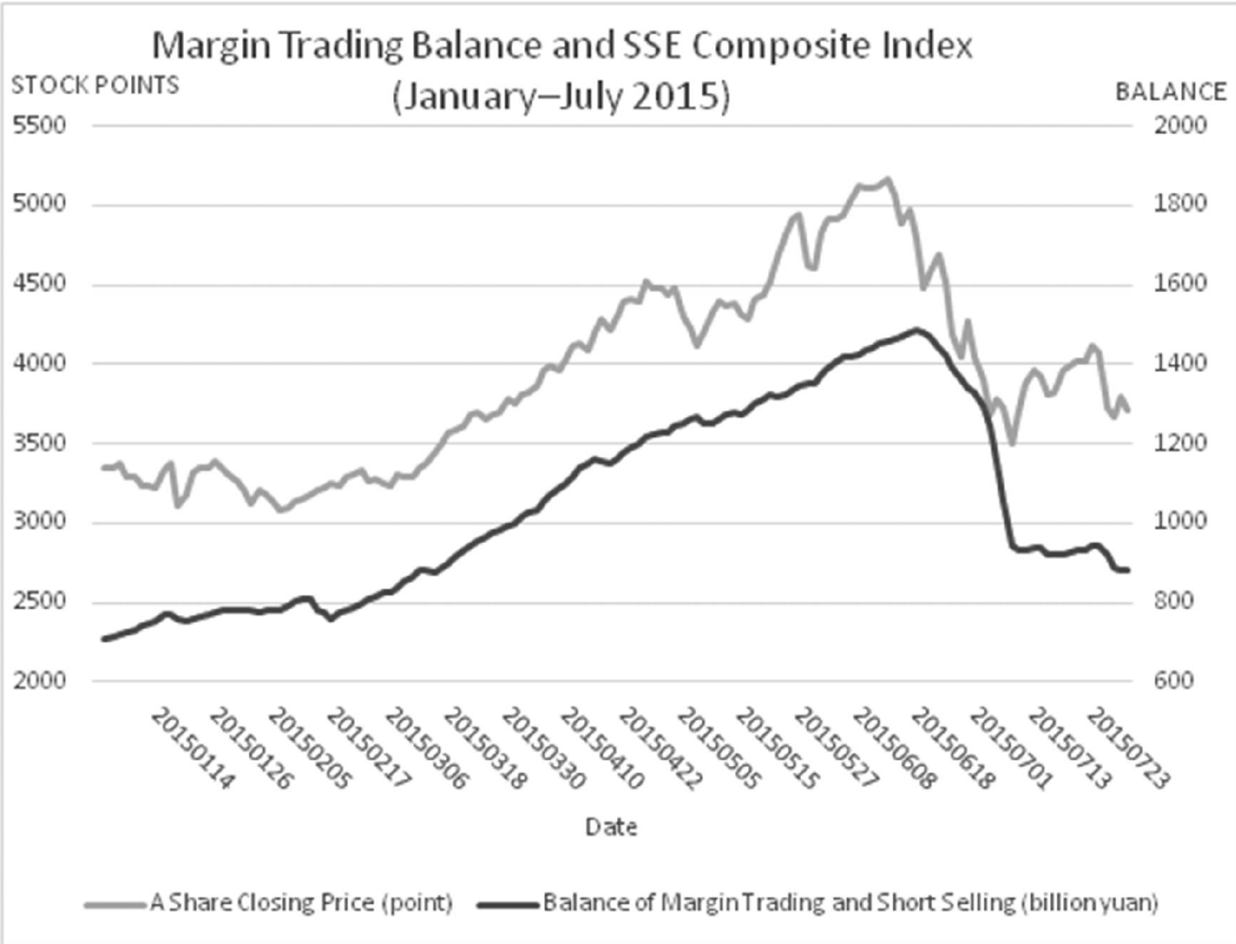

Figure 3: Margin trading and stock bubble[55]

The chart shows the fluctuation of both margin financing outstanding loan balance and the SSE Composite Index during the same period of time when the bullish trend was developing in 2015. Clearly, the ascending or descending trends of both figures are roughly in the same direction. It means that when investors borrowed more and more margin loans from January–June 2015, the amount of outstanding loans kept rising, driving up the share price with the influx of trillions of yuan. By late June, there was a sharp fall in the margin financing figure as investors pulled out their money from the stock market, leading to the diving of the SSE Composite Index. This article, therefore, argues that there is a positive correlation between the movement of share prices and margin financing activities. When there is increasing margin lending activities, the share price of public companies goes up and vice versa. It is safe to say that the most important driving force behind this round of bull market was margin trading.

According to the scenarios discussed above, the employment of margin trading tools can exponentially increase investors' gains from the rise of share price. In a bullish market, the leverage effect of margin trading will encourage more people to borrow money to buy shares, which leads to a significant growth in both stock price and trading volume. Accordingly, the share market looks healthy and dynamic at first. However, as more and more people who want to make quick money are drawn

[53] Eric C. Chang, "Short-selling, margin-trading, and price efficiency: Evidence from the Chinese market" (2014) 48 *Journal of Banking & Finance* 411, 411; Saqib Sharif et al, "Against the Tide: The Commencement of Short Selling and Margin Trading in Mainland China" (2014) 54 *Accounting and Finance* 1319, 1323.

[54] See CSRC, "CSRC Will Recently Launch the Pilot Programme of Margin Trading and Short Selling" (5 October 2008) available at: *http://www.csrc.gov.cn/pub/newsite /zjhxwfb/xwdd/200810/t20081005_68632.html* [Accessed 1 November 2016].

[55] The chart is made by authors by using the data of margin trading balance and the SSE Composite Index. For margin trading balance available at: *http://www.sse.com.cn /market/othersdata/margin/sum/* [Accessed 1 November 2016]. For the SSE Composite Index, see fig.3 above.

to the equity speculation, with a large amount of borrowed money, the share price will be pushed up to a sky-scraping level, creating an asset bubble. The relationship between the rising margin loan balance and the uprising stock price is similar to an upward spiral. When the share price continues to rise, it seems a win-win situation for everyone, as not only investors can earn good returns but also brokerages profiting a lot from undertaking margin loans and charging dealing fees. Therefore, broker firms often encourage investors to borrow more money to buy shares, regardless of the risky nature of margin financing. In China's case, they even breached the threshold rules to make margin loans to those who do not have enough capital or investment experience to use margin financing according to rules stipulated by the CSRC and stock exchanges, which will be discussed later.

What is more, the impact of margin trading on share prices is increased to some extent due to the fact that the Chinese market is dominated by retail investors (*Sanhu*) who lack investment knowledge and skills and can be irrational. As stated, tens of millions of retail investors in China contributed to over 90% of trading volumes. It is clear that the existence of massive retail investors significantly enhances the leverage effect of margin trading.[56] It is because a large proportion of Chinese investors, lacking independent judgement, tend to follow the crowd and pursue concept stocks as we said which increases the volatility of share price movement. When the price of a concept stock begins to take off, a large amount of capital coming from margin loans will take the lead and push price up further, then thousands of *Sanhu* trying to catch up the rising trend will put their own money in. It results in the accelerating rise of share price, forming a beautiful bubble before it finally bursts.

Shadow margin lending: money-matching firms and umbrella trusts

Although the official margin financing is closely watched by the CSRC, there are still a large number of so-called money-matching firms in China extending margin loans to investors. Money-matching firms operating in the underground market remain outside of the regulatory regime. They are shadow lenders which finance their businesses by bank credits or through complicated financial structures like umbrella trusts and then offer loan service to stock market investors by charging interests and fees higher than the official service provided by securities brokers. Some money-matching firms even set up online lending portals, which is similar to that of peer-to-peer lending, in order to allow investors to borrow funds online. For example, Miniu, a leading online money-matching platform, was launched in April 2014 and, until this year, its total amount of loans was approximately CNY 4.9 billion (US $730 million).[57]

The business of money matching for securities investment emerged soon after China's stock markets started operating in 1990 but the industry had remained relatively small until 2014 when the bull market took off. Most borrowers utilising money-matching services used to be professional retail investors. Since 2014, at the arrival of the bull market, a large number of individual investors, who cannot meet the strict requirements to open official margin financing accounts, have been trying to approach money-matching firms to borrow funds to wager on the bull run. By early 2015 as the industry experienced rapid growth and became a mature market, market leaders including Xunqianwang.com and Miniu98.com held a grand China Money Matching Industry Conference in Wuzhen in East China, with the theme of "Using Innovation to Win the Future".[58] More than 550 people from well-known money-matching firms, news media, securities brokers and professional investors attended the conference to discuss the future path of the industry, technical issues like risk control as well as co-operation opportunities within the industry. According to the organising committee of the Conference, in 2014, China had nearly 10,000 money-matching platforms, which collectively provided credits worth more than CNY 100 billion (US $16 billion) for Chinese investors across the country.[59] At the peak of the stock bubble in 2015, the market scale of all underground loans made by money-matching firms could be as much as CNY 1 trillion (US $160 billion).[60] Clearly, abundant funding borrowed from money-matching firms and official securities brokers contributed to China's super bull market in 2015.

Unlike official margin trading, few regulatory rules are applied to this grey market, so relevant financial risks are obvious. First, the threshold for investors using money-matching platforms is much lower than that of official margin loans offered by brokerages. As stated, regulated securities brokers only allow investors, having cash or shares worth more than CNY 500,000 and passing a strict risk test, to use the margin financing service. However, in the underground market, no threshold standard exists, which means any investor is able to borrow money to buy shares regardless of their financial condition and investment skills. Secondly, the leverage level of underground loans, without regulation, can be much higher than that of official margin loans, resulting in excessive risks, particularly when the market plummets. The leverage ratio can reach 5:1, namely, investors who have capitals of CNY 1 million can borrow another CNY

[56] Yuwen Deng, "The Regulatory Responsibility of the Stock Bubble", *Caijing Magazine*, 29 June 2015 available at: *http://comments.caijing.com.cn/20150629/3914490 .shtml* [Accessed 1 November 2016].

[57] Xiaocui Liu, "The CSRC Levied Penalties Against Money Matching Businesses", *Wall Street China*, 18 September 2015 available at: *http://wallstreetcn.com/node/223747* [Accessed 1 November 2016].

[58] "2015 China Money Matching Industry Conference Launched in Wuzhen", *Sina News*, 30 April 2015 available at: *http://zj.sina.com.cn/news/regional/2015-04-30 /1217259097.html* [Accessed 1 November 2016].

[59] "2015 China Money Matching Industry Conference Launched in Wuzhen", *Sina News*, 30 April 2015.

[60] Gabriel Wildau, "Shadow lending crackdown looms over China's stock market", *Financial Times*, 25 June 2015 available at: *http://www.ft.com/cms/s/0/6963a7c6-1a5a -11e5-a130-2e7db721f996.html* [Accessed 1 November 2016].

5 million to buy shares.[61] Such a high level of leverage can bring considerable profits for investors when the market is in the rising trend, as an increase of 10% in the share price can bring 60% gains if five times the amount of money has been borrowed. However, if the market starts to fall, a decrease of around 17% in share value can lead to the complete loss of the origin capitals of investors. Most speculators only see the potential benefits but ignore potential risks brought by margin lending. Thirdly, unlike official margin lending which limits purchasable shares to certain blue chip firms operating at a reasonable P/E ratio, money-matching firms have no limits on which shares investors can borrow money to buy.[62] Consequently, a large number of investors borrow a loan to purchase shares of high-tech companies listed on the ChiNext board. In a nutshell, the lower threshold condition, coupled with high leverage and no limitation on shares that could be bought, allows ordinary retail investors to borrow money to gamble in the overheated market, resulting in the formation of a speculative bubble.

Moreover, due to the limited amount of capital, many money-matching firms or online lending platforms use an umbrella trust to raise money and then lend the money out to investors seeking extra funding to purchase shares. The picture below shows a simplified structure of a popular umbrella trust in China.

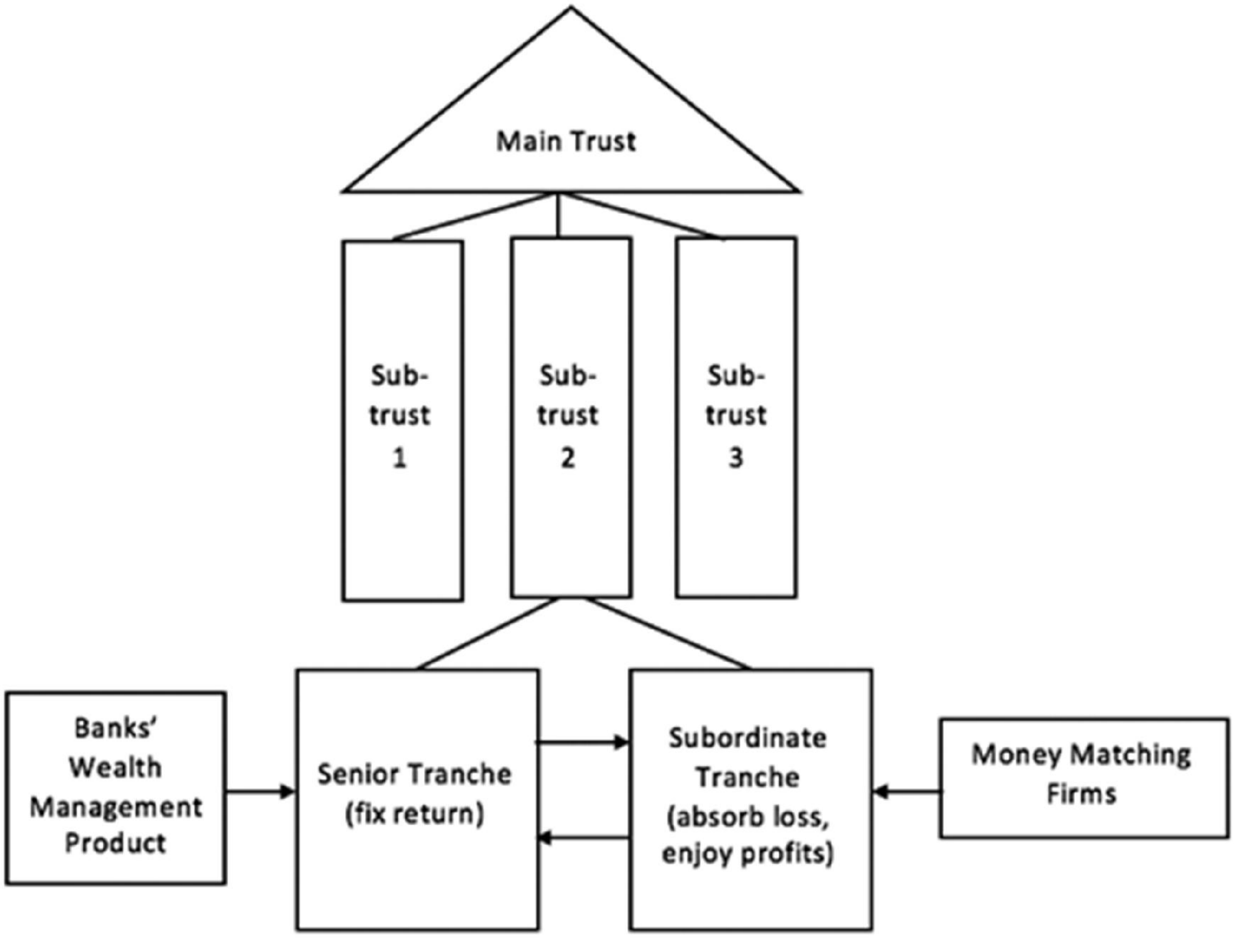

Figure 4: The structure of an umbrella trust[63]

A trust firm establishes several sub-trusts to operate the investment business, and within each sub-trust, there is a senior tranche and a subordinate tranche. The senior tranche provides subscribers with a fixed return, and usually banks buy the senior tranche and then divide it into small portions which are sold to its high-net-worth clients as Wealth Management Products (WMPs). WMPs guarantee attractive returns around 8% annually for purchasers who are unsatisfied with low interest returns of bank deposits, which has become a popular investment choice for Chinese savers in recent years. On the other side of the trust, money-matching firms or other investment institutions purchase the subordinate tranche which has access to using the money in both senior and subordinate tranches. In fact, subscribers to the subordinate tranche borrow money from the senior tranche by offering a fixed sum of money as interest to investors of the senior tranche. If any loss occurs, buyers of the subordinate tranche have to absorb the loss in the first place but they also enjoy all profits from the security

61 Wildau, "Shadow lending crackdown looms over China's stock market", *Financial Times*, 25 June 2015.
62 Wildau, "Shadow lending crackdown looms over China's stock market", *Financial Times*, 25 June 2015.
63 The chart is made by the authors of this article.

speculation after the fixed return is paid to holders of the senior tranche. In short, the umbrella trust is essentially a financial investment vehicle to allow people to borrow funds to undertake investments.

That is how money-matching firms obtain funding by creating an umbrella trust and subscribing to its subordinate tranche. In the meantime, these firms also hold share trading accounts at some security brokers and use specially designed software systems, such as Hundson's Homs, Shanghai Mecrt Corporation (*Mingchuang*) and Hithink Flush Information Network (*Tonghuashun*), to divide their trading accounts into a number of sub-accounts for each client to trade shares separately.[64] If clients want to borrow money, money-matching portals will deposit the money into individual accounts, which are closely monitored by the general account. Clearly, money-matching firms exert ultimate control over individual sub-accounts, and are able to liquidate each account when significant losses occur and pose a threat to the safety of capitals provided by the firms. The second-level accounts opened by money-matching firms are actually not allowed by the securities regulator as the security law requires investors to use real identity to open share trading accounts, but these sub-accounts are in fact not registered with stock exchanges.

It is apparent that money-matching firms and their use of umbrella trusts increases the market volatility to a great extent. Billions of yuan have been channelled from WMPs bought by banks' clients to securities investors through a complex trust structure, inflating the market speculation. When the market begins to surge, millions of investors could easily borrow funding up to several multiples of their own capital to join the speculation. However, when the market starts to fall, the trust firms have to initiate a margin call if the decrease of value in securities bought with borrowed money passes a certain point depending on the leverage level. They will ask investors to deposit more cash or sell off the shares to pay off margin debts. If investors are unable to bring in more money to maintain the minimum margin, or the market falls too quickly, money-matching platforms will liquidate the account immediately to prevent platforms from entering into a loss, which therefore increases the falling speed in a short time. Worse still, the rapid decline in share price will trigger a panic effect in the stock market where more investors rush to sell the securities they hold, resulting in a downward spiral of share prices. In particular, speculators using borrowed money suffer from steep losses due to the magnifying effect of leverage and they do not even have a chance to wait for the market to rebound since the lenders force them to sell shares to pay off loans.

The regulatory responses to the stock crash

After the crash, the Chinese Government has adopted a series of measures to save its stock markets from falling further and prevent a potential economic crisis. For instance, at the end of June 2015, the People's Bank of China cut the benchmark interest rates as well as the reserve requirement of banks to inject more credits at an affordable price into the economy.[65] At that moment, the Government tried to avoid a sudden and steep slowdown of economy which could lead to more unemployment and a large scale of defaults causing systemic risks to the whole financial system. What is more, 21 state-owned securities companies have been asked by the CSRC to spend around CNY 120 billion (US $17.9 billion) to purchase blue chip ETFs in order to stabilise the market and keep the SSE Composite Index above 4,500 points.[66] The effort, however, turned out to be a failure as the Index continued to fall to the bottom of around 2,600 points in January 2016. Also, the CSRC banned large shareholders of public companies (holding stakes over 5%), their senior executives and board members from selling their shares for a period of six months, hoping the halt of massive selling could lift the market.[67] Other bailout measures included a central bank-backed equity purchase plan through the China Security Finance Company, which will lend securities firms up to CNY 260 billion (US $38.9 billion).[68] Although the use of a central bank's money to buy shares would probably undermine the market discipline and the credibility of Chinese securities markets, the Government decided to do so as they regarded the stability of financial markets and the economy as the top priority in the current situation.

It is clear that the Chinese Government has spared no efforts to use multiple tools to stop the market from slumping. However, the real effect of the rescue package has remained limited, as the SSE Composite Index was still falling in the following months, and most companies on the ChiNext board lost as much as two-thirds of their values. The myth of China's wealth story was broken and millions of middle-class families became losers in this game, in particular those who borrowed margin loans to buy shares. Furthermore, the strong government intervention this time could be a big step back for China's market-oriented reform in past decades, which contravened the Government's promise to let the market play a decisive role in the economic operation.

[64] Chuin-Wei Yap, "China's Hundsun Freezes Stock Platform Accounts Amid Scrutiny", *The Wall Street Journal*, 16 July 2015 available at: *http://www.wsj.com/articles /chinas-hundsun-freezes-stock-platform-accounts-amid-scrutiny-1437039845* [Accessed 1 November 2016].

[65] Patti Waldmeir, "China central bank cuts benchmark interest rates", *Financial Times*, 27 June 2015 available at: *http://www.ft.com/cms/s/0/6e9af244-1cbc-11e5-aa5a -398b2169cf79.html* [Accessed 1 November 2016].

[66] Dongliang Li, "21 Securities Brokerages Promised to Contribute 120bn to Stabilise A-share Market This Morning", *Securities Times*, 6 July 2015 available at: *http:/ /finance.sina.com.cn/stock/zldx/20150706/071622598238.shtml* [Accessed 1 November 2016].

[67] Josh Noble and Gabriel Wildau, "China curbs stock sales in effort to halt market rout", *Financial Times*, 8 July 2015 available at: *http://www.ft.com/cms/s/0/9382843e -2511-11e5-bd83-71cb60e8f08c.html* [Accessed 1 November 2016].

[68] Mitchell, Wildau and Noble, "A bull market with Chinese characteristics", *Financial Times*, 10 July 2015.

Nonetheless, the biggest lesson China has learned this time is to realise the power of market and leverage. Next, the article is going to explain how the Chinese regulator dealt with official margin financing services and grey-market lending before and after the crisis.

The regulation of official margin finance

In order to control and reduce systemic risks, maintain the sustainability and health of the capital market as well as protect the interests of investors, the Chinese Government has enacted a series of rules and regulations, which lay down the legal basis for the supervision of margin trading activities. In 2006, the CSRC enacted the Pilot Regulation of Margin Trading and Short Selling in Securities Firms (the 2006 Regulation).[69] When the pilot scheme was completed, the CSRC revised the 2006 Regulation and replaced it with the Pilot Regulation of Margin Trading and Short Selling in Securities Firms (the 2011 Regulation), which came into effect on 26 October 2011.[70] The SSE and SZSE also published their own implementation rules of margin trading and short selling following the enforcement of the 2011 Regulation.[71]

According to the 2011 Regulation, only certain securities firms licensed by the CSRC are able to offer the service of margin trading to equity investors.[72] In order to be qualified, securities firms must apply to the CSRC and follow the procedural requirements.[73] Then the CSRC is responsible for examining whether the firms materially fulfil the conditions listed in the 2011 Regulation before granting a permission. The CSRC will investigate the firm's relevant experiences, financial situation, inside governance and risk management, penalty records, client documentations, compliant handling mechanism, information security system and so on.[74] Apart from the requirements for securities firms, there are limitations on investors who are eligible to open accounts with securities firms for margin financing. The 2011 Regulation listed the standards by which securities firms must observe in order to ensure the suitability of investors.[75] Before opening any margin financing account, a securities firm shall carry out a series of credit investigations of the applicant, and know the identity, property, incomes, securities investment experiences and risk preferences of the customer. The 2011 Regulation also prohibits clients in the following situations to open a margin finance account if: they fail to provide the relevant information as required; they take part in the securities dealings for a period of less than half a year; their transaction settlement funds are not put aside in the custody account held by a third party; their securities investment experiences are insufficient; they lack the ability to undertake investment risks; those who have records of major breach of contracts with the security firm; those who are major shareholders (having shares of over 5%); or those who are related parties of the securities company that they apply to open the margin finance account with.[76] If customers are eligible for margin trading after the test, a securities firm could open the margin finance accounts and take a certain proportion of margin and collateral which must satisfy a minimum proportion.[77] However, the 2011 Regulation did not explicitly stipulate the minimum standard. Instead, the implementation rules made by the SSE require that the margin proportion shall not be lower than 50%.[78]

Although the 2011 Regulation and other relevant rules seem to be comprehensive and detailed, the result of compliance was far from satisfying. In January 2015, on the completion of the fourth on-site inspection of margin trading and short selling at the offices of some leading securities firms, the CRSC announced the decision to punish 12 brokerages due to their violation of rules in the 2011 Regulation, such as offering margin trading to ineligible clients and extending overdue margin loans illegally.[79] In practice, several securities firms lowered the capital threshold (CNY 500,000 or US $74,740) for investors to open margin trading accounts, exposing risks to unsophisticated investors. In some cases, even investors with CNY 100,000 (US $14,948) were allowed to borrow loans from their brokers.[80] The reason for securities firms to encourage more investors to borrow margin loans is clear for they can earn considerable interests and fees over lending money. Also, as more money is being poured into the securities market, the trading volume will consequently increase so securities companies can earn more trading commissions.

The CSRC issued warnings to some of the brokerages and ordered others to correct their wrongful practices as well as to enhance inside censorship in order to prevent malpractice happening again. In response to this, the

[69] CSRC, The Pilot Regulation of Margin Trading and Short Selling in Securities Firms, No.2006(69) available at: *http://www.csrc.gov.cn/pub/chongqing/xxfw/tzzsyd/200607/t20060705_90320.htm* [Accessed 1 November 2016].

[70] CSRC, The Pilot Regulation of Margin Trading and Short Selling in Securities Firms (Amendment), No.2011(31) available at: *http://www.csrc.gov.cn/pub/zjhpublic/G00306201/201110/t20111028_201127.htm* [Accessed 1 November 2016].

[71] SSE Implementation Rules of Margin Finance and Short Selling, SSE available at: *http://www.sse.com.cn/services/tradingservice/margin/rules/c/c_20150912_3987306.shtml*; SZSE, "SZSE Implementation Rules of Margin Finance and Short Selling" available at: *http://www.ewww.com.cn/rzrq/files/007.pdf* [Both accessed 1 November 2016].

[72] 2011 Regulation s.3.

[73] 2011 Regulation s.6.

[74] 2011 Regulation s.5.

[75] 2011 Regulation s.11.

[76] 2011 Regulation s.12.

[77] 2011 Regulation ss.2 and 23.

[78] See SSE Implementation Rules of Margin Finance and Short Selling s.36. Margin Proportion = Margin Value/(Number of Securities * Price of Securities) *100%.

[79] "CSRC: 12 Securities Firms' Margin Trading and Short Selling Illegal—Two Kinds of Problems", *Sina Finance*, 16 January 2015 available at: *http://finance.sina.com.cn/stock/quanshang/qsyj/20150116/173321317516.shtml* [Accessed 1 November 2016].

[80] Jinze Jiang, "CITIC, Haitong and Guotai Jun'an Violated Rules of Margin Finance", *Wall Street China*, 16 January 2016 available at: *http://wallstreetcn.com/node/213243* [Accessed 27 February 2017].

Chinese stock market plunged on 19 January 2015 as the SSE Composite Index fell by 7.7% to 3,116.35 points at the close; the biggest drop of the index since June 2008.[81] The share prices of two of the largest securities firms in China, Citic Securities and Haitong Securities, both fell 10% on that day as they were suspended from making new loans to any investor for three months as a punishment for providing margin loans for unqualified investors.[82] The suspension raised the fear that extra liquidity from margin loans was stopped from entering the stock market, which could turn the bull market into a bear one. On the other hand, the penalties showed the concern of the regulator regarding the overheated stock market resulting from the rapid rising margin loans. In June 2014, the total amount of margin loans was CNY 400 billion (US $59.8 billion) but, after only six months, the figure surged to CNY 1.1 trillion (US $164 billion) in January 2015. During the same period, the SSE Composite Index rose by 67%. Therefore, the regulator, by imposing penalties to securities firms, attempted to curb stock purchases using margin loans. However, the real effects remained limited as the speculation fever continued and more investors tended to shadow banks to borrow margin loans.

After the January 2015 stock market plummet, the bull trend stopped for a while but soon regained its momentum. In the first half of 2015, the SSE Composite Index rose from around 3,000 points to more than 5,000 points. Following the big crash in June 2015, the CSRC enacted the amendment of the 2011 Regulation. On 1 July 2015, the CSRC released Decree No.117 to publish the modified Regulation of Margin Trading and Short Selling in Securities Firms (the 2015 Regulation).[83]

In this amendment, the CSRC has established a countercyclical adjustment mechanism,[84] aiming to strengthen the prudential supervision and risk control of margin finance activities. The so-called countercyclical adjustment mechanism means that the CRSC, along with the SSE and SZSE and securities brokers, can make dynamic adjustments to the requirements of margin finance for their clients in accordance with the latest market situation.[85] When the market is overheated and the margin loan outstanding balance rises too fast, they can take actions to refrain margin investment activities. In contrast, if the stock market is underperforming, the regulators and securities companies can relax certain requirements to encourage qualified investors to use margin finance to purchase shares and thus lift the market. For instance, stock exchanges can make countercyclical adjustments by raising or lowering the margin ratio—changing the types of securities which can be used as investors' collateral, the converting rate between the price of securities and the amount of margin, as well as what securities can be purchased with margin loans. Therefore, by relaxing or tightening the rules and specifications around margin transactions, and by enlarging or narrowing the scope of object securities of margin finance, the regulators can realise the goal of macro-level prudential regulation and maintain market stability in the long term.

Furthermore, a significant change in the 2015 Regulation is the stricter requirement on investor eligibility, which prohibits brokers to offer margin loans to those investors having securities assets worth less than CNY 500,000 in the recent 20 trading days.[86] Compared to the previous rule in the 2011 Implementation Rules of SSE, which only stated a general CNY 500,000 threshold without a certain period of time, the new rule set a higher standard. Also, the condition of a 20-day period makes the investor suitability provision easier to implement in practice, setting up a uniform standard for all brokerages to comply with. In addition, the 2015 Regulation stipulates that the total margin trading outstanding figure of any securities firms shall not exceed four times of the amount of their net assets.[87] Clearly, this rule emphasises on the prudential operation of securities firms by limiting their margin loans total to the condition of capital level.

Despite the tightened rules on investor eligibility and the scale of margin finance, the CSRC also relaxed some restrictions in other aspects, attempting to offer more flexibility to securities companies. For instance, the maximum term of a margin finance contract was six months before; but now the restriction has been removed and stockbrokers can extend the term after 6 months.[88] Other loosened policies included the removal of the mandatory liquidation rule and the requirement of investors' collateral.[89] Now the brokerages have discretion to decide whether to liquidate investors' accounts if the price of securities bought by margin loans falls to the red line, by negotiating with the investors to increase collateral. Through these deregulatory actions, the CSRC aims to return more powers to the market and let it play a more decisive role in allocating capital resources. Besides, the CSRC attempts to establish a regulatory

[81] "Chinese Stocks Plunge Most in Six Years on Lending Curbs", *Bloomberg*, 19 January 2015 available at: *http://www.bloomberg.com/news/articles/2015-01-19/china-s -stock-index-futures-plunge-on-margin-trading-suspensions* [Accessed 1 November 2016].

[82] "Chinese Stocks Plunge Most in Six Years on Lending Curbs", *Bloomberg*, 19 January 2015; in accordance with the SSE Implementation Rules of Margin Finance, brokerages shouldn't lend to investors with assets below CNY 500,000. According to the 2011 Regulation s.45, the CSRC has been given the power to take actions on any infringement in brokerages' margin trading and short-selling activities.

[83] CSRC, The Regulation of Margin Trading and Short Selling in Securities Firms, No.2015(117) available at: *http://www.csrc.gov.cn/pub/zjhpublic/G00306201/201507 /t20150701_280175.htm* [Accessed 1 November 2016].

[84] 2015 Regulation s.36.

[85] CSRC, "Regulation of Margin Trading and Short Selling Has Been Released" (1 July 2015) available at: *http://www.csrc.gov.cn/pub/newsite/zjhxwfb/xwdd/201507 /t20150701_280174.html* [Accessed 1 November 2016].

[86] 2015 Regulation s.12.

[87] 2015 Regulation s.20.

[88] 2015 Regulation s.14.

[89] In the SSE Implementation Rules, the value of investor's collateral could be lower than 130% of the loans borrowed for margin financing or short selling. When the collateral decrease to less than 130%, the brokerage must inform its client to add more collateral to 150% of the debts. See SSE Implementation Rules of Margin Finance and Short Selling ss.40 and 41.

framework which is efficient and appropriate for the soundness and health of the margin financing market. Since the underground margin finance expanded very fast, a more efficient market with standardised regulations and supervisions may be conducive to encourage more qualified investors to choose the official margin finance service over shadow lenders and thereby the interests of investors can be better protected under a formal regime.

The preparation work for the 2015 Regulation started earlier than the burst of the recent stock bubble. The draft of the new regulation was published on 12 June 2015 when the CSRC started to call for public comments.[90] The original deadline of the public consultation was 11 July 2015. However, during this time, the Chinese stock market witnessed the big crash and investors suffered heavy losses. Therefore, the turmoil in the stock market actually accelerated the publishing process of the new Regulation. Before the deadline of the public consultation, the CRSC hurried to finalise the 2015 Regulation and announced it to the public on 1 July 2015. The purpose of making the 2015 Regulation was for the long-term development of margin financing activities, so it was clearly incapable of stopping the market slump. Nevertheless, the new Regulation can, to some extent, help maintain the public confidence in the market and stop the contagion[91] since it released a signal that the regulator has been actively taking actions and drafting new rules to standardise margin finance transactions, improve investor protection and market stability.

The regulation of money-matching firms

In terms of unofficial margin loans provided by money-matching firms and online lending platforms, the Chinese regulator decided to crack down on these grey-market lending activities. As discussed, money matching has been widely blamed for the high volatility in China's stock market turbulence as it allows ordinary investors to borrow money up to five times the value of their own capital, thereby taking excessive risks. On 12 July 2015, the CSRC issued an official document to curb grey-market money lending activities.[92] The CSRC ordered securities brokers to clean out sub-accounts opened and managed by money-matching firms in order to ensure that only registered accounts with real names and national ID numbers could be used in securities transactions.[93] By stopping the co-operation between securities companies and money-matching firms, the CSRC is able to stop these firms from offering new sub-accounts to investors. According to China's Securities Law, the securities registration and clearing house should open trading accounts only for investors under their own names.[94] However, money-matching firms hold an account at their securities broker but employ software like HOMS to create a large number of sub-accounts affiliated to a firms' own account. The sub-accounts are therefore not known to securities brokers nor to the regulator, which will be used by retail investors to purchase shares on margin without official regulation. Accordingly, the first step of the CSRC's task force to clean illegal shadow lending is to terminate accounts for money-matching companies' new clients.

Following the CSRC's document issued on 12 July 2015, money-matching platforms responded quickly to the latest regulatory change. For instance, the leading platform Miniu98.com removed all of its online advertisements about providing margin lending for investors to buy shares, as well as shutting down the securities investment funding service on its website overnight.[95] On 13 July 2015, Miniu released an open letter to its customers saying that they were going to halt the service of margin lending. In fact, at that time, the CSRC did not explicitly classify money-matching activities as illegal activities despite the banning of sub-accounts offered to new investors. Miniu's CEO Mr Liu Yang explained that: "We stop the money-matching activities on a voluntary base mainly for the risk-control concern."[96] After Miniu's announcement, other leading lenders like Xunqian.com and 658 Finance also suspended their money-matching services. Apparently, the CSRC's action was a devastating blow to the entire money-matching industry as the ban of running sub-accounts, to a large extent, means the end of all shadow margin loans.

In September 2015, after an investigation carried out by the CSRC, Miniu was fined CNY 60 million (US $9.26 million) for illegal operation of securities business under the PRC Securities Law.[97] Moreover, three information technology companies: Hundson, Shanghai Mecrt Corp and Hithink Flush Information Network, which designed and operated the software for money-matching platforms to run sub-accounts, were fined by the CSRC a collective number of CNY 450 million (US $67 million) for knowingly assisting in the illegal operation of securities business.[98] After that, most online money-matching

[90] CSRC, "CSRC seeks public comments on Regulation of Margin Trading and Short Selling in Securities Firms" (12 June 2015) available at: *http://www.csrc.gov.cn/pub /newsite/zjhxwfb/xwdd/201506/t20150612_278881.html* [Accessed 1 November 2016].

[91] Sara Hsu, "China's Volatile Stock Market and its Implications", China Policy Institute Policy Paper No.7 (2015) available at: *https://www.nottingham.ac.uk/cpi/documents /policy-papers/cpi-policy-paper-2015-no-7-hsu.pdf* [Accessed 1 November 2016].

[92] CSRC, "Opinions about Cleaning and Rectifying Illegal Operation of Securities Businesses" (12 July 2015) available at: *http://www.gov.cn/xinwen/2015-07/12/content _2895674.htm* [Accessed 1 November 2016].

[93] Chuin-Wei Yap, "China's Hundsun Freezes Stock Platform Accounts Amid Scrutiny", *The Wall Street Journal*, 16 July 2015 available at: *http://www.wsj.com/articles /chinas-hundsun-freezes-stock-platform-accounts-amid-scrutiny-1437039845* [Accessed 1 November 2016].

[94] PRC Securities Law 2014 s.166.

[95] Bao Hui, "36 hours for Miniu, the largest money matching platform in China", *21st Century Economic Report* (17 July 2015) available at: *http://www.wdzj.com/news /pingtai/21260.html* [Accessed 1 November 2016].

[96] Hui, "36 hours for Miniu, the largest money matching platform in China", *21st Century Economic Report* (2015).

[97] Liu, "The CSRC Levied Penalties Against Money Matching Businesses", *Wall Street China*, 18 September 2015.

[98] CSRC Gave Administrative Penalty for Hudson, Mart Corporation and Flush Information", *Xinhua*, 2 September 2015 available at: *http://news.xinhuanet.com/fortune /2015-09/02/c_116454411.htm* [Accessed 1 November 2016].

platforms ceased to offer margin lending service to investors, so the once prevalent form of margin financing came to a halt.

The crackdown of shadow lending businesses, to some extent, can protect the benefits of Chinese investors, as most retail investors are no longer able to borrow money from shadow banks to buy shares, and only a small proportion of them meeting certain capital requirements can open margin finance accounts with official securities firms. Apparently, the regulator wants to make sure that only qualified and professional investors can have access to this kind of investment tool. However, the sudden crackdown of money-matching firms can also be problematic. It is said to cause a sudden liquidity drain in the market as a large number of illegal accounts were forced to be closed and liquidated in a short time.[99] Moreover, the crackdown mainly targeted well-known online money-matching platforms rather than offline money-matching firms, the business of which is more secretive and thus more difficult to detect and regulate, so there are still some money-matching services which can be found.

Conclusion

After more than two decades of capital market reform, China now has the second largest securities market in the world. It witnessed a super bull market from 2014–15, when the major SSE Composite Index more than doubled and the tech-heavy ChiNext Index tripled. However, people are wondering about the driving force behind this bull run, as the Chinese economy encountered a significant slowdown in recent years. Currently, the major player in the Chinese stock market has been the 90 million retail investors, many of whom rushed to open share trading accounts during the bull market. However, most investors lacked the necessary investment knowledge and risk awareness, relying on “concept stocks”, to buy shares. It explains why the rise and fall of share price of public companies in China bears little connection to their business performance and the general economic condition.

This article examined two types of margin financing that allows Chinese investors to borrow money to buy shares, which is considered as the major cause of the bull run. First, investors having assets over CNY 500,000 under their share trading accounts can borrow up to two multiples of their own money from securities brokers. Secondly, investors can also borrow cash from money-matching firms with fewer restrictions on their capital as well as a higher leverage ratio. Clearly, the increased use of borrowed money by retail investors pushed the share price of Chinese listed companies to its highest level after 2008, which is therefore called a “leveraged bull”. However, in June 2015 the market started to fall sharply as investors started to realise most shares did not deserve such a high price and the whole bull run was merely a frothier bubble supported by excessive liquidity. As the bubble suddenly burst, investors rushed to sell off and most of them suffered a great loss in several months, which also caused turbulence to capital markets around the world.

This article then analysed a series of governmental measures to rescue the falling share price and restore public confidence, despite their limited impact. In 2006, the CSRC, for the first time, enacted a piece of pilot regulation regarding official margin finance and short-selling activities, and it was revised twice in 2010 and 2015 respectively until it became a formal ministerial legislation. It contains detailed rules on how securities firms shall carry out margin finance business as well as the eligibility requirements for investors to open margin accounts. However, during the stock boom, several securities firms illegally relaxed the rules by offering margin accounts to unqualified investors with inadequate capitals. The situation has changed as, in 2015, the CSRC carried out on-site inspections to correct the incompliance of relevant firms and revised the regulation to set out clearer rules regarding investors’ suitability. It is clear that investor protection shall always lie at the heart of securities regulation.

As for the supervision over the underground money-matching business, the CSRC tried to shut down all shadow banks which offer margin loans to almost everyone wanting to borrow. The CSRC cancelled shadow lenders’ access to open sub-accounts which have been used by their clients to trade shares. It can, to some extent, protect the interests of retail investors as money-matching firms often charge high interest rates and offer loans with high leverage regardless of the risks. However, banning the whole industry can also be problematic for it suddenly resulted in a liquidity drain in the Chinese stock market which accelerated the downward spiral. Moreover, this move is seen as disrespecting the market discipline since there are always some investors who prefer to pay a higher interest and borrow extra money to make the bet. Last but not least, shadow banking by its nature is impossible to eliminate, so even though most existing money-matching firms are closed down, there always exist other informal channels for those people who would like to borrow money.

Clearly, China’s recent stock rally and the following crash taught investors and regulators around the world several lessons. Most importantly, a “leveraged bull” fuelled by debts is risky and short-lived, and does more harm than good to the economy. A long-term bull market shall be backed by the sustainable development of economy as well as the improving performance of public companies, which brings the dividends of economic development to most investors.

[99] Charles Clover and Gabriel Wildau, “China cracks down on margin lending before markets reopen”, *Financial Times*, 12 July 2015 available at: *http://www.ft.com/cms /s/0/5f28a750-286c-11e5-8613-e7aedbb7bdb7.html* [Accessed 1 November 2016].