Rating Confirmation Letter

CCXI Credit Rating Committee Notice No. [2016]1246D

China Chengxin International Credit Rating Co., Ltd.
7th Floor, Tower D
Beijing Merchant International Finance Center
156 Fuxingmen Nei Avenue
Xicheng District, Beijing 100031
P.R.China

November 14, 2016

Shanghai Municipal Government
No.200 People Avenue, Shanghai 200003
P.R.China

Shanghai Municipal Government:

At your request, China Chengxin International Credit Rating Co., Ltd. ("CCXI") has conducted a comprehensive review on the credit profiles of *the Third Batch of General Obligation Bonds to Be Issued by Shanghai Municipal Government in 2016 (the "Bonds")* based on information available. The outcome reached by CCXI's Credit Rating Committee was to assign *the "Bonds"* an AAA rating with a stable outlook.

Yours sincerely,

Credit Rating Committee
China Chengxin International Credit Rating Co., Ltd.

This is a translation of CCXI's Rating Confirmation Letter "CCXI Credit Rating Committee Notice No. [2016]1246D". If there is any disparity between the Chinese and English versions, the Chinese one shall prevail.

China Chengxin International (CCXI)

Credit Rating Report for the Third Batch of General Obligation Bonds to Be Issued by Shanghai Municipal Government in 2016

Issuer: **Shanghai Municipal Government**

Credit Rating of Bonds: **AAA**

Scale: **3 billion yuan**

Terms: **3 years**

Purpose of the issue: **Swapping the existing local debts**

Mode of repayment: **Interest will be paid annually, and the principal will be paid off in a lump sum when the bonds mature**

Selected data on economy, public finance and debt of Shanghai

Indicator\Year	2013	2014	2015
Total GDP (RMB billion)	2,181.815	2,356.77	2,496.499
Total GDP growth (%)	7.7	7.0	6.9
Three-industry structure	0.6:36.2:63.2	0.5:34.7:64.8	0.4:31.8:67.8
Fixed assets investment (RMB billion)	564.779	601.643	635.27
City-wide general public budgetary revenues (RMB billion)	410.95	458.56	551.95
City-wide percentage of overall tax revenues (%)	92.40	92.01	88.02
City-wide revenues from government-controlled funds (RMB billion)	234.04	253.27	231.22
Municipal-level general public budgetary revenues (RMB billion)	197.70	220.93	280.61
Municipal-level percentage of overall tax revenues (%)	88.75	88.44	82.70
Municipal-level revenues from government-controlled funds (RMB billion)	98.53	98.13	89.52
Debts which the government of Shanghai was liable to repay (RMB billion)	495.6	581.25	488.0

Analysts

Feifei Mao *ffmao@ccxi.com.cn*

Dongyang Fu *dyfu@ccxi.com.cn*

Shandi Zhao *shdzhao@ccxi.com.cn*

Jianchao Liu *jchliu@ccxi.com.cn*

Yuxin Zhang *yxzhang@ccxi.com.cn*

November 14th, 2016

Basic Views

CCXI assigns a credit rating of AAA to the "Third Batch of General Obligation Bonds to Be Issued by Shanghai Municipal Government in 2016" (the "Bonds").

CCXI assigned the AAA rating to the Bonds based on: strong economic fundamentals and competitiveness; robust fiscal strength, sound fiscal & taxation systems; healthy debt position, well-established risk prevention & control system and perfect debt management system; an innovative, free and legal system environment; and powerful support from the central government. Meanwhile, CCXI also acknowledges that the sound debt servicing safeguards and bond proceed management system would provide guarantees for interest payment and redemption of the Bonds.

Highlights

Given the developments and changes since 2015, CCXI analyzed and assessed the comprehensive credit level of Shanghai Municipal Government in terms of basic credit and external support. The influencers of its basic credit level include local economy, fiscal strength, solvency and institutional environment.

Local economy: Shanghai takes a leading position nationwide in terms of economic strength and competitiveness, and its potential for innovation-driven transformation will be unleashed step by step in the future. In terms of characteristics and structure, Shanghai's economy operated steadily within a reasonable range; all the districts and county have achieved even and complementary development and facilitated each other, with overall economic growth living up to expectations; Shanghai places manufacturing at a key position of strategic significance in the future, which will push the transformation and upgrades of the secondary industry, alongside coordinated the growth of the secondary and tertiary industries; the innovation-driven financial industry has become a core driver of the growth of the tertiary industry, while financial innovation is accelerating the development of Shanghai as an international financial center.

Fiscal strength: Shanghai is financially strong and highly self-sustained; as the industrial restructuring,

transformation and upgrades are making steady progresses, and percentage of the earnings from State-owned capital turned in is increasing stably, its income structure and elasticity will be improved further. Shanghai boasts a very high self-financing ratio and a good taxation environment; a large part of total fiscal expenses goes to people's livelihood related areas; sound transfer payments have ensured that the districts and county of Shanghai are financially in balance; Shanghai is cultivating more tax growth points by actively pushing forward industrial restructuring, transformation and upgrades, and is also expanding the collection scope of the earnings from State-owned capital turned over to public finance to include regulation enterprises entrusted by Shanghai SASAC and gradually raising the percentage. All these measures will effectively enhance the city's financial elasticity.

Solvency: All three types of debts are trending down stably, the debt position is sound, the risk prevention and control system is robust and the reform of State-owned capital/enterprises has laid a solid foundation for debt repayment. The debt ratio of Shanghai Municipal Government is moderate and the outstanding debt is significantly lower than the outstanding local government debts ceiling; the local government has effectively prevented and controlled debt risks through a multi-pronged approach such as replacement of existing debts, improvement of debt management system, stripping off the borrowing function from financing vehicles and establishment of debt risk pre-warning mechanism and debt servicing mechanism. Shanghai occupies the national leading level in classified regulation of SOEs, establishment of a State-owned asset flow platform and reformation of mixed-ownership; the new round of State-owned capital/enterprise reform will effectively boost the contribution of the city's State-owned capital to its finance, improve the quality and liquidity of government assets, thereby laying a solid foundation for debt servicing.

Institutional environment: An innovative, free and law-based environment will facilitate sustained improvements in the competitiveness and credit standing of Shanghai. Shanghai Municipal Government is committed to further streamlining administration and delegating powers to lower levels, transforming functions, promoting innovation in management models and stepping up improvements of organizational & management efficiency, sense of service, city management and information transparency. Shanghai enjoys a superior policy environment in the building of China (Shanghai) Pilot Free Trade Zone (FTZ), development of Pudong and early and pilot implementation of financial reforms, and has achieved significant interim results in investment management, trade supervision and financial innovation, among others. What's more, Shanghai is very capable in innovation and R&D and boasts the potential to become a hi-tech innovation center with global reputation. All these will boost economic transformation and upgrades in Shanghai.

External support: Shanghai is of great strategic significance both economically and politically, and secures continuous support and trust from the central government. Policy support will drive innovative development in the city and significantly raise the overall credit level of Shanghai Municipal Government.

In conclusion, CCXI believes that the general bond of Shanghai Municipal Government has very low default risk considering the overall credit quality of Shanghai Municipal Government and the debt servicing safeguards of the bonds.

Disclaimer

I. This credit rating is entrusted by the issuer. Except the entrustment relationship with the rated entity for the purpose of this credit rating, CCXI has no connection with the rated entity that may impact the independence, objectiveness and fairness of this credit rating; nor is there any connection between the members of the rating project team and of the credit review committee and the rated entity that may impact the independence, objectiveness and fairness of this credit rating.

II. This credit rating is based on the information provided or officially disclosed by the rated entity who is liable for the legitimacy, authenticity, completeness and accuracy of relevant information. CCXI performs prudential analysis of the rating-related information under the principles of relevance, timeliness and reliability, but does not ensure the legitimacy, authenticity, completeness and accuracy of the information provided by the rated entity.

III. For the purpose of this credit rating, CCXI and the project members have complied with the applicable laws and regulations and regulatory requirements, followed the rating procedure and standards of CCXI, fully performed duties in due diligence and their obligations in good faith, and therefore have good reasons to ensure this credit rating is in line with the principles of authenticity, objectiveness and fairness.

IV. The conclusion in the credit rating report is the independent judgment made by CCXI based on its rational internal credit rating standards and approaches as well as its internal rating procedures, and free from any intervention or impact of the rated entity and any other third-party organization or individual.

V. All descriptions and judgments in this credit rating report with respect to the credit status of the rated entity are solely for the purpose of providing reference for relevant decision making, and do not constitute a material advice to any user for any transactions including investment and borrowing/lending based on this report, nor a basis for any user to buy, sell or hold relevant financial products.

VI. CCXI will not be held liable for any losses incurred by any investor, institutional or individual, for use of CCXI's analysis results provided herein, or for any consequences from the issuer's use of this report or provision of this report to any third party.

VII. The result of this credit rating takes effect on the date of issue of the debt financing instrument, and its validity is one year. During the duration of the bonds, CCXI shall conduct regular or irregular follow-up credit rating on the object rated in accordance with the Follow-up Credit Rating Arrangement, determine whether to maintain, modify, suspend or discontinue the rating result in light of the follow-up credit rating, and disclose the results on a timely basis.

About the Bonds

About the Issuer

The issuer of the Bonds is the Shanghai Municipal Government. Shanghai is one of China's four municipalities directly under the central government. It has a land area of 6,340.5 square kilometers. As at the end of 2015, Shanghai had 15 districts and 1 county, with a resident population of 24.15 million.

Terms and Conditions for the Bonds

Shanghai Municipal Government will issue the third batch of general obligation coupon bonds for 2016 amounting to RMB 3 billion. The Bonds are fixed-rate book-entry bonds and have a term of 3 years. The interest will be paid on an annual basis. After the maturity date, the principal will be paid off in a lump sum. After the issue, the Bonds will be traded on the international financial assets transaction platform of the Pilot Free Trade Zone as part of China Interbank Bond Market.

Table 1: Basic Facts of the Bonds to Be Issued by Shanghai Municipal Government in 2016

Bond name	Shanghai Municipal Government General Obligation Bonds 2016 (Phase IX)
Scale	3 billion yuan
Terms of bonds	3 years
Interest rate	Fixed
Method of repayment	Interest will be paid annually, and the principal will be paid off in a lump sum when the bonds mature.

Source: Shanghai Municipal Finance Bureau

Debt servicing safeguards

On August 29th, 2016, the Standing Committee of the National People's Congress passed the resolution in relation to the *Proposal of the State Council on the Review and Approval of the 2015 Local Government Debt Limit*, which set the limit at RMB 16 trillion for 2015. To promote local bonds issuance in 2016, the Ministry of Finance issued the *Opinion on Implementing Limit-based Management of Local Government Debts* (Cai Yu No.225 [2015]) and the *Circular on Ensuring Issuance of Local Government Bonds in 2016* (Cai Ku No.22 [2016]) on December 21th, 2015 and January 25th, 2016 respectively. Alongside the advancement of local debt swap, the structure of outstanding local debts will be optimized and the interest cost will be cut deeply, which will remarkably reduce direct debt risks facing the local governments.

Under the guidelines of the Ministry of Finance, revenues from general obligation bonds must be used and managed under the general public budget. Revenues from swap bonds must be used to pay off the principal of the local government debts identified to be outstanding as of December 31th, 2015 and to mature in 2016. Whereas the local government has made other arrangements to pay off the said debts, the swap bonds can be used to repay the principal of other identified government debts. According to the above guidelines, Shanghai Municipal Finance

Bureau has drawn up a special arrangement for the usage of the funds raised from the issuance of Shanghai Municipal Government bonds in 2016, and the arrangement has been submitted to the Municipal Government and the Municipal People's Congress of Shanghai to be reviewed and approved. The funds generated from the issuance of the swap bonds will be used to repay the general obligation debts of the Municipal Government.

Shanghai will take a multi-pronged approach to guarding against debt risks and providing full guarantee for the redemption of local government bonds, such as establishing and improving the system of rules and policies for government debt management, setting up a stable government debt servicing mechanism, strengthening dynamic monitoring and risk early warning of debts and stepping up budget management for local government bonds. In accordance with the *Opinions of the State Council on Strengthening the Management of Local Government Debts (2014) No. 43* and the guidelines of the Ministry of Finance concerning swapping outstanding local government bonds and issuing new local government debts, the city has designed budget adjustment schemes under the ceiling of bond issuance imposed by the Ministry of Finance, since 2015 the local government debts of Shanghai have been included in budget management by category: general obligation debts are managed under general public budgets, special debts are managed under budgets of government-controlled funds, and the issuance quota of local government bonds has been carefully designed and distributed to district/county governments. Meanwhile, the district/county governments of Shanghai are mandated to arrange the use of funds raised from issuing bonds prudentially, strictly managing the funds and putting them under budget management following a statutory procedure on a timely basis.

Rating considerations

Given the developments and changes since 2015, CCXI started with macroeconomic environment by analyzing the impact of external economic environment on Shanghai, and then analyzed and examined the basic credit level of Shanghai Municipal Government in terms of local economy, fiscal strength, solvency and institutional environment, and assessed the willingness and capability of Shanghai Municipal Government to service its debt without external support. Afterwards, CCXI analyzed the impact of the support from the central government on the credit level of Shanghai. On that basis, CCXI examined the debt service coverage measures and the protection from the debt management system for repaying this batch of bonds.

Macroeconomic environment: China's economic growth is slowing down, but its overall economic operation is within expectation, and the quality of growth is improving; and further advancing the supply-side reform will become a top priority for China's macroeconomic development.

1. Overall characteristics

China's economic growth is slowing down, but its overall economic operation is within expectation; the demand structure is characterized by slower growth of investment, stable growth of consumption, and

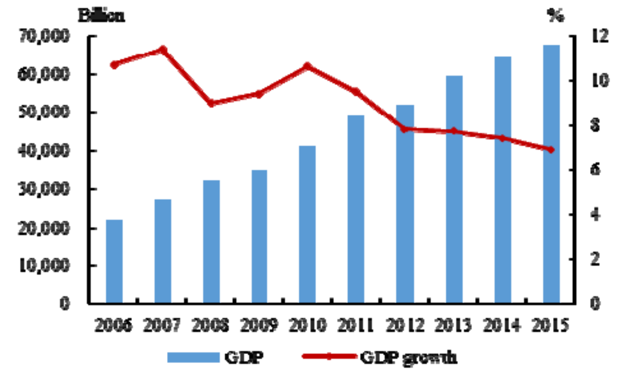
higher trade surplus, with infrastructure investment remains as a key growth stabilizer; the industrial structure is being optimized while the tertiary industry making greater contributions to GDP year on year.

In 2015, impacted by multiple factors such as sluggish global economic recovery, adjustment of domestic economic structure and cyclical downturn of some sectors, China's annual GDP amounted to RMB 67.67 trillion, indicating its economic growth continued to slow down, with its GDP picking up by 6.9%, 0.4 percentage point lower year on year. IMF's forecast shows that China's GDP contributed 15.5% of the global growth in 2015, 4 percentage points higher than that of 2012. Moreover, its gap with the US' GDP has been significantly bridged, with its 2015 GDP being 63.4% of that of the US, which was 11 percentage points higher than that of 2012. China's economy has entered a new stage featuring slower growth and higher quality, and optimizing resource allocation, cultivating new impetus, and restructuring will be the way forward for its future reform. China's economy is expected to be stabilized while sustaining slow growth, as the 13th Five-Year Plan is implemented, the supply-side reform is pressed ahead with, and a series of measures remain in effect to stabilize growth while promoting reform.

On demand side, the demand structure is characterized by slower investment growth, stable growth of consumption, and higher trade surplus. Impacted by the adjustment of the real estate industry and weak demand in the manufacturing industry, the total investment in fixed assets grew at a slower pace of 9.8%[1] in 2015, down by 5.9 percentage points year on year. Despite a marginal fall, infrastructure investment continued to grow at an astonishing 17.2% and accounted for 18.4% of fixed assets investment (excluding farmers), remaining the key growth stabilizer. Consumption has grown steadily, driven by auto-related consumption slowing down, recovering catering income growth along with the weakened impact from limiting the three public consumptions (spending on overseas travel, receptions and vehicles), as well as housing-related consumption and emerging consumption formats such as online shopping and e-commerce. Total revenue from retail sales of consumer goods in 2015 increased by 10.7% from the last year, indicating consumption maintains a steady growth momentum. As major trade partners' recoveries were below expectation, China's export of goods had slowed down quarter-over-quarter and began a downward trend in July, leading to a fall of 1.8% in export of goods for the year. Dragged by sluggish domestic demand, imports of goods continued to drop, and registered a decrease of 13.2%. Trade surplus continued to expand, with the gap between import and export (import subtracted from export) hitting RMB 3,677.0 billion, RMB 1,324.4 billion more than the previous year.

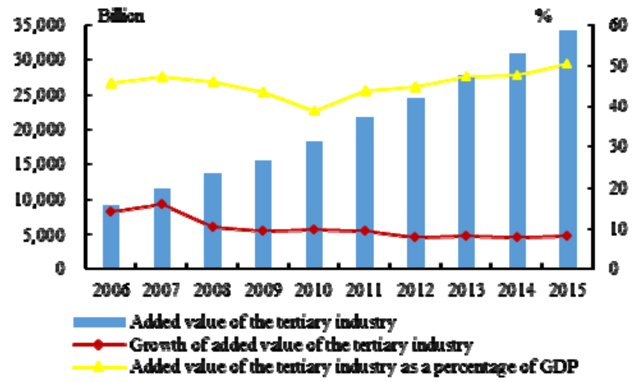
[1] This is nominal growth, same below. With price factors adjusted, the total investment in fixed assets actually grew by 11.8% in 2015; the total retail sales of consumer goods registered growth of 10.6%.

Figure 1: China's GDP and its growth 2006-2015



Source: National Bureau of Statistics

Figure 2: Added value of the tertiary industry 2006-2015



Source: National Bureau of Statistics

As the economic reform advances, industry structure has been optimized. Since 2013, the tertiary industry has grown faster than the secondary industry, and the proportion of its added value has been growing. In 2015, the tertiary industry delivered added value of RMB 34.16 trillion, up by 8.3% year on year or 2.3 percentage points against that of the secondary industry; the added value of the tertiary industry as a percentage of GDP was 50.50%, exceeding 50% for the first time.

However, CCXI has also noticed that the industrial production declined on the whole due to slower demand, dropping prices and overcapacity. Impacted by slower growth and overcapacity of industrial production, the inflation in the productive industry is not optimistic. According to leading indicators, PMI is around the 50 boom-and-bust line, suggesting that the manufacturing industry is still struggling with recession. Commodity prices are low, weak demand has led to decreasing PPI, and the prices in the production industry remain low.

Overall, China's economy is still at the reform and transformation stage featuring slower growth and pursuit of higher quality. Firstly, China's GDP growth is slowing down due to several factors, including sluggish global economic recovery, adjustment of domestic economic structure and cyclical downturn of some sectors, China's GDP growth is slowing down; secondly, the industry structure is being optimized, with the tertiary industry accounting for a growing proportion in GDP on an annual basis; thirdly, investment is decelerating, but consumption stays stable, suggesting the quality of growth is improving. In the next few years, under the 13th Five-Year Plan, the supply-side reform may achieve substantial advancement and economy may find a better balance between growth speed, structure and reform, but as reform enters into the critical stage, the challenges facing the industrial economy will call for more attention.

2. Policy outlook

In 2016, the monetary policy will be prudent but relatively accommodating. The Central Bank will be committed to creating a moderately loose monetary and financial environment for economic restructuring and transformation and upgrades in terms of quantity and price. The positive fiscal policy will further encourage efforts to stabilize growth and improve people's living standards. More fiscal spending will be budgeted and the spending structure will be optimized.

Under the current economic conditions, fiscal and monetary policies still have great room for operation. The Central Economic Work Conference points out that the government will continue to adopt positive fiscal policy and prudent monetary policy in 2016.

As for monetary policy, the Central Bank implemented the prudent and slightly loose monetary policy, innovating thinking and way of regulation and control, stressing that the monetary policy should be neither too tight nor too loose with focus on key areas, pace and intensity, and timely and moderate pro-cyclical fine-tuning should be conducted, so as to build a neutral and moderately loose monetary and financial environment for economic restructuring, transformation and upgrades in light of amount and price. On the one hand, many instruments such as public market operation and medium-term lending facility have been used to adjust the banking liquidity. On the other hand, the Central Bank cut the RMB benchmark deposit and lending rates and the reverse repurchase rate in open markets to guide stable and moderate cuts in market interest rates and promote the stability of real interest rates. In addition to conventional public market operations, in 2015 the Central Bank cut interest rates and deposit-reserve ratio five times respectively, extended funds issued via MLF and expanded the pilot program for credit asset pledged relending, to guide the reduction in financing costs of the real economy and adjust liquidity at a proper time. As at the end of 2015, the all-system financing stock was RMB 138.14 trillion, up by 12.4% year on year. In particular, the balance of RMB loans issued to the real economy stood at RMB 92.75 trillion, up by 13.9% year on year. Driven by lowered offering threshold and offering interest rate in the bonds markets, corporate bonds rose rapidly, with the balance of corporate bonds and that of domestic equity financing by non-financial institutions sustaining a growth of more than 20%. Along with more stringent regulation on off-balance sheet business, the foreign currencies-denominated loans dropped by 13.0% year on year. At the end of 2015, M2 grew by 13.3% or 1.1 percentage points year on year. Affected by RMB depreciation and expected US interest rate hikes, funds outstanding for foreign exchange was on a downward trend in the year, declining at the end of the year despite a slight recovery in October. The balance of funds outstanding for foreign exchange of financial institutions was RMB 26.6 trillion at the end of Dec 2015, down by RMB 628.98 billion month on month. Considering exchange rate fluctuations, pressure from capital outflows, inflation and economic growth, China is expected to face a more complex macro situation in 2016. On the one hand, mutual impact and restriction between exchange rate and interest rate may be strengthened; on the other hand, more complex factors need to be taken into consideration in adjusting targets under the new normal. While pushing forward interest rate marketization, the Central Bank will step up efforts to build the policy interest rate system, changing quantitative adjusting tools into price-based ones. Overall, the monetary policy will be moderately loose, with interbank liquidity sustained while consensus loans will be expanded and more targeted easing control means such as use of credit policy to support relending, credit asset pledged relending, and pledged supplementary lending will be adopted.[2] Further, the bidirectional fluctuation system for the RMB exchange rate will be improved as the interest rate liberalization is advanced.

[2] According to the *Execution Report on China's Monetary Policy for 2014 Q3* published by the Central Bank, consensus loan is in nature the dynamic adjustment mechanism of differential reserve, whose focus is that financial institution's issuance of credit should

Due to economic slowdowns, structural tax cuts and adjustments in the real estate industry, China's fiscal revenues growth has slowed down over the past two years. In 2015, national general public budgetary revenues hit RMB 15.22 trillion, up by 5.8%. At the same time, more fiscal spending has been budgeted, with national general public budgetary expenses reaching RMB 17.58 trillion, up by 13.2%, which was higher than that of the national general public budgetary revenues. It is expected that the more positive fiscal policy will be adopted and the spending structure will be further optimized in 2016. Firstly, more financial deficit, national and local treasury bonds will be issued to increase input to the construction of key infrastructure projects. Secondly, fiscal expenses structure will be further optimized to support short-term demand while improving long-term supply. The government finance will need to accelerate weeding out overcapacity while considering bottoming out of short-term demand and long-term supply improvement. It needs to provide more support for areas where public services are lacking, such as scientific research, environmental protection, new energy and education, and work with key industries as set forth in Made in China 2025 and the 13th Five-year Plan to boost technical innovation and industrial upgrades. Thirdly, tax reform will be pressed ahead with and further structural tax cuts will be conducted to reduce taxes and dues. The VAT pilot program was rolled out in an all-round way on May 1st, 2016. According to the transition scheme of VAT revenue division between the central government and local governments, there will be a 50%/50% split between the central government and local governments in VAT revenues in the coming 2-3 years. Fourthly, local government debt swap will be intensified and local financing model will be innovated. 1,035 periods of local government bonds worth RMB 3.84 billion were issued in 2015, accounting for the top 22.8% of all types of bonds issued in the inter-bank bond market in the year. The smooth advancement of local governments' bond swap will be favorable for reducing debt risk and boosting local economic transformation.

As the economy slows down from high-speed growth to mid to high-speed growth, China will continue to adopt the prudent monetary policy and positive fiscal policy, build a favorable monetary and fiscal environment to boost economic restructuring, transformation and upgrades, while stepping up efforts to stabilize growth and improve people's living standards. Local governments will build an effective and standard debt financing mechanism, which will be favorable for reducing systematic debt risk and promoting local economic transformation.

3. Impetus for future growth

Further advancing the supply-side reform will become a top priority for China's macroeconomic development.

match its own capital level and reasonable demands of economic growth. The implementation of the consensus loan policy has produced positive results in smoothing balanced and proper issuance of credit and guiding the adjustment and optimization of credit structure.

The central government has proposed to promote the supply-side reform. The supply side is comprised of four factors, namely, labor, land, capital and innovation; the supply-side structural reform is carried out to adjust economic structure to optimally allocate factors and enhance the quality of economic growth.

While maintaining the bottom line of economic growth, the central management will focus economic governance more on the quality of growth, with structural reform still as the focus of control. The 13th Five-Year Plan, setting forth five development concepts such as coordinated development, is the overall planning and guidance for the economic, financial and social developments in the coming five years. CCXI believes that the reform to narrow income gaps and the factor price reform, the two core reforms, will keep propelling the reforms in key areas, such as the SOE reform, the land system reform, the fiscal, tax and financial institutional reform, the reform to transform government functions and the capital market reform. Barriers that prevent the market from playing its roles will be removed. The reforms in the monopoly industry, franchise operation and overseas investments will be accelerated and the market mechanism will continue to play its roles.

CCXI believes that the supply-side reform proposed by the central government is to weed out overcapacity, boost industrial optimization and reorganization, reduce cost of industrial enterprises and reduce real estate industry inventory, while guarding against and mitigating economic and financial risks. This is a strategic layout to boost economic transformation and recovery in China.

Local economy: operated stably within a reasonable range; the potential to utilize innovation to drive development and transformation will be unleashed in the future

1. Regional environment

The Yangtze River Delta is the most prosperous region in China. According to the *Plan for City Cluster Development in the Yangtze River Delta* passed at the State Council Executive Meeting, world-class city clusters with global reputation will be built in the region by 2030. As the leading city and core circle, Shanghai will play a guiding role in achieving this goal, driven by innovation. As the Belt and Road Initiative moves forward and the Yangtze River Economic Belt being built, it is expected that the new Yangtze River Delta City Cluster strategy will further strengthen Shanghai's radiation and guiding role, and assist Shanghai in achieving its economic and social development goals during the 13th Five-year Plan period.

The Yangtze River Delta is the most prosperous region in China, boasting a superior location, profound economic foundation, sound institutional environment, advanced academic culture, complete township system and a solid foundation for integrated development. Firstly, located in the east coastal area of China, Shanghai boasts intensive and 3D traffic network that connects to foreign countries, and links the south with the north, with central and western parts within its radius. This superior location provides strong support for the flows of market factors. Secondly, with a solid manufacturing foundation, Shanghai has witnessed rapid development of traditional industries such as electronic information, equipment manufacturing, iron and steel and petrochemical industries, as well as emerging industries like biomedicine, new materials and new energy. Shanghai also takes the lead in the services industry, developing finance, trade, shipping, logistics and tourism together with other cities depending on their advantages. Thirdly, Shanghai was among the first to build the basic framework of the socialist market economic system, which has provided systemic guarantee for developing an open economy. Fourthly, Shanghai also prides itself on an advanced academic culture. There are many colleges and universities and research institutes in the region, laying a solid foundation for cultivating the innovation capability.

The *Regional Plan for the Yangtze River Delta* (Regional Plan), approved by the State Council in 2010, is currently in force. According to the Regional Plan, Shanghai is the center in the region, and 16 out of 25 cities in the region are the core areas, and the rest are radius regions. As the Belt and Road initiative is pressed ahead with, and the Yangtze River Economic Belt is built, the regional planning of the Yangtze River Delta is changing. On May 11th, 2016, the State Council Executive Meeting passed the *Plan for City Cluster Development in the Yangtze River Delta*, proposing the cultivation of higher level economic growth poles. By 2030, world-class city clusters with global reputation will be built in the region. The Meeting also put forward that Shanghai's role as the center of the region should be made use of to promote the development of adjacent metropolitan circles such as Nanjing, Hangzhou, Hefei, Suzhou-Wuxi-Changzhou, and Ningbo. The goal of the Yangtze River Delta City Cluster is to build a world-class city cluster that functions as a major platform for the government to participate in international competition. Inside the region, Shanghai is the leader and other cities develop in clusters where there are core cities, axis cities, belts, circles, districts, and so forth. Jiangsu, Zhejiang and Anhui are close cooperation circles, and the rest such as Henan and Shandong are radius circles.

Integrated development of the cities in the Yangtze River Delta requires creating a mechanism that can motivate the cities for cooperation. It is expected that Shanghai will play a guiding role that is of great significance. In December 2014, heads of the commercial departments from the three provinces and one city in the Yangtze River Delta signed the *Cooperation Agreement for Promoting Integrated Development in the Yangtze River Delta* to strengthen regional cooperation and build a big integrated market through joint building of rules and systems, joint pushing of innovative models, joint governance of market regulation, connectivity of logistical facilities, sharing of market information and mutual recognition of each other's credit system. Amid its long-standing efforts to promote integration, the Delta has developed a regional cooperation mechanism consisting of the decision layer, coordination layer and execution layer. As the leading city in the Delta, Shanghai will take the opportunity of building the pilot free trade zone to play a better role in impacting and driving the development of other cities in the Delta and benefit from the integrated regional development.

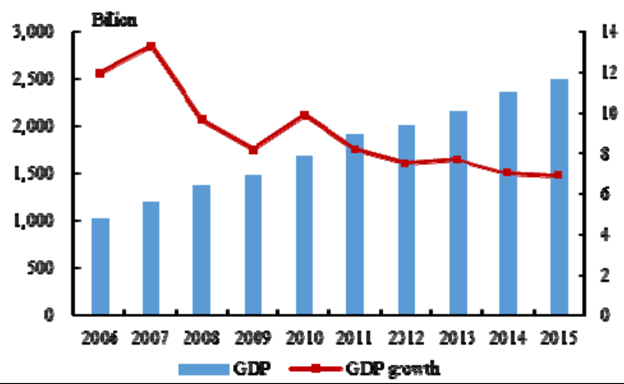
In CCXI's opinion, building world-class city cluster in Yangtze river delta according to the new development plan will further strengthen Shanghai's leading role and driving the development of other cities in the Delta. The integration and fusion of cities in the Delta will create a favorable external environment for Shanghai and promote Shanghai to fulfill its economic and social goals during the 13th Five-year Plan period.

2. Economic Growth

Shanghai's economy was operated within a reasonable range throughout the year, with its fundamentals remaining stable. Despite sluggishness across the country, Shanghai's economy sustained robust growth. Consumption, which is the main driver of the new economic growth mode, has become an increasingly stronger drive force. The overall size of trade in goods and trade in services sustained strong momentum for growth.

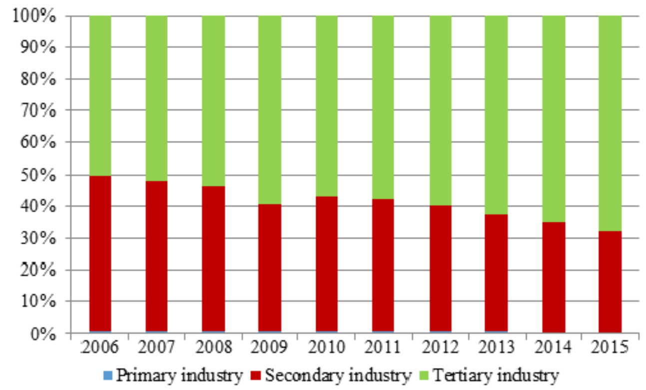
In 2015, Shanghai's economy was operated within a reasonable range, with fundamentals remaining stable. Its GDP hit RMB 2,496.50 billion, up by 6.9% year on year. Despite economic slowdowns across the country, Shanghai's economy sustained stable growth. In 2015, Shanghai's GDP contributed 3.7% of China's GDP, and its GDP per capita was RMB 103,100, calculated by its resident population.

Figure 3: Shanghai's GDP and its growth 2006-2015



Source: Shanghai Statistical Yearbook, Report on National Economic and Social Development of Shanghai

Figure 4: Three-industry structure of Shanghai 2006-2015



Source: Shanghai Statistical Yearbook, Report on National Economic and Social Development of Shanghai

Consumption is still the top driver of Shanghai's economic growth and new economic forms such as e-commerce are at the forefront of the country. In 2015, retail sales of consumer goods went up by 8.1% in Shanghai, down by a slight 0.6 percentage point year on year. With building an international trade center as the top priority, Shanghai is committed to building a multi-layered, multi-form and full-coverage commercial carrier including commercial streets, iconic business circles, new commercial landmarks, and suburban business and commercial centers. As at the end of 2015, there were 163 shopping centers in the city, including 71 shopping centers with a floor area of more than 100,000 square meters. These shopping centers achieved operating income of RMB 128.86 billion, up by 17.2% year on year. Besides, the opening of Shanghai Disneyland Park in June 2016 drives the economic increments of relevant industries such as tourism and consumption. In addition to traditional forms, Shanghai has been active in cultivating new forms such as the services economy, expanding the service scope of e-commerce. In 2015, it registered RMB 125.06 billion in none-store retailing, up by 26.9% year on year. Statistics from Shanghai Municipal Commission of Commerce shows that Shanghai registered RMB 1.64 trillion in e-commerce trading volume, accounting for 10% of the country's total and up by 21.4% year on year. In particular, the inter-company e-commerce trading volume was RMB 1.23 trillion, up by 15.7%. The e-commerce platforms in Shanghai such as iron and steel, chemicals, and non-ferrous metals have become the price barometers for the industries across the country. Online shopping for normal consumers delivered a trading volume of RMB 414 billion, up by 42.6%, which was nearly 10 percentage points higher than that of national online retailing.

In 2015, investment in fixed assets in Shanghai was up by 5.6% year on year. Nationally, its contribution to GDP was mediocre. On the one hand, Shanghai's infrastructure is sound, and its demand for large-scale investment in fixed assets is dwindling; on the other hand, the economic level is high in the city. Along with deeper restructuring, transformation and upgrades, Shanghai's economic structure has changed from being dominated by investment into being dominated by consumption. Structurally, investments in the tertiary industry and the non-state owned economy account for a high percentage respectively. In 2015, investment in the tertiary industry accounted for 84.8% of total investment in fixed assets; and investment in non-state owned economy is 68.9%.

In 2015, 96 key engineering construction projects were adjusted in the city. RMB 120.1 billion in investment was made as at the end of 2015, 12 percentage points higher than the figure planned at the beginning of the year. To be specific, 23 projects including Pudong International Airport Expansion Project Phase III had started, and 17 projects including Middle Ring Road Pudong Section had been completed. Significant progress was achieved in key construction areas in the year. In particular, Expo SOE Headquarters Cluster Buildings were topped; the major infrastructure of the core area of Shanghai Hongqiao Central Business District was completed; the major construction and supporting utilities in Shanghai International Tourism and Resorts Zone were completed; the major infrastructure in New Bund was completed; the functional and basic developments along the Huangpu River were equally stressed and conducted; Lingang Area became the manufacturing base of equipment and spare parts for automobiles, large vessels, and aviation. Smooth progress was achieved in the construction of many key industrial projects in the year. Specifically speaking, Commercial Aircraft Corporation of China, Ltd. (COMAC), Shanghai Tianma 5.5 Generation AMOLED, and Zizhu Emerging Industrial Technology Research Institute were completed; advanced manufacturing projects such as AVIC Aircraft Engine Industry Base, the 12-inch Large Diameter Silicon Product Line Construction Project Phase I of Shanghai Xinsheng Semiconductor Co., Ltd., and SAIC Technology Center Proprietary Brand R&D Center Expansion Project were pressed ahead with smoothly. Further, the key engineering projects of 2015 were focused on social projects and eco-environment projects. Indemnificatory housing construction and supporting utilities projects of the second round of large residential community were completed.

Dragged by weak demand worldwide, Shanghai’s imports and exports was RMB 2,806.09 billion in 2015, down by 2.1% year on year, but its contribution to the national total was 11.4%, 0.6 percentage point higher than that of the previous year. In 2015, Shanghai’s scale of imports and exports ranked No. 3 nationwide; its imports went up by 0.5%, but its exports dropped by 5.3%. Besides imports, its trade with relevant markets under the Belt and Road Initiative sustained growth. Its trade with ASEAN grew by 0.3%, and its import with the countries along “the Belt and Road” was up by 0.9%. Moreover, the trade in services grew rapidly. In 2015, Shanghai's trade in services (in the balance of payments) hit USD 196.67 billion, up by 12.2% year on year. Trade in services accounted for 30.3% of the city's total foreign trade volume, up by 3 percentage points.

Overall, Shanghai's economy operated within a reasonable range in 2015, with fundamentals remaining stable; spurred by new economy like e-commerce, consumption remained the top driver of economic growth; key infrastructure projects made smooth progresses and became the key pillars in stabilizing growth and

restructuring; although weakened by sluggish global demand, Shanghai's overall foreign trade volume was still at the forefront in China; notably, trade for services showed trend of fast growth.

The districts and county in the city have witnessed balanced and complementary development. Their economies are within expectations, and characterized by "two stables and two fasters". They set development goals based on their characteristics and local situations to boost industry restructuring and the implementation of technical innovation policies.

There are 15 districts and one county in Shanghai. According to th*e Plan for Major Functional Areas in Shanghai*, Shanghai is divided into New Metropolitan Development Area, Metropolitan Functional Optimization Area, New Urban Area and Comprehensive Development Ecological area. To be specific, the Metropolitan Functional Optimization Area encompasses central districts including Huangpu District, Xuhui District, Changning District, Jing'an District, Putuo District, Hongkou District, and Yangpu District, as well as Baoshan District, and Minhang District. The purposes of such an area are to promote deep integration of services industry and manufacturing industry and build the brand of "Services in Shanghai", by cultivating strategic emerging industries and metropolitan industries with high technical contents. The New Metropolitan Development Area, or Pudong New Area is defined as the core functional area for Four Centers, namely, international economic, financial, trade and shipping centers, the leading area for strategic emerging industries and the demonstration area for national reforms. The New Urban Area, covering Jiading District, Jinshan District, Songjiang District, Qingpu District and Fengxian District, is to optimize and enhance industrial capacity level based on key industry areas and industry bases. The Comprehensive Development Ecological Area, or Chongming County, is characterized by ecological residence, leisure and resort, and international conference. The efforts of the districts and county to develop based on local situations the industries that match their chief functions have boosted the development of the advanced manufacturing and modern services industries.

According to the *2015/2016 Report on Economic Conditions in Districts and county in Shanghai*, the economic development in the districts and county in Shanghai was within expectations, and characterized by "two stables and two fasters" in 2015, that is, the economy operates stably, quality and benefits improve stably, growth impetus changes faster and restructuring advances faster. The economy of the central areas was robust, with the economic and financial goals in most districts and county fulfilled earlier than was expected at the beginning of the year.

In 2015, accelerated construction of key projects yielded radiation dividends for the development of the districts and county. Shanghai Disneyland Park was completed and opened, Shanghai Tower was completed and business invitation began, Shanghai Hongqiao Central Business District was completed. These key projects, together with Oriental Dreamworks in the south, and Huanshangda International Film Park in the north, provide a hard-won opportunity for relevant districts and county to seek development as well as industrial restructuring in the districts and county.

As Shanghai kick-started making layouts for the building of a global science and technology center, the districts and county in the city formulated their own policies for pushing forward technical innovation to reshape development impetus. For example, Jing'an District set the major way forward under the strategic framework, i.e., building an "innovation ecological demonstration area", and striving for the "first choice" for innovation and entrepreneurship, the "first user" of innovation fruits, and the "hub" of innovation resources. Hongkou District proposed to build an integrated fintech innovation demonstration area, a pilot area for international technical and education cooperation, and an area teeming with talents for technical innovation and entrepreneurship". One more example, Jiading District proposed that it would build a key carrier of the science and technology center with global reputation. It introduced a 3-year action plan focusing on IC and IOT, new energy automobiles and smart automobiles, high-performance medical equipment and precision medicine, smart manufacturing and robots.

Table 2: General public budgetary revenues of districts and county in Shanghai in 2015 and its 13th Five-year Plan

City functional area	District/county	General public budgetary revenues (RMB bn)	13th Five-year Plan
New Metropolitan Development Area	Pudong New Area	78.82	Further efforts will be made to optimize layouts, adding one belt to the "one axis and three belts" proposed in the 12th Five-year Plan period to build "one axis and four belts". The additional belt, the central urban belt ranging from Hangtou to Laogang, is to help coordinate the south and the north and balance urban and rural development. In industrial layout, the 4+3 model proposed in the 12th Five-year Plan period will become the 4+4 model in the 13th Five-year Plan period, with the Aviation Town in the Zhuqiao-Chuansha Area added. One axis refers to the Pudong section of the east-west development axis in Shanghai. Running from Lujiazui to Pudong International Airport, this axis is the core of economic and urban service functions in Pudong. Compared with the 12th Five-year Plan period, the functions of this axis will be more diverse in the 13th Five-year Plan period. This axis runs from Lujiazui Financial City to Zhangjiang Yangtze River Delta Sci-Tech City, to the Tourism City backed up by Disneyland Park and then to the Aviation Town in Zhuqiao.
Metropolitan Functional Optimization Area	Huangpu District	18.09	The 13th Five-year Plan period will be a critical period for Huangpu District to build 4 icons and to be at the forefront in 4 aspects, and build an international metropolitan central area with the highest global reputation. By 2020, efforts will be made to build the basic framework for the international Metropolitan central area with the highest global reputation, and become the core functional area for building Shanghai into an international financial center and trade center, the key service area for building Shanghai into a science and technology center, the core guiding area for building Shanghai into an international cultural metropolitan, the livable area suitable for business and entrepreneurship and the core ironic area for building Shanghai into a socialist modern international metropolitan.
	Xuhui District	15.11	Xuhui District will be committed to growing into an innovative and beautiful district that is committed to ensuring a happy life, especially a diversified cultural life, for its residents, and into a modern international metropolitan central area by 2020, featuring a dynamic economy, diverse culture, elegant environment and balanced society.
	Changning District	12.99	By 2020, the district will strive to become a dynamic and green high-profile area, with the major framework established for building it into a gathering place of technical innovation talents, featuring strong trading functions and special modern services. The district will take bold steps to grow into an innovation-driven, dynamic and livable international high-end area at a faster pace, in a bid to build a moderately prosperous society at a higher level and make its people's life better. The district's fiscal revenues grows at an annual average of 8%.

	Jing'an District	19.44	In the coming 5 years, under the guidance of the central government's strategic layout of a Four-Pronged Comprehensive Strategy, Shanghai government's plan of Four Centers and the district's strategy of "one axis and three belts", the district will establish a development philosophy of innovation, coordination, green development, openness and sharing to fulfill the goal of "building Jing'an into an international district where your dreams will materialize" by focusing on building it into a dynamic, balanced, and beautiful area boasting openness, inclusiveness, livability and satisfaction.
	Putuo District	9.64	By 2020, under the functional layout of "one axis and two wings", the district will be built into a "technology-driven transformation pilot area, and great ecological area to live, work, and innovate", so as to make sure that a better city makes its people's life better.
	Hongkou District	9.01	By 2020, the district will strive to grow into a key functional area in Shanghai amid the latter's efforts to become an international financial and shipping center, into a reputed dynamic area fit for entrepreneurship and innovation, into an open and diversified area inheriting the local culture, into a great area to live, work and travel, and into a modern area with global reputation, characterized by passion for innovation and enchanting culture, so as to enhance its people's wellbeing and build a moderately prosperous city at a higher level.
	Yangpu District	9.58	Under the guidance of accelerating the building of the district into a key carrier for the technology innovation center with global reputation, the district aims to be the first to grow into a mass innovation area, and to become a national innovation-oriented demonstration area and a better international metropolitan central area by 2020, by deepening "three-district linkage" and "three-city integration". Regional collaboration will be stressed to establish a new development pattern of "western core area + central enhancement area + eastern strategic area". Based on the five functional areas, the district will work to clarify the spatial layout of "western core area + central enhancement area + eastern strategic area", integrate spatial resources and unleash functional integration effect under the principle of south-north linkage and east-west interaction to boost integration of technical innovation with district updates, with focus on improving the district spatial layout with innovation and entrepreneurship as the core. Specifically, focus will be on the western core area to build an "innovative economic corridor"; the central enhancement area will be optimized to shape a "maker eco-community"; and the eastern strategic area will be deepened to build a "new riverside innovation-oriented landmark".
	Baoshan District	12.71	In the next 5 years, the district aims to grow into a key carrier for the building of strategic emerging industries, and the best pilot for city functional transformation to ensure a higher level of urban-rural integration and shape a new modern riverside area featuring "three innovations, three friendlies and three suitables" "Three innovations" means a great place to innovate, create and start business. "Three friendlies" means an eco, production and life-friendly place. "Three suitables" means a place suitable for living, working and travelling.

	Minhang District	21.44	The district aims to build a basic framework for a technical innovation central functional area with global reputation. In the 13th Five-year Plan period, the district will continue with the spatial development strategy of "one axis, one belt and three functional areas" that was proposed in the 12th Five-year Plan period, with focus on building a city linkage development axis. This axis, formed by subway line 5 and planned subway line along Qizi Road, links innovation and entrepreneurship landmarks such as "Big Zizhu", and Nanhongqiao, and connects modern services clusters and industry parks such as Shanghai Hongqiao Central Business District, Qibao Ecological Business District, Zizhuang Business District, areas along Humin Road in Zizhung Industry Zone, and Jianchuan Road Business District. The district will also develop the belt along the Huangpu River. The district will voluntarily undertake the city's development strategy for areas along the Huangpu River. By deepening planning and research, it will accelerate promotion in the early period, and kick-start the construction of the riverside public spaces, boost the simultaneous planning and linked development of the areas along the Huangpu River and make plans for developing the belt along the Huangpu River. It will focus on shaping three key functional areas, namely, Big Hongqiao Modern Services Business Area, Big Zizhu Technical Innovation Functional Area and Greater Huangpu River Urban-rural Functional Area.
New Urban Area	Jiading District	19.14	By the end of the 13th Five-Year Plan period, the district aims to build a basic framework of a new modern city that boasts strong capabilities in innovation, entrepreneurship and delivering benefits and is a great place to live and work, featuring sound and independent functions, integrated urban-rural development, beautiful eco-environment, and orderly society. Meanwhile, the district will strive to make significant breakthroughs in building a key carrier of Shanghai Technology Innovation Center, and to build a moderately prosperous society in all aspects and at a higher level, in a bid to become an example of suburban development in Shanghai. In optimizing layouts, efforts will be made to boost the transformation from "one core and two wings" to "one core and three districts" to further strengthen the guiding role of Jiading New Town as a core area, and enhance the functions of the independent innovation and industrialization demonstration area in the Technology Town, the production-city fusion demonstration area in the International Auto City, and Beihongqiao Business Demonstration Area.
	Jinshan District	6.55	By 2020, the district will strive to grow into a technology-led, innovation-driven economic transformation demonstration district, pilot district for unique integrated rural and urban development that is great for living and working, and pilot district for integrated regional development that has broad coverage and complete functions, in a bid to step into a higher-level moderately prosperous society. The district will spare no effort to build an economic transformation demonstration district with focus on a "modern smart manufacturing town". It will work to ensure that its economy grows at a mid and high-speed, which will continue to be at the forefront among suburban districts/counties, and push its comprehensive economic strength to a new high. It will also be committed to building itself into a pilot district for integrated rural and urban development, characterized by a "seaside garden town".
	Songjiang District	12.31	The district aims to build a higher-level moderately prosperous society featuring more balanced urban and rural areas, a basic framework for a comprehensive node city in the Yangtze River Delta City Cluster with a population of more than 1 million, and a modern new Songjiang that is great for living and working by 2020. It will be committed to optimizing its industry structure and sharpening its competitive edge.
	Qingpu District	12.53	By 2020, the district will sustain mid- and high-speed economic growth, with significant breakthroughs achieved in transformation and upgrades. The city functions will be improved, city quality will be enhanced, its basic capability for public services will be strengthened further, and the new integrated urban-rural development pattern will be built, so as to build a higher-level moderately prosperous society and a new modern Qingpu that is eco-friendly and ideal for living.

	Fengxian District	8.49	By 2020, the district will further optimize the industrial structure, with technical advances making greater contributions to economic development. It will also strive to improve the business environment, build a landscape of mass entrepreneurship and innovation, and basically establish a new innovation-driven development model, in a bid to become an area where SMEs are passionate about technical innovations. With its functions and forms enhanced, Nanqiao New City will make better use of the driving role of production-city fusion, and establish a new system for urban-rural integrated development, so as to become an example for coordinated urban and rural reform in Shanghai.
Comprehensive Ecological Development Area	Chongming County	5.50	By 2020, the county will strive to complete the Outline of Building Chongming into Eco-island, and make new breakthroughs in ecological development to establish a basic framework for a modern eco-island. It will step up efforts to build the functions of three islands, to coordinate the building of a beautiful and eco-friendly county that is great for recreation and resorts and advanced in eco-agriculture, marine equipment, and technical research and innovation, and to remarkably improve its comprehensive economic strength and the quality of development. New developments will be achieved in building AAAAA big tourism industry to shape a multi-tourism integrated development pattern. New goals of industrial development based on the smart island industry park and Shanghai Changxing Marine Equipment Industrial Base will be achieved, with production-city interaction capability remarkably strengthened. New-type urbanization with focus on Chengqiao New City and Dongtan Chenjia Town will open up a new chapter, making the urban development system transparent.

Note: The general public budgetary revenues of Jing'an District for 2015 includes that of original Zhabei District.
Source: Bureaus of finance of the districts and counties

Compared with other major cities, Shanghai still enjoys strong competitive advantages and ranked No. 1 by comprehensive economic strength in China. With a superior location, Shanghai is a leader in terms of financial innovation capability and maintains balanced development of industrial economy and environmental protection, which give it competitive advantages in economic and social development.

In comparison with other major cities in China, Shanghai's economic development presents the following features:

Firstly, Shanghai is the most prosperous city in China, with the major economic indicators being at the forefront across the country. In basic economic indicators, Shanghai has sustained No. 1 position in China by GDP, and takes a leading position in per capita GDP, which is at the level of developed countries. The city's economic structure is consumption-based and financial industry-driven, with focus on tertiary industry. Meanwhile, it boasts strong and advanced manufacturing industry and a leading position in technical innovation and R&D inputs in China.

Secondly, Shanghai enjoys a superior location, benefiting from the regional integration of the Yangtze River Delta. The Beijing-Tianjin-Hebei Region, the Yangtze River Delta and the Pearl River Delta are the three core areas for economic growth in China, priding themselves on five major cities, namely, Beijing, Tianjin, Shanghai, Guangzhou, and Shenzhen. By population, economic and established area densities, the Yangtze River Delta takes the top spot among the three regions, followed by the Pearl River Delta. Due to uneven economic development in the Beijing-Tianjin-Hebei City Cluster, Beijing and Tianjin's effect of resource absorption significantly outperforms their effect of economic radiation. By contrast, Shanghai, as the leading city in the Yangtze River Delta region, has stronger radiation effect on the regional city cluster, while the regional integrated development has further boosted the Shanghai's economic and social development.

Thirdly, Shanghai has a diversified financial industry and first-tier capacity of financial innovation, and economic growth is largely driven by finance. With a sound financial system and the superior development environment, Shanghai boasts remarkable agglomeration effect of financial institutions and strong financial innovation capability. Shanghai has established a robust national financial market system comprised of securities, monetary, foreign exchange, insurance, futures, and financial derivatives markets. The agglomeration effect of financial institutions has become further evident. While financial institutions including commercial banks, securities companies, insurance companies, fund management companies and futures companies accelerate agglomeration, emerging institutions such as petty loan companies, financing guarantee companies and equity investment companies are developing rapidly. With the expansion of the opening up policy, Shanghai continued to push forward innovation in financial business and launched a batch of key innovation businesses, such as Shanghai-Hong Kong Stock Connect, Shanghai Gold Exchange International Board and the RMB cross-border payment system. Shanghai is a leader in financial innovation and overall financing environment across the country, which offers a strong boost to its local economic development.

Fourthly, the balance between industry development and environmental protection in Shanghai is favorable for the long-term development of the industry economy. Along with the stronger awareness of environmental protection, the contradiction between environmental protection and economic development has been more evident. Shanghai is home to 14 national development zones and 15 development zones, which have promoted industrial agglomeration and is favorable for centralized pollution control. Currently, the concentrated sewage treatment rate in industry parks and the attainment rate of discharge of pollutants of industry enterprises subject to special monitoring are both above 95%. Shanghai's attention to environmental protection has laid a solid foundation for the long-term development of its industry economy.

Table 3: Major economic indicators in Shanghai and other cities 2015

City/indicator	GDP (RMB mn)	GDP Per Capita (RMB '000)	Share of the tertiary industry (%)	Added value of financial industry (RMB mn)	R&D inputs as a percentage of GDP (%)	Retail sales of consumer goods (RMB mn)	Investment in fixed assets (RMB mn)
Shanghai	**2,496,499**	**103.1**	**67.8**	**405,223**	**3.7**	**1,005,576**	**635,270**
Beijing	2,296,860	106.3	79.8	392,630	5.95	1,033,800	799,090
Tianjin	1,653,819	--	52.0	158,812	3	524,569	1,306,586
Chongqing	1,571,972	52.3	47.7	141,018	1.53	642,402	1,548,033
Guangzhou	1,810,041	--	66.77	162,943	--	793,296	540,595
Shenzhen	1,750,299	158.0	58.8	254,282	4.05	501,784	329,831

Source: the Statistical Communique of Social and Economic Development of the cities 2015

3. Six key industries and strategic emerging industries

While improving quality of service industry, Shanghai places manufacturing at a position of great strategic significance in the future. It set a target of 25% of GDP for manufacturing industry during the 13th Five-year Plan period, and a target of a 20% of GDP for added value of strategic emerging industries by 2020; Shanghai is pushing transformation and upgrades of manufacturing industry, following a logic that outputs will be reduced, quality will be improved, and efficiency will be enhanced, while R&D inputs will be

increased, system will be innovated, and factor costs will be reduced in order to create favorable conditions for the transformation and upgrades of 6 key industries.

Thanks to its ports, Shanghai started industrialization earlier than other cities in China, boasting a solid industrial foundation. With years of development, Shanghai takes shape six key industries in the secondary industry, namely, electronic and information product, automobiles, petrochemicals and fine chemicals, high-end steel, complete-set equipment and biomedicine manufacturing industry, and many enterprises with global reputation have emerged, such as Shanghai GM, Shanghai Volkswagen, and Baosteel. In 2015, the secondary industry contributed 31.8% of the city's GDP with its added value, and 2.4% of the city's economic growth. In 2015, Shanghai recorded RMB 3,321.16 billion in gross industrial output value, down by 0.5% year on year; the gross industrial output value of the six key industries accounted for 66.9% of the city's gross industrial output value above designated size, down by 0.2% year on year. But the growth was 0.3 percentage points higher than that of the city.

Table 4: Gross industrial output value of six key industries 2013-2015 (RMB million)

Industry/year	2013	2014	2015
Electronic and information product manufacturing industry	648,635	625,234	615,955
Auto manufacturing industry	488,408	531,903	516,822
Petrochemicals and fine chemicals manufacturing industry	414,822	378,503	337,531
High-end steel manufacturing industry	151,707	144,719	115,953
Complete-set equipment manufacturing industry	371,340	394,976	400,194
Biomedicine manufacturing industry	83,680	87,351	90,489
Total	**2,158,591**	**2,162,685**	**2,076,944**

Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

Given the new characteristics of industrial economic development, Shanghai proposed that efforts should be made to accelerate the building of a modern industry system that is led by emerging industries of strategic significance, and supported by advanced manufacturing industry and features collaboration of productive service industries, promote production-oriented manufacturing towards service-oriented manufacturing, intensify technical innovation and renovation, and cultivate new-generation information technology, high-end equipment manufacturing, biomedicine, new energy, new materials, energy saving and environmental protection and new energy automotive industries.

To guard against industry hollowing-out, deliver a better performance in building the Four Centers and the science and technology center, and boost the coordinated and sustainable development of the secondary and tertiary industries, Shanghai places manufacturing industry at a position of great strategic significance while improving quality of service industry. Shanghai set a target of 25% of GDP for manufacturing industry in the 13th Five-year Plan, and a target of 20% of GDP for added value of strategic emerging industries by 2020 in the Report on the Work of the Government. In May 2016, Shanghai published the *Opinions on Advancing the Supply-side Structural Reform to Promote Stable Growth, Restructuring and Transformation in Industries*, and proposed 27 measures to boost stable growth and restructuring in industries. Shanghai is making industries the main battleground of the supply-side structural reform to boost the transformation and upgrades of manufacturing industry and step towards higher ends of the innovation chain, industry chain and value chain. The strategic emerging industries are affected by the overall economic conditions, which provides a good opportunity for Shanghai to reduce outputs, improve quality and ramp up efficiency. Shanghai views manufacturing industry as a key support for the future economy, while increasing of R&D inputs and systemic innovation. Shanghai's R&D spending was RMB 92.5 billion, or 3.7% of the city's GDP in 2015. The growing R&D spending has provided good conditions for promoting the development of new technology, new model, new form and new industry.

4. Modern services industry and financial industry

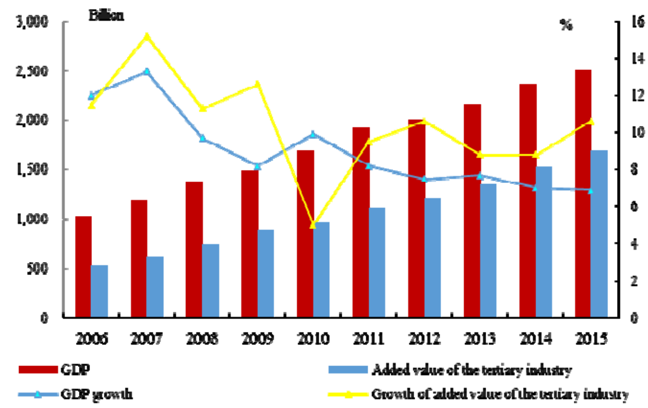
The share of the services-based tertiary industry and its contribution to the economy have been increasing year on year, and become the major pillar of the economic development, transformation and upgrades; Based on the building of China (Shanghai) Pilot Free Trade Zone, the sustainable development of the productive services industry, which is characterized by finance and logistics, has accelerated the building of "two centers"[3] in Shanghai; the innovative financial industry has become the core driver of the development of the tertiary industry, with the added value of the financial industry in 2015 rising by an astonishing 22.9% year on year; During the 12th Five-year Plan period, the plan to make Shanghai a global financial center had made significant progress and increased the level of internationalization.

Shanghai has started to explore the innovation-driven development model rather than element-driven model to make light of GDP measurement and develop the special modern services economy such as finance, logistics, e-commerce and information technology. Shanghai's tertiary industry grows faster than its economy, with wholesale and retail-led commerce and trade services industry and financial services industry being the major drivers of the tertiary industry. In recent years, the city's tertiary industry has grown rapidly than GDP for the same period, becoming the major driver of local economic growth. In 2015, the city's tertiary industry recorded RMB 1,691.45 billion in added value, which was up by 10.6%, and accounted for 67.8% of its GDP, continuing to display a year on year upward trend. The added value contributed 94.9% of the city's economic growth. By industry, the retail and wholesale industry, financial industry and real estate industry are the major composition of the tertiary industry. In 2015, the added value of the above industries combined accounted for 56.61% of that of the tertiary industry.

In the tertiary industry, the financial industry plays a crucial role. In 2015, the financial industry registered added value of RMB 405.22 billion, which was up by 22.9% year on year.

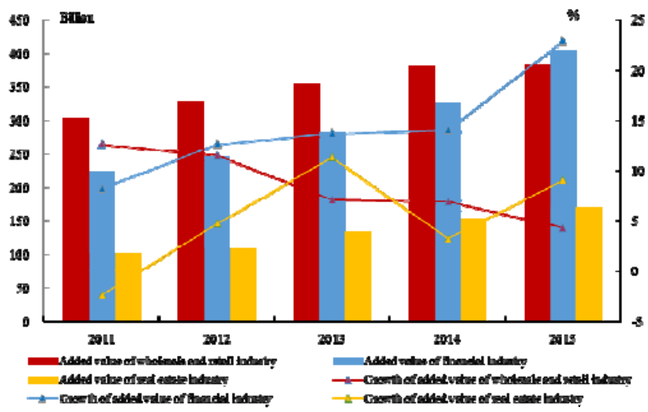
[3] The two centers refer to international financial and shipping centers

Figure 5: GDP, added value of the tertiary industry and their growth of Shanghai 2006-2015



Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

Figure 6: Major composition of added value of the tertiary industry of Shanghai 2011-2015



Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

Financial innovation in Shanghai started with the building of China (Shanghai) Pilot Free Trade Zone and has been strengthened step by step. On March 25, 2009, the 54th Executive Meeting of the State Council passed in principle the *Opinions of the State Council on Pushing Shanghai to Accelerate the Modern Services Industry and the Advanced Manufacturing Industry to Build International Financial Center and International Shipping Center*. Later, the Standing Committee of Shanghai Municipal People's Congress introduced the *Regulations on Pushing Forward the Building of International Financial Center*, and other supporting systems. Under such circumstances, the financial industry displayed a strong momentum for rapid development. During the 12th Five-year Plan period, the building of Shanghai World Financial Center achieved significant progress. Its position as the domestic financial center with financial market system as the core was basically established, and it would act as a global RMB product innovation, trading, pricing and liquidation center. Currently, Shanghai boasts diverse financial forms, active financial markets, and a sound financial market system. The innovative financial development has played a crucial role in promoting its economic transformation.

Firstly, the financial market system has been further improved, the financial institution system has become more robust, and the financial market has been more dynamic. The infrastructure of Shanghai's financial markets has been more robust. At present, Shanghai has a national financial market system comprised of stocks, bonds, etc. and covering almost all the national financial factor markets across the country. At the end of 2015, the State Council approved the preparation of Shanghai Insurance Exchange, the China International Payment System (CIPS) was launched in Shanghai, and China Government Securities Depository Trust & Clearing Co., Ltd. Shanghai Branch was established in Shanghai too. The financial market products and tools have been diversified, with a batch of influential financial products and tools such as T-bond futures, interbank deposit, ETF futures, Gold ETF, and foreign exchange futures launched. As multi-level capital markets are improved, diverse choices are available for corporate financing and resident investment. In recent years, many international financial institutions have chosen to establish headquarters and regional centers in Shanghai. In 2015, New Development Bank was officially opened as the first international financial organization to be headquartered in Shanghai. Breakthroughs in gathering head office and functional financial institutions have been achieved. Bank of China Shanghai RMB

Trading Unit, China Construction Bank (Shanghai) Center, and Agricultural Bank of China Shanghai Management Headquarters have been established one after another. Key financial institutions such as China Insurance Fund, UnionPay International Co., Ltd., E-Capital Transfer Co., Ltd. and China Minsheng Investment Corp., Ltd. have been established in Shanghai, too.

In 2015, the trading volume in the financial markets in Shanghai hit RMB 1,462.73 trillion, two times that of the previous year. Shanghai was among the leaders in the world by trading volumes of many financial categories, and its influence was expanding. In 2015, the financial industry in Shanghai registered RMB 405.22 billion in added value, accounting for 16.2% of its GDP. Shanghai Stock Exchange reported total turnover of RMB 266.37 trillion, 2.1 times that of the previous year. In particular, stock turnover was RMB 133.10 trillion, 3.5 times that of the previous year. Shanghai Futures Exchange registered total turnover of RMB 63.56 trillion, up by 0.5%. China Financial Futures Exchange achieved total turnover of RMB 417.76 trillion, 2.5 times that of the previous year. The interbank market registered total turnover of RMB 704.26 trillion, up by 94.8%. Shanghai Gold Exchange achieved total turnover of RMB 10.78 trillion, up by 68.8%.

Table 5: Total turnovers of financial segments in Shanghai 2013-2015 (RMB trillions)

Financial segment\Year	2013	2014	2015
Shanghai Stock Exchange	86.51	128.15	266.37
Shanghai Futures Exchange	120.83	126.47	63.56
China Financial Futures Exchange	141.01	164.02	417.76
Interbank markets	235.29	361.51	704.26
Shanghai Gold Exchange	5.22	6.51	10.78
Total	588.86	786.66	1,462.73

Note: The interbank markets' turnover for 2015 was the sum of those of interbank domestic currency markets and interbank foreign currency markets. Shanghai Gold Exchange's turnover was calculated on a two-way basis, while those of Shanghai Stock Exchange, Shanghai Futures Exchange, China Financial Futures Exchange and interbank markets were calculated on a one-way basis.

Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

As at the end of 2015, there were 1,430 financial institutions in the city, including 618 monetary financial services units; 350 capital markets service units; and 382 insurance units. Besides, there were 230 foreign-funded financial units in the city.

Table 6: Number of financial institutions in Shanghai 2013-2015

Indicator\Year	2013	2014	2015
Number of financial institutions	1,240	1,336	1,430
Wherein: Monetary financial service units	564	601	618
Capital market service units	252	292	350
Insurance units	347	363	382

Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

Secondly, the financial industry has continued to boost the development of the real economy, which has produced remarkable results. Following the *Plan for Implementing the Guidelines of the General Office of the State Council on Financial Support for Economic Restructuring, Transformation and Upgrades in Shanghai*, the local government has introduced classified promotion measures, implemented the central government's policies for financial support for economic development, and introduced 42 policy measures with regard to financial support for SMEs and micro enterprises, agriculture, farmer and rural area, cultural creation industry, technical innovation enterprises, advanced manufacturing industry, and livelihood projects. In addition, the real economy has raised funds from financial markets directly or indirectly, greatly benefiting the development of China's economy and all of its sectors. In 2015, funds of RMB 871.30 billion were raised through stock trading on Shanghai securities market, 2.2 times that of the previous year; corporate bonds of RMB 1,741.37 billion were issued, 5.9 times that of the previous year. As at the yearend, 5,914 securities had been listed on Shanghai securities market, up by 2,156 year-on-year. In particular, there were 1,125 stocks, up by 86 year on year; Also by the yearend, balance of bank saving deposits of Chinese and foreign financial institutions in yuan and foreign currencies amounted to RMB 10,376.060 billion, up by RMB 1,332.88 billion from the beginning of the year; the outstanding balance reached RMB 5,338.721 billion, up by RMB 488.06 billion from the beginning of the year.

Table 7: Financing on Shanghai securities market and deposits and loans of Chinese and foreign financial institutions in yuan and foreign currencies 2013-2015 (RMB million)

Indicator\Year	2013	2014	2015
Equity financing throughout the year	251,572	396,259	871,296
Corporate debt financing throughout the year	313,042	295,522	1,741,367
Balance of bank saving deposits of Chinese and foreign financial institutions in yuan and foreign currencies	6,925,632	7,388,245	10,376,060
Balance of outstanding bank loans of Chinese and foreign financial institutions in yuan and foreign currencies	4,435,788	4,791,581	5,338,721

Note: since 2015, the "balance of domestic and foreign currency deposits of Chinese and foreign-funded financial institutions" include the deposits of non-banking financial institutions, and the "balance of domestic and foreign currency loans of Chinese and foreign-funded financial institutions" include the loans to non-banking financial institutions.

Source: Shanghai Statistical Yearbook, the Statistical Communique of Shanghai Social and Economic Development

Thirdly, the financial reform of China (Shanghai) Pilot Free Trade Zone has been deepened, remarkably improved the development environment. Shanghai takes the top spot in China by the level of its financial liberalization, and also takes a leading position in financial environmental security, financial asset quality and operation benefits. The banking, securities and insurance industries in Shanghai have always been at the forefront in China. Shanghai has become a financial center in the country, boasting a sound financial market system, a wealth of financial institutions and talents, and a strong driving force, which well prepare it to be an international financial center. In recent years, the government has kick-started many financial pilot reforms in Shanghai. As the building of China (Shanghai) Pilot Free Trade Zone is boosted, financial innovation and liberalization in the city have been stepped up. Meanwhile, Shanghai's strong financial innovation capability has provided impetus for the sustainable development of the financial industry. Since China (Shanghai) Pilot Free Trade Zone was listed, the government financial administration authority has published 51 policy measures and implementation rules in favor of the building of the pilot zone. In October 2015, with the approval of the State Council, 6 ministries and committees including the Central Bank and Shanghai Municipal Government jointly issued the *Plan for Further Promoting the Pilot Program for Financial Development and Innovation in China (Shanghai) Pilot Free Trade Zone to Accelerate the Building of Shanghai into International Financial Hub* (Plan). The Plan, containing 6 sections and 40 articles, proposes the major tasks and measures in 5 aspects as follows: firstly, being the first to realize RMB capital account convertibility. The overall goal is to enhance the level of convertibility of items under the capital account. Secondly, expanding the cross-border use of the RMB. The RMB and capital internationalization will be boosted through trading, industrial investment and financial investment. Thirdly, deepening the level of openness of the financial services industry internally and externally. The negative financial market access list approach will be explored, and related pilot programs will be carried out in China (Shanghai) Pilot Free Trade Zone. By interfacing with the high-level international economic and trade rules, a management model with the pre-entry national treatment plus the negative list will be adopted for accessing the financial services industry by foreign capital. Efforts will be made to support the entry of private capital into the financial services industry, allowing the establishment of various financial institutions including but not limited to private banks. Fourthly, accelerating the building of internationalized financial markets. Trading platforms for international financial assets will be shaped to expand channels for foreign investors to participate in the domestic financial markets. Fifthly, strengthening financial regulation to guard against financial risks.

Shanghai has built an overall policy framework where finance supports the pilot zone, a strong information management system featuring strong ongoing and ex-post regulation and a classified and well-organized management system for capital account convertibility. At the same time, cross-border use of the RMB has been vigorously promoted, with the business process fully simplified. The ceiling of petty deposit interest rates in foreign currencies have been fully liberalized, thereby strongly promoting the interest rate marketization. The "cross-border and cross-industry interbank negotiable certificates of deposit" has been kick-started smoothly, giving a further push to the orderly interest rate marketization. A negative list approach has been explored in foreign exchange administration for deregulation in an all-round way. For banking regulation, banking institutions have accelerated clustering in Shanghai and made beneficial explorations in the "going global" of services enterprises. Significant progress has been achieved in enhancing the international competitiveness of the securities industry to promote the expansion and openness of the industry. In insurance industry, focus has been on supporting the building of Shanghai into an international insurance center.

Fourthly, Shanghai has witnessed a higher level of financial internationalization and sustained a leading growth speed. The Xinhua-International Financial Centers Development Index (2015), released by CDI CFCI, shows that New York and London are the top two on the list of global financial cities , followed by Singapore, who took over Tokyo as No. 3, and Shanghai and Hong Kong, who were both No. 5. Financial centers in emerging economies represented by Shanghai have emerged rapidly across the world. Over the past five years, the capital account has been liberalized step by step in China, indicating financial liberalization has been expanded. Meanwhile, Shanghai's global position as an international financial center has been escalated from No. 8 in 2010 to No. 5 in 2015, sustaining a stable and upward trend. In particular, its growth indicators have left others far behind, enabling it to take the top spot for consecutive years.

Overall, the tertiary industry led by the service industry in Shanghai has sustained fast growth, becoming the major pillar for the city's economic development, transformation and upgrades; for the financial industry as the core driver of the tertiary industry in particular, Shanghai boasts diverse financial forms, active financial markets and a sound financial market system. With the building of China (Shanghai) Pilot Free Trade Zone as an opportunity, financial innovation in the city has been escalated, laying a solid foundation for the building of the city into an international financial center. During the 12th Five-year Plan

period, Shanghai has achieved significant progress in building itself into an international financial center, hence a higher level of internationalization. The 40 measures for the financial reform in China (Shanghai) Pilot Free Trade Zone have been introduced, and the RMB convertibility under the capital account will accelerate the process of building Shanghai into an international financial center in the future.

5. Current challenges

Shanghai is also faced with some challenges in economic development, including the pressure on the transformation and upgrades of the real economy, the restriction from population and resources on economic development, high unit factor costs and so forth; as a result, the strategic goals and positioning of the city's development should be considered based on long-term horizon and strategic level, with the pressure from resource factors overcome, the bottleneck in economic growth removed, and the contradiction in city development addressed. Only in this way can the city's economic growth reach a new high. The 13th Five-year Plan of Shanghai, designed in a top-down approach and under new concepts, provides the way forward for Shanghai and is therefore forward-looking and viable.

Shanghai has entered a critical period for innovation-driven development and industrial upgrades and transformation, while the international environment is undergoing profound changes, with international investment and trading rules and global industry and value chains to be reshaped, and therefore Shanghai is still faced with many challenges in economic development. Given the 2015 situation, the downside pressure is still on the economy, the real estate markets are cooling and land revenues are dropping, which seriously challenge Shanghai's efforts to adjust economic structure and promote reforms. First, the city is faced with pressure on the transformation of its real economy. Although Shanghai started economic restructuring early, yet it is still faced with pressure on transformation in the new economic situation. Second, the population, resources and environment restrict its economic development. Third, the unit factor cost is high.

Table 8: Some factor costs of Shanghai 2013-2015

Indicator\Year	2013	2014	2015
Average sales price of newly-built housing in the city (RMB/square meter)	16,192	16,415	21,501
Wherein: inside the inner ring road (RMB /square meter)	48,909	53,629	72,066
Minimum salary standard (RMB /month)	1,620	1,820	2,020
Average employee wage (RMB /month)	60,435	65,417	71,268

Source: Shanghai Municipal Statistics Bureau, Shanghai Statistical Yearbook, Operations of Real Estate Markets in Shanghai, the Statistical Communique of Shanghai Social and Economic Development

Despite many challenges, Shanghai still boasts many favorable conditions and positive factors in social and economic growth. As the global economic landscape is undergoing profound adjustments, and China's economic growth enters the new normal, Shanghai will enter into the crucial period for innovation-driven development and economic transformation and upgrades. The 13th Five-year Plan of Shanghai, with a vision to guide new developments with new concepts, establishes a new philosophy of innovation-driven, coordinated, green, open and inclusive development. The city's goal for the 13th Five-year Plan period is to build Four Centers, namely, international economic, financial, trading and shipping centers that match China's economic strength and global position, and have the capability of global resource allocation. The core impetus to achieve this goal is to make innovations and build relevant systems.

Fiscal strength: Shanghai is financially strong and highly self-sustained; as the industrial restructuring, transformation and upgrades are progressing steadily, and the percentage of the earnings from State-owned capital turned over to public finance is stably increasing, its financial structure and elasticity will be improved further[4].

Shanghai boasts an advanced economy. The industrial structure led by the tertiary industry enables it to make great contributions to taxation and it takes a leading position among provinces and municipalities directly under the central government by fiscal income. In 2015, the general public budgetary revenues of Shanghai hit RMB 551.95 billion, pointing to astonishing fiscal strength and remarkable advantages in industrial structure.

Table 9: Fiscal revenues breakdown of Shanghai 2013-2016 (RMB billion)

Account Title	2013		2014		2015		2016	
	City-wide	Municipal-level	City-wide	Municipal-level	City-wide	Municipal-level	City-wide	Municipal-level
General public budgetary revenues	410.95	197.70	458.56	220.93	551.95	280.61	590.50	300.20
Revenues from government-controlled funds	234.04	98.53	253.27	98.13	231.22	89.52	212.87	86.89
Revenues from State-owned capital operations	--	3.87	6.16	4.60	11.03	9.23	8.53	7.04

Note: 2016 data are estimated

Source: Shanghai Municipal Finance Bureau

1. General public budgetary revenues and expenses

Shanghai is financially self-sustained to a large extent, with the tertiary industry contributing greatly to its fiscal revenues and a main focus on live hood projects for fiscal expenses. The fiscal strengths of the districts and county in Shanghai are in balance.

Alongside economic slowdowns, Shanghai has witnessed stable and rapid growth in fiscal revenues. During 2013 to 2015, the city recorded general public budgetary revenues of RMB 410.95 billion, RMB 458.56 billion and RMB 551.95 billion respectively, representing an increase of 9.8%, 11.6% and 13.3% in the same terms. As economic restructuring is deepened, more effects of innovative transformation are displayed, and the financial sector develops, the growth of the general public budgetary revenues of Shanghai in 2015 was 1.7 percentage points higher than that of the previous year. To be specific, the tertiary industry exerted a stronger pull of the fiscal

[4] For the purpose of this section, the 2014 and 2015 data are based on final accounts, while the 2016 data are quoted from the *Report on 2015 Budget Execution* and *2016 Budget Draft in Shanghai and the Note to Requesting Review of the Draft Plan for Adjusting 2016 Municipal Budget of Shanghai*.

revenues, contributing 15.4% higher of the city's fiscal revenues in 2015 than it did in 2014, and accounting for 80.7% of its total fiscal revenues. In particular, the services sector including finance, leasing and commerce contributed 51.6% and 16.1% higher of the city's fiscal revenues respectively than they did in 2014.

Tax revenues is a major component of Shanghai's general public budgetary revenues, taking up around 90% in recent years. It is mainly composed of business tax (BT), value-added tax (VAT), corporate income tax and personal income tax, which contributed RMB 121.55 billion, RMB 101.28 billion, RMB 110.41 billion and RMB 48.76 billion respectively to the city's tax revenues in 2015. Shanghai is the first to conduct the VAT pilot reform in China, with BT and VAT sustaining rapid growth respectively. What's more, Shanghai is the only city where state and local tax bureaus share the same workplace, enjoying many advantages such as lean institution, high efficiency, strong policy linkage and low taxation cost, hence providing a benign institutional environment for tax collections.

On March 18th, 2016, the State Council Executive Meeting reviewed and adopted the plan for the comprehensive rollout of the VAT pilot program, specifying that the program would be rolled out to all sectors starting from May 1st, and including the construction industry, real estate industry, financial industry and life service industry in the scope of the program, with the tax rate being 11%, 11%, 6% and 6% respectively. In 2016, the general public budgetary revenues of Shanghai is budgeted at RMB 590.5 billion, up by 7% over 2015. In addition, the central government tax refund, subsidies and the income carried forward from previous years will amount to RMB 99.32 billion, while proceeds from issuance of local government general obligation bonds will arrive at RMB 103.3 billion. Allowing for these incomes, the general public budgetary revenues available for use is budgeted at RMB 793.12 billion.

Table 10: Composition of general public budgetary revenues of Shanghai 2013-2016 (RMB billion)

Account Title	2013		2014		2015		2016	
	City-wide	Municipal -level	City-wide	Municipal -level	City-wide	Municipal -level	City-wide	Municipal -level
Tax revenues	**379.71**	**175.46**	**421.91**	**195.39**	**485.82**	**232.06**	**522.50**	**248.70**
Value-added tax	84.85	35.96	96.91	41.33	101.28	43.30	109.20	46.80
Business tax	96.27	46.61	100.19	49.08	121.55	62.32	131.10	67.30
Corporate income tax	83.74	50.08	94.25	56.97	110.41	66.88	122.00	74.20
Individual income tax	35.52	18.09	40.86	20.74	48.76	24.54	55.50	28.00
Urban maintenance & construction tax	16.79	9.62	17.72	10.06	22.13	13.04	23.00	13.60
Property tax	9.31	2.69	10.00	2.68	12.38	3.69	13.00	3.90
Urban land use tax	3.08	1.64	3.47	1.84	3.74	1.98	3.97	2.10
Farmland occupation tax	1.21	0.62	1.45	0.86	0.73	0.36	0.73	0.36
Deed tax	21.51	4.30	21.43	4.29	27.10	5.42	28.10	5.62
Other taxes	27.43	5.85	35.63	7.54	37.74	10.53	35.90	6.82
Non-tax revenues	**31.24**	**22.24**	**36.65**	**25.54**	**66.13**	**48.55**	**68.00**	**51.50**

General public Budgetary revenues	**410.95**	**197.70**	**458.56**	**220.93**	**551.95**	**280.61**	**590.50**	**300.20**

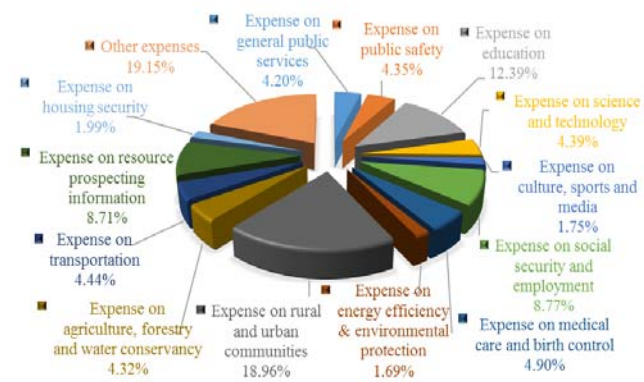
Note: 2016 data are estimated

Source: Shanghai Municipal Finance Bureau

Shanghai is financially strong and one of the provincial-level administrative units that makes the greatest contributions to central finance under the tax-sharing system. However, compared with other administrative regions, the central government’s transfer payment to Shanghai is mediocre. In 2013-2015, the central government tax refund and subsidies were RMB 63.2 billion, RMB 63.47 billion and RMB 64.93 billion respectively. The central government’s transfer payment in 2015 accounted for merely 8.11% of the city's aggregate fiscal revenues[5].

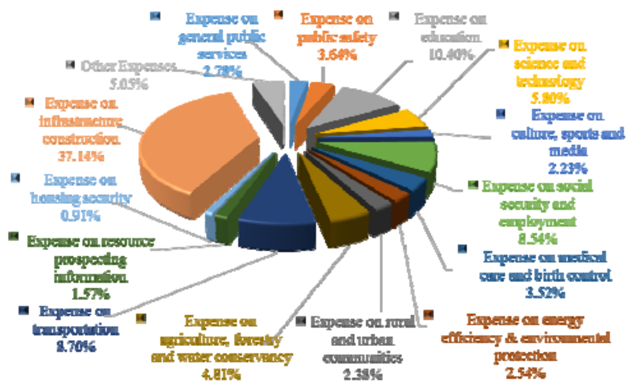
With respect to fiscal expenses, Shanghai is committed to strictly controlling general expenses, with focus on optimizing the structure of fiscal expenses and safeguarding economic restructuring, transformation and upgrades, ecological civilization building, integration of urban and rural areas and key livelihood areas. In 2015, Shanghai posted RMB 619.156 billion in general public budgetary expenses.

Figure 7: Composition of general public budgetary expenses of Shanghai 2015



Source: Shanghai Municipal Finance Bureau

Figure 8: Composition of Municipal-level general public budgetary expenses of Shanghai 2015



Source: Shanghai Municipal Finance Bureau

To break down, expenses on rural and urban communities, on education, on social security and employment, on resource prospecting information and on medical care and birth control were the top five, accounting for 18.96%, 12.39%, 8.77%, 8.71% and 4.90% respectively. In 2016, the general public budgetary expenses of Shanghai is budgeted at RMB 688.8 billion, up by 11.2% year on year. In addition, fiscal expenses turned over to the central government will be RMB 20.12 billion, and expenses on repaying the principal of local government general debts will be RMB 84.2 billion. Combined, the general public budgetary expenses of the City is budgeted at RMB 793.12 billion.

Regarding the structure of the municipal-level general public budgetary expenses of Shanghai, expense on education, on transportation, on social security and employment, on science and technology and on agriculture,

[5] Aggregate fiscal revenues = general public budgetary revenues + debt income + transfer income

forestry and water conservancy were the top five in 2015, accounting for 10.4%, 8.7%, 8.5%, 5.8% and 4.8% respectively. The government of Shanghai undertook more tasks of public infrastructure construction and supported the balanced and coordinated development of districts and county through transfer payments.

Over the past few years, Shanghai has stepped up efforts in transfer payments to its districts and county and optimizing the allocation measures of transfer payments, in a bid to promote balanced development and enhance the capabilities of districts and county to guarantee infrastructure and basic public services. Between 2013 and 2015, the city recorded RMB 37.10 billion, RMB 38.54 billion and RMB 42.00 billion respectively in its transfer payment to its districts and county. According to the composition of transfer payment, the city's transfer payments to its districts and county were general transfer payments, which amounted to RMB 34.73 billion, RMB 36.03 billion and RMB 38.23 billion in 2013-2015 respectively, and were primarily used to guarantee the balanced development of districts and county in nine aspects such as education, agriculture, farmers and rural areas, and medical care.

Shanghai has been committed to deepening the budget management system reform, establishing and improving the government budget system with focus on the "general public budget, budget for government-controlled funds, budget for State-owned capital operations and budget for social security funds", promoting the coordinated use of fiscal funds, making use of available government-controlled funds, pressing ahead with and regulating government procurement of services.

Table 11: General public budgetary revenues and expenses of Shanghai 2013-2015 (RMB billion)

Region	General public budgetary revenues			General public budgetary expenses		
	2013	2014	2015	2013	2014	2015
Municipal-level	**197.70**	**220.93**	**280.61**	**159.06**	**168.76**	**233.35**
Total of district/county-level	**213.25**	**237.63**	**271.34**	**293.81**	**323.58**	**385.81**
Pudong New Area	61.06	68.45	78.82	73.84	82.04	92.02
Huangpu District	15.28	16.36	18.09	18.01	18.73	20.74
Xuhui District	11.87	12.89	15.11	14.21	15.17	17.33
Changning District	10.84	11.72	12.99	11.64	12.68	14.38
Jing'an District	8.56	9.25	10.62	9.99	10.66	12.44
Putuo District	7.51	8.51	9.64	11.10	13.26	15.85
Zhabei District	7.05	7.89	8.81	10.72	11.35	12.92
Hongkou District	6.63	7.86	9.01	10.41	11.59	12.68
Yangpu District	7.70	8.50	9.58	12.61	13.65	16.28
Minhang District	17.12	19.03	21.44	22.52	24.37	34.43
Baoshan District	10.17	11.27	12.71	15.74	17.18	21.92
Jiading District	14.54	16.78	19.14	17.73	19.78	29.72
Jinshan District	5.04	5.66	6.55	11.35	12.54	14.52
Songjiang District	10.35	11.17	12.31	15.22	16.45	19.43
Qingpu District	8.87	10.41	12.53	13.80	15.28	17.99
Fengxian District	6.60	7.29	8.49	13.03	15.18	16.82

Chongming County	4.06	4.59	5.50	11.90	13.67	16.34

Source: Shanghai Municipal Finance Bureau

Besides, in accordance with the *Budget Law of the People's Republic of China*, the *Decision of the State Council on Deepening the Budget Management System Reform* (Guo Fa No.45 [2014]), the *Circular on the Improvement of Government Budget System* (Cai Yu No.368 [2014]) and the Circular on Forwarding the MOF Circular on the Improvement of Government Budget System (Hu Cai Yu No.149 [2014]), seven items including local education surcharges in budget for government-controlled funds of Shanghai and two items including government housing funds are included in general public budgets from 2015 and from 2016, respectively. According to the MOF's regulations on making use of available government-controlled funds, 30% of the carried-over money of government-controlled funds that exceeds the fund's income for the year will be treated as general public budget for coordinated use. Further, the delivering ratio of return on State-owned capital to public finance will be increased to 30% by 2020, with a larger part to be used for guaranteeing and improving people's living standards. In 2016, the ratio is to be increased to 19% in Shanghai.

In general, Shanghai enjoys excellent fiscal strength. In 2015, tax revenues comprises 88.02% of general public budgetary revenues and the tertiary industry had made great contributions to the city's fiscal revenues. With excellent fiscal strength, Shanghai is highly self-sustained with regard to public finance, boasting well-balanced finance, with fiscal expenses mainly going to livelihood projects. The city's fiscal management system is highly liberalized and the taxation environment is sound, enabling it to make faster reform progress than other provinces and cities do in China.

2. Revenues and expenses from government-controlled funds

Revenues from government-controlled funds in Shanghai has declined slightly; Shanghai is actively promoting the adjustment, transformation and upgrading of industrial structures to cultivate more growth points for tax revenues. Fiscal revenues may be likely to be less sustained on revenues from government-controlled funds.

Revenues from government-controlled funds are mainly affected by revenues from the assignment of land use right of State-owned land. In 2013-2015, revenues from government-controlled funds in Shanghai were RMB 234.04 billion, RMB 253.27 billion and RMB 231.22 billion respectively, of which revenues from the assignment of land use right of State-owned land accounted for 85.62%, 86.75% and 91.10% respectively. In 2015, the supply-side structural reform was accelerated in China, fixed assets investment, especially real estate investment, decelerated significantly, economic growth slowed down, and land markets were in short supply, with revenues and expenses from land assignment both decreasing; revenues from land assignment turned over to the national treasury went down by 21.6% year on year, with most provinces seeing significant decreases except a few specific regions who bucked the trend. As one of the four municipalities directly under the central government and one of the important economic centers in the country, Shanghai witnessed a slight decrease in its land market. In 2015, revenues from the assignment of land use right of State-owned land decreased by 1% only, which was far lower than the national average. In 2015, the total transaction area and value in the land market (industrial land excluded) in Shanghai both declined year on year, but the premium rates on land assignment were very high. In 2015, the budgetary revenues from government-controlled funds in Shanghai was RMB 194.28 billion, of which the budgetary revenues from the assignment of land use right of State-owned land was RMB 176.69 billion, 83.6% of the actual figure for the last year. The actual figure came to RMB 231.22 billion, 119% of the budgeted figure. At the municipal level, the revenues and expenses from government-controlled funds were RMB 89.52 billion and RMB 69.32 billion respectively. The expenses was mainly for downtown urban area reconstruction as well as land reserve and infrastructure construction for key areas and sections such as the Expo Park.

In 2016, the budgetary revenues from government-controlled funds in Shanghai is RMB 212.87 billion, which, combined with RMB 25.88 billion in subsidies from central government finance and carry-over income from the previous year and RMB 116.7 billion in revenues from special local government bonds, brings the total budgetary revenues from government-controlled funds available for use to RMB 355.45 billion. In 2016, the budgetary expenses from government-controlled funds in Shanghai is RMB 239.25 billion, which, coupled with RMB 89.3 billion used to repay the principal on local government bonds, RMB 4.84 billion in funds transferred out, RMB 22.06 billion carried forward to the next year, brings the total budgetary expenses from government-controlled funds for the whole year to RMB 355.45 billion.

In the long run, the city's fiscal revenues may be less sustained on the revenues from government-controlled funds in Shanghai. Shanghai is actively promoting the adjustment, transformation and upgrading of industrial structures to cultivate more growth points for tax sources and is actively adjusting the growth rates of budgetary income and expenses from government-controlled funds and controlling the size of income from land assignment to optimize the structure of fiscal revenues and expenses.

Generally speaking, in the event of slower national economic growth and sluggish real estate markets, revenues from government-controlled funds in Shanghai has decreased slightly, but at a slower pace than the national average. CCXI also notices that, while being committed to building China (Shanghai) Pilot Free Trade Zone and Four Centers, the city is promoting the cultivation of an open economy, technological innovation, structural adjustment as well as industrial transformation and upgrades. As a result, it is likely that fiscal revenues may be less sustained on the revenues from government-controlled funds, and the fluctuations of the revenues from government-controlled funds will have a diminishing impact on the city's fiscal strength.

3. Revenues and expenses from State-owned capital operations

With respect to the overall reform results, the concentration of State-owned capital in the four major fields including strategic emerging industries is increasing, and State-owned enterprises (SOEs) have achieved rapid growth in profits and deeper internationalization.

In 2014, Shanghai introduced 24 supporting policies and detailed implementation rules with respect to the reform of State-owned capital and enterprises, launched 80-plus reform and restructuring projects with "four batches", with focus on the reforms and developments of five major fields, i.e.: optimizing layout of State-owned assets, classified regulation of enterprises, tenure contract management, corporate technological innovation, as well as incentive and restriction mechanism, and concluded agreements on the tenure targets of 24 enterprise groups. Consequently, the "four ones" target for technological innovations of SOEs has been set and the concentration of State-owned assets in the four major fields including strategic emerging industries has risen to 75%.

According to the data disclosed at the Shanghai State-owned Assets and State-owned Enterprises Work Conference in 2016, the local SOEs in Shanghai achieved operating revenues of RMB 3.01 trillion in 2015, representing a year on year increase of 7.10%, and total profits RMB 313.056 billion, up by 18.80% from the previous year. As at the end of 2015, the total assets of local SOEs and state-holding enterprises hit RMB 15.90 trillion, an increase of 21.90% from the end of the previous year. According to the statistics from the State-owned Assets Supervision and Administration Commission (SASAC) under the State Council, the total assets, operating revenues, and total profits of enterprises under the SASAC of Shanghai Municipal Government accounted for 1/10, 1/8 and 1/5 respectively of the corresponding total figure of SASAC of local provinces and municipalities nationwide. In 2015, the enterprises entrusted with management by Shanghai Municipality recorded operating revenues of RMB 1,992.819 billion, up by 1.2% from the previous year; and the total profits of RMB 116.370 billion, up by 7.7% year on year. In 2015, although most of the entrusted enterprises engaged in manufacturing, foreign trade, tourism services, construction and investment sustained stable growth in operating revenues, household consumption and commodity trading failed to stop the downward trend, and the operating revenues were primarily driven by enterprises such as Jinjiang International, INESA, and Changfa. Profit growth slowed down, and returns on financial investment contributed greatly to the total profits.

Shanghai supports qualified enterprises to conduct overseas investments and transnational operations, so as to enhance internationalized operation capabilities and competitiveness. Its target is to develop 2-3 assets management companies which conform to international rules and operate effectively, and 5-8 internationally competitive multinational corporations with global footprint, transnational operations and intentional brand influence.

Shanghai Municipality has improved the budget management system for State-owned capital operations, and expanded the collection scope of earnings from State-owned capital from enterprises funded and supervised by the SASAC of Shanghai Municipal Government to enterprises entrusted with the SASAC of Shanghai Municipal Government. The collection percentage has been raised, from 10% to 15% for general enterprises and from 5% to 10% for public welfare enterprises. It is expected that the elasticity of local fiscal strength will be effectively enhanced to safeguard the SOE reform and construction of livelihood projects.

In terms of the collection of budgetary revenues from State-owned capital operations, Shanghai Municipality further expanded the collection scope of the earnings from State-owned capital turned over to public finance, increased the collection percentage by five percentage points, deepened the reform of State-owned capital and enterprises, and realized transfer of some equity in 2015. Overall, Shanghai Municipality witnessed sustained growth in operating revenues from State-owned capital. According to the *Report on the Implementation of the Local Budgets for 2015 and on the Local Draft Budgets for 2016 in Shanghai*, the city's revenues from State-owned capital operations was RMB 11.03 billion in 2015, which, combined with the revenues carried over from the previous year and accumulated surpluses over the years, brought the city's total revenues from State-owned capital operations to RMB 11.39 billion; and the municipal-level revenues from State-owned capital operations was RMB 9.23 billion, increasing by 100.7%. In 2016, the budgetary revenues from State-owned capital operations of Shanghai stands at RMB 8.53 billion, which, combined with the revenues carried forward from the previous year of RMB 3.23 billion, brings the total revenues from State-owned capital operation of the whole city to RMB 11.76 billion.[6]

Shanghai is gradually expanding the collection scope. In 2014, Shanghai's municipal-level budgeting scope for State-owned capital operations covered enterprises funded and supervised by SASAC of Shanghai Municipal Government as well as enterprises supervised by Municipal Financial Office upon the entrustment from the SASAC of Shanghai Municipal Government. In 2015, the five units directly funded and supervised by the SASAC of Shanghai Municipal Government were directly integrated into relevant enterprise groups and were included in the municipal-level collection scope of the earnings from State-owned capital of Shanghai Municipality turned over to public finance. Meanwhile, five State-owned cultural enterprises supervised by the Publicity Department of Shanghai Municipal Party Committee upon the entrustment from the SASAC of Shanghai Municipal Government were newly integrated into the collection scope of budgetary revenues from State-owned capital operations. Based on the progress of the reform of SOEs, the city integrated three enterprises directly funded by the SASAC of Shanghai Municipal Government into the collection scope of the earnings from Shanghai's municipal-level State-owned capital turned over to public finance.

While expanding the collection scope, the city has raised the percentage of the earnings from State-owned capital turned over to public finance in order to make sure the percentage is no lower than 30% by 2020. In 2015, Shanghai Municipality raised the overall percentage of the earnings of the State-owned capital turned over to public finance from the municipality-affiliated SOEs by 5 percentage points. To be specific, the percentage for general enterprises was raised from 10% to 15%, and from 5% to 10% for public welfare enterprises, and from 5% to 10% for public welfare enterprises, while small and micro enterprises continued to be exempted from paying profits payable for the year.

With regard to expenses from State-owned capital operations, Shanghai posted RMB 8.16 billion in expenses from State-owned capital operations in 2015, which was mainly used to support the structural adjustments of national economy as well as industrial upgrades and development. The expenses from State-owned capital operation at the municipal level was mainly used to support technological innovation and capability improvement of SOEs, development of strategic emerging industries and modern services industry, construction of livelihood projects as

[6] According to the Interim Implementation Measures for Collection Management of Revenues from State-owned capital Operations of Enterprises in Shanghai Municipality, approved and forwarded by Shanghai municipal government in 2010, the "revenues from State-owned capital operations of enterprises" include profit payable, dividends of State-owned shares, revenue from transfers of State-owned property right and equity right, revenue from enterprises' liquidation and other revenues from State-owned capital operations. Except that profits payable (i.e., net profits of solely State-owned enterprises) are collected on the pro rata basis, the remaining four kinds of revenues should be turned over in full (i.e.: 100% of revenues to be turned over).

well as innovative development of SOEs and resolving historical problems with respect to the SOE reform. Shanghai's budgetary expenses from State-owned capital operations is RMB 11.76 billion for 2016.

Table 12: Revenues and expenses from State-owned capital operations of Shanghai 2014-2016 (RMB billion)

Account Title	2014		2015		2016	
	City-wide	Municipal-level	City-wide	Municipal-level	City-wide	Municipal-level
Total revenues from State-owned capital operations	**7.90**	**6.14**	**11.39**	**9.30**	**11.76**	**9.79**
Revenues carried forward from last year	0.21	0.01	0.36	0.07	3.23	2.75
Cumulative surplus used	1.53	1.53	--	--	--	--
Revenues from State-owned capital operations	6.16	4.60	11.03	9.23	8.53	7.04
Total expenses from State-owned capital operations	**7.57**	**6.09**	**8.16**	**6.55**	**11.76**	**8.17**
Current surplus	**0.33**	**0.05**	**3.23**	**2.75**	--	--

Note: 2016 data are estimated

Source: Shanghai Municipal Finance Bureau

In terms of budgetary management of State-owned capital operations, Shanghai Municipality has introduced the Measures on Collection of the Earnings from State-owned Capital and the Measures on Budget Management of State-owned Capital Operations, in order to strengthen the building of the budget management system for State-owned capital operations. According to the *Interim Measures for Budget Management of Municipal-level State-owned capital Operatiosn of Shanghai* released by Shanghai Municipal Finance Bureau, the Municipal Finance Bureau is the competent department for budgeting for municipal-level State-owned capital operations, and the departments and units responsible for SOE supervision such as the SASAC of Shanghai Municipal Government are the budgeting units for State-owned capital operations. So far districts and county have formulated and released opinions or measures for implementing the budgets for State-owned capital operations. Besides, the SASAC of Shanghai Municipal Government has published the *Measures for Post-expense Evaluation of the Budget for State-owned Capital Operations of the SASAC of Shanghai Municipal Government (Interim)*, with the aim of reinforcing the management over expenses matters from the budgets for State-owned capital operations in terms of standardization and benefits of expenses.

Shanghai has a well-developed budget management system, high collection ratio and intensity for State-owned capital operations. It is expected that the local financial elasticity will be effectively enhanced, so as to financially safeguard the SOE reform and livelihood project construction. At the same time, however, as the SOE reform is still underway, there are some problems in collection of the earnings from State-owned capital. For example, some enterprises entrusted with supervision haven't been included in the collection scope of the earnings from the budgets for State-owned capital operations.

Solvency: All of the three types of debts have dropped slightly while maintaining stability, indicating a sound debt level and a robust risk prevention and control system. The State-owned capital reform has laid a solid foundation for debt servicing.

1. Overall Debt Position and Risk Profile

The three types of debts incurred by Shanghai Municipal Government are all on a downward trend, featuring a moderate debt ratio and remarkably lower outstanding loans than the outstanding local government debts ceiling, except that some districts and county are still facing pressure from debt due to the restrictions of the development stage. In the coming two years, the Shanghai government will be issuing local government bonds to swap outstanding debts, while the outstanding debts invested in infrastructure construction and public welfare projects will provide a solid guarantee for debt servicing. Overall, the overall debt risk facing the Shanghai government is within control.

According to the audit results provided by Shanghai Municipal Finance Bureau with regard to the government debts of Shanghai, as at the end of 2015, the outstanding balance of debts which the government of Shanghai was liable to repay amounted to RMB 488.0 billion, 16.0% lower than that of the end of 2014; the outstanding balance of debts for which the government of Shanghai issued official guarantees was RMB 17.9 billion, down by 24.9% year on year; and the outstanding balance of debts for which the government of Shanghai had a limited rescue responsibility was RMB 239 billion, down by 27.3% year on year. In audit terms, as at the end of 2015, the city's debt ratio of Shanghai (the outstanding balance of debts which the government of Shanghai was liable to repay/total fiscal revenues) was 44.3%, down by 13.8 percentage points from 58.1% at the end of 2014, which was below the international warning level of the 90%-150%, and the national level.

In terms of borrowers, government organs account for 29% of the outstanding balance of local government debts; public service units 14%; financing platforms 20%; SOEs (excluding financing platforms) 34%; and other borrowers 3%.

In terms of funding sources, bank loans accounted for 57% of the outstanding balance of local government debts; bonds 28%; payables to suppliers 8%; financing from other non-banking institutions 3%; and other sources 4%. By the end of 2017, it is expected that except a small amount of trust that can't be swapped, all local government debts which the government of Shanghai was liable to repay will have been swapped.

In terms of maturity structure, over 71.3% of the outstanding local government debts of Shanghai will be repaid after 2018 and the percentage of repayment liability spreads reasonably across the years.

For 2015, by the consent of the State Council, the Ministry of Finance imposed the outstanding local government debts ceiling of RMB 601.85 billion on the city of Shanghai; and increased by RMB 50 billion to RMB 651.85 billion in 2016. As at the end of 2015, the outstanding balance of debts which the government of Shanghai was liable to repay amounted to RMB 488.0 billion, with enough potential for future financing.

In terms of region, the outstanding balance of local government debts which municipal-level government was liable to repay amounted to RMB 141.3 billion as at the end of 2015, accounting for 28.95 % of the City's total debt and 26.9% less than that of the end of 2014, which was over 11.1 percentage points lower than the city's overall level; the outstanding balance of debts which districts and county governments was liable to repay was RMB 346.7

billion, or 71.05% of the city's total. As some districts and county was still under pressure to build infrastructure, the outstanding debt of the district and county governments dropped by a smaller margin than that of the Shanghai Municipal Government. In 2015, the RMB 121.2 billion general obligation bonds were issued by the government of Shanghai including RMB 20.6 billion newly issued bonds. All money raised from the bonds was refinanced to the districts and county for major public-welfare projects, such as rundown area renovation, and construction of affordable housing, ordinary roads, underground pipeline networks in the urban areas, and smart cities; RMB 100.6 million bonds were swapped for outstanding government debt identified and cleared up in 2014, of which RMB 19 billion bonds were swapped for the municipal government debt and RMB 81.6 billion bonds, for the district and county government debt.

Table 13: Government debts of Shanghai by the end of 2015

Account Title	City-wide		Municipal-level		Districts and county	
	Balance (RMB billion)	Growth Rate (%)	Balance (RMB billion)	Growth Rate (%)	Balance (RMB billion)	Growth Rate (%)
Debts which the government of Shanghai was liable to repay	488.0	-16.0	141.3	-26.9	346.7	-10.7
Wherein: Government bonds	157.4	-	27.6	-	129.8	-
Debts for which the government of Shanghai issued official guarantees	17.9	-24.9	11.6	-1.9	6.3	-47.5
Debts for which the government of Shanghai had a limited rescue responsibility	239.0	-27.3	128.4	-27.3	110.6	-27.2

Source: Shanghai Municipal Finance Bureau

CCXI believes that the overall debt risk of the Shanghai Municipal Government is controllable, based on the following: Firstly, the ratio of the debts which the government of Shanghai was liable to repay and on the decline. In recent years, Shanghai has witnessed sustained stable growth in its fiscal revenues, with the general public budgetary revenues hitting RMB 551.95 billion in 2015, which was up by 13.30% year on year. By the end of 2016, it is expected that the debt ratio will drop further alongside the growth in fiscal revenues. Secondly, the funds raised through debt financing have been used for infrastructure construction and public-welfare projects, hence ensuring the funds needed for the social and economic growth of Shanghai and forming some assets, some of which have also generated revenues that can be used as a supplement to debt repayment. In particular, land reserve assets as a result of urban renovation boast strong liquidity; assets in the form of traffic and transportation facilities such as highways have generated some revenues; and indemnificatory housing assets including public rental housing, low-rent housing and affordable housing also have generated some rents in return and housing sales revenues.

2. Debt Prevention and Control Systems

Shanghai Municipal Government has been committed to strengthening government debt management by improving the system of rules and policies for government debt management, stripping borrowing functions from financing platforms, establishing debt risk pre-warning mechanism and debt servicing mechanism, thus effectively control the growth in government debt.

Since 2011, the districts and county governments of Shanghai have taken positive measures to strengthen the management of government debts in accordance with the arrangements of the State Council and the requirements of the Ministry of Finance, National Development and Reform Commission (NDRC), the Ministry of Land and Resources, and China Banking Regulatory Commission. Shanghai Municipal Government has issued a series of debt management systems, including the *Opinions on Further Enhancing the Management of Funds Raised through Issuance of Local Government Bonds*, the *Notice on Further Strengthening the Management of District/County Government Debts*, and the *Proposals of CPC Shanghai Municipal Committee on Improving Government Debt Management No.44 (2014).* As at the end of June 2013, the 17 district/county governments under the municipal government had all introduced management systems for government debts. In 2015, based on the *Proposals of CPC Shanghai Municipal Committee on Improving Government Debt Management* the Municipality published in 2014, Shanghai further innovated the way of debt regulation. It issued the *Circular on Strengthening the Management of Government Debts in Shanghai in 2015* together with Shanghai Office of Commissioners for Financial Supervision of the Ministry of Finance, to jointly regulate the district/county government debts, with focus on standardizing the management of government debts by strengthening the regulation of debt risks and establishing debt filing and reporting systems.

Shanghai's efforts to further strengthen the management of local government debts concern 7 aspects. Firstly, standardizing guarantees and commitments by the local government. It is strictly forbidden to raise money from the public or make commitments to guaranteeing loans to the public in Shanghai in violation of rules and regulations, in a bid to control and standardize debt financing or guarantee commitments by the local government. Secondly, establishing a stable government debt repayment mechanism. Under the principles of "two levels of government and two levels of management" and "debtor as payer", commensurate repayment reserves have been set aside and a government debt repayment mechanism has been established, with reference to the financial possibility and total government debt of district/county government. Thirdly, establishing an on-going debt monitoring mechanisms for local government debts to dynamically monitor the monthly positions of municipal and district government debts and analyze causes of changes. Fourthly, improving of the government debt risk pre-warning system. By monitoring a number of risk indicators such as the debt ratio, the city has enhanced the evaluation, pre-warning and monitoring of government debt risks borne by the municipal and district/county governments, and the results are communicated to the district/county governments in time to fend off debt risks effectively. Fifthly, stripping financing platforms off their borrowing functions. Borrowings through financing platforms are the corporate behavior and will be no longer included in local government debts. Sixthly, imposing quota restriction over government debt. According to relevant guidelines concerning debt control, especially the local government debt ceiling imposed by the Ministry of Finance, the Municipal Finance Bureau has drawn up a debt quota proposal for the whole city and a scheme concerning the distribution of local government debt quota among the municipal and district/county governments, which has been communicated to all district/county governments after it is approved by the Municipal Government. Seventhly, government debts should be included in budget management. General obligation debts are managed under general public budgets, special debts are managed under budgets of government-controlled funds.

CCXI believes that Shanghai Municipal Government has established and improved its management system for government debts and has achieved some progress in properly handling outstanding debts. With the debt ratio decreasing, the overall government debt risk is controllable.

3. A New Round of State-owned Capital Reform

Shanghai has accumulated valuable experience in classified regulation of SOEs, building of State-owned assets flow platform and mixed-ownership reform, hence setting a good example for the rest of China; the new round of State-owned enterprise reform focuses on establishing a scientific and effective regulation system, improving the liquidity of State-owned assets, and improving the capabilities of enterprises for globalized operation. All these will effectively boost the contribution of the city's State-owned capital to its fiscal revenues, improve the quality and liquidity of government assets, thereby lay a solid foundation for debt servicing by the Shanghai municipal government.

Shanghai has taken the lead in past SOE reforms, contributing valuable experience to the SOE reform nationwide and setting a good example for the rest of the country. In December 2013, Shanghai published the *Opinions on Further Deepening State-owned Capital Reform to Facilitate the Development of Enterprises* ("20 Provisions on SOE reform in Shanghai"), setting the goals of the new-round State-owned capital reform in terms of layout and management of State-owned assets as well as State-owned enterprises. Shanghai will set up open, transparent and standardized platforms for the flows of State-owned assets, gradually increase the percentage of earnings from State-owned capital turned over to public finance, implement classified management of enterprises, and allow equity incentive schemes for eligible listed companies. In July, 2014, Shanghai published the *Opinions on Pushing Active Development of the Mixed Ownership Economy by State-owned Enterprises in Shanghai (Interim)* (Hu Wei Ban Fa No.22 [2014]). Except those required to be wholly State-owned by the state policy, other enterprises are allowed to diversify their equity and develop the mixed ownership economy. Based on this, Shanghai Pudong New Area published in June 2015 the "18 Articles Regarding the Reform of State-owned Capital and State-owned Enterprises in Pudong New Area", further setting five reform priorities in the area. In September 2015, the top-down design plan for the SOE reform, *Guidelines on Deepening SOE Reform*, was introduced, providing comprehensive guidance to the follow-up reforms of State-owned enterprises under the Central Government or local governments. The new round of the reform of State-owned capital has continued to focus on and press ahead with such key directions as classified regulation of State-owned enterprises and the State-owned capital mobilization platform, which has produced significant results. This round of reform has two remarkable features:

Firstly, coordinating classified regulation system for State-owned assets: the logic is further reducing the level of administration by changing from managing State-owned enterprises to managing State-owned assets and from managing assets to managing capital. In terms of regulatory manner, classified management will be implemented, whereby enterprises are categorized into "competitive", "functional" and "public service" ones, so that differentiated management can be gradually implemented.

At present, following the logic of further reducing the level of administration, with managing State-owned enterprises changed to managing State-owned assets and managing assets to managing capital, a pattern of State-owned assets management characterized by two levels of management, two systems and three dimensions has formed. Shanghai Guosheng Group Co., Ltd. (SGG) and Shanghai International Group Co., Ltd. (SIG) form a dual-platform model for industry and finance for the management of State-owned assets in Shanghai. Correspondingly, a district-level platform for the flows of State-owned assets, Shanghai Pudong Investment Holding (Group) Co., Ltd., has been established in Pudong New Area, and the equity of competitive enterprises within the State-owned assets system will be transferred to this platform one after another. In the future, a pattern of the State-owned assets management will be gradually formed in Shanghai with the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government responsible for capital regulation, platform companies for basic operations and enterprise groups for daily operations.

In terms of the layout of State-owned assets, over 80% of State-owned assets within the system of the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government are concentrated in key areas and advantageous industries in Shanghai, such as strategic emerging industries, advanced manufacturing and modern services, infrastructure and livelihood security. Enterprise groups control management layers, strengthen the control of enterprises below level 3, specify functionality and positioning and carry out classified management. The market attributes of enterprises are emphasized for differentiated management. Enterprises are categorized into market-oriented competitive enterprises, functional enterprises committed to completing strategic tasks and public service enterprises dedicated to ensuring normal functioning and stability of the city and the delivery of social benefits. Enterprises under different categories are subject to classified management and dynamic adjustments. In 2015, enterprises under the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government recorded RMB 1,992.819 billion in operating income, representing a year-on-year increase of 1.2%; and RMB 116.37 billion in total profits, up by 7.7% year-on-year. To be specific, competitive enterprises achieved RMB 1,890.01 billion in operating income, up by 0.8% year-on-year and accounting for 94.84% of total operating income of all enterprises under the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government; and RMB 105.98 billion in total profits, up by 4.4% year-on-year and accounting for 91.07% of total profits of all enterprises under enterprises under the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government.

As regards functional and public services enterprises, the regulation and adjustment are market oriented and focused on enhancing the resource allocation efficiency and public services capability. The reform and transformation of financing platforms is combined with the reform of State-owned enterprises and the layout of State-owned assets. According to the gist of the Opinions of the State Council on Strengthening the Management of Local Government Debts (Guo Fa Document No. 43), local financing platforms will undergo transformation. Shanghai Urban Construction Investment Development Corporation has been actively seeking change of its role. In 2014, it was renamed Shanghai Chengtou Corporation and became a corporate legal person from an enterprise legal person, and the major business sectors under it, especially water utilities and road and bridge construction, were also restructured into independent specialized companies. The role of the parent company, with direct operations stripped off, is transforming into a provider of urban infrastructure and public goods solutions. In 2016, Shanghai will promote the reform of enterprises in the gas industry at a proper time, and explore franchise operation for eligible infrastructure industries. According to the first reform announced by Pudong New Area, the relationship between Shanghai Golden Bridge (Group) Co., Ltd. and Shanghai Jinqiao Export Processing Zone Development Co., Ltd. will be adjusted to build two platforms focusing on functions and markets respectively for classified reform and operations. The positioning of the Golden Bridge (Group) after the reform will be an operational carrier of government functions. The joint-stock companies will further emphasize its market-oriented positioning and "going-global development", focusing on creating value for shareholders and improve market competitiveness and return on capital.

Secondly, open, transparent and standardized State-owned asset flow platforms: building State-owned asset flow platforms, and establishing an investment decision-making committee for the platforms; utilizing market's ability in resource allocation to explore a custodian model for existing assets of holistically listed companies, boosting open and market-oriented restructuring and integration of listed companies and non-listed companies that are controlled by the state.

Shanghai has indicated that the company system reform of enterprise groups within the system of the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government will be completed in 2016. To be specific, the holistic listing or core assets listing of enterprise groups will be accelerated; enterprise groups with core assets already listed and eligible for holistic listing are required to accelerate adjustment of their management systems for the integration of management focus and assets structure; competitive enterprises adopting mixed ownership shall carry out a pilot program of employee stockholding to integrate state interests, enterprise benefits and personal income.

Up to now, two State-owned asset flow platforms, SGG and SIG, have been set up in Shanghai and investment decision-making committees have been established too. Specifically, by consolidating SPD Bank, Guotai Junan Securities Co., Ltd. and China Pacific Insurance Group, SIG has achieved synergies of "banking, securities and insurance" through vertical integration. Its non-financial assets have been integrated with Shanghai Industrial Investment (Holding) Co., Ltd. on a market-oriented basis, revitalizing over RMB 30 billion in financial and similar financial assets. SGG has finished horizontal restructuring with Shanghai Vegetable Group, Shanghai Changjiang Computer Group and Shanghai Building Materials Group, revitalizing RMB 8.8 billion in available assets. In accordance with the framework of "Supervision by State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government, capital operations by platform companies and day-to-day operations by enterprise groups", a custodian model for existing assets of holistically listed companies will be explored.

Developing the mixed-ownership economy, accelerating the stockholding system reform, and achieving holistic listing or core asset listing is a main channel to enhance the liquidity and promote mergers and restructuring of State-owned assets. After Greenland Group, Shanghai Xian Dai Architectural Design Group and Shanghai Urban

Construction Group were holistically listed, Shanghai promoted the listing of Guotai Junan Securities Co., Ltd. in 2015.

While revitalizing available assets, SIG has actively carried out incremental equity investment and AMC business through its subsidiary Shanghai State-owned Assets Operation Co., Ltd. (SSAOC). As the most important subsidiary of SSAOC and an entity for external equity investment on behalf of SSAOC, Shanghai Guoxin Investment Development Co., Ltd. boasts an independent decision-making team and operates in a market-oriented manner. In July 2014, SSAOC formally obtained the qualification as an asset management company (AMC). This business, limited in size now, is expected to play an important role in the reform of State-owned capital in Shanghai in the future.

In January 2016, the State-owned Asset Supervision and Administration Commission of Shanghai Municipal Government published the *Circular on the Printing and Distribution of Directive on the Operation of Mixed Ownership Reform of State-owned Enterprises in Shanghai*, giving operational guidance on the mixed ownership reform of State-owned enterprises in Shanghai in terms of general procedures, reform decision-making, auditing and assessment, property rights transactions and related issues (e.g., personnel placement). The Directive gives enterprises the independent decision power, especially the full decision power to SOE groups in the restructuring of subsidiaries. In addition, in introducing investors during the process of mixed ownership reform of enterprises, strategic investors should be introduced in principle, and financial investors where necessary. Multiple investors are advised to be introduced to optimize equity structure and legal person governance.

In general, state-owned enterprises in Shanghai have great comprehensive strength. A group of multinational corporations have emerged and they have been playing an important role in driving local economic growth. With a clear logic for the new-round SOE reform, the categorized management model will be favorable for making use of the competitive advantages of different types of enterprises. The establishment of State-owned asset flow platforms can help realize the economic benefits of State-owned assets and ensure debt repayment by Shanghai Municipal Government.

Institutional environment: accelerating the continuous improvement of Shanghai's strength in competitiveness and creditability by building an innovative, free and legal environment.

The factor of institutional environment is a combination of external and internal governance factors in front of local governments. Local internal governance and policy environment vary due to different geographical features under the macro institutional environment in China. Such difference in internal governance conditions will influence the regional endogenous development force, thus bringing certain impact on the local government's creditability in this region. CCXI will evaluate the impact of the institutional environment factor on the creditability of Shanghai from four aspects according to the features of Shanghai, i.e. local government's governance capability, market environment, policy environment, and innovation capability.

CCXI believes that Shanghai, as pioneer in China's reform and opening up and institutional innovator, has always been playing a leading role in local government's governance, market environment, policy environment, and innovation capability. As an international megacity, Shanghai carries out the national economic strategies and pilots institutional innovation and has set a good example in development zone construction, financial reform, city management, and etc. Shanghai has established an institutional environment featured with innovation, freedom, and legalization. Such institutional environment is an important driver for enhancing Shanghai's competitive strength and creditability.

1. Local government's governance capability

The self-construction of Shanghai Municipal Government in organizational management efficiency, service awareness, city management, and information disclosure & transparency is remarkably strengthened; at the same time, Shanghai further streamlines administration and delegation to the lower levels, conducts transformation in functions, continuously advances innovation in governmental administrative model, and has made fruitful achievements.

In terms of governance, Shanghai Municipal Government exercises law-based administration, attaches importance to institutional innovation in administrative management, and takes the leading position in organizational management efficiency, service awareness, city management, information disclosure & transparency, and etc. The mindset of Shanghai Municipal Government in management institutional innovation is to shift the role from approver to regulator and controller and to be dedicated to providing quality and efficient services to society and the public.

In 2015, Shanghai made significant improvement in self-construction in areas like reform of the administrative approval system, reform of the administrative law enforcement system, and government effectiveness. In improving the administrative efficiency, Shanghai further advanced streamlined administration and decentralization, developed and issued the actual administrative authority list and the responsibility list; and it conducted a new round of streamlining administrative approval items and canceled 160 administrative approval items and 152 evaluation review items; at the same time, Shanghai further improved the management system and steadily promoted the “combination” of Zhabei District and Jing’an District. In administrative law enforcement, Shanghai established the governmental legal counsel system, refined the long-term rectification mechanism for auditing, made full disclosure of the budget and final settlement reports and statements, budget and final settlement per department and segment, and the three public expenses of the municipal, district & prefectural, and township government. In terms of promoting governmental effectiveness construction, Shanghai formulated the opinions to implement governmental effectiveness construction and the methodology for management by objectives, established the institutional framework of “single window” for governmental services, and launched implementation opinions and supporting policies for government purchased services.

At the same time, Shanghai Free Trade Zone conducted in-depth innovation in the in-process and after-event regulatory system centered on governmental function transformation and have the system gradually refined. 1) The reform of administrative approval system was gradually intensified: municipal departments should further delegate authority for administrative approval items to Pudong District in the principle of "focus on economic items, authority delegation to the maximum extent, and within Pudong District's capability" and delegated 151 administrative approval items to Pudong District. 2) The supporting regulatory system was optimized step by step, the disclosure system of corporate annual report and the business exception list system was refined, while social supervision was strengthened. The social credit system construction was strengthened and the "Pudong Public Credit Information Service Platform" established after the extended FTZ incorporated 4.3 million of credit information data, to further facilitate information sharing.

In addition, Shanghai strived to improve its management proficiency with innovative technologies like the Internet and made researches and advanced innovation in the governmental management model with the "Internet +" thinking. The *Opinions on Implementation of the "Internet +" Activities in Shanghai* was released in December 2015, the guidance ideology of which is to realize reform innovation by way of the innovative, open, and inclusive "Internet +" thinking, to build the new "Internet+" industrial integration model and the relaxing ecological environment of "mass entrepreneurship and innovation", to serve the transition of governmental functions and livelihood improvement, to achieve better economic quality and efficiency and to realize economic transformation and upgrading, to set up the radiating and driving force to industries in the Yangtze River Delta or even in the whole country, and to form the new development strength with "Internet +" for Shanghai.

CCXI believes that Shanghai Municipal Government actively follows international practices, gradually heads for the administrative management model of full disclosure of government affairs, law-based administration, and in-process and after-event regulation and supervision; at the same time, Shanghai makes use of innovative technologies like the Internet to advance government governance and city management, which is the foundation for Shanghai to enjoy a good market order and operating environment and plays an important role in consolidating Shanghai's good creditability.

Table 14: Major Administrative Reforms in Shanghai in 2015

Areas	Achievements
Reform in administrative approval system	• Developed and issued the administrative authority list and the responsibility list at the municipal level, cancelled 160 items for administrative approval, extended standardized administrative approval to districts, counties, streets, and towns; completed the sorting through of evaluation review related to administrative approval, and cancelled 152 items for evaluation review. • Further refined the management system, steadily promoted the " combination " of Zhabei District and Jing'an District, adjusted functions of the city construction management organization, comprehensively implemented the new market regulation system in districts and county, and set up the real estate registration organization in the municipal level and the district and county level.
Reform in administrative law enforcement system	• Established the governmental legal counsel system and refined the long-term rectification system for auditing. • Full disclosure of the budget and final settlement reports and statements, departmental budget and final settlement, and the three public expenses in the municipal, district & county, and the township government level. • Further improved the government working style, seriously implemented the study on " Three Stricts and Three Steadies ", made efforts to solve prominent issues put forward by the grassroots and the general public, highlighted the long-term mechanism for economy, and continued to strengthen the construction on diligent administration and clean government.

Governmental effectiveness construction	• Developed the opinions on implementation of government effectiveness construction and methodology for management by objectives and built the framework for the "single window" system for government services. • Issued implementation opinions and supporting policies for government purchased services.	

Source: Work Report of Shanghai Municipal Government 2016, complied by CCXI

2. Market environment

Important progress has been made in the construction of Shanghai International Financial Center. By taking the opportunity of the Free Trade Zone, Shanghai has led financial innovation, consistently refined the financial market system, accelerated the development of financial factors with the financial agglomeration effects emerged; Shanghai takes the leading position in economic entities' degree of freedom, liquidity of production factors, business environment, and liberalization in trade and demonstrates of convenience, fairness, and legalization.

At present, Shanghai has become one of the megacities with a complete market system in China or even in the world and has gradually established and refined the multi-center market pattern in the financial capital market, the international business center, the cargo distribution center, the e-commerce center and etc. In particular, the internationalization degree of Shanghai International Financial Center is significantly improved after RMB was incorporated into the special drawing rights (SDR) by the International Monetary Fund (IMF) and international financial institutions like BRICS Development Bank settled down in Shanghai.

From the perspective of the capital market and degree of financial marketization, great process was made in the construction of Shanghai International Financial Center with the support and guidance of ministries and their subsidiaries in Shanghai in the process of serving national economic and social development and financial reforming and opening, the position of the financial center in China was basically set up for Shanghai International Financial Center with a focus on the financial market system, and the global center for RMB product innovation, trading, pricing, and clearing was initially shaped.

Firstly, the financial market system in Shanghai was further refined and the market size significantly improved. The total trading volume in Shanghai financial market amounted to RMB 1,462.7 trillion in 2015, increased by 2.5 times compared to that in 2010; financial innovations in financial products, financial instruments, and service models were greatly increased. Secondly, the development in different financial factor markets in Shanghai was accelerated with new development platforms emerging one after another. Following the gold sector initiated by Shanghai Gold Exchange and the International Energy Exchange set by Shanghai Futures Exchange and permitted to conduct trading in crude oil futures, Shanghai Insurance Exchange was approved by the State Council at the end of 2015. In future, more market platforms will settle down in Shanghai. Thirdly, Infrastructure of the financial market was more comprehensive. In October 2015, Phase 1 of the Cross-border Interbank Payment System (CIPS) was successfully launched and operated, which marked China made a key breakthrough in accelerating RMB internationalization. In terms of the percentage of settlement currencies in trade financing, RMB surpassed the Euro and became the second largest currency only second to the US dollar in 2015. Fourthly, products and instruments in the financial market were constantly diversified and financial products and instruments with significant impact were launched, such as Treasury bond futures, NCDs, ETF options, gold ETFs and foreign exchange options.

Fifthly, the environment for financial development was continuously optimized and the risk prevention capability was strengthened. During the “12th five-year plan” period, Shanghai expedited financial legalization construction and took the lead to release the white paper of the *Legal Environment Construction for Shanghai International Financial Center* in China and the Financial Consumer Protection Bureau of the People’s Bank of China was officially put into operations in Shanghai. In addition, Shanghai’s capability to mitigate and cope with financial risks by way of legalization and market-oriented methods was considerably improved.

Now, Shanghai is committed to fostering more comprehensive financial market factors and to promoting the competitiveness of the institutional environment and talents, and is striving to build a world-class financial center in line with China’s economic strength and the international status of RMB. The *Construction Plan for Shanghai International Financial Center in the* “*13th Five-Year Plan*” *Period* was reviewed and approved in principle at the executive meeting of Shanghai Municipal Government in May 2016; according to the Plan, in 2020, Shanghai will be the global financial market dominated by RMB products and with strong financial resource allocation capability, whilst an innovative, efficient, cooperative financial service system based on the principle of fairness, rule by law, openness and freedom will be basically established, and an international financial center in line with China’s economic strength and the international status of RMB will be founded, to become a leader in global financial centers.

From the perspective of business environment and the level of trade facilitation, Shanghai is far ahead of other cities in China in economic entities’ freedom, liquidity of production factors, business environment, and degree of trade liberalization and possesses the features of convenience, fairness, and legalization. At present, Shanghai has set up a system with multi-layer and multi-category market factors that incorporates means of production and livelihood, combines tangible and intangible markets as well as futures and spot markets, and is dominated by the wholesale market and the retail market.

Surrounding the target of “two centers”, Shanghai is building the international business center, the cargo distribution center, and the e-commerce center with global influence through improving the trade facilitation. In August 2015, the introduction of the Asia Pacific Malaria Elimination Network (APMEN) and its operating center was led by Shanghai, with an aim to make use of new technical means like cloud computing, big data and the Internet of Things to enhance supply chain interconnection and connectivity and trade facilitation in the Asia-pacific region. Meanwhile, *Detailed Rules for Implementation of Foreign Exchange Management Reform in China (Shanghai) Pilot Free Trade Zone* was officially released in January 2016, in a bid to serve the real economy and promote trade & investment facilitation. For the enterprises in the free trade zone, the rules encourage full use of two resources and two markets, i.e. China and overseas, and facilitate cross-border investment and financing; for multinational companies, the rules are conducive to creating a better policy environment for centralized fund operations and management and promoting the headquarters’ economy agglomeration.

The contractual foreign investment in Shanghai reached USD 58.9 billion in 2015, with year on year growth of 86%. This figure hit a new high in annual foreign investment and was ranked first across the country. The foreign investment in actual use continued to grow on the basis of the high last year, amounting to USD 18.459 billion, with a year on year growth of 1.6% and growing for 16 years in a row. Now, Shanghai is the city that hosts most multinational companies' regional headquarters in Mainland China. There are 535 regional headquarters of multinational companies, 312 investment companies, and 396 foreign-funded R&D centers in Shanghai. 45 regional headquarters of multinational companies, 15 of which were headquarters of the Asia-Pacific region, 15 investment companies, and 15 foreign-funded R&D centers were newly established this year.

In 2015, the implementation of favorable policies like further liberalization of restriction in e-commerce shareholding ratio by foreign investment propelled a group of domestic and foreign e-commerce headquarters to entry into Shanghai: supermarket giants like Metro and Carrefour set up the e-commerce headquarters of the Asia-Pacific region and the cross-border e-commerce headquarters in Shanghai Free Trade Zone, the headquarters of Alipay was relocated to Pudong District, Shanghai, Wanda set up its e-commerce headquarters in Shanghai, SF Express set up its second headquarters in Shanghai, foreign-funded third party platform e-commerce players like feiniu.com were approved and operated, Wal-Mart acquired and wholly owned yhd.com, dianping.com were merged with meituan.com, and Ctrip expanded its online tourism market share through extensive cooperation with Baidu and Tencent.

In terms of innovation in market transaction model, Shanghai is adapting itself to global development trends of new technologies, new models and new formats, is steadily expanding pilot in new international trade, and further explores pioneer and pilot in foreign exchange management, to attract more multinational companies and large enterprise groups at home and abroad to set up the orders center, the pricing center, and the settlement center in Shanghai.

Recently, Shanghai has broken administrative monopoly, ensured fair market access, and promoted the efficient flow of goods and services to build a favorable market environment; Great efforts have been made to attract companies at home and abroad to set up organizations in Shanghai, encourages enterprises with different ownership to operate across the country or even across the world; Shanghai further refines the market rules and equally treats all enterprises in independent innovation, government procurement, and intellectual property protection; Shanghai standardizes the market order and strictly controls unfair competition and acts harmful to consumers' interests. To speed up connection with international practice, Shanghai is forming a unified, open, orderly and competitive market environment.

3. Policy environment

Shanghai enjoys advantageous policy environment in construction of the free trade zone, development of Pudong District, and financial reform pilot and has obtained significant phased achievements in investment management, trade regulation, and financial innovation.

In the background of national economic transformation & upgrading and institutional innovation, Shanghai enjoys advantageous policy environment in construction of the free trade zone, development of Pudong District, and financial reform pilot and is given great autonomy. A series of groundbreaking policies were piloted and implemented in Shanghai, with significant phased achievements. In CCXI's view, the superior policy environment in Shanghai effectively promotes the construction and development of Shanghai Free Trade Zone and Shanghai International Financial Center and improves the international competitiveness and strength of Shanghai. **Institutional innovation is not only one of the biggest advantages for the development of Shanghai, but also a core element for the policy environment in Shanghai.**

In October 2015, with the permission from the state council, six ministries including the central bank and Shanghai Municipal Government jointly issued the *Plan for Further Promoting the Pilot Program for Financial Development and Innovation in China (Shanghai) Pilot Free Trade Zone to Accelerate the Building of Shanghai into International Financial Hub*, which is of great significance because it is the guiding document for further advancing the construction of Shanghai Pilot Free Trade Zone and Shanghai International Financial Center in the new phase. The Plan clearly puts forward the five tasks to be achieved in Shanghai Free Trade Zone, i.e. taking the lead in achieving RMB capital account convertibility, further expanding cross-border use of RMB, constantly expanding the opening of the financial service industry to the outside world, accelerating the construction of the internationalized financial market, and consistently strengthening financial regulation and risk prevention.

At the same time, to actively push forward the implementation of pilot reform programs, the Free Trade Zone made improvement surrounding institutional innovation, openness, and transparency and all of its systems are linked to international prevailing rules. Positive progress was also made in replication and promotion of the *Implementation Plan for Promoting Experience from Pilot Reform in the Pilot Free Trade Zone across Shanghai*:

Deepening and refining the innovation in investment management system centered on negative list management while further improving the business and investment environment. Firstly, remarkable effects have been obtained from reforming foreign investment and overseas investment management system. In terms of foreign investment recording, the negative list management model was fully implemented in the newly expanded areas; all new foreign-funded enterprises not included in the list should be subjected to recording management, thereby improving the transparency in foreign investment access. Secondly, accelerating the implementation of wider opening measures. After the 54 opening measures launched in 2 batches, altogether around 1,500 projects were initiated with significant effects achieved from wider opening measures in industries like financial leasing, engineering design, travel agency, value-added telecom, recreational and game equipment production and sales. 21,000 enterprises were newly established in the past two year after the implementation of the negative list model in Shanghai Free Trade Zone, in which over 4,000 were foreign-funded enterprises, accounting for 20% of the total new enterprises. The number of newly established foreign-funded enterprises is almost equivalent to the total number of foreign-funded enterprise settled in the Zone in the past 25 years before the setup of Shanghai Free Trade Zone.

Accelerating innovation in the trade regulation system focusing on trade facilitation to further enhance the ease of doing business. The “single window” for international trade was comprehensively launched and operated in 2015, covering the six aspects, i.e. import and export declaration, declaration of transportation facilities, payment and settlement, enterprise qualification, trade license and information inquiry, involving 17 port & trade regulation departments; over 1,200 enterprises handled businesses in the “single window”, which primarily has the basic framework and major functions of the “single window” for international trade; after the release and implementation of the Notice of Implementing Goods Statement Supervision by Category in Shanghai Pilot Free Trade Zone in the same year, 18 logistics enterprises participated in the pilot and 1,382 deals were conducted, with the cargo value of around RMB 960 million. The Pilot Free Trade Zone has the capability of supervising goods state by category, which will further improve trade facilitation.

Actively promoting innovation in the financial system in order to achieve capital account convertibility and open financial services. New progress has been made in open financial innovation. At present, the institutional framework for open and innovative finance is basically shaped in Shanghai Pilot Free Trade Zone. Since the inauguration of the Free Trade Zone, national financial management authorities like the People’s Bank of China, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission have successively released 51 policy measures and detailed implementation rules to support the development of the Free Trade Zone. The authorities actively promoted the development of a new round of schemes for open and innovative finance pilot in the Pilot Free Trade Zone in 2015. On the one hand, the construction of the international financial market platform was steadily promoted; Shanghai Gold Exchange set up the gold sector, Shanghai Futures Exchange set up the International Energy Exchange in the FTZ and the Exchange obtained the permission for crude oil futures trading. On the second hand, the functions of financial services were constantly intensified, the domestic and foreign currency operations for the free trade account were initiated, and innovation pilots in cross-border use of RMB, investment and financing exchange facilitation, interest rate liberalization, foreign exchange management reform, administration streamlining and decentralization in financial regulation were propelled. Altogether 42 institutions accessed to the separate accounting unit system in the year and opened 44,186 FTZ accounts. The total annual amount of cross-border RMB settlement in the bonded area reached RMB 1,202.64 billion and the amount of cross-border RMB offshore borrowing reached RMB 6.982 billion, and the total balance of the cross-border RMB bidirectional capital pool business was RMB 339.207 billion. Finally, the financial regulation and risk prevention mechanism was constantly refined. The regulation coordination mechanism and the cross-border capital flow monitoring mechanism were set up by subsidiaries of “the central bank and the three commissions” in Shanghai and related departments of Shanghai Municipal Government, to further strengthen the regulation coordination on “anti-money laundering, anti-terrorism financing, and anti-tax evasion” in the Pilot Free Trade Zone.

Along with the formal extension of Shanghai Free Trade Zone at the end of January 2015, the defects of simple industrial structure in the original zone were offset and at the same time it brought profound impact on the “Financial area in Lujiazui” with agglomeration of financial resources and elements. The extended Shanghai Free Trade Zone will shoulder the heavy responsibilities in reform and innovation under the complete administrative region and architecture of Pudong District. In April 2015, the state council issued a notice approving the *Plan for Further Deepening the Reform and Opening in China (Shanghai) Pilot Free Trade Zone* and requiring the extended Pilot Free Trade Zone to set an example as pioneer in reform & opening and leader in innovation & development, continue to implement national strategies like development of Yangtze River Economic Belt with a focus on institutional innovation, and take the lead in exploring reform potential and addressing reform challenges in terms of construction of the new open economic system, exploration of new models in regional economic cooperation, building of the legal business environment and etc.

4. Innovation capability

Shanghai possesses strong innovation capability and has the potential to become a globally influential innovation center for science and technology, which will boost the economy transformation and upgrading in Shanghai; however, Shanghai also needs to create a favorable business environment, to stimulate individuals' entrepreneurial vigor, and to sustainably increase financial investment to enhance innovation capability.

Shanghai has entered the post-industrialization development stage and is in urgent need to build new development advantages along with the changes in the development stage, external environment, as well as internal resources and capabilities. “The fundamental way out for Shanghai is innovation-driven development and economic transformation & upgrading”. Shanghai clearly put forward the innovation-driven development strategy in the “12th five-year plan” period, which became the consensus of Shanghai. In May 2014, President Xi Jinping made an inspection tour to Shanghai and pointed out “Shanghai should march toward the globally influential, domestic leading, and world-class innovation center for science and technology”. This is a new position, mission, and requirement for Shanghai from the state.

According to the *Opinions on Accelerating the Construction of the Globally Influential Innovation Center for Science and Technology* issued by Shanghai Municipal Government in May 2015, the basic framework system shall be shaped for the innovation center for science and technology in 2020, and the core functions of the city with the innovation center for science and technology shall be established in 2030. The Opinions put forward reform measures in 4 aspects, i.e. establishment of the market-oriented and innovative system and mechanism, construction of the highland for innovative and entrepreneurial talents, creation of a favorable environment for innovation and entrepreneurship, and optimization of the significant layout for science & technology and innovation. Specifically, the Opinions mainly promotes the construction of the innovation center for science and technology from four layers: 1) building Zhangjiang National Comprehensive Science Center, 2) building generic technology platforms, 3) creating scientific and technological innovation zones, and 4) promoting mass entrepreneurship and innovation. It is planned to build a large open research base with Zhangjiang as the core supporting region, attract global innovation resources, promote the integration of industry, university, and research, and strive to make breakthroughs in major scientific challenges and bottlenecks of cutting-edge science and technology. At the same time, it is planned to build world-class infrastructure for major science and technology and cultivate globally influential joint research centers and innovative universities, gather the world top research institutions and teams, in a bid to become sources of innovation in certain inter-discipline frontier areas based on existing achievements.

Shanghai has accumulated certain foundation and conditions to build the globally influential innovation center for science and technology. On the one hand, Shanghai has a large number of science and technology resources as over

200,000 people are engaged in science and technology activities in Shanghai, including 165 academicians from the Chinese Academy of Sciences and Chinese Academy of Engineering, accounting for 11% of the total number in China. On the other hand, Shanghai is very open in innovation, since there are over 300 foreign-funded R&D centers, particularly over 120 R&D institutions from the Fortune Global 500 enterprises, which respectively accounting 1/4 and 1/3 of the total number in China. Moreover, with good innovation environment, Shanghai is presently home to 149 incubators, and nearly 100 new entrepreneur service organizations. Shanghai also successively carries out a series of reform in the science and technology system and mechanism like stock option incentive and introduction of international talents.

Shanghai made substantial progress in the construction of the innovation center for science and technology in 2015: significant science and technology projects were planned in the areas of brain science and artificial intelligence; science and technology infrastructure was completed, e.g. National Center for Protein Science, Shanghai; more R&D organizations at home and abroad settled down in Shanghai, with 15 newly set up foreign-funded R&D centers; National Eastern Tech-Transfer Center entered in Shanghai; mass entrepreneurship and innovation was vigorously promoted and 454 innovation and entrepreneur service organizations were set up; the science and technology innovation sector was opened in Shanghai Equity Exchange and the mother fund for innovation and entrepreneurship was set up; intellectual property operation services were piloted and the ownership of patent for invention reached 29 per 10,000 people.

From the perspective of financial support, Shanghai has been increasing the R&D investment year by year in recent years. The Work Report of Shanghai Municipal Government 2015 revealed that the total spending in R&D in Shanghai was RMB 92.5 billion in 2015, and its percentage in GDP was increased from 2.81% in 2010 to 3.7% in 2015, which is equivalent to the level of developed countries. Science and technology innovation has become an important driver for economic growth and has laid a solid foundation for the development of a globally influential innovation center for science and technology.

In the significant planning of building Shanghai as a globally influential innovation center for science and technology, Zhangjiang National Innovation Demonstration Zone will serve as the core carrier of scientific and technological innovation and will play an exemplary role. The *Implementation Plan for Accelerating the Interactive Development of China (Shanghai) Pilot Free Trade Zone and Zhangjiang National Innovation Demonstration Zone* (hereinafter referred to as "Interactive Development of the Two Zones") issued by Shanghai Municipal Government in November 2015 presented the specific tasks for "Interactive Development of the Two Zones" in the aspects of institutional innovation, agglomeration of innovative organizations, financial support to science and technology, IPR protection, talent highland construction, and etc., initiated 10 significant innovation pilots including building Zhangjiang Air Cargo Service Center, and provided a large number of supporting elements to the construction of the innovation center for science and technology in Shanghai. At present, these 10 pilots are progressing steadily in Zhangjiang National Innovation Demonstration Zone and phased achievements have been obtained from certain pilots. For example, the construction of Zhangjiang Joint Customs and Inspection & Quarantine Service Center is advancing steadily. After the Center is completed, the total time for customs clearance is expected to be shortened from the original 2-3 days to 6-10 hours. In addition, Shanghai Zhangjiang Boston Enterprise Park was inaugurated in Boston, Massachusetts, USA in February 2016 as a new model for science and technology innovation and cooperation between China and the US. In addition, Shanghai Zhangjiang Boston Enterprise Park will build the innovation clusters for R&D, incubation, industry, services, trading, and finance, which will create favorable conditions for exchanges and cooperation between US enterprises and Chinese counterparts and bring benefits to the implementation of the international development strategy of Zhangjiang National Innovation Demonstration Zone.

CCXI believes that Shanghai takes the lead in building the innovative city with global influence, which is organically connected to and provides mutual promotion to the construction of Four Centers and the innovation center for science and technology can effectively promote the construction of the financial and commercial center in Shanghai. Shanghai pioneers in transforming the economic growth model and in reform and innovation and the focus for future policy design lies in creating a policy environment favorable to innovation-driven development on the basis of the Four Centers. Shanghai also needs to further create an entrepreneurship environment, stimulate individuals' entrepreneurship, and continuously increase financial investment to enhance the innovation capability.

External support: Shanghai is of great strategic significance both economically and politically and secures continuous support and trust from the central government

Under China's current administrative system, the governments at a higher level usually provide various supports in policy, finance, and resources to the local governments at a lower level due to uneven regional economic growth. Furthermore, in case of default risk facing the local government, the government at an immediate higher level will take steps to intervene and to provide debt servicing support. Support from the government at an immediate higher level will help reduce the local government's actual debt default rate and enhance the credit standing of the local government. CCXI examines Shanghai's external support factors in two aspects.

Firstly, Shanghai enjoys an important position in economics and politics in China and boasts a strong strategic position as well. The city is ranked No. 1 by economic strength, and one of the key economic centers across the country. Politically, it is only second to Beijing, and strategically, it is of great significance. In short, its economic and fiscal strengths are awesome. It has been strategically defined by the government as a city with Four Centers. According to its 13th Five-year Plan, it will strive to grow into the international economic, financial, trading and shipping centers by 2020 that match China's economic strength and global position and boasts the capability of global resource allocation, and into a socialist modern international metropolitan, and build a basic framework for a technological innovation center with global reputation.

Secondly, the central government usually provides support for Shanghai at the policy level. The reforms and attempts the city has made in the course of its development reflect the implementation of national strategies. In the process of reform and opening up, the central government has made Shanghai a pilot for various policies, making Shanghai an important window to the outside. Shanghai holds an important political position in China, obtaining strong external support from the state, and carrying out pilot programs for key systems and policies for the central government. In practice, Shanghai has always been at the forefront of reform and opening up. For example, Shanghai Stock Exchange and Shenzhen Stock Exchange are among the earliest stock exchanges in China; Pudong New Area and China (Shanghai) Pilot Free Trade Zone are respectively the first national-level new area and the first national-level pilot free trade zone. Alongside the development of China (Shanghai) Pilot Free Trade Zone, the central government has introduced many groundbreaking financial and trade policies to support early and pilot implementation in China (Shanghai) Pilot Free Trade Zone, which have greatly motivated the city to be committed to reforms and innovations.

Conclusion

All in all, CCXI assigns a credit rating of AAA to the "Third Batch of General Obligation Bonds to Be Issued by Shanghai Municipal Government in 2016".

CCXI's Arrangements for Follow-up Rating of The Third Batch of General Obligation Bonds to Be Issued by Shanghai Municipal Government in 2016

Given the international practices and the requirements of the competent authority, we will conduct regular or irregular follow-up rating of the Bonds within their duration every year.

We will track and monitor the risk profiles of the Bonds during their duration. We will pay close attention to the local economic position, fiscal revenues & expenses, local government debts, and related information disclosed by the issuer. The issuer shall immediately notify us of any material event that may impact the credit rating, and provide us with relevant information, so that we can analyze the event in time after field surveys or telephone interviews and decide whether to adjust the credit rating and publish it, if any, at our website.

China Chengxin International Credit Rating Co., Ltd.

November 14th, 2016

Appendix 1: Selected data on economy, public finance and debt of Shanghai

Indicator\Year	2013	2014	2015
Total GDP (RMB billion)	2,181.815	2,356.77	2,496.499
Total GDP growth (%)	7.7	7.0	6.9
Total GDP per capita (RMB ’000)	90.1	97.3	103.1
Value-added of the primary industry (RMB billion)	12.489	12.426	10.978
Value-added of the secondary industry (RMB billion)	790.781	816.771	794.069
Incl.: Value-added industrial output (RMB billion)	723.669	736.284	710.994
Total industrial output (RMB billion)	3,389.938	3,407.119	3,321.157
Value-added of the tertiary industry (RMB billion)	1,378.545	1,527.573	1,691.452
Incl.: Value-added of the financial sector (RMB billion)	282.329	326.843	405.223
Three-industry structure	0.6:36.2:63	0.5:34.7:64.8	0.4:31.8:67.8
Percentage of research & development (R&D) expenses in the regional GDP	3.6	3.66	3.7
Fixed assets investment (RMB billion)	564.779	601.643	635.270
Growth rate of fixed asset investment (%)	7.5	6.5	5.6
Retail sales of consumer goods (RMB billion)		930.349	1,005.576
Growth rate of retail sales of consumer goods (%)	8.6	8.7	8.1
Number of resident population (’000)	24,151.5	24,256.8	24,152.7
City-wide general public budgetary revenues (RMB billion)	410.95	458.56	551.95
City-wide percentage of overall tax revenues (%)	92.40	92.01	88.02
Growth rate of city-wide general public budgetary revenues (%)	9.8	11.6	13.3
City-level general public budgetary expenses (RMB billion)	452.861	492.344	619.156
Growth rate of city-level general public budgetary expenses (%)	8.2	8.7	19.5
City-wide revenues from government-controlled funds (RMB billion)	234.04	253.27	231.22
Incl.: Revenues from assignment of State-owned land use right (RMB billion)	200.39	219.71	210.58
Municipal-level expenses for government-controlled funds (RMB billion)	224.27	230.27	218.49
Central government tax refund & subsidy (RMB billion)	63.20	63.47	64.93
Municipal-level general public budgetary revenues(RMB billion)	197,700	220,930	280,610
Municipal-level percentage of overall tax revenues (%)	88.75	88.44	82.70
Growth rate of municipal-level general public budgetary revenues (%)	7.9	11.8	14.8
City-level general public budgetary expenses (RMB billion)	159.05	168.76	233.35
Growth rate of city-level general public budgetary expenses (%)	4.3	6.1	24.8
Municipal-level revenues from government-controlled funds (RMB	98.53	98.13	89.52
Incl.: Revenues from assignment of State-owned land use right (RMB billion)	98.53	98.13	89.52
City-level expense for government-controlled funds (RMB billion)	79.32	76.40	79.90
Debts which the government of Shanghai was liable to repay (RMB	89.61	78.90	69.32
Debts for which the government of Shanghai issued official guarantees	495.6	581.25	488.0
Debts for which the government of Shanghai had a limited rescue responsibility (RMB billion)	50.9	23.86	17.9

Note: Figures in the table are shown as in the source, without rounding.

Source: Shanghai Municipal Finance Bureau, Shanghai Statistical Yearbook (2014, 2015), the Statistical Communique of Shanghai Social and Economic Development 2015

Appendix 2: Symbols and Definitions of Government Bond Credit Rating

Rating Symbol	Definition
AAA	The highest capability of servicing its debt obligations, basically immune from any adverse economic environment change, subjected to minimum credit default risk.
AA	Excellent capability of servicing its debt obligations, relatively insensitive to adverse economic environment change, subjected to very low credit default risk.
A	Sound capability of servicing its debt obligations, but sensitive to adverse economic environment change, subjected to low credit default risk.
BBB	Moderate capability of servicing its debt obligations, relatively sensitive to adverse economic environment change, subjected to moderate credit default risk.
BB	Relatively weak capability of servicing its debt obligations, very sensitive to adverse economic environment change, subjected to high credit default risk.
B	Debt obligation service capability highly relies on the availability of positive economic environment, subjected to very high credit default risk.
CCC	Debt obligation service capability completely relies on the availability of positive economic environment, subjected to extremely high credit default risk.
CC	Basically unable to repay debts.
C	Unable to repay the bonds.

Note: "AAA-" is a rating slightly below AAA; The modifiers of "+" and "-" can be appended to each generic rating classification from AA to B, with the modifier "+" indicating a rating slightly above its generic rating category and "-" slightly below its generic rating category.