Development of Stock Exchange Markets in China

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Ostrava 2015
Bachelor Thesis Assignment

Student: Yuxuan Huang
Study Programme: B6202 Economic Policy and Administration
Study Branch: 6202R010 Finance
Specialization: 01 Finance
Title: Vývoj burzovních trhů v Číně
Development of Stock Exchange Markets in China

Description:
1. Introduction
2. Structure and Role of Financial Market
3. Overview of Chinese Capital Market
4. Comparison of Chinese Stock Exchanges
5. Conclusion
Bibliography
List of Abbreviations
Declaration of Utilization of Results from the Bachelor Thesis
List of Annexes
Annexes

References:

Extent and terms of a thesis are specified in directions for its elaboration that are opened to the public on the web sites of the faculty.

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Date of issue: 21.11.2014
Date of submission: 07.05.2015

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Annexes
1 Introduction

Capital market, at the core of a modern economy, plays an important role in allocating resource in an economy. Developing a mature economy cannot without a well-developed capital market. Stock exchange is a barometer of a national economy. The situation of a capital market can be understood according to the situation of stock exchange. And the condition of a national economy can be reflected by stock exchange.

The main objective of this thesis is to study the development of Chinese stock exchange markets. According to studying the development of Chinese stock exchanges, on the one hand, it can make us understand the importance of stock exchanges to a national economy. On the other hand, we can understand the Chinese capital markets via studying Chinese stock exchange markets. There are two stock exchanges in China, Shanghai Stock Exchange and Shenzhen Stock Exchange. They are the key components of Chinese economy. Built in the same country, they are similar in many ways. However, they are different in terms of total market capitalization, listed companies and stock indexes. Comparing these two stock exchanges can make us a better understanding of the multi-layered capital markets of China. As an emerging market, China has some common problems but also some own problems. This thesis selects the National Stock Exchange of India to compare with Shanghai Stock Exchange. According to comparing these two important stock exchanges of two important emerging countries, China and India, it will be known that there are some differences and similarities between the two emerging markets.

In this thesis, this first chapter is the main principle of financial markets and stock exchanges. The second part introduces the Chinese capital markets. The third part is the core part of thesis. In this part, the main objective is comparison of Shanghai Stock Exchange and Shenzhen Stock Exchange. The National Stock Exchange of India is also selected to compare to make a better understanding of the current situation of Chinese stock exchange markets in an international background.
2 Structure and Role of Financial Markets

Nowadays, financial markets are more and more important in a national economy. The goal of this chapter is to introduce financial markets from macroscopic to microcosmic in theory. Taking a quick look at financial markets from the overall financial markets, securities in primary market and secondary market, to OTC and stock exchanges in this chapter.

2.1 Role and Functions of Financial Markets

The main goal of this part is introducing the definition and functions of financial markets. As we all know that financial markets play an important role in economy. There are four main functions of financial markets will be introduced in this part.

Before introducing the definition of financial market, it is suitable to introduce the definition of market in general. As time goes by, market is not just a spot to exchange. Today, market is the sum of relationship between supply and demand or purchase and sell. Financial market also is a market firstly. What makes it different is that financial assets as goods are exchanged in this market. So financial market is just a market in which financial assets can be purchased and sold. On the other way, more specifically, financial market can also be defined as a market in which funds are transferred from people who have an excess of available funds to people who have a shortage of funds.

According to the definition of financial markets, we can know the essential role of financial markets is channeling funds from economic players that have saved surplus to those that have a shortage of funds. It means that in financial markets the surplus funds can be invested to where funds are needed. So the second role of financial markets is increasing economic efficiency by providing an efficient allocation of capital. The third role is improving the well-being of consumers by allowing them to time purchase better. In financial markets, economic players that have surplus income do not need to consume all their income at the same time, they can invest the surplus money in financial markets. Economic players that have a shortage of funds also can
get capital in financial markets to consume or invest before getting income. The last role of financial markets is that reducing the costs of transacting. Financial market is just like a bridge that connecting other different markets via trading financial assets. Real assets determine the wealth of an economy, while financial assets allow us to make the most of the economy's real assets.¹

2.2 Structure of Financial Markets

There are many different ways to classify financial markets, and there are different structures according to different ways to classify. For example, classified according to the degree of concentration of trading financial instruments, the types of instruments are traded, or whether the financial claims are newly issued.

According to the degree of concentration of trading financial instruments, there are some organizations which are center on trading securities. Like New York Stock Exchange, London Stock Exchange, they are called centralized exchanges. Others like the Nasdaq, which are merely a collection of dealers who trade with one another via computer from wherever they are sitting, without a fixed and physical place. We called them as over-the–counter (OTC) markets. According to the type of instruments are traded in the markets, there are some markets for trading debts and equities. Others are for derivatives. Debt and equity markets are where financial claims are bought and sold for immediate cash payment. Derivatives markets are where claims based on underlying assets are traded for payment at a later date. According to whether the financial claims are newly issued, the markets for newly issued financial assets are called the primary markets. The markets where financial asset is bought and sold is referred as to secondary markets.¹

¹ Source: CECHETTI Stephen and Kermit SCHOENHOLTZ, 2014
2. 3 Classification of Financial Instruments

As explained earlier, financial market is where financial assets are traded. The financial assets which can be traded are also called as financial instruments. People can use different instruments in different financial markets to achieve different goals. There are different ways to classify the financial instruments. According to the maturity of financial instruments, there are short-term (usually less than 1 year) instruments and long-term (usually more than 1 year) instruments. The short-term instruments can be also called as money market instruments and long-term instruments are called capital market instruments. According to the nature of claim, there are equity and debt securities. Due to equity instruments are general perpetual, the equity instruments belong to the capital markets. This part will focus on introducing the financial instruments according to the maturity.

2. 3. 1 Money Market Instruments

In money markets, there are Treasury Bill, Certificated of Deposit, Commercial Paper, Eurodollars, Bank's Acceptance, Repos and Reverses, Brokers' Calls. Treasury Bills are short-term debt obligations of a national government. Due to they are short-term securities and issued by government, they are the most risk free investments and have high liquidity. Investors buy the bills at a discount from the state maturity value. At the bill's maturity, the holders receive a payment from government equal to the face value of the bill. The difference between the purchase price and maturity value is the earnings of investors. The Certificate of Deposit, or CD, is a time deposit with a bank. The bank pays interest and principle to the depositors only at the end of the fixed term of the CD. CDs for more than $100,000 usually are negotiable. They can be trade before the maturity date. And the typical amount is 1,000,000 dollars. Such certificates are issued by large banks and bought mainly by corporation and institutional investors. The Commercial Paper refers to the short-term debt notes that are issued by large and creditworthy firms. Bank's
Acceptance is a short-term credit investment created by a non-financial firm and guaranteed by bank. When the bank endorses the order for payment as “accept”, it guarantees to make the ultimate payment to who holds this acceptance.²

2.3.2 Capital Market Instruments

Except the short-term financial instruments, there are some long-term financial instruments in capital markets. Capital markets can be divided into bond and equity markets. The bond markets are composed of longer term borrowing or debt instruments. Equity securities include common stock and preferred stock.

In bond markets, there are different issuers issuing different bonds. In terms of issuers, bond markets include Treasury notes and bonds, corporate bonds, municipal bonds, mortgage securities and federal agency debt. Treasury notes and bonds are similar to Treasury Bills; they are both issued by government. However, the maturity of Treasury notes and bonds is longer than Treasury Bills. The bonds whose maturity range up to 10 years are called T-notes. The bonds whose maturity range from 10 to 30 years are called T-bonds. In equity markets, common stock and preferred stock both represent ownership shares in a corporate. The stockholders own a percentage interest in a firm. However, preferred stocks also have features similar to debts. The dividends of preferred stock likes bone is a fixed amount of income each year. Preferred stock generally does not confer voting right. And the dividends must be paid in full before the dividends paid to the holders of common stock. What makes the preferred stock is different from bond is that the companies have obligation to pay the interest on the debt and repay the principal of the bonds. It is not necessary for common stock or preferred stock to pay the principal.

There are still some derivative instruments in derivative markets. Derivative instruments are derived from the underlying instruments (or primitive securities). The most common examples of derivatives are forward, future and option. A forward, or forward contract, “is an agreement between a buyer and a seller to exchange a

² Source: FABOZZI Frank J. and Franco MODIGLIANI, 2009
commodity or financial instrument for a specified amount of cash on prearrange future date.” It means people make an agreement advance and trade in future. As for the future, it is similar to forward but it is a forward that has been standardized and can be sold in an organized exchange. So it is more liquid than forward and it can be traded again due to standardized. Options are investors pay premium to get right that buy or sell some financial instruments at a predetermined price on or before a fixed date. There are two basic options, puts and calls. A call option is the right to buy asset at a predetermined price. While the put option is the right to sell the underlying asset at a predetermined price.²

2. 4 Issuing and Trading Securities

Securities are fungible, negotiable financial instruments that represent some type of financial value. We know what these instruments are and we also should pay attention to how they are issued in primary market and how they are traded in secondary market.

2. 4. 1 How to Issue Securities

When a corporation needs to raise capital, except to borrow the money from the banks, it can issue stocks, bonds or other securities in primary market. In issuing common stock, there are two types of primary markets issue of common stock. One is initial public offerings (IPO). It is a private company goes to public via selling stock to the public for the first time. The other is seasoned equity offerings, which refers to issuing additional shares from a company who has already issued shares. Secondary offerings may be bought by existing shareholders, new shareholders or both. In bond markets, there still are two types of primary markets. One is public offering and another is private placement. Public offering is issuing bonds and then trading them on the secondary market. Private placement means issuing bonds and trading bonds just to a or a few investors. These investors usually hold the bonds to maturity.¹
2. 4. 2 How to Trade Securities

After issuing securities, they are supposed to be traded on secondary markets. When investors want to trade securities, they found it is difficult to trading if the investors scattered everywhere. So people trended to meet at a fixed place to trade. Eventually, financial markets formed based on these places. There are four types of markets, direct search markets, brokered markets, dealer markets and auction markets.

Direct search markets means buyers and sellers seek each other directly and transact directly without intermediary. It is the least organized market. The cost of trade is generally high. Next markets are brokered markets. It is a marketplace where buyers and sellers conduct transaction by agents or intermediaries. One kind of important brokered markets is the primary markets where issue new security and offer to public. In primary market, investment bankers who make the new security to public act as brokers, they seek investors to purchase securities directly from the issuing company. Another kind of brokered markets is for large block transaction. The block is so large that brokers directly seek for other large traders rather than bring the trade to the market where relatively smaller investors trade. The third kind of markets is dealer markets. In dealer markets, there is a dealer – who is designated as a “market maker”. Dealer makes market in a security, indicating both the price at which it will buy the security (the “bid” price) and the price at which it will sell the security (the “offer” price). The difference between dealer's buy price and sell price is the resource of profit. Bonds and foreign exchanges trade primarily in dealer markets. The most integrated markets are auction markets. In auction markets, buyers enter competitive bids and sellers enter competitive offers at the same time. Matching the bids and offers are then paired together and the orders can be traded. It does not need search dealers to find the best price. If all participants converge, they can arrive at a mutually agreeable price and save the bid-ask spread.3

3 Source: SAUNDERS Anthony and Millon CORNETT, 2011
2. 4. 3 OTC and Stock Exchange

The over-the-counter (OTC) market refers to a market where securities traded outside of stock exchange market. It has not a fixed or physical place to trade. The phrase "over-the-counter" can be used to refer to trading securities via a dealer network on a centralized exchange. It can be seen as a dealer market. In OTC markets, trading is done directly between the buyers and sellers, without any supervision of an exchange. The way of trading in OTC is based on the credit of two parties of the transaction. The two parties bear the credit risk by themselves. In an OTC trade, the price is not necessarily published for the public. It also can be called as the market for unlisted stocks. It is a market for some small companies which are unable to meet exchange listing requirements.

While compared to OTC market, stock exchange market can be said to be a market for listed stocks. Stock exchanges markets can be seen as auction markets. They are formal organizations, approved and regulated by some institutions. These exchanges have physical and fixed locations. Only the companies which apply and reach requirements set by the exchange for minimum capitalization, shareholders equity, average closing share price, and other criteria can they trade stocks on a stock exchange. Even after being listed, if the company no longer meets the requirement of exchange, the exchange will delist its stocks. Only a firm or individual through buying a seat on the exchange to become a member of the exchange can he has a right to trade securities or make markets on an exchange floor. And the number of seats is fixed by the exchange, the cost of the seat is determined by the relationship between the supply and demand.³

2. 5 Characterization of Stock Exchanges and Stock Indexes

Stock exchanges as formal organizations are for trading securities. This chapter will introduce stock exchanges in more detail. We can know the development of stock markets according to the history of stock exchanges. The function of stock markets will be introduced in 5 parts. Two most important indexes also will be introduced in
2.5.1 The History of Stock Exchange

The history of stock exchanges can be traced to 13th-14th Century in Italy. The brokers are believed to have developed in trading debts and government securities in that time. At the beginning, there were some moneylenders in Europe and they did some business that left by the larger banks. Moneylenders traded debts with each other. These lenders also bought government debt issues. As the natural evolution of their business continued, the lenders began to sell debts to customers. These lenders are called as the first individual investors. In the 1300s, the leaders started trading the securities from other governments in Venetians. They would carry slates with information on the various issues for sale and meet with clients, much like brokers do today.

In 15th-17th Century, Dutch East India Company was formed. In that time, sea voyages to the East Indies and Asia were high profit but also extremely risky. In order to lessen the risk, ship owners had long been in seeking investors who would put up money for the voyage. Before the Dutch East India Company formed, there were limited liability companies just invest a single voyage. When a voyage finished, the investors would dissolved, and a new investment would be created again for the next voyage. When the East India Company formed, they changed the way of investment. These companies had stocks that would pay dividends on all the voyages the companies undertook, rather than going voyage by voyage. These were the first modern joint stock companies with stocks that were tradable. By the early 1700s, there were fully operational stock exchange in France and England. In the later part of the century, the New York Stock Exchange formed.

Now, there are so many important stock exchanges all over the world and they influence our daily economic activities. In Asia, there are Tokyo Stock Exchange, Hong Kong Stock Exchange and Shanghai Stock Exchange. In Europe, there are London Stock Exchange and Frankfurt Stock Exchange. In US, there are New York
2. 5. 2 Functions of Stock Exchange Markets

Nowadays, the stock exchanges are playing more and more important role in the global economy. Stock exchanges not only serve for trading securities, but also serve for the overall economy.

a) Serving for Trading Securities

Stock exchange markets were built for trading securities. The primary function certainly is serving for trading securities.

(1) Providing Liquidity and Marketability to Existing Securities

Stock exchange is a formal market place where trading issued securities. Various types of securities are traded here on regular basis. There are huge participants in a stock exchange. Therefore, comparing to match the sellers and buyers in a small group, stock exchanges allow the investors invest the money into various types securities or reconvert the investment into cash through the markets at any time. Stock exchange markets as the ready markets for sale and purchase of securities obviously increase the liquidity and marketability to securities. Meanwhile, stock exchanges allow healthy speculation of securities, which also ensure the liquidity of securities.

(2) Pricing of Securities

A stock exchange provides platform to deal in securities. It is free to buy or sell securities. In this way, prices of securities are determined by the relationship between supply and demand of securities.

(3) Safety of Transactions

Stock exchanges are formal and organized markets. Only the listed securities can

be traded in stock exchanges. Stock exchanges take the responsibility to govern the listed companies and supervise the markets. The stock exchanges themselves are also regulated by securities supervisors. All of that can make sure the safety of dealing to protect the interest of investors.

b) Serving for the Overall Economy

Stock exchange is an important market of national overall markets. There are two main functions of stock exchange markets for national economy.

(1) Being Economic Barometer

The price of shares is influenced by the conditions of national economy. The rise or fall in the share price indicates the boom or recession of national economy. So a stock exchange can be seen as a barometer to reflect the condition of a national economy.

(2) Contributing to Economic Growth

The stock exchanges provide liquidity to securities. They facilitate for saving to transform into investing. The companies can raise the capital quickly through stock exchanges. Stock exchanges can allocate capital efficiently to promote the development.\(^5\)

2. 5. 3 Stock Indexes

Stock index is “a statistical measure of change in an economy or a securities market\(^6\).” They are used to give people a sense of which stocks are going up or down to some extent. So they are general expressed in percentage change rather than actual numeric value. There are two most important indexes, the Dow Jones Industrial

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Average and the Standard & Poor's 500 index.

(1) The Dow Jones Industrial Average (DJIA)

This index was created by Charles Dow in 1884, it was an average the price of 11 stocks at the beginning. Today, the index is based on 30 stocks price of largest companies in the United States. The Dow Jones Industrial Average is a price-weighted average. It means it gives greater weight to shares with higher price. The DJIA is the percentage change in sum of the 30 prices. Thus, it measures the return to holding a portfolio of a single share of each stock included in the average.\(^7\)

(2) The Standard & Poor's 500 index

The Standard & Poor's 500 index has two important respects differ from the Dow Jones Industrial Average. Firstly, it is unlike the DJIA which just choice only 30 larger companies, the Standard & Poor's 500 index is based on the value of 500 firms which are the largest firms in the U.S. Secondly, the Standard & Poor's 500 index is a value-weighted index. In the Standard & Poor's 500 index's calculation, each company's stock price receives a weight equal to its total market value. However, stocks of companies with higher total market value, or market capitalization carry more weight. So the scale of company is more important in the S&P 500.

We can not judge which index is better. The two indexes answer different questions. The Dow Jones Industrial Average tells us the change in the price of typical stocks, while the Standard & Poor's 500 index tells us the return to holding a portfolio of stock weighted in proportion to the size of firms.\(^8\)

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3 Overview of Chinese Capital Markets

The reform and opening up of China’s economy gave birth to China’s capital markets since the end of the 1970s. China’s capital markets started late and have experienced a rapid development. However, there are still so many problems in China’s capital markets. This chapter is focused on introducing Chinese capital markets in detail. Firstly, the attention will be paid to the history of Chinese capital markets, and then the current situation of Chinese capital markets, the last part is the future development of Chinese capital markets.

3.1 The History of China’s Capital Markets

Chinese capital markets have gone through more than 20 years since China started full-scale economic reform. The history of Chinese capital markets is usually divided into three phases. This chapter will introduce these three phases and more attention will be paid to the development of Chinese stock exchanges in each phase.9

3.1.1 The Emergence of China’s Capital Markets

In stock markets, in 1978, the household contract responsibility system built in 1978 by farmers in rural China. It was seen as the early from of shareholding companies. During the early 1980s, some small state-owned and collectively-owned enterprises started share-holding reforms. From 1984 to 1986, government selected a few large and medium-sized enterprises in Beijing, Guangzhou and Shanghai initiated share-holding reforms. In 1986, it became a national strategy.

In bond markets, in July 1981, China’s government relaunched treasury bonds. These treasury bonds had a long term (10 years), and individual buyers got higher interest rate than corporate investors. At that time, these treasury bonds could not be

transferred and were sold through administrative allocation. It is a special treasury bonds that would not appear in a mature capital market. However, there is no denying that issuing these treasury bonds increased the public awareness of investing into bonds. From 1982, a few enterprises started issuing corporate bonds. By the end of 1986, these unregulated bonds reached more than US$2.9 billion.

As the volume of securities issued increased and the number of investors grew, the securities intermediaries were needed. The over-the-counter appeared for stocks and bonds. In August 1986, the first company to provide brokerage service for stocks and bonds trading appeared. After that, more and more similar companies were built. In 1990, the Shanghai and Shenzhen stock exchange were established.

3.1.2 Formation and Initial Development of National Capital Markets

Though Chinese capital markets appeared, the proper regulation and supervision were not established at the same time. It was not until in August 1991 that the Securities Association of China was built. It was a not-for-profit and self-regulatory organization for securities intermediaries. Shanghai and Shenzhen stock exchange also issued rules for IPOs and stock trading. However, there was a major problem in Chinese capital markets is that there was not a single centralized regulatory framework at that time. During 1993 to 1998, China established the Securities Committee and issued a series of rules and regulations to build a single centralized regulatory. China’s capital market stepped into a new stage.

a) A Single Centralized Regulation Framework

In October 1992, China’s State Council established the Securities Committee (SCSC) and China Securities Regulatory Commission (CSRC). It marked that China’s capital markets started in a single centralized regulation framework. At that time, SCSC was responsible for drafting relevant laws, rules, regulations and developed long-term strategies, delivering guidance for security markets. It coordinated among central and local governments to conduct supervision and inspection of market
activities. The CSRC reported to SCSC and was responsible for developing market rules and regulations, supervising the securities firms, especially their proprietary trading activities, and listed companies as well as their issuance and sale of securities to the public, and overseeing the oversea listing of domestic companies. In November 1997, China implemented separate the operation and supervision of banking, insurance and securities industries. In April 1998, the SCSC merged with the CSRC. The CSRC became the regulator of national securities and future markets. It marked the single centralized regulation framework of Chinese capital markets was built.

To build a regulatory framework, the authorities established a series of laws, rules and regulations. Such as The Company Law, implemented in July 1994, which set out the rule of companies from building a company, organizing a company, issuing and transferring shares or corporate bonds to liquidation procedures and legal liability. About the securities firms, the CSRC also issued a series of regulations to regulate securities firms, such as Administrative Procedures for Securities Brokerage Institutions’ Equity Underwriting Business and the Proprietary Trading Business. These laws, rules and regulations were foundation of healthy capital markets.

b) The Development of Stock Exchanges

Before and at the beginning of building the Shanghai and Shenzhen stock exchange, there were so many over-the-counters and securities trading centers in Chinese capital markets. The securities of unlisted companies were traded without organization and regulation in these informal markets. In 1998, the CSRS led the business of securities trading center to formal exchanges and closed down all securities trading centers and prohibited trading centers from offering and trading the shares to the public finally. At the same time, Shanghai and Shenzhen stock exchange developed rapidly. The two stock exchanges moved to a paperless securities system. They introduced automatic trading system to match numerous buy and sell orders.

They also focused on market transparency and information disclosure. As result, the transaction cost and risk was significantly reduced compared to the off-the-street markets and regional over-the-counter markets before. The two stock exchanges established highly-automated electronic depository system. They introduced the daily price change floor, ceiling limit and have set at a range of 10% in either direction since December 1996 to stabilize price. Both of them added new products. Government bonds, warrant, enterprise bonds, convertible bonds and closed-end funds appeared in the two shock exchanges during this period.

Table 3.1 Details of the securities market, 1993-1998

<table>
<thead>
<tr>
<th>Year</th>
<th>Total funds raised from A-shares (Billion US$)</th>
<th>Total funds raised from B-shares (Billion US$)</th>
<th>Number of investor's accounts opened (million)</th>
<th>Total market capitalization of shares (Billion US$)</th>
<th>Total market capitalization of tradable shares (Billion US$)</th>
<th>Trading volume of Shanghai and Shenzhen Stock Exchanges (Billion US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>4.8</td>
<td>0.7</td>
<td>8.4</td>
<td>61.5</td>
<td>15</td>
<td>62.9</td>
</tr>
<tr>
<td>1994</td>
<td>1.2</td>
<td>0.4</td>
<td>11.1</td>
<td>42.8</td>
<td>11.2</td>
<td>94.3</td>
</tr>
<tr>
<td>1995</td>
<td>1</td>
<td>0.4</td>
<td>12.9</td>
<td>41.6</td>
<td>11.2</td>
<td>48.3</td>
</tr>
<tr>
<td>1996</td>
<td>3.5</td>
<td>0.6</td>
<td>24.2</td>
<td>118.4</td>
<td>34.5</td>
<td>256.6</td>
</tr>
<tr>
<td>1997</td>
<td>10</td>
<td>1.3</td>
<td>34.8</td>
<td>211.5</td>
<td>62.8</td>
<td>370.6</td>
</tr>
<tr>
<td>1998</td>
<td>9.4</td>
<td>0.3</td>
<td>42.6</td>
<td>235.8</td>
<td>69.4</td>
<td>284.2</td>
</tr>
</tbody>
</table>

Source: China Securities and Futures Statistical Yearbook, 2007 (data); author

According to this table, it can be seen that there was an evident increase in all indicators except the total funds raised from B-shares from 1993 to 1998. Especially, the number of investor’s accounts opened and trading volume of Shanghai and Shenzhen Stock Exchanges grew most. It is clear that with the national trading platforms established and a centralized regulatory framework formed, China’s capital market developed rapidly during this time. The total market capitalization, total tradable shares market capitalization, total trading volume, funds raise from share issuance and number of investment accounts all increased significantly.
3. 1. 3 Further Regulation and Development of China’s Capital Markets

As the Securities Law, issued in December 1998, enacted in July 1999 and amended in November 2005, Chinese capital markets stepped into a new phase. The Securities Law is the first national law to regulate the issuance and trade of securities in China. This law marked the legal status of capital markets was formalized in China.

a) Development of Capital Market’s Legal and Regulatory System

As introduced before, with the CSRS became the regulation of national security and future markets, the single centralized regulation framework was built in 1998. To build legal system of capital markets, CSRC decided to decentralize supervisory responsibilities to the local agencies. CSRC coordinate with local governments for the better regulation of capital markets nationwide. To improve the enforcement of the law related to capital markets, CSRS set up enforcement offices. In 2002, it built a special crime investigation bureau. Meanwhile The Securities Crime Investigation Bureau of the Ministry of Public Security was built. This office worked together with CSRC to investigate crimes in the security markets. What’s more, to develop the centralized enforcement system, in 2007, CSRC set up the Sanction Committee, Chief Enforcement Office and the Law Enforcement Task Force. And it separate inspection and sanctions to make sure efficiency and justice.

b) Adjustment of Securities Markets and Stock Exchanges

After Securities Law issued, China’s capital markets grew rapidly. No matter in transaction, registration, or settlement of exchanges was more efficient. The security markets especially the secondary markets became more active. However, there were still so many problems as well as systematic and structural limitation in China’s capital markets. Such as, corporate ownership restructuring for some listed companies were incomplete, corporate government was weak, brokerage firms mismanagement, the number of blue chip companies were few and lack of institution investor and also lack of hedging tools for institutional investors. So from 2001, market entered 4 years
adjustment periods. During these 4 years, stock indexes greatly decreased, the situation of companies’ IPO was bad and companies also had difficult in refinance. Securities firms all struggled to survive. To solve these problems, the State Council conducted a new round of reform, including implementing non-tradable share and the IPO process reform, improving the quality of listed companies and the management of securities firms, promoting the development of institutional investors. These measures stabilized market and built the confidence of investors.

In this phase, China’s capital markets have been controlled by Shanghai and Shenzhen stock exchanges for a long time and the requirement on size, profitability, industry focus of listing companies were strict, so that the products in stock exchange markets lack of diversification. The Chinese capital markets were in downturn. To expand and brisk up the markets, the stock exchanges made adjustments. The SZSE began to try to enlarge markets of enterprises in 2001 and set up the Small and Medium-sized Enterprises (SME) Board in May 2005. To diversify the market, new products were also launched. These products included convertible bonds, asset-backed, mortgage-backed and non-performing loan-backed securities, collective investment schemes and warrants issued by enterprises or securities firms. Setting up SME Board in SZSE and introducing new products in two stock exchanges made the markets be more active and promote the development of China’s capital markets.

Table 3.2 Summary of the Securities Market, 1999-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>A-shares funds raised (Billion US$)</th>
<th>B-shares funds raised (Billion US$)</th>
<th>Number of securities accounts (million)</th>
<th>Total market value of shares (Billion US$)</th>
<th>Total Turnover (Billion US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>10.8</td>
<td>0.05</td>
<td>48.1</td>
<td>319.8</td>
<td>378.3</td>
</tr>
<tr>
<td>2000</td>
<td>18.4</td>
<td>0.2</td>
<td>61.5</td>
<td>580.9</td>
<td>734.8</td>
</tr>
<tr>
<td>2001</td>
<td>14.3</td>
<td>0</td>
<td>69.7</td>
<td>525.8</td>
<td>462.8</td>
</tr>
<tr>
<td>2002</td>
<td>9.4</td>
<td>0</td>
<td>72.0</td>
<td>463.1</td>
<td>338.2</td>
</tr>
<tr>
<td>2003</td>
<td>9.9</td>
<td>0.04</td>
<td>73.4</td>
<td>513.0</td>
<td>388.0</td>
</tr>
<tr>
<td>2004</td>
<td>10.1</td>
<td>0.03</td>
<td>75.9</td>
<td>447.7</td>
<td>511.5</td>
</tr>
<tr>
<td>2005</td>
<td>4.1</td>
<td>0</td>
<td>77.1</td>
<td>395.9</td>
<td>386.5</td>
</tr>
<tr>
<td>2006</td>
<td>30.9</td>
<td>0</td>
<td>82.5</td>
<td>1121.5</td>
<td>1134.9</td>
</tr>
<tr>
<td>2007</td>
<td>105.8</td>
<td>0</td>
<td>138.9</td>
<td>4478.6</td>
<td>6305.0</td>
</tr>
</tbody>
</table>

Source: CSRS and China Securities and Future Statistical Yearbook, 2007(data); author
According to this table, the Chinese capital markets can be seen as go through a hard time from 1999 to 2005. From the 1997 to 2005, the shares funds raised, total market value and total turnover all decreased. The number of securities accounts increased slowly. The 2005 can be seen as the hardest year of Chinese stock markets during this period. But from the 2006 to 2007, after the government made some adjustment in capital markets, all indicators increased significant expect funds raise from B - shares.

3. 2 The Current Situation of China’s Capital Markets

After a new round reform of China’s capital markets from 1999 to 2007, China’s capital markets grew fast. Nevertheless, China’s capital is destabilized due to the global financial crisis. Nowadays, China’s capital markets are facing a lot of changes. China’s capital markets are still “emerging markets in a transitional economy” (Analysts of China Securities Regulation Commission). China’s capital markets are opening to foreign investors and trying to be more independent from central authorities.

3. 2. 1 Overall Picture of Current China’s Capital Markets

Today, Chinese stock markets rank the 3rd in terms of market capitalization in the world, the bond markets with the fifth largest balance in the world, and future markets among the highest in the world in terms of trading volume. China’s capital markets started late and changed tremendous. In recent years, Chinese rapid economic growth promotes Chinese capital markets expand in return the development of China capital markets contribute to Chinese economy. Chinese capital markets have changed a lot but still are young markets and have much room to improve.11

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a) Current Stock Markets

In the past years, stock markets achieved tremendous development. By the end of 2012, listed companies amounted to 2,602, investor accounts exceeded 200 million, and the total market capitalization of shares exceeded RMB 23 trillion. However, in recent years, stock markets are greater volatility. Markets turned to bearish in 2008 and still weak in 2011. There are two types shares are available on Chinese stock markets: A shares and B shares. A shares are renminbi (RMB)-denominated shares and they are traded by mainland Chinese. B shares are for domestic retail investors to make them have access to foreign currency, as well as for foreigners. B shares are supplement to A shares. However, as Qualified Foreign Institutional Investors (QFIIs) were introduced to A shares, the role of B shares have been weakened.

As investors, now Chinese stock markets developed to a more mix investors classes. Institution investors as the major force play a more important role than retail investors. Compared to the situation of China’s capital markets before 2007, now both domestic and foreign institutions are growing. Nevertheless, retail investors still have a sizable portion in the markets. Household saved of RMB 31 trillion at the end of 2010 and institution held saving of RMB 25 trillion. The institution investors held around 40 percent of the trading by volume and owned about 60 percent of China’s tradable shares by value in 2012. And retail investors always follow the institution investors to invest, so institution investors are influential in the markets. Specifically, now private equity (PE) funds become more and more important in Chinese equity markets. At the end of 2010, the number of active PE funds more than 600 and the total assets reached RMB 10 billion.

The figure 3.1 describes the investors’ structure of China in terms of market capitalization. From this figure, it is clear that the corporate and other general agencies are the main investors in Chinese markets, accounting for 57.30% in terms of market capitalization. Compared with the professional institutional investors, individual investors still have a higher percentage in Chinese markets.

b) Current Bond Markets

Compared with the scale of China’s economy, the China’s bond markets are still small. It can not play a big role in allocating resource. And China’s corporations depend highly on bank financial rather than corporate bonds. However, in recent years, bond markets grow rapidly. By the end of 2012, the total balance of bonds reached RMB 23.7 trillion, and the number of bonds reached 3570.\textsuperscript{14} And in the past years, China's bond markets introduced a lot of innovative products, included corporate bonds, convertible bonds, asset-backed securities, the SME private debt, and so on. And the denomination of bonds has been extended not only RMB. The types of trading have also been diversified.

In China’s bond markets, there are three main markets: inter-bank, exchange and bank counter. Inter-bank is the main marketplace for bonds and accounts for more than 90% market share. The main participants are institutions in this marketplace. Exchange is other important part in bond markets. It allows individual investors participate in bond markets. Bank counter is the extension of the inter-bank and also allows the retail investors. As the investors, the types of investors expand and diversify in recent years. The commercial banks are the main players in inter-bank. However, insurance companies, mutual funds, securities companies, individuals and overseas investors as the important participants increase their balances constantly now.

3. 2. 2 Development of Stock Exchanges

The development of China’s capital markets in recent years contributes to develop the more mature stock exchanges. The development of capital markets also requires the two stock exchanges to improve themselves to promote the development of capital markets in China.

In Shenzhen stock exchange, Shenzhen stock exchange set up SME Board for small and medium-size companies to raise capital in 2004. However, the Board has become bumpy since 2006 and it is lagging behind the A share markets gradually. After reaching a peak in January 2008, it dropped to a low point in November 2008. After launching SME Board, SZSE established ChiNext in October 2009. It is for the companies which are in high growth sectors such as technology and pharmaceuticals. The companies listed on ChiNext are required to hold less capital than the Main Board or the SME Board, but have stricter requirement in other areas, such as business operations, information disclosure and limitations on stock sales to ensure transparency and decrease risk. The aim of building ChiNext not only to promote the development of capital markets but also to promote the economic reform and the development of new industries.13
In Shanghai stock exchange\textsuperscript{15}, in August 2009, China released that SSE plan to creating a Shanghai’s International Board. Chinese capital markets do not open to overseas capital totally now. If the International Board is established, it means China further opens up the capital account to the world. On the one hand, it will help China’s capital markets to connect closer to international capital markets and make RMB become international currency. On the other hand, it means greater risk after international capital flowing into China. It will be an opportunity and challenge to China. Before setting up the International Board, China has introduced the QFIIs in 2002. And SSE built the Shanghai-Hong Kong connects in 2014. It makes Hong Kong stock exchange as a bridge through which the mainland markets can connect with the world markets. Foreign investors have access to Shanghai stock exchange through the Hong Kong Stock Exchange. The all measures are for make preparation for China to open its capital market to the world.

\textbf{3. 2. 3 Introduction of QFII}

QFII is the Qualified Foreign Institution Investor system. It was introduced in 2002. This system allows overseas institutional investors invest in China’s security markets through buying domestic-listed shares. Before this system, foreign investors only can buy B-share to enter into China’s capital markets. Nowadays there are more than 100 international institutions have entered into China’s securities markets and there are still more than 100 applicants are waiting for approval. At the end of 2010, the total quota approved had reached USD 19.7 billion. Thought, QFII hold accounts less than 2 percent of total stock markets, they have greater influence compared to their size, because the domestic investors watch closely at them. Their investment may influence the domestic investors’ investment.\textsuperscript{13}

3. 3 Future Development of Chinese Capital Markets

Even Chinese capital markets have made great strides in the past years, China’s capital markets are still the young markets. China’s capital markets still need to optimize the structure and function, and improve the system construction. This part will introduce the problems of Chinese capital markets, and then forecast the future of Chinese capital markets.

3. 3. 1 The Problems of China’s Capital Markets

(1) Low percentage of direct financing. In most developed markets, companies obtain the external financing rely mainly on direct financing rather than bank loan. In China, corporations remain highly depend on bank financing. And due to lack of innovation, China's capital markets lack of secondary loan markets, these loans after the bank lend, have to been held to maturity. Due to the high growth rate of Chinese economy, the capital is needed more and more in China markets. If the loans are to be held to maturity, and are unable to be traded, it means the total amount of bank loans each year must be keep a considerable growth rate. That will be a potential problem not only for banks but also for the all financial system. Financial innovation is particularly important in this situation to make the bank loans can be sold and traded. Ensuring the corporations can be easier to finance in securities markets, enriching financial products are China need to do now.

(2) Unbalance development of the stock and bond markets. Compared with stock markets, bond markets account for small percentage of capital markets in China. Despite many years of rapid development of China’s bond markets, bond markets are still in lower level. However, diversifying corporations’ financing and encourage corporations to raise funds through issuing bonds play an important role in diversifying credit risk which are concentrated on bank system now in China. There are two main reasons why Chinese bond markets develop slowly. Firstly, for government, regulation system is not mature enough. Jurisdiction of different offices is overlapping. There is vacancy of oversight and lack of motivation to develop in
bond markets. Then, for participants, the one of important participant is company. The most of companies in China rely on borrowing money from banks rather than issuing bonds. Another and the main participate is commercial bank. Chinese household prefer to deposit as an important invest. Commercial banks have huge balance sheet, and regulations prohibit these banks from investing in equities, so commercial banks have to invest in bond markets. They are the homogenous investors and have similar investment strategy. They tend to hold government bonds to get risk free profit. It will discourage an active market. If we want to develop well capital markets, we can not ignore bond markets. Balancing stock markets and bond markets will benefit to establish more mature capital markets.

Figure 3.2 The proportion of each type of bonds, as of the end of 2012

According to the above figure, it is clear that government bonds had the largest proportion of the all type of bonds. The corporate bonds account for small shares in Chinese bond markets.

(3) Shortage of stock exchanges. Firstly, despite both two stock exchanges have introduced lots of new financial products in recent years, compared with mature stock markets, the products of two stock exchanges are still limited. Especially lacks of
financial derivatives as well as other innovative products in two stock exchanges. Next, a mature stock exchange will diversified its revenue structure. Shanghai and Shenzhen stock exchange rely heavily on fee of securities transaction. It will cause unstable revenue of a stock exchange. Then, now Shanghai and Shenzhen stock exchange do not have a market-maker system, and do not allow intra-day trading or securities’ lending/borrowing business. An inadequate trading system can not satisfy the needs of different types of investors and can not have a wide range of products.

(4) Lack of financial innovation and low level of financial derivatives markets. All problems mentioned above disclose a problem in China’s capital market is that lack of financial innovation. Financial innovation in not only a problem of China, it is an issue of the world. The derivatives markets are the emerging market of international markets. The scale of China’s derivatives markets is small. Limited product, limited derivatives markets, small participants and insufficient product innovation, there is a long way to go for Chinese derivatives markets.9

3.3.2 Prospect of China’s Capital Markets

To build the more transparent, efficient and mature capital markets, China tend to further open capital markets to the world. Chinese government selects Shanghai to develop as global financial center. It also gives a good chance for Shanghai Stock Exchange to develop as an international largest stock exchange.

China government tends to open up Chinese capital account and makes the RMB be an international reserve currency. It will give China’s capital markets more room and more opportunities. It will bring more risk from international capital flow, meanwhile. Before China opening up the capital markets totally, China’s capital markets need to perfect itself to meet the challenge. Increasing the public awareness of invest, liberalizing markets to expand investors base, strengthening the legal and regulatory framework, extending markets depth and width, promoting financial innovation, improving direct financial are all Chinese capital markets need to do in the future to build as globally competitive capital markets.
4 Comparison of Chinese Stock Exchange Markets

This chapter is the core chapter of the thesis. In this chapter, we will study Chinese stock exchange markets via comparing three different stock exchanges. The main objective of this chapter is to compare two Chinese stock exchanges, Shanghai Stock Exchange and Shenzhen Stock Exchange. In addition, the focus will be paid to the Indian stock exchange markets to study Chinese stock exchanges in an international background. It allows the comparison of Chinese and Indian capital markets, the markets of the world’s fastest growing economies. They are both the members of BRICS. China and India are supposed to be the world’s suppliers of manufactured goods and services. China and India, as two of the most important emerging national economies, are concerned by more and more people. For this reason, the Chinese stock exchange markets will be compared with Indian stock exchange markets in this chapter.

4.1 Main Characteristics of the Chinese and Indian Capital Markets

Capital market is an important market for a national economy. The situation of Chinese capital markets have been introduced and described in the previous chapter (Chapter 3). In this chapter, more attention will be paid on introducing Indian capital market and comparing the stock exchanges.

4.1.1 Economic Background

China is a country with a huge population. The population of China is about 1.35 billion\(^\text{16}\). China’s economy has been growing by around 8% over the past decade.\(^\text{17}\) The reason why India is selected to compare with China is the current situation of India is similar to China’s. India also is a populous country. The population of India is


\(^{17}\) Source: VALDEZ Stephen and Philip MOLYNEUX, 2010.
about 1.23 billion. The GDP growth rate of India has been around 7% over the past decade. In terms of GDP, China develops better than India. China is more a manufacturing economy than India. The infrastructure of China is also better than India. However, India is known as an entrepreneurial economy and the service industries of India are more famous than Chinese, especially outsourcing. Abundant workforce guarantees the high growth rate of two countries. According to The 2012 Revision of the World Population Prospects, nowadays, the population of India is growing more rapidly than China’s. And India’s population is younger than China. The population is ageing in China. The “one-child” policy of China is storing up problem in future years. The use of English language in India is also a great advantage for India in a global economy.

In general, India and China have different models of development and the achievements of development of two countries are in different parts. However, India and China have similar challenge and opportunity in economic development.

4. 1. 2 Overview of Capital Markets Segments

The situation of Chinese capital markets has been described in detail in the chapter three. This part will focus on introduction of Indian the capital markets and comparison of the capital markets between the two countries briefly.

Equity Markets

India has 22 stock exchanges and a National Stock Exchange (NSE). The NSE was set up in 1993, located in Mumbai. It was set up as the first debt market exchange for Treasury bills, government securities and corporate bonds. It was also the first exchange in India to provide a modern, fully automated screen-based electronic trading system and this system connects together the investors of the entire country. Today, there are more than 1500 locations in the country and more than 230000 terminals in NSE network. NSE has nearly 74% market share in equity markets and
more than 98% market share in equity derivatives segments.\textsuperscript{18}

The other important stock exchange in India is Bombay Stock Exchange (BSE), which is the really Mumbai Stock Exchange. It was built in 1875, and it is the oldest stock exchange in Asia. The main share index in BSE is the SENSEX30. India’s SENSEX is the index which is the most widely used for investment in India. Currently, there are more than 5500 companies listed on the Bombay Stock Exchange. The total market capitalization of USD 1.68 trillion on March 2015. "Indian stock market" mentioned by media, actually refers to the Bombay Stock Exchange.

As for Chinese equity markets, there are only two stock exchanges in mainland China, Shanghai Stock Exchange and Shenzhen Stock Exchange. The bulk of shares listed on these markets are mostly state-owned firms. Compared to China’s equity markets, India’s equity markets are more open to the foreign capital. There is a large amount of M&A activities and much foreign investment in private firms in Indian stock exchanges. And now Chinese government tries to liberalize the markets by increasing private listed companies and foreign investment. What both of the two countries need is more domestic investment. In these two countries, the savings of households represent a high share of GDP. The households prefer to save money rather than invest in two countries.

**Bond and Money Markets**

India has already liberalized its bond markets and Indian bond markets have attracted many foreign investors. Indian bond markets are diversified. There are different types of bond markets in India: corporate bond markets, municipal bond markets, government and agency bond markets, and funding bond markets. Asset-backed bonds are traded, mortgage-backed bonds are also popular. However, after the credit crisis in 2008, the mortgage-backed bonds are almost non-existent. Bond markets in India play an important role in the large organizations raising funds. The main issuers are the large private organizations and government companies. The


equity markets are more popular than bond markets in India, which is similar to the situation of China.

In the money markets, there are diversified products: treasury bills, commercial paper, certificated of deposit, forward rate agreement, interest rate swaps. And the money markets consist of the unorganized sector, organized sector and co-operation sector. Central bank of India - the Reserve Bank of India (RBI) regulates and controls the money markets. The money markets in India have grown rapidly since 1992 and have performed outstanding in the past 20 years.

**Derivative Markets**

In India, the interest rate options, future and swaps are traded mainly in OTC. On the SENSEX Index, index futures and options began to be offered in 2000. NSE was the first stock exchange in India to set up separate currency derivatives segments. Standardized currency futures started being traded on 28th August, 2008 in NSE. Over the years, Indian currency future markets have grown significant in terms of number of contracts, trading value and average daily trading value. Nowadays, futures and options are both allowed to be traded on the NSE. These derivatives are traded electronically in exchanges. Indian financial derivatives’ trading is well established. India started financial derivative markets earlier than China. Compared to the immature derivatives markets in SSE and SZSE, the derivatives products of NSE and BSE are more abundant than that of SSE and SZSE.

**4. 2 Comparison of Chinese Stock Exchanges**

Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) are the only two stock exchanges in China mainland. They were built at the almost same time. Shenzhen Stock Exchange set up on Dec. 1st, 1990. Shanghai Stock Exchange established on Nov. 26th, 1990 and in operation on Dec.19th the same year. Both of these two stock exchanges were established in the background of China’s economic reform. As the two stock exchanges in the same country, there are some similarities
but also some differences between the two stock exchanges. This part will compare these two stock exchanges in terms of market capitalization, listed companies and indexes.

4.2.1 Market Capitalization

Market capitalization is the most important indicator for stock exchanges. Market capitalization\(^{20}\) refers to the value of outstanding shares. The market capitalization is given as the product of current stock price times the number of shares outstanding. The market capitalization of a company reflects the theoretical cost of buying all of company’s shares. However, in a normal merger transaction, the enterprise value calculation is more appropriate. Thus market capitalization is not the same as the market value; it is a better measure of size than worth. Similarly, for a stock exchange, market capitalization is seen as the important indicator to measure the size of a stock exchange.

<table>
<thead>
<tr>
<th>Year</th>
<th>SSE</th>
<th>SZSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>314315.71</td>
<td>133404.55</td>
</tr>
<tr>
<td>2005</td>
<td>286190.31</td>
<td>115661.94</td>
</tr>
<tr>
<td>2006</td>
<td>917507.53</td>
<td>227947.34</td>
</tr>
<tr>
<td>2007</td>
<td>3694347.97</td>
<td>784518.56</td>
</tr>
<tr>
<td>2008</td>
<td>1425354.02</td>
<td>353430.02</td>
</tr>
<tr>
<td>2009</td>
<td>2704778.46</td>
<td>868374.00</td>
</tr>
<tr>
<td>2010</td>
<td>2716470.22</td>
<td>1311370.08</td>
</tr>
<tr>
<td>2011</td>
<td>2357423.32</td>
<td>1054684.97</td>
</tr>
<tr>
<td>2012</td>
<td>2547203.79</td>
<td>1150172.25</td>
</tr>
<tr>
<td>2013</td>
<td>2496989.93</td>
<td>1452153.56</td>
</tr>
<tr>
<td>2014</td>
<td>3932527.68</td>
<td>2072419.99</td>
</tr>
</tbody>
</table>

Source: WFE (data); author

Figure 4.1 Comparison of Domestic Market Capitalization of SSE and SZSE

![Graph showing the comparison of market capitalization of SSE and SZSE from 2004 to 2014](graph.png)

Source: WFE (data); author

The table 4.1 displays the market capitalization of SSE and SZSE from 2004 to 2014. As we can see from this table, the market capitalization of these two stock exchanges is not large at the beginning. As time goes by, the market capitalization of two stock exchanges both increased dramatically. On 31 January 2015, the SSE ranks 5\textsuperscript{th} and SZSE ranks 8\textsuperscript{th} in terms of market capitalization in the world\textsuperscript{21}. The market capitalization of SSE in 2014 is about 12 times as much as that in 2004. The market capitalization of SZSE in 2014 is about 15 times what it was in 2004. It is clear that as an emerging nation, the capital markets are developing rapidly and the size of stock exchanges enlarge sharply.

The figure 4.1 describes the development of market capitalization of SSE and SZSE from 2004 to 2014. According to the figure, from 2004 to 2007, the market capitalization of two stock exchanges rose constantly. From 2006 to 2007, there was a rapid increase in these two stock exchanges, especially in SSE. The market capitalization of SSE has been overwhelmingly greater than that of SZSE since 2006. There was a sudden drop from 2007 to 2008 due to the world financial crisis in both of them. From 2009 to 2013, in the economic convalescence after the financial crisis, the amount of market capitalization of two stock exchanges is fluctuant. After 2013, the market capitalization of two stock exchanges rose again obviously.

4.2.2 Number of Listed Companies

Another way how we can compare the two stock exchanges is the number of listed companies. It is also an indicator to measure the size of a stock exchange. As can be seen in table 4.2, the number of listed companies of SSE and SZSE has been increasing considerably. From the 1997 to 2000, the gap between the SSE and SZSE in terms of the number of listed companies was likely to narrow, which is shown in the figure 4.2. The number of listed companies of SSE is slightly more than that of SZSE. After 2000, the gap between the two stock exchanges became widen. However, the number of listed companies of SZSE has been increasing rapidly since 2006. And in 2010, the number of listed companies of SZSE was over the SSE. In 2013, the number of listed companies of SZSE was well over that of SSE.

Table 4.2 Comparison of Listed Companies in SSE and SZSE

<table>
<thead>
<tr>
<th>Year</th>
<th>SSE</th>
<th>SZSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>188</td>
<td>135</td>
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<tr>
<td>1996</td>
<td>293</td>
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<tr>
<td>1997</td>
<td>383</td>
<td>362</td>
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<td>1998</td>
<td>438</td>
<td>413</td>
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<tr>
<td>1999</td>
<td>484</td>
<td>463</td>
</tr>
<tr>
<td>2000</td>
<td>572</td>
<td>514</td>
</tr>
<tr>
<td>2001</td>
<td>646</td>
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</tr>
<tr>
<td>2002</td>
<td>715</td>
<td>508</td>
</tr>
<tr>
<td>2003</td>
<td>780</td>
<td>505</td>
</tr>
<tr>
<td>2004</td>
<td>837</td>
<td>536</td>
</tr>
<tr>
<td>2005</td>
<td>834</td>
<td>544</td>
</tr>
<tr>
<td>2006</td>
<td>842</td>
<td>579</td>
</tr>
<tr>
<td>2007</td>
<td>860</td>
<td>690</td>
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<td>954</td>
<td>1540</td>
</tr>
<tr>
<td>2013</td>
<td>953</td>
<td>1536</td>
</tr>
</tbody>
</table>

Source: SSE, SZSE Fact Book 2014 (data); author
4.2.3 Stock Market Indexes

Index is a statistical measure, which is used to measure the change in an economy or a securities market. It is usually expressed in terms of a change from a base value. Every stock exchange usually has its own index and each index has its own calculation. Shanghai Composite Index of SSE and Shenzhen Composite Index of SZSE as the most important indexes of two stock exchanges will be introduced in this part.

Shanghai Composite Index\(^22\) is a major index of all the shares that traded in SSE. It is a capitalization- weighted index. The calculation of this index uses a Paasche weighted composite price index formula. It means that the calculation of this index is based on a base period on a specific base day. The specific base day of SSE Composite Index selected on December 19, 1990, the base period is the total market capitalization of all stocks of that day. The base value is CNY 100.

Shenzhen Composite Index\(^23\) is similar to Shanghai Composite Index, it is also a market - capitalization weighted index. It tracks the daily price movement of all shares listed on SZSE and reflects the market performances of all shares. The base

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day for A shares listed on SZSE is April 3, 1991. The base day for B shares is February 28, 1991. The base value is also CNY 100.

Figure 4.3 Shanghai Composite Index from 1996 to 2014

Source: WFE (data); author

Figure 4.4 Shenzhen Composite Index from 1996 to 2014

Source: WFE (data); author

From the above figure 4.3 and figure 4.4, it can be seen that the fluctuation of the two indexes is similar. These two indexes both kept the low level before 2005. There was a significant increase from 2006 to 2007. From 2007 to 2008, there was a shape decrease of two indexes. In 2008, both of them bottomed out in recent years. In 2009 the two Composite Indexes began to grow. From 2008 to 2009, the Shanghai Composite Index decreased, while the Shenzhen Composite Index increased. And both of these two indexes increased from 2013 to 2014.

The indexes in SSE and SZSE are both volatile in two figures. From 2000 to 2004,
there was a four-year decline as the figure showed. So in July 2005, the government intervened into stock markets, the government set 1000 points as the point barrier for the Shanghai Composite Index. And then Chinese markets experienced a sharp increase in 2007 and sharp decrease in 2008. The performance of Chinese stock markets is not related closely to the country’s overall economic performance. Due to foreign investors are restricted in Chinese markets, the markets are much influenced by domestic investors. There are few stocks can be fit “blue - chip” trading and so many small - cap stocks in Chinese markets. The investors in Chinese markets are more individual investors than professional institution investors. These features make the markets in China become extreme volatile.

4. 2. 4 Listed Companies

Stock exchange is the place for trading listed stocks, so it is definitely that the listed companies are the most important part for every stock exchange. This part will focus on the top 10 listed companies by market capitalization in two stock exchanges. The attention will be paid on the size and character of these listed companies.

Table 4.3 Top 10 Listed Companies by Market Capitalization in SSE (2013 year-end)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Short Name</th>
<th>Market Cap (100 billion RMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Petrochina</td>
<td>12484</td>
</tr>
<tr>
<td>2</td>
<td>ICBC</td>
<td>9443</td>
</tr>
<tr>
<td>3</td>
<td>Agricultural Bank of China</td>
<td>7293</td>
</tr>
<tr>
<td>4</td>
<td>Bank of China</td>
<td>5123</td>
</tr>
<tr>
<td>5</td>
<td>China Petroleum &amp; Chemical</td>
<td>4079</td>
</tr>
<tr>
<td>6</td>
<td>China Life</td>
<td>3151</td>
</tr>
<tr>
<td>7</td>
<td>China Shenhua</td>
<td>2609</td>
</tr>
<tr>
<td>8</td>
<td>China Merchants Bank</td>
<td>2246</td>
</tr>
<tr>
<td>9</td>
<td>Ping An Bank</td>
<td>1997</td>
</tr>
<tr>
<td>10</td>
<td>Industrial Bank</td>
<td>1932</td>
</tr>
</tbody>
</table>

Source: SSE Fact Book 2014 (data); author
Table 4.4 Top 10 Listed Companies by Market Capitalization in SZSE
(Beginning of 2014)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Short Name</th>
<th>Market Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guosen Securities</td>
<td>1786</td>
</tr>
<tr>
<td>2</td>
<td>Ping An Bank</td>
<td>1692</td>
</tr>
<tr>
<td>3</td>
<td>GF Securities</td>
<td>1504</td>
</tr>
<tr>
<td>4</td>
<td>China Vanke</td>
<td>1442</td>
</tr>
<tr>
<td>5</td>
<td>Midea</td>
<td>1343</td>
</tr>
<tr>
<td>6</td>
<td>Gree Electric Appliance</td>
<td>1281</td>
</tr>
<tr>
<td>7</td>
<td>Hong Yuan Securities</td>
<td>1211</td>
</tr>
<tr>
<td>8</td>
<td>JD</td>
<td>1125</td>
</tr>
<tr>
<td>9</td>
<td>HIK-Vision Digital Technology</td>
<td>1088</td>
</tr>
<tr>
<td>10</td>
<td>BYD</td>
<td>977</td>
</tr>
</tbody>
</table>

Source: NETEASE (data); author

Table 4.6 and Table 4.7 describe the top 10 listed companies by market capitalization in two stock exchanges. The market capitalization of the top 10 listed companies in SSE is larger than the top 10 companies in SZSE. Even the market capitalization of last one company in the SSE in the table is larger than the top company’s market capitalization in SZSE. The situation is similar to the total market capitalization of two stock exchanges, which the total market capitalization of SSE is larger than that of SZSE.

The character of these typical listed companies is also difference in SSE and SZSE. The top 10 companies in SSE are mostly state-owned firms. Only the last two companies are private companies. And the market capitalization of the last two companies is far less than other top ranked companies in SSE. The top 10 listed companies in SZSE, only three of them are state firms. What calls for special attention is that the listed companies in SZSE are more diversified. These 10 companies in SSE, six of them are banking. Among the top 10 listed companies in SZSE, there are not only in banking but also in manufacturing, real estate and an e-commerce. The top 10 listed companies in SZSE distribute in more industries than that of SSE.
4. 2. 5 Situation of Chinese Stock Exchanges

SSE and SZSE as the only two stock exchanges in mainland China, they are in the same macroeconomic background and have similar history of development. They are governed by the same institution and inflected by the same policy. However, there are still some differences between these two stock exchanges.

As the above tables and figures have shown, the market capitalization of SSE is larger than that of SZSE, though the number of listed companies in SSE is less than that in SZSE. So according to this result and the situation of top 10 listed companies in two stock exchanges, we can see the size of listed companies in SSE is much larger than what in SZSE. In fact, the all shares in SSE are in the main board. However, there are main board, SME (small and medium enterprises) board and ChiNext board in SZSE. The SME board set up on 27 May, 2004 and operated on 25 June, 2004. It as the second board market is for the companies of which size is not enough for listing on main board. Setting up this board contributes to building a multi-tier capital markets system in China. On 23 October, 2009, the ChiNext board was built. The required capital of companies listed on ChiNext board is less than SME board and Main board. Most of the listed companies in ChiNext board are hi-tech and emerging companies. The main aim of building this board is to improve the ability of national independent innovation and promote the development of emerging industries.

In general, the Shanghai Stock Exchange to Chinese capital markets is what New York Stock Exchange to American capital markets, while the Shenzhen Stock Exchange can be seen as a NASDAQ style stock exchange for China. Whatever to say, they are both important components of national economy.

The function of stock exchanges is seen as the barometer for national economy. Though there are difference between the SSE and SZSE, they both reflect the situation of Chinese capital markets. The two indexes of the two stock exchanges show the common problem in Chinese stock markets: Chinese stock market is extreme volatile. In China, the trade by individual investors account for more than

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85% of trading value. Different from professional institutional investors, the investment of individual investors is retail and short-term. These small and medium investors speculate on newly listed stocks, small-cap stocks, poorly-performing stocks and change hands quickly.\textsuperscript{25} These small-cap and poorly-performing stocks are not good for building a healthy market. Meanwhile, some scope for speculation can ensure liquidity but too many speculators in the make will increase higher turnover and make the market be extreme volatile.

4. 3 Comparison of Chinese and Indian Stock Exchanges

According to comparing the two stock exchanges in China, SSE is more important than SZSE in Chinese capital markets. National Stock Exchange of India (NSE) has large market capitalization and is highly active in the trading of equities and derivatives. It is the most important stock exchange in India. So this chapter will select these two stock exchanges to compare and through comparing these two stock exchanges to learn about two countries capital markets. As the detailed information about the Shanghai Stock Exchange was provided in the previous part, the next paragraphs will pay more attention to National Stock Exchange of India.

4. 3. 1 Historical Background of Chinese and Indian Stock Exchanges

The National Stock Exchange\textsuperscript{26} set up in November, 1992. But it was not recognized as stock exchange until in April, 1993. In June 1994, the Wholesale Debt Market Segment (WDM) was introduced, it marked the trading facilities of the National Stock Exchange was increased. In the same year, 1994 November, the Capital Market (CM) Segment was also introduced. The Derivatives segment commenced operation in June 2000. The WDM, CM and F&Q (The Future and Options Market) Segment are three basically market segments of the NSE. In August


1995, the National Securities Cleaning Ltd. (NSCCL) was incorporated. The National Stock Exchange became the first Clearing Corporation in India. Nowadays, there is the facility of electronic exchange offering investors in NSE.

The Shanghai Stock Exchange was established in 1990 and in the background of China’s economic reform. The one of the intention of developing Chinese securities markets is to solve the problems of inefficient, badly management of state-owned enterprises. And traditionally the bulk of shares on Chinese stock markets were from state firms.

Comparing the history and development of NSE and SSE, there are some similarities between the NSE and SSE. They were both built by government, unlike some stock exchanges set up by market itself. The one of the intention of building SSE is to solve the problems of state-owned enterprises. The mission of NSE is to improve Indian securities markets by establishing a nation-wide trading facility. It ensures equal access to investors all over the country through a communication network and provides a fair, efficient and transparent securities market to investors via electronic trading systems. It also tries to meet the current international standards of securities markets. NSE is more than a stock exchange. It guides not only capital markets but also the industry in India towards new stage. Both of the establishing of the two stock exchanges carries bid significance for national economy. Meanwhile, the time of establishing of the two stock exchanges is similar. The international environment for the two stock exchanges to establish and develop is also similar.

4.3.2 Basic Information of SSE and NSE

The basic information of SSE has been introduced in previous part. This part will compare the selected stock exchanges in terms of market capitalization, listed companies and indexes. Unlike comparing the two stock exchanges in China, in this part, the more attention will be paid on the annual change of two stock exchanges due to they are in the different macroeconomic background.
a) Stock Market Indexes

The Shanghai Composite Index is the basic index of SSE, while National Stock Exchange of Indian’s benchmark stock market index is CNX Nifty for equity markets. It also called the Nifty 50 or simply the Nifty. This index appeared the first time is in April, 1996. CNX stands for the Credit Rating Information Services of India Limited (CRISIL) and the National Stock Exchange of India (NSE). The index was known as the S&P CNX Nifty Index, and was renamed as CNX Nifty in 2013. It is a capitalization - weighted index. It is composed of 50 of the largest and most liquid stocks which were listed on the NSE and account for 22 sectors of the economy. The initial calculation of this index is on full market capitalization methodology. From June 26, 2009, the calculation was changed to free float methodology. The base day of CNX Nifty is on November 3, 1995. The base period is the completion of one year of operations of National Stock Exchange Equity Market Segment. The base value is 1000, and the base capital is Rs 2.06 trillion.²⁷

Figure 4.5 CNX Nifty from 1996 to 2014

Source: India Index Services & Products Limited²⁸

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As we can see from the figures 4.3 and 4.5, the fluctuation of the two indexes is similar. Before 2005, the two indexes were low and remained steady. From 2006 to 2008, the CNX Nifty increased rapidly, while Shanghai Composite Index increased at the beginning and then decreased sharply. In 2008, the Shanghai Composite Index reached the lowest point in recent years, but CNX Nifty kept high point. In 2009 the Shanghai Composite Index began to grow, but CNX Nifty began to decrease and reached the lowest point after 2007. In recent years, CNX Nifty and Shanghai Composite Index both kept increase.

b) Market Capitalization

Market capitalization is the important indicator to analyze a stock exchange. However, due to the total population and the size of total market are different between the two countries, it is more significant to compare the annual change of indicators of these two stock exchanges than to compare the absolute number of indicators of these two stock exchanges. So this part will pay attention to the change compared to the previous year of each stock exchange.

Figure 4.6 Market Capitalization of SSE and NSE (2004-2014)

Source: WFE (data); author
According to the figure 4.6, it can be seen that the absolute value of market capitalization of SSE is larger than the corresponding figure of NSE from 2006 to 2014. The market capitalization of SSE is around twice what it was of NSE from 2007 to 2014. Comparing the annual change of two stock exchanges according to the figure 4.7, when the market capitalization of SSE increased or decreased compared with the previous year, the market capitalization of NSE increased or decrease too at the same time except the situation in 2005. From 2006 to 2007, the market capitalization of SSE increased considerably. The growth rate of SSE’s market capitalization is much higher than the growth rate of NSE’s. However, after 2007, the growth rate of market capitalization of NSE exceeded the growth rate of SSE’s.

c) Listed Companies

The situation of listed companies is the important indicator to measure a stock exchange. This part will also pay attention to the annual change of the number of listed companies of two stock exchanges. In addition, the character of the listed companies of two stock exchanges is also compared in this part.
From the Figure 4.8, we can see that from 1996 to 2014. The number of listed companies of NSE was always more than SSE’s. And the gap between these two stock exchanges in terms of the number of listed companies is growing in recent years. As
for the figure 4.9, it is clear that there is a continual increase in the number of listed companies of these two stock exchanges except the situation in 2005 and 2013. In 2005 and 2013, the number of listed companies of SSE decreased slightly. From the 1997 to 2003, the growth rate of the number of listed companies of SSE is higher than that of NSE. But from 2004 to 2013, the growth rate of NSE is much higher than the growth rate of SSE in terms of the number of listed companies, especially from the 2004 to 2008.

As for the character of listed companies, the key feature of SSE’s listed companies is that the most of bulk of shares on SSE are from state firms according to analyzing the top 10 largest listed companies in SSE in previous part. The top 10 companies in SSE are mostly state firms except the last two companies. And six of them are banking, one of them is non-bank finance. The mostly bulk of share of SSE are from financial. The 10 companies in NSE, only two of them are public sector. Except the banking and oil companies, there are two IT service companies in these top 10 companies. Even in the all listed companies in NSE, the market capitalization of computers - software listed companies account for 16.34% of the all listed companies’ market capitalization, ranking the second after the banking in 2013. Thus the listed companies in NSE are more diversified than that of SSE. The new industries, especially the high-value service such as outsourcing of IT in India develop well.

According to comparing the market capitalization and the number of listed companies, the SSE is larger than NSE in terms of market capitalization. But in terms of listed companies, not only the number of the listed companies of NSE is more than SSE, but also the listed companies of NSE are more diversified than SSE. The most of bulk of shares listed on the SSE are from state firms in China with large market capitalization, while most of listed companies are private companies in India. This is the reason why the number of the listed companies of NSE is much more than that of SSE but the market capitalization of NSE is much less than SSE. What’s more,
although the growth rate of SSE is rapidly at the beginning, the growth rate of NSE exceeded the SSE in recent years in terms of the market capitalization and the number of the listed companies.

4. 3. 3 Stock Exchanges Instruments

Stocks, bonds, funds and derivatives are the main instruments of stock exchanges. This part will study the two stock exchanges markets according to the selected stock exchanges instruments.

a) Stock Markets

The stocks in SSE are divided into A shares and B shares. And there is the Qualified Foreign Institutional Investor system (QFII) that was introduced in 2002, which allows overseas institutional investors to invest in China’s markets thought to buy domestic - listed shares in SSE. In 1990, the first 8 A shares were listed in SSE. In 1992, the first B share was listed. Nowadays, there are 1021 A shares, 53 B shares in SSE and 201 foreign institutions that had QFII licenses in SSE. The equities segment was introduced into NSE on November 3, 1994. After one year, the NSE became the largest exchange in India in terms of volumes transacted.

Figure 4.10 The Annual Change of Shares Trading Value of SSE and NSE

Source: SSE Fact Book; NSE Fact Book (data); author

Comparing the two stock exchanges’ stock markets, the size of SSE’s stock markets is larger than NSE’s in terms of trading value and the number of shares traded. The trading value of SSE in 2013 is around US 3289 billion\textsuperscript{29}, while what of NSE is around US 498 billion\textsuperscript{30}. However, as the above figures show, the trend of development of these two stock exchanges is fluctuant. The stock markets in SSE are more variable due to the annual change rate of trading value and number of shares traded of SSE is more variable than that of NSE. From 2007 to 2008, the growth rate of trading value of SSE reached 426.93\% in 2007 and immediately dropped to -40.94\%. There was also a huge change in SSE in the number of share traded, the growth rate reached 140.27\% in 2007 and dropped to -33.37\% in 2008.

b) Bond Markets

There are treasury bonds (T-bonds), local government bonds, enterprise bonds, corporate bonds, corporate bonds with detachable warrants, convertible corporate bonds and private placed SME bonds in Shanghai Stock Exchange. In Chinese bond markets, the enterprise bonds and corporate bonds are different. According to the Shanghai Stock Exchange Corporate Bond Listing Rule, enterprise bonds issuers are unincorporated legal person entities. In fact, the requirement of enterprise bonds is
stricter than corporate bonds. Most of the issuers of enterprise bonds are some enterprises which solely funded by the state or controlled by state. And the enterprise bonds are backed by large banks or large state-owned enterprises. The credit rating of enterprise bonds is similar to government bonds and higher than corporate bonds absolutely. The bond market is one of the markets which grows rapidly in recent years in China. There was a huge increase in the field of the number of bonds listed, the amount of debt outstanding and the transaction volume of bond markets of SSE.

NSE set up as the debt market exchange at the beginning and the Wholesale Debt Market Segment was the first market segments to be built among the three basically market segments. This segment operated on June 30, 1994\textsuperscript{32}. The NSE was the first stock exchange which provided the formal screen based trading facility for the debt markets in India. So the NSE is seen as an important trading platform for trading of a wide range of debt securities in this country. The NSE will be the first exchange to offer a separate trading platform for debts in India. And it will improve the transparency of Indian bond markets by screen based trading facility.

The bond markets of two stock exchanges have been developing rapidly and have achieved significant breakthroughs. Chinese bond market ranks the third in the world now and Indian bond market is the 12\textsuperscript{th} largest in the world. In terms of the total size of bond market, the Indian bond market was approximately equivalent to 27% of the Chinese bond market in 2012. The size of Indian bond market is only at 5.5% of GDP which is behind every country in Asia except for Indonesia.\textsuperscript{33} Most of bonds are traded in Indian bond markets are government bonds, only a few corporate debt paper is traded regularly. However, it does not mean that Chinese bond markets develop better than Indian. The growth of Chinese bond market does not match with the growth of Chinese economy. Chinese bond market is still small when compared to the scale of national economy. Both the SSE and NSE need to improve their bond markets.


c) Funds

The main funds in SSE are closed-end funds and exchange-trade funds (ETFs). The ETFs is also the core product in NSE. “ETFs are portfolio investment products that are admitted to listing or trading on a regulated exchange”. The significant advantage of ETFs is that the cost of the ETFs is low and they can be sold and bought throughout the trading day like any stock. ETFs as the financial instrument can be used as a hedging tool or as an investment product.

The fund markets of SSE started in 1998 when the Jintai and Kaiyuan issued in the SSE and the Shenzhen Stock Exchange in March 1998. There were 4 securities investment fund in SSE in the same year. However, due to the opaque operation, depressed market and high discount rate, the issuance of closed - ended fund grew slowly. Until the SSE introduced the first ETF in 2005, China’s fund markets opened a new chapter. As the significant advantage of ETFs, it was popular immediately in the market. After 2009, the SSE’s fund markets increased markedly. In 2011, the number of ETFs listed in SSE rose considerably from 3 to 24. By the end of 2013, there were 291 listed funds in SSE and 49 funds of the 291 funds were ETFs. The total market value of SSE’s fund markets reached RMB 368.7 billion and the total market value of ETFs reached RMB 102.6 billion. The SSE is a leader in China’s fund markets who built China’s first sector ETF. The fund markets in SSE developed obviously but it still has too much room to improve.

There are equity, debt, gold and international indices ETFs in NSE. The number of listed funds in NSE is much more than the number of listed funds in SSE. NSE became the world’s fourth largest stock exchange and the top one in the Asia Pacific region in terms of the number of listed funds in 2012. The number of listed funds reached at 1223.

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d) Derivatives Markets

The derivatives markets of China are just beginning. In 2006, the China Financial Future Exchange (CFFEX) established and the stock index future started trading after 4 years later, in 2010. And the CSI 300 equity index future was the only stock-based derivatives in Chinese markets without option markets in that time. And before the CSI 300, only warrants are available as the financial derivatives in Chinese securities exchanges. It was until on 9 February 2015 the SSE launched the first equity option, Chinese options market started finally. The SSE as the pioneer of Chinese option markets, it will play the most important role in the development of option markets.36

Compared with Chinese derivatives markets, Indian derivatives markets started earlier and are maturer than Chinese derivatives markets. The NSE is the most important stock exchange for future markets and a single monopolistic centre for options. The NSE started trading derivative instruments as the index futures launched on June 12, 2000. The Index Options was launched on June 4, 2001. Futures traded on individual securities were allowed on November 9, 2001. The NSE also was the first exchange that launching trading in options on individual securities from July 2, 2001 in India. Nowadays, there are equity derivatives, currency derivatives and bond futures as the three major products in NSE’s derivatives markets. In the equities derivatives, the options and futures are the most common products and they are available on indices and stock.37

The NSE was the largest exchange in India in derivatives and the third largest derivatives exchange in the world in 201238. The development of derivatives markets of NSE can be seen as an explosive growth. The derivatives, as the innovation of financial instruments, have significance for developing the financial market. The derivative segment has expanded greatly in the recent years around the world. The


equity derivatives in Indian operate successfully. It is a new milestone for Chinese derivatives markets that the first equity option was launched in SSE. But there is still a long way to go for Chinese derivatives markets.

4.3.4 Regulation of SSE, SZSE and NSE

The SSE and SZSE are the two stock exchanges in China. They are in the same regulation framework and are both under the direct management of the China Regulatory Commission (CSRC). There are the same national rule and law to regulate their economic activities. The organizational structure of two stock exchanges is also similar. But, as the two stock exchanges of the two different countries, the regulation of SSE and NES is different.

To regulate the stock exchange markets, there is CSRC as outside regulator for SSE in China. The SSE also set up inside regulators to regulate the markets. In SSE, the General Assembly is the supreme authority of the SSE, The Board of Governors is the decision-making body of the SSE and the supervisory body of the SSE is the Board of Supervisors, which independently exercising the rights of supervision by law.

The regulation of SSE can be divided into two parts: listed companies supervision and market regulation. Firstly, to supervise the listed companies, the Listed Company Supervision Department was set up to supervise information disclosure of listed companies and punish illegal acts. Meanwhile, some law and rules were made by government and SSE. The Rules Governing the Listing of Stock on Shanghai Stock Exchange is the foundation rule for the SSE to disclose the information of listed companies. Secondly, to build a well-regulated markets, the SSE set up Market Surveillance Department to monitor the market. SSE Market Surveillance Department monitors the market through the three aspects. Firstly, Real-time monitoring. The stuff will conduct initial analysis on the alert messages which are sent from the monitoring system to find the unusual trading activities. Secondly, investigation. The department will conduct the further and more detail investigates to determine whether the unusual
activities belong to illegal activities and the level of severity. The last one, market analysis. The department will summarize a formal written report and submit the report to CSRC. Finally, intervening to the illegal activities.39

The corporate structure of NSE is totally different from the SSE. The NSE is a public limited company and the ownership and management of the exchange is completely separated. It is owned by the leading institutional in the country, such as banks, insurance companies and other financial intermediaries. It is managed by professionals, who do not directly trade on the exchange. Separating the ownership and management can make sure to avoid conflicts of interest and ensure the public’s interest. So there are some differences in the regulation between the two stock exchanges.

The regulators of Indian capital markets are the Ministry of Finance, The Securities and Exchange Board of India and The Reserve Bank of India. The department of Economic Affairs- Capital Market Division of the Ministry of Finance is the major department to be responsible for the securities markets. Specifically, it is responsible for conducting institutional reforms in the securities markets, building regulatory and other market institutions, protecting the right of investors and providing efficient legislative framework for securities markets. The Securities and Exchange Board of India (SEBI) is the principal regulator for stock exchanges in India. The primary job of SEBI is protecting the interest of investors, regulating the Indian stock markets. All Indian financial intermediaries need to get the permit from the SEBI and are governed by SEBI. Foreign Institutional Investors only register on SEBI are allowed to participate in the Indian securities markets. The NSE is not a regulatory authority but a securities participant, but it also regulates the securities markets. The NSE implements rules and regulations to govern the securities markets. These rules and regulations rule the member registration, securities listing, transaction monitoring and so on. The NSE is also regulated by SEBI and inspected regular by

4. 4 Summary

China and India are the two most important emerging countries in the world. The high-speed development of two countries attracts more and more attention from the world. According to the forecast of Goldman Sachs, by the year 2050, the world’s three top economic powers will be China, India, and the US. Amazing growth also can be seen in two countries’ capital markets. Currently, the market capitalization of the Shanghai combines with Shenzhen stock exchanges is greater than any other country’s exchanges except those of the US. The market capitalization of the Indian exchanges ranks the sixth in the world and keeps increasing at high pace. And India also has much more than listed companies than any other country in the world. The number of listed companies of two stock exchanges of China is still fewer but grows rapidly. In terms of initial public offerings, they were both in the top five exchanges for initial public offerings by value from 2009 to 2011. In 2012 they were still in the top 10. The Shanghai Stock Exchange also ranked the fourth in the share trading by value in 2013.41

Table 4.5 The Economic Growth and Market Indices of Selected Countries from 2010 - 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Real GDP Growth</th>
<th>Stock Market Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>40%</td>
<td>Shanghai Composite Index -36%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shenzhen Component Index -11%</td>
</tr>
<tr>
<td>India</td>
<td>29%</td>
<td>NSE Nifty CMX +20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BSE Sensex +19%</td>
</tr>
<tr>
<td>United States</td>
<td>9%</td>
<td>DJIA +55%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5%</td>
<td>FTSE 100 +22%</td>
</tr>
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</table>

Source: The Economist Intelligence Unit, September 2014 (data); author

In terms of capital markets of these two countries, the Shanghai Stock Exchange, Shenzhen Stock Exchange and the National Stock Exchange are important components of each capital markets. The SSE serves mainly for the large companies while SZSE can provide boards for SMEs. They contribute to build a multi-level capital markets in China. In the newest world rank in stock exchanges, SSE has a market capitalization of more US $3.9 trillion, making it be the world’s 5th largest stock exchange. The SZSE ranks 8th in the world with market capitalization of more than US $2.28 trillion and the NSE ranks 12th in the world with market capitalization of more than US$1.65 trillion.\(^{42}\) When comparing the overall size of SSE and NSE, SSE is much larger than NSE, especially in equity markets. But the growth rate of market capitalization and the number of listed companies of NSE is higher than the growth rate of those of SSE. There has been an increase more than 40% in the market value of listed companies of India over the past years. Indian stock exchanges rise in the world ranking\(^ {43}\). In the derivatives markets, the NSE developed better than SSE. The SSE just launched the first equity option on 9 February 2015. The derivatives market in China is still in its infancy. The future & option segment of NSE set up in 2000. The development of this segment is substantial and the products of this segment are more and more diversified to meet specific investor needs. Chinese capital markets do not open totally to foreign capital. But China is opening its capital markets gradually. Not only setting up QFII, but also setting up Shanghai-Hong Kong Stock Connect on 17 November 2014. After building Shanghai-Hong Kong Stock Connect, foreign investors gained access to A-shares in Shanghai Stock Exchange, through the Hong Kong Stock Exchange. This tie up promotes the opening up of the Chinese capital market undoubtedly.

There are differences in two countries’ markets, there are some similarities in two countries markets at the same time. They are both typical emerging markets, they both grow fast along with many problems need to be solved. The regulations of two


countries are both need to perfect. They are both in a significant position in the world’s markets. In 2011, the market capitalization of India and China constitute 20% of total market capitalization of the world. In 2020, the market capitalization of India and China is expected to constitute 29% of total capitalization. While in 2040, it is expected to constitute 48% of total capitalization. The equity markets of these two countries are also seen as have the potential to grow substantially and become the world’s leading capital markets over the coming decade.\(^{44}\)

5 Conclusion

According to Monthly Reports of World Federation of Exchanges (31 January 2015), the SSE ranks 5th and SZSE ranks 8th in terms of market capitalization in the world. After the 20 years of development, Chinese stock exchange markets have experienced the growth from zero to constantly expand.

Chinese capital markets can be seen as have gone through the three phases. In the first phase, China’s reform and opening up gave birth to Chinese capital markets. In the second phase, Chinese government tried to build a mature regulation framework of Chinese capital markets. In the third phase, China improved the capital markets and focused on building more open capital markets. The growth of Chinese stock exchange markets has been closely linked to the Chinese capital markets, and reflects the development of Chinese capital markets.

Comparing Shanghai Stock Exchange with Shenzhen Stock Exchange, the Shanghai Stock Exchange is larger than Shenzhen Stock Exchange in terms of the total market capitalization and the size of the listed companies. Chinese government tries to make Shanghai Stock Exchange to develop as an international largest stock exchange. While the SME and ChiNext Board of Shenzhen Stock Exchange gives the opportunity to the companies which have potential of developing. The development of these two stock exchanges contributes to building a multi-layered capital markets of China.

Like China, India is an emerging country with huge population and high growth rate of national economy. The stock exchange markets of these two countries are comparable. Due to the size of total markets is different, this thesis focused on comparison of the growth rate of Shanghai Stock Exchange of China and National Stock Exchange of India. According to this thesis, it can be seen that the growth rate of NSE is higher than SSE in terms of market capitalization and the number of listed companies. The development of derivatives markets of NSE can be a reference for Chinese derivatives markets. And there are some similar tasks for two markets to
solve.

Nowadays, the Chinese stock exchange markets are more and more mature, Shanghai Stock Exchange and Shenzhen Stock Exchange move up in the world ranking. The main tasks of developing Chinese stock exchange markets are not only to keep a high growth rate, but also to strengthen the regulatory framework, gradually open the markets and optimize the market structure.
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List of Abbreviations

CD: Certificate of Deposit
IPO: Initial Public Offerings
OTC: Over-The-Counter
NASDAQ: National Association of Securities Dealers Automated Quotations
DJIA: Dow Jones Industrial Average
CSRC: China Securities Regulatory Commission
SSE: Shanghai Stock Exchange
SZSE: Shenzhen Stock Exchange
SME: Small and Medium Enterprises
QFIIs: Qualified Foreign Institutional Investors
PE: Private Equity
GDP: Gross Domestic Product
NSE: National Stock Exchange
BSE: Bombay Stock Exchange
M&A: Mergers and Acquisitions
RBI: Reserve Bank of India
NSCCL: National Securities Cleaning Corporation Ltd.
WFE: World Federation of Exchanges
ETFs: Exchange-Trade Funds
CFFEX: China Financial Future Exchange
SEBI: Securities and Exchange Board of India
CRISIL: Credit Rating Information Services of India Limited
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Yuxuan Huang
Student’s name and surname
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Annexes 3: Top 10 Companies by Market Capitalisation on NSE
Annexes 1: History Trends of SSE 50 Index
Annexes 2: History Trend of SZSE Component Index

SZSE Component Index, Daily Movement Chart, 2004 - 2014
Annexes 3: Top 10 Companies by Market Capitalisation on NSE

Top 10 Companies by Market Capitalisation on NSE (March 31, 2014) (billion USD)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name of Security and Industry</th>
<th>Market Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TATA CONSULTANCY SERVICES LTD</td>
<td>69.92</td>
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<tr>
<td>2</td>
<td>RELIANCE INDUSTRIES LTD</td>
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<tr>
<td>3</td>
<td>TC LTD</td>
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<td>4</td>
<td>OIL AND NATURAL GAS CORP.</td>
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<td>5</td>
<td>INFOSYS LIMITED</td>
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<td>6</td>
<td>COAL INDIA LTD</td>
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<td>10</td>
<td>HDFC LTD</td>
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