Center for Macroeconomic Research of Xiamen University

China's Macroeconomic Outlook

Quarterly Forecast and Analysis Report, February 2013

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of Xiamen University

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Preface I

This report is partial results of the "China Quarterly Macroeconomic Model (CQMM)", a project of the Center for Macroeconomic Research (CMR), Xiamen University. The CMR is one of the Key Research Institutes of Humanities and Social Sciences of the Ministry of Education of China. The research is supported by the fund of Key Research Institutes of Humanities and Social Sciences of the Ministry of Education (10JJD790001), the National Social Science Foundation of China (08&ZD034), and the National Natural Science Foundation of China (71073130).

Since the launch of CQMM 7 years ago,13 forecast reports with policy simulations and 6 essay collection books on China's macroeconomic analysis have been published. This is the 14th forecast report, and it is a summary of forecast results released on the "China Macroeconomic Advanced Forum, CQMM (Spring) Press Conference for Economic Projections for 2013–2014 and a Book Launch of 'China Macroeconomic Outlook'", which was jointly organized by the Center for Macroeconomic Research, Xiamen University, and the Economic Information Daily, Xinhua News Agency, on February 23, 2013 in Beijing. Since the fall of 2012, Springer began to publish this economic report series in the English version "China Macroeconomic Outlook" twice a year.

We are grateful to all the speakers for their valuable comments at the press conference, and we revised the report based on their comments. We also appreciated strong supports from Economic Information Daily, Xinhua News Agency. We thank the media for reporting the conference. Of course, we are fully responsible for all possible mistakes.

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Preface II

In 2012, the worsening sovereign debt crisis in Europe and sluggish recovery in the US economy had shrunk external demand for China's goods and services. On the other hand, excess production capacity and tightened policies and regulations on real estate continued to curb the growth of investments in manufacturing and real estate industries. However, as the result of expansionary monetary policy beginning from the first half of the year and proactive fiscal policy beginning from the second half of the year, money supply maintained at a higher grow rate, which accelerated investments in infrastructure by governments, and offset shrinking investment by private sectors to some extent. Meanwhile, China's growth rate of gross domestic product (GDP) declined gradually during the first three quarters, while price levels began to drop. The contribution of gross capital formation to GDP growth increased, whereas the contribution of net exports to GDP growth was negative. Although resident real income grew faster than real GDP, the contribution of final consumption to GDP growth dropped 3.8 percentage points compared with last year.

Considering unclear economic prospect in the euro-zone and a global monetary easing situation, the research team assumes that: First, in 2013, the growth rate would be −0.2 and 1.9 % in the euro-zone and the United States respectively. As a result of "Debt Ceiling", the defense expenditure cuts have led to a slowdown of the US economic growth in the fourth quarter of 2012. The US government would keep decreasing its government expenditure under the pressure from the Debt Ceiling in 2013. In 2014, the euro-zone and the US economy are expected to rebound, and the growth rates would be 1 % in the euro-zone and 3 % in US, respectively. Secondly, in 2013, China's monetary policy would be expansionary at the first half year, and then turn to be tightened. In order to respond to uncertainty from external markets, the growth rate of broad money supply (M2) would be 15 % in the first half year, and it would drop as inflation would rebound in the second half year of 2013. As a result, the growth rate of M2 in 2013 would remain at the level of 14 %.

Based on the above assumptions, the research team makes the following forecasts: First, in 2013 China's growth would remain stable and reach 8.23 %, which is an increase of 0.43 percentage points compared with the previous year; even though there exists inflation pressure resulting from the global monetary easing situation, severe inflation in China is unlikely to happen, and consumer price index (CPI) would remain at 3.11 %. Second, growth of imports and exports would rebound, but trade surplus would decrease further. Finally, the share of investment in GDP would remain to be high in the short term as urbanization would promote growth of fixed assets investment, though higher resident income would cause high and steady consumption.

The decreasing share of final consumption, especially resident consumption in GDP, is the most significant feature of China's economic structural imbalance over the past decade. Therefore, restructuring national income distribution is the fundamental measure to remedy the economic structural imbalance. Two ratios in national income distribution should be noted and need to be adjusted: the first is the share of government revenue in GDP; the second is the proportions of income distribution between the rich and the poor, which reflects the income gap. It is critical to control the growth of government revenue and to increase resident income, especially that of low-income residents, in order to correct economic structural imbalance and to transform the pattern of economic development. To examine the effectiveness of government fiscal policies on China's economy, the research team has made two policy simulations in which a portion of government revenue was transferred to residents: (1) distributing the transfer payment evenly to all residents; (2) distributing them evenly to the poor, whose income lie below the 20th percentile for urban residents and those lie below the 40th percentile for rural residents.

In the first scenario, simulation results show that: (1) resident disposable income would increase, and in turn, boost resident consumption, ensuring a stable economic growth; (2) the share of resident consumption in GDP would increase, while those of capital formation and net exports would drop. Therefore, the aggregate demand structure would be improved; (3) the growth rate of imports would rise and exports would decline. As a result, net exports would drop slightly and trade surplus would decrease. In the second scenario, simulation results show that disposable income in low-income cohort would increase significantly, and then their consumption would increase, which contributes to decreasing investment and improving the aggregate demand structure. The simulation results indicate that income redistribution policy aiming at increasing the income level of poor group would produce desired effects on economy such as promoting economic growth, narrowing the income gap, boosting resident consumption, increasing imports, decreasing exports, and finally, the trade surplus would decrease.

Therefore, the research team suggests that: (1) moderately slowing down the growth rate of government fiscal revenue and well controlling the share of government revenue in GDP is one of the crucial means to deepen reform of economic

system, to properly handle the relationship between government and market, and to promote transformation of the pattern of economic development; (2) it is necessary to increase the resident consumption and pay attention to restructuring the national income distribution between government and residents.

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Chapter 1
A Review of China's Economy in 2012

1.1 Economic Growth Slowed Down, Structural Imbalance Persisted as Well

In 2012, China's GDP grew by 7.8 %, a decrease of 1.5 percentage points over the previous year. The worsening sovereign debt crisis in Europe and sluggish recovery in the U.S. economy had directly depressed external market demand for China. On the other hand, domestic excess production capacity in manufacturing sectors resulting from persisting high investment for decades, has reduced industrial investment, and in turn its output growth. The industrial output increased by 7.9 %, which was the lowest since 2000, a decrease of 2.5 percentage points over the previous year. At the meantime, as the consequence of tighten regulations, the output of the real estate sector only increased by 3.8 %, a decrease of 2.9 percentage points over last year. Inflation slowed down as well: CPI was 2.6 %, a decrease of 2.8 percentage points; and PPI was 1.7 %, a decrease of 7.7 percentage points (Fig. 1.1). From a long term perspective, a slow-down of China's economy is an inevitable outcome of its unbalanced economic structure after China has enjoyed high economic growth over more than 30 years and thus has become one of the middle-income countries. At the moment, it is vital to deepen reform, to regulate economic structure and to create conditions for a further reform of the China's economy and transformation of economic development pattern.

The shrinking external market demand led to a slowdown in GDP growth for 2011 and 2012. The contribution of net exports to GDP growth was −4.3 % in 2011, and −2.2 % in 2012. The negative contribution has changed growth of fixed assets investment and final consumption. Even though the growth rate of fixed assets investment declined in 2012, its contribution to GDP growth was as high as 50.4 %, an increase of 1.6 percentage points over the previous year. Meanwhile the growth rate of per capita real income exceeded that of per capita real GDP, but the contribution of final consumption to GDP growth was 51.8 %, yet a decrease of 3.8 percentage points over 2011 (Fig. 1.2), whether or not final consumption, especially resident consumption can serve as the key driving force in promoting

Fig. 1.1 The growth rates of major economic indicators from 2000 to 2012 (Data source: CEIC data)
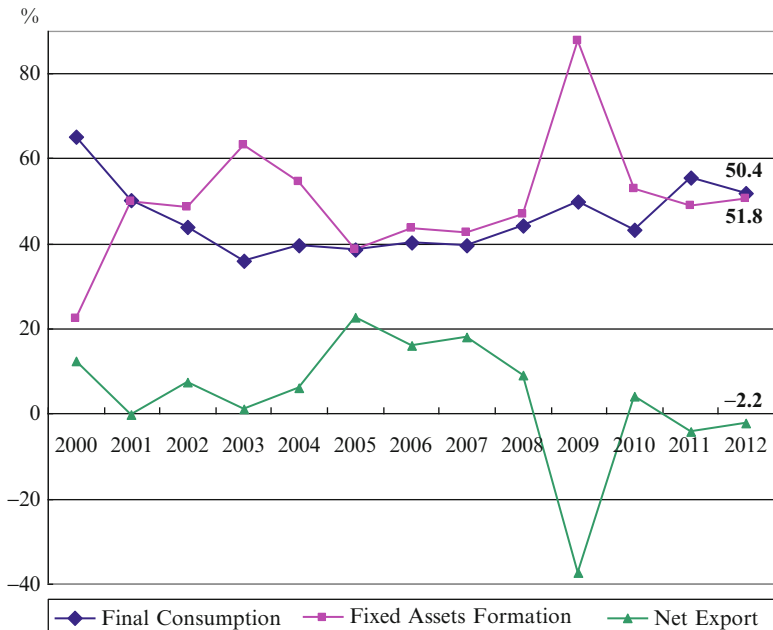
Fig. 1.2 Contributions of various components to GDP growth from 2000 to 2012 (calculated with expenditure approach) (Data source: CEIC data)

economic growth, will depend on efforts to deepen reform and effectiveness in transformation of the pattern of economic development and economic structural adjustment.

1.2   Non-Government Investments Shrunk, and Fixed Assets Investment Slowed Down

In 2012, China's fixed assets investment rose by 20.6 %, which was the lowest since 2004, a decrease of 3.2 percentage points over 2011. The growth rate of fixed assets investments from domestic enterprises was 21.2 %, and that from Hong Kong, Macao and Taiwan enterprises was 8 %, a decrease of 3.5 and 11.9 percentage points over the previous year respectively, while those from state-owned, state-holding and foreign enterprises were higher than in 2011. In terms of industries, investments in the manufacturing sectors rose by 22 %, a decrease of 9.8 percentage points over the previous year, and investment in real estate rose by 22.1 %, a decrease of 7.6 percentage points over the previous year, and investments in transportation, storage and postal services rose by 9.1 %, a decrease of 7.3 percentage points over the previous year.[1] In terms of fixed assets investment by sectors, the proportion of manufacturing investment accounted for 34.3 % of gross fixed assets investment, and that of real estate was 25.3 %, both an increase of 0.3 percentage points over the previous year, while the ratio of transportation, storage and postal services investment was 8.3 %, a decrease of 0.9 percentage points (Fig. 1.3). Even though their growth rates declined, investment in manufacturing sector and real estate sector still accounted for nearly 60 % in gross fixed assets investment.

In 2012, fixed assets investment rose by 18.6 %, a decrease of 1.7 percentage points. In terms of investment sources, investment from the state budget and domestic loans rose by 29.7 and 8.4 %, an increase of 18.9 and 4.9 percentage points respectively; investment from self-raised fund rose by 21.7 %, a decrease of 6.9 percentage points; foreign investment dropped by 10.9 %, a decrease of 19.1 percentage points. In terms of the composition of fixed assets investment, foreign investment accounted for 1.1 %, which was the lowest since 2000; the proportion of Self-raised Fund investment continued to increase and thus reached 67.3 %, an increase of 1.7 percentage points; investment from State Budget accounted for 4.8 %, an increase of 0.4 percentage points; investment from Domestic Loans accounted for 12.5 %, a decrease of 1.2 percentage points. The rapid growth of investments from State Budget and Domestic Loans prevented a rapid decline in fixed assets investment to some extent. In addition, although investment from local

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[1] In the first half of 2012 the growth rate of investment to transportation, storage and postal services was negative, and turned to be positive in the second half of the year and kept increasing afterwards.
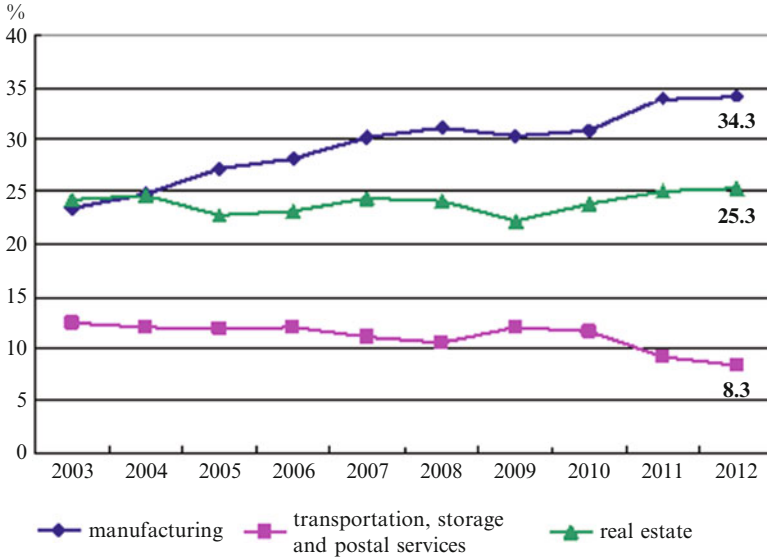
Fig. 1.3 Fixed assets investment by sectors from 2003 to 2012 (Data source: CEIC data)

investment rose by 21.7 %, a decrease of 5.5 percentage points, its share in fixed assets investment rose to 94.1 %. To some extent, excess production capacity, together with the tightened regulations on real estate, suppressed private investment in the past 2 years. The expansionary monetary policy from the first half of the year guaranteed money supply for domestic loans, and the proactive fiscal policy from the second half of year accelerated infrastructure investment from government, thus the investment from local investment which was biased to transportation infrastructure offset the shrinkage of investment from self-raised fund and foreign investment.

1.3   The Growth Rates of Exports and Imports Sharply Declined and the Trade Surplus Kept Expanding

In 2012, due to the shrinkage of external market demands, China's exports rose by 7.9 %, a decrease of 12.4 percentage points, while China's imports rose by 4.3 %, a decrease of 20.6 percentage points. It was the first time that the growth rates of China's exports and imports fell below two digit ever since China had joined WTO (except for 2009) (Fig. 1.4). A rapid decline in the growth rate of imports increased trade surplus to 231.11 billion dollars, an increase of 76.21 billion dollars over the previous year. The growth rate of China's actual use of foreign
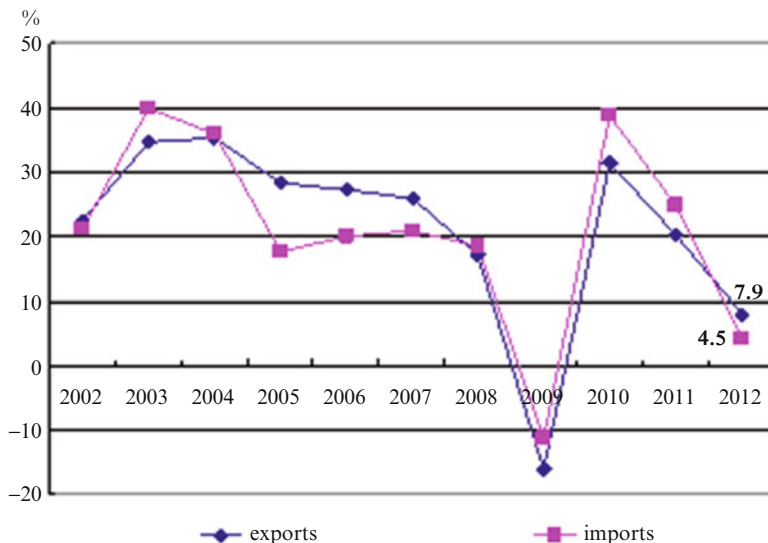
Fig. 1.4   The growth rates of exports and imports from 2002 to 2012 (Data source: CEIC data)

direct investment dropped 3.7 %, a decrease of 13.4 percentage points.[2] Thus, the foreign exchange reserves increased only 130.44 billion dollars, which was the lowest growth since 2004.

In 2012, in terms of trade composition, general trade exports rose by 7.7 %, a decrease of 19.5 percentage points; general trade imports rose by 1.6 %, a decrease of 29.5 percentage points. Trade deficit of general trade decreased to 32.2 billion dollars. The growth rate of processing trade exports dropped 14.2 %, a decrease of 17.5 percentage points, and that of imports in processing trade dropped 13.3 %, a decrease of 15.8 percentage points. Overall trade surplus of processing trade reduced to 323 billion dollars. In terms of imports and exports by regions, the growth rate of China's exports dropped by 4.1 % to Europe, increased by 8.4 % to the U.S., and increased by 12 % to Asia, a decrease of 20.6, 6.1, and 10.8 percentage points respectively. Since 2008, the share of China's exports to Asia in total exports kept increasing and thus reached 49.1 % in 2012,while that of China's exports to Europe continued to decline and was 19.3 % in 2012; the share of exports to the U.S. remained stable and was 17.2 % in 2012 (Fig. 1.5a). In 2012, the growth rate of China's imports from Europe dropped by 0.2 %, while imports increased by 8.8 % from the U.S., and increased by 3.4 % from Asia, a decrease of 32, 10.8, and 16.9

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[2] The growth rate of China's actual use of foreign direct investment kept decreasing in the past 2 years. For one reason, the slowdown of economic growth in Europe and U.S. and the sovereign debt crisis in Europe reduced their investment abroad. Another reason is that the increasing labor cost in China drives foreign investments which aim to produce low-level and labor-intensive goods towards low wages areas.

a

b
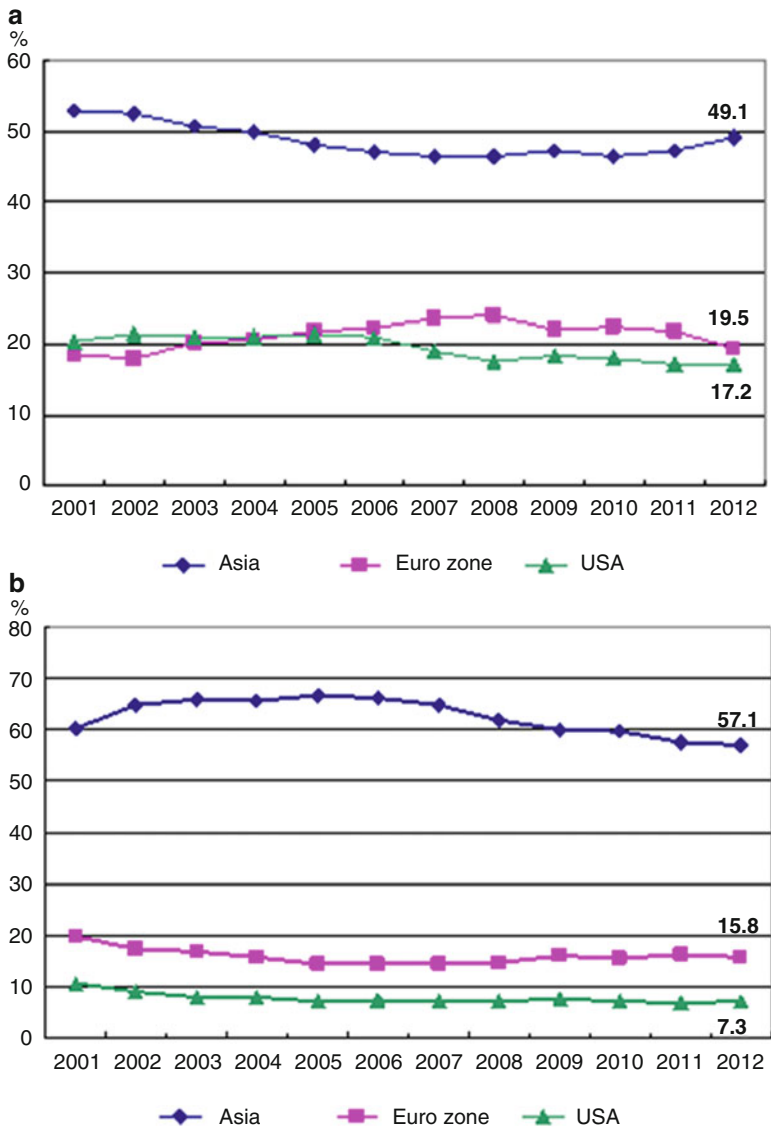
Fig. 1.5 The changes in China's exports and imports by regions from 2001 to 2012. (**a**) The exports by region. (**b**) The imports by region (Data source: CEIC Data)

percentage points respectively. As a result, in 2012, the share of imports from Asia in total imports was 57.1 %, a decrease of 0.5 percentage points; 15.8 % from Europe, a decrease of 0.7 percentage points, and 7.3 % from U.S., an increase of 0.3 percentage points (Fig. 1.5b).

1.4   Inflation Slowed Down, and Income in Real Terms Increased

In 2012, as economic growth slowed down, major price indicators decreased (Fig. 1.1). In the first half of the year, CPI basically declined month after month, but increased slightly in the second half of the year. The core CPI which excludes prices of food and energy, and the non-food CPI remained at the level of 0.1–0.4 %. Among eight categories of consumer price indices, price indices for apparel, recreation, education and communication increased slightly while the rest of them dropped. Food CPI reached 4.8 %, a decrease of 7 percentage points over the previous year. As a result, a modest inflation ensured an increase of per capita real income to some extent. In 2012, disposable income per capita of urban residents was 24,565 Yuan, increased by 9.6 % in real terms, which was an increase of 1.2 percentage points; and net income per capita of rural residents reached 7,917 Yuan, increased by 10.7 % in real terms, which was a decrease of 0.7 percentage points.

1.5   The Monetary Policy Turned To Be Expansionary, While the Fiscal Policy Remained To Be Proactive

To counteract negative effects from global economic slowdown in the first half of 2012, China's monetary policy turned to be expansionary. At the end of July, the central bank reduced the deposit reserve ratio twice, and sliced the benchmark interest rate for loan twice in a row. Broad money supply (M2) rose by 13.8 %, an increase of 0.2 percentage points; narrow money supply (M1) rose by 6.5 %, a decrease of 1.4 percentage points; currency in circulation (M0) rose by 7.7 %, a decrease of 6.1 percentage points. RMB loans increased by 8.2 trillion Yuan, and it accounted for 52.1 % of total money and credit supply.

In 2012, government fiscal revenue increased by 12.8 %, a decrease of 12.2 percentage points, and the share of tax revenue in government revenue was 85.8 %, a decrease of 0.6 percentage points. In 2012 government expenditure rose by 15.1 %, a decrease of 6.5 percentage points. In terms of expenditure composition, the share of education, science and technology was 20.4 %, an increase of 1.7 percentage points; the share of social security and employment, health and environmental protection expenditures was 15.7 %, a decrease of 0.3 percentage points; the share of housing support expenditure was 3.5 %, and the shares of transport expenditure and spending on agriculture, forestry and water resources were both 16 %, both increasing slightly.

In conclusion, in 2012 the worsening sovereign debt crisis in Europe and sluggish recovery in the U.S. economy had directly shrunk external market demand for China; Excess production capacity in manufacturing sector resulting from persisting high investment for a long period, has reduced the growth of investment

in the manufacturing sector. Tightened regulation on the real estate market suppressed real estate investment to some extent. Expansionary monetary policy beginning from the first half of the year guaranteed money supply for domestic loans, and the proactive fiscal policy beginning from the second half of year accelerated infrastructure investment from government, thus investment by local governments, which was biased to transportation infrastructure offset the shrinkage of investment from self-raised fund and foreign investment to some extent. Given this background, China's economic growth slowed down gradually from the first quarter to the third quarter, inflation began to drop as well. As the contribution of net exports to GDP growth was negative, that of gross capital formation kept increasing. Even though the growth rate of resident income in real terms exceeded that of real GDP per capita, the contribution of final consumption to GDP growth dropped 3.8 percentage points from the last year. It depends on the efforts to deepen reform and the effectiveness in transformation of the pattern of economic development and economic structure, whether or not final consumption, especially resident consumption can become the key driving engine of economic growth. China faces the major challenges to deepen reform, to transform the pattern of economic development, to regulate economic structure and stabilize economic growth after it has become one of the upper-middle income countries and its potential economic growth dropped.

Chapter 2
Forecast of China's Macroeconomic Outlook for 2013–2014

2.1 Improvements of the CQMM

2.1.1 Imports and Exports Module

One improvement is to add the imports and exports module (block of equations) into CQMM. In 2012, China's exports increased by 7.9 %. Among them, exports to the Association of Southeast Asian Nations (ASEAN) increased rapidly by 20.1 %. Meanwhile, the trade value between China and ASEAN reached a remarkable level, accounting for 10.35 % of total foreign trade of China. Consequently, ASEAN has become China's third-largest trading partner for the fourth consecutive year. With the growing influence of ASEAN market on China's foreign trade, this report takes the growth of the top five trade partners of the Association of Southeast Asian Nations (ASEAN-5) into account. By doing so, we can capture the effects of growth in ASEAN-5 on China. As a result, forecast based on CQMM is improved.

2.1.2 Public Finance Module

Another improvement is to add a fiscal module into CQMM. By introducing the variables of government fiscal revenue and expenditure, the CQMM model can analyze the impacts of fiscal policies on consumption, investment, imports and exports and simulate the effectiveness of fiscal policies. Specifically, we develop the equations of government expenditure and government consumption, while the "fixed assets investment" equation and the "export of general trade" equation have been updated. Incorporating the government fiscal module makes the framework of behavior equations of the CQMM more thorough and comprehensive, and could make forecast more precisely. More importantly, it also broadens the applicability of the model, by making it possible to simulate any fiscal policy change.

2.2 Assumptions on Exogenous Variables

2.2.1 The Growth Rates of the US and Euro Zone

In 2013, the downside pressure on the economy of the euro zone is expected to remain significant. Based on IMF forecast, the economic growth in the euro zone would decrease 0.2 % in 2013. As there are concerns of fiscal contraction under the pressure of a "fiscal cliff", the research team assumes that the growth rate of the United States would be 1.9 % in 2013, 0.1 percentage points lower than forecast by IMF. On the other hand, according to IMF's forecast, the growth of the euro zone and the United States are forecast to increase in 2014, 1 and 3 %, respectively. We compute the quarterly growth rates for 2013 and 2014 on year-on-year basis using annually forecast for these two areas, and give them in Fig. 2.1.

2.2.2 Main Exchange Rates

Given the assumptions made on the external economies, the value of an Euro against a US dollar is expected to decline in the first half of 2013, as a result of the economic slowdown in the euro zone; and then, the value is likely to be appreciated in second half of the year as the euro area gradually picks up its economy. The exchange rate of the Euro against the US dollar is expected to be 1:1.27 on average in 2014. On the other hand, a long-term trend of appreciation of the Yuan (RMB, the Chinese Currency) against the US dollar would keep unchanged, in spite of the continuing quantitative easing monetary stance in the United States, as well as the euro zone or Japan. However, the floating band of the Yuan's two-way fluctuation may expand in short term. Therefore, the value of Yuan

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
◆ EU17GDP_C	-0.11	0.05	-0.02	0.10	-0.08	0.05	-0.03	0.10
■ USGDP_C	0.07	-0.01	0.03	-0.01	0.11	-0.03	0.06	-0.04
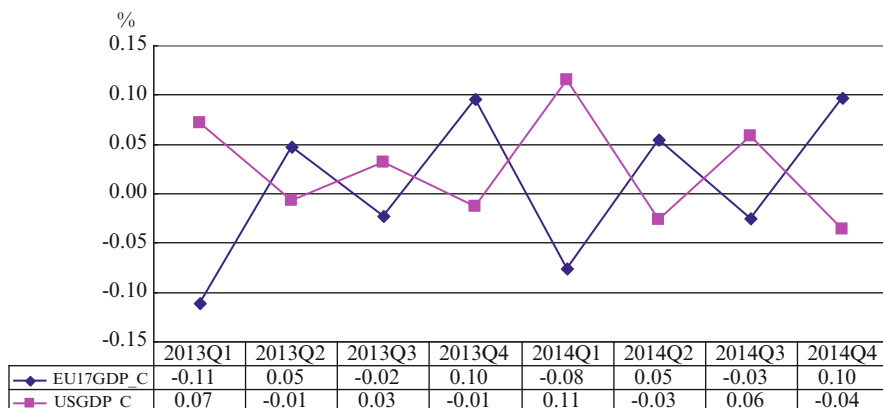
Fig. 2.1 Forecast of growth rates in the US and euro zone (year on year) (Note: EU17GDP_C is average growth rate in the euro zone, USGDP_C is growth rate in the US (quarterly chained growth rate))

against the US dollars would continue to appreciate in the next 2 years: 6.14 Yuan and 6.06 Yuan for one US dollar in 2013 and 2014, respectively (Fig. 2.2).

2.2.3   The Growth Rate of the Broad Money Supply

The growth rate of M2 is expected to rise faster in the first half of 2013, and then go down in the second half, reflecting efforts to cope with inflation pressure resulted from easing monetary stance of external economies. On year-on-year basis, M2 is expected to grow 15 % in the first half of 2013, and fall to 13 % in the fourth quarter of 2013. Furthermore, M2 is expected to increase at an annual rate of 14 % (Fig. 2.3) in 2014.

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
USDEURO	1.28	1.27	1.25	1.27	1.29	1.30	1.31	1.33
ER_W	6.20	6.18	6.16	6.14	6.12	6.11	6.08	6.06
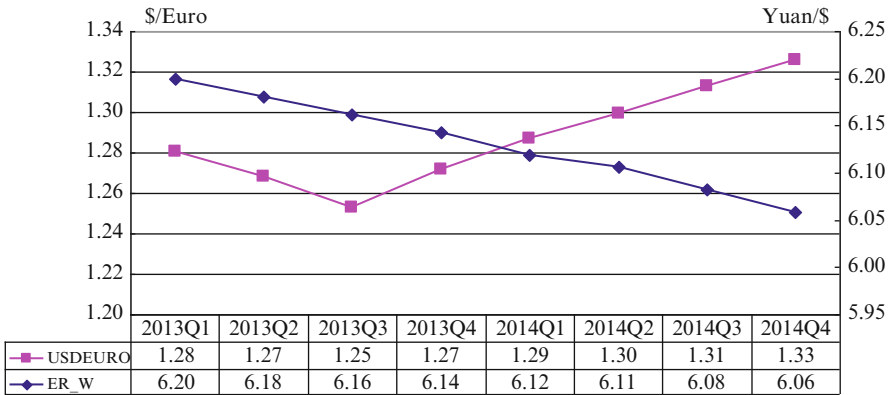
Fig. 2.2 Forecast of certain exchange rates (Note: *ER_W* denotes the exchange rate of RMB against the US dollar (*right axis*), and *USDEURO* denotes the exchange rate of the US dollar against the Euro (*left axis*)

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
M2	15	15	13.5	13	14	14	14	14
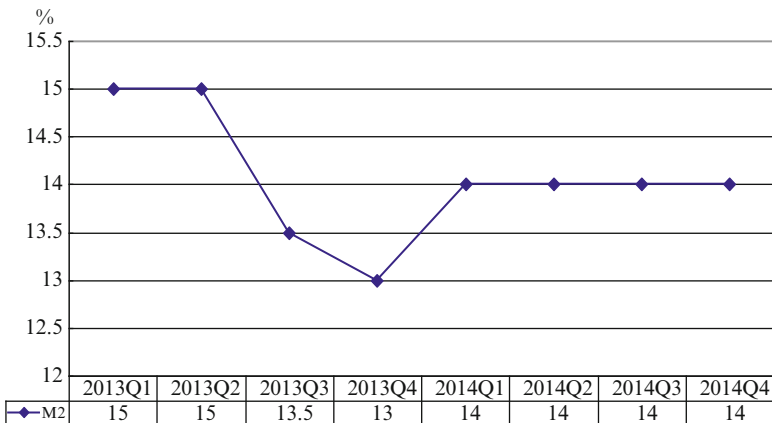
Fig. 2.3 Expected growth of M2

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
RL	6	6	6	6	6	6.25	6.25	6.25
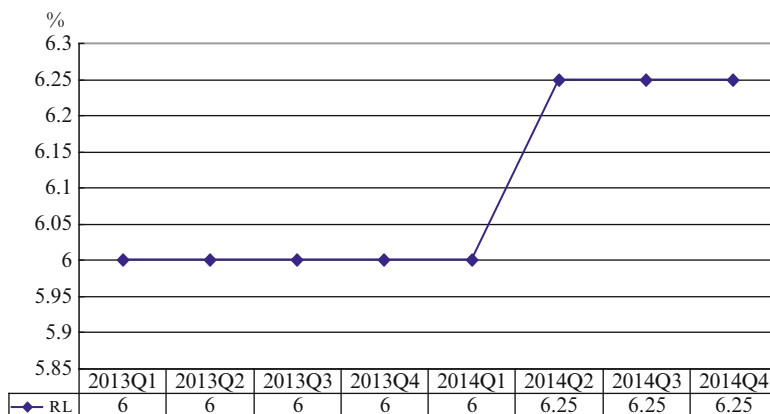
Fig. 2.4 Forecasts of the benchmark 1-year lending rate

2.2.4 The Benchmark 1-Year Lending Rate

Based on above considerations, the Central Bank of China is expected to maintain its official interest rate of loans for 1 year at 6 % in 2013, and is likely to raise the benchmark 1-year lending rate by 25 basis points in the first quarter of 2014 to fight likely inflation (Fig. 2.4).

2.3 Forecast of China's Major Macroeconomic Variables for 2013–2014

2.3.1 The Growth Rate of GDP

Based on the assumptions on the exogenous variables in CQMM, it is forecast that the growth rate of GDP would rebound to 8.23 % in 2013, 0.43 percentage points higher than previous year, owing to less uncertainty of the globe economy. A higher growth rate of 8.84 % is forecast for 2014. On year-on-year basis, the growth rate would fall to 7.8 % in the first quarter of 2013, and then climb to a peak of 8.52 % in the third quarter, finally down to 8.38 % in the fourth quarter of 2013 (Fig. 2.5).

2.3.2 Forecast of Major Price Indices

The CQMM indicates that inflation pressure in China would continue to increase in 2013, as a result of globally monetary quantitative easing. The consumer price index (CPI) is projected to rise by 3.11 % in 2013, 0.47 percentage points higher

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
Growth	7. 81	8. 19	8. 52	8. 38	8. 28	9. 02	9. 11	8. 94
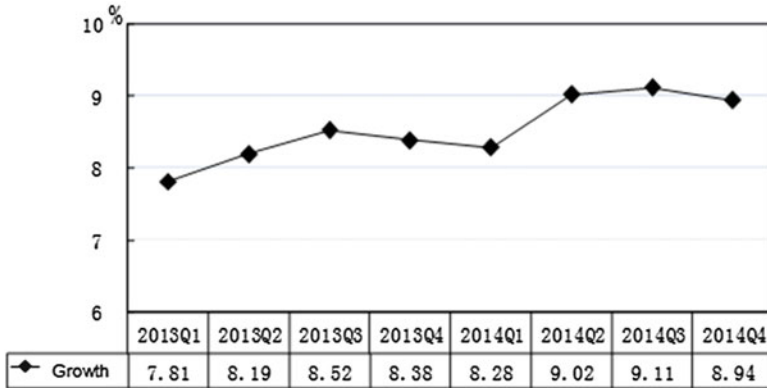
Fig. 2.5 Forecast of quarterly growth rates of GDP (year on year)

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
CPI	2.32	2.87	3.52	3.73	3.56	3.58	4.22	4.14
P_I	3.64	4.28	5.46	6.02	4.33	4.38	5.35	5.35
P_GDP	3.08	4.10	5.55	6.87	4.38	4.41	5.11	5.14
PPI	1.79	4.07	6.63	7.09	3.59	3.67	5.41	4.72
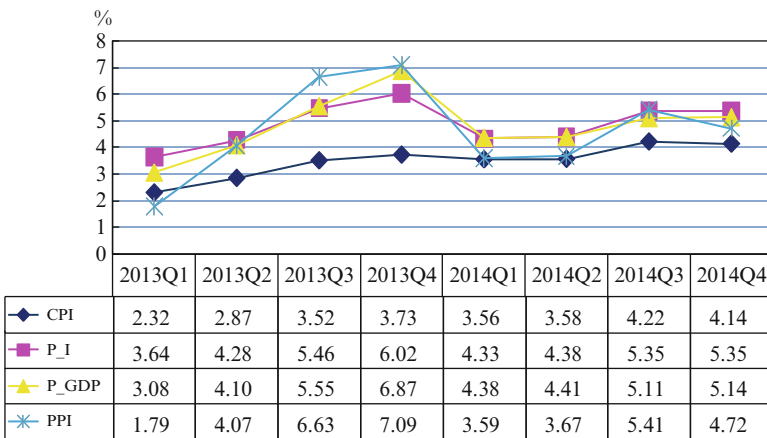
Fig. 2.6 Forecast price indices (year on year) (Note: *P_I* denotes the price index of investment in fixed assets; *P_GDP* is the GDP deflator)

than in previous year, following by a rise of 3.88 % in 2014. In 2013, the growth of CPI in first quarter would be relatively low, and then rise to 3.73 % in fourth quarter, the first peak of CPI. In 2014, CPI is forecast to increase by 4.22 % in third quarter compared with the same quarter of the previous year (Fig. 2.6).

The producer price index (PPI) would first rise to 4.88 % in 2013 and then fall slightly to 4.36 % in 2014 rise. As shown in Fig. 2.6, PPI would reach the highest point, 7.09 % in fourth quarter of 2013, and then go down to 4.72 % in fourth quarter of 2014.

The price index of investment in fixed assets (P_I) is expected to be 4.85 % in 2013, an increase of 3.75 percentage points over the previous year, and then to increase to 4.86 % in 2014. P_I would continue to rise through 2013, from 3.64 % in

the first quarter of 2013 to 6.02 % in the fourth quarter of 2013. It would fall temporarily to 4.33 % in the first quarter of 2014, and then go up and stay at 5.35 % in the second half of 2014 (Fig. 2.6).

The GDP deflator (P_GDP) is expected to be 4.9 % in 2013, 3.05 percentage points higher than in 2012, and then decrease slightly by 4.76 % in 2014. On year-on-year basis, the GDP deflator would reach 3.08 and 4.38 % in the first quarter and second quarter, and then 6.87 % in the fourth quarter of 2013; the GDP deflator would be 4.38 % in the first quarter and 5.14 % in fourth quarter in 2014 respectively.

To sum up, China's economy would grow steadily in 2013. Expectations of inflation would remain well anchored during 2013, even though surplus liquidity may recur due to the global monetary easing. However, a pickup in external demand may fuel inflationary pressure since 2014.

2.3.3   Forecast of Growth Rates of Other Variables

2.3.3.1   Growth Rates of Imports, Exports and Foreign Reserves

The research team forecasts that the imports and exports of China would rebound, owing to decreasing uncertainty from the euro zone and recovery of the United States in 2013. The amount of Exports, calculated at current price and in the U.S. dollar is projected to rise by 12.22 % in 2013, 4.32 percentage points higher than in 2012, while the imports is projected to rise by 17.83 %, 13.53 percentage points higher than in 2012 (Table 2.1). The growth rate of exports may go down to 8.57 % in the second quarter of 2013, but followed by a rebound above 14.3 % either in the third and fourth quarter. The growth rate of imports keeps rising in the first three quarters of 2013, from 15.51 to 20.38 %, only with a modest adjustment to 19.11 % in the fourth quarter. The foreign exchange reserve is expected to increase by 13.03 % for 2013, owing to the accelerating growth of exports and a low base of 2012. As external demand would fully recover in 2014, the growth of imports and exports of China would accelerate, with exports expanding by 19.82 % and imports expanding by 21.39 %. Meanwhile, the foreign exchange reserve is expected to rise by 9.18 % for 2014 (Fig. 2.7; Table 2.1).

2.3.3.2   Growth Rates of Investment in Fixed Assets

As shown in Fig. 2.8, fixed assets formation at constant price is projected to rise by 11.14 % in 2013, 3.49 percentage points higher than in 2012, while urban investment in fixed assets at current price is projected to rise by 18.47 % in 2013, 2.32 percentage points lower than in 2012. In 2014, expectations of inflation and a rise in interest rate which would pose downward pressure on investment demand. But on the other hand, on-going urbanization would boost the urban infrastructure investment. Consequently, fixed capital formation at constant price would rise by 8.67 % in 2013, while urban investment in fixed assets at current price would rise by 20.08 %.

Table 2.1 Forecast on growth of imports, exports and foreign reserves during 2013–2014 (%)

Time	Exports				Imports				Reserve
	Constant price	Current price	General trade at current price	Processing trade at current price	Constant price	Current price	General trade at current price	Processing trade at current price	Current price
2013	8.44	12.22	14.35	12.25	10.44	17.83	21.43	9.96	13.03
Q1	8.96	11.39	13.10	8.37	9.81	15.51	16.40	10.27	8.80
Q2	5.78	8.57	9.53	8.77	9.74	16.30	17.13	11.21	13.76
Q3	9.59	14.56	14.74	19.17	10.76	20.38	24.67	12.11	14.31
Q4	9.45	14.32	19.95	13.14	11.39	19.11	27.74	6.44	15.26
2014	13.25	19.82	21.86	16.99	10.50	21.39	21.95	15.55	9.18
Q1	13.13	18.42	20.20	15.99	10.37	18.57	17.56	14.62	9.14
Q2	13.20	18.97	21.04	16.04	11.98	21.35	23.52	14.09	8.65
Q3	14.05	21.19	23.20	18.43	10.49	23.18	23.41	17.51	9.38
Q4	12.65	20.57	22.80	17.42	9.24	22.33	23.15	15.92	9.54

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
FER	8.80	13.76	14.31	15.26	9.14	8.65	9.38	9.54
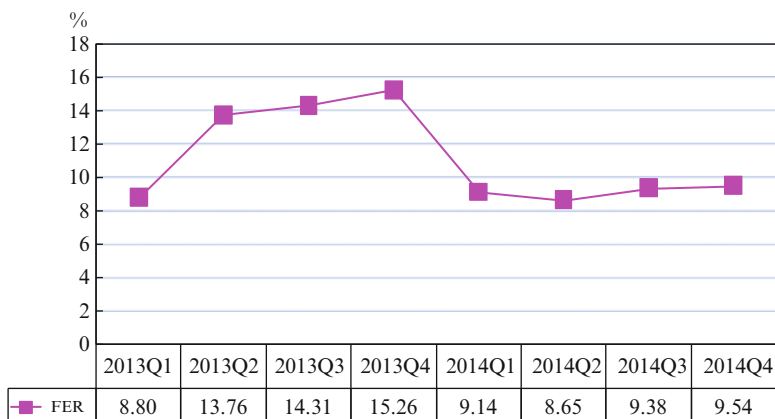
Fig. 2.7 Expected growth of foreign exchange reserve (year on year)

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
TI_C	10.41	12.54	12.01	9.65	8.88	8.83	8.76	8.21
FI_UR	17.29	18.33	16.85	21.32	19.87	19.84	20.81	19.80
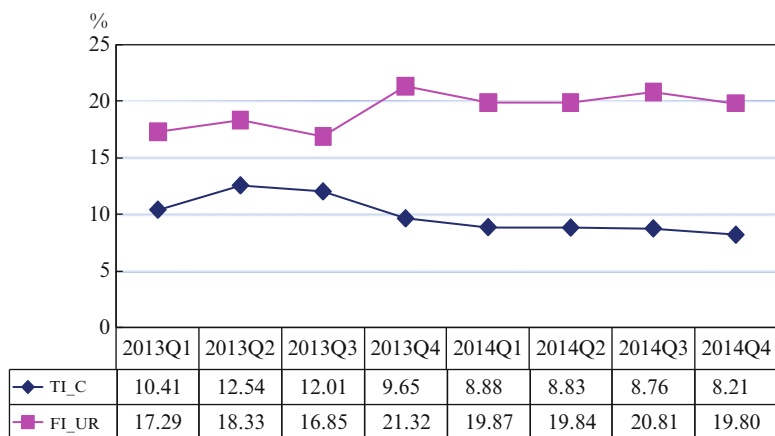
Fig. 2.8 Expected growth of fixed capital formation (year on year) (Note: *TI_C* denotes the growth rate of fixed capital formation (at constant price), and *FI_UR* is the growth rate of urban investment in fixed assets (at current price))

Investment in fixed assets is likely to grow faster in the first two quarters of 2013 compared with the same periods of previous year. The growth rate would reach 12.54 % at the second quarter, and then decline to 12.01 and 9.65 % in the third and fourth quarter respectively in 2013; and then continue to decline in 2014 owing to the inflation pressure. On the other hand, the growth rate of the fixed capital investment at current price in urban would be quite different, with the lowest rate of 16.85 % in the third quarter of 2013, followed by a rebound of 21.32 % in the fourth quarter of 2013. In 2014, it would grow at around 19.8 % all quarters, except the third quarter, which reaches the highest of the whole year 20.81 %. Moreover, total investment in

Table 2.2 Expected growth of investment in fixed assets from 2013 to 2014 (Group by source of funds, %)

Time	From domestic credits	From firms' self-financing	From other sources	In total
2013	24.56	21.64	27.68	22.17
Q1	20.17	18.41	37.02	22.15
Q2	20.91	23.62	32.62	22.42
Q3	23.34	21.25	21.21	19.42
Q4	34.08	23.15	22.44	24.71
2014	16.13	23.14	17.08	20.71
Q1	17.40	22.57	16.52	20.49
Q2	16.86	22.49	17.73	20.47
Q3	16.65	23.86	18.69	21.46
Q4	13.82	23.56	15.40	20.41

Note: Investment in fixed assets from other sources is the remaining part of total investment other than parts from domestic credits, firm's self-financing, government budget and foreign

fixed assets is projected to be 22.17 % in 2013, an increase of 1.57 percentage points compared with the previous year. A slightly reduction may occur in 2014, but still maintaining a level of 20.71 %. Specifically, the investment from domestic credits is likely to increase by 24.56 % for 2013, 16.16 percentage points higher than the previous year; investment from self-financed fund of firms would rise by 21.64 % in 2013, slightly lower than in 2012. Investment from other sources would increase by 27.68 % in 2013, 13.57 percentage points higher than the previous year. All these are results of government monetary policies. Entering 2014, except for investment from self-financed fund of firms, investment from other financial sources may slowdown, as depicted in Table 2.2.

2.3.3.3   Growth Rate of Consumption

The resident consumption at constant price is expected to grow by 7.61 % in 2013, a decline of 1.79 percentage points compared to the previous year. However, a rebound of 8.33 % can be expected in 2014. At the same time, the growth rate of retail sales of consumer goods at current price is expected to hit 18.27 % in 2013, an increase of 5.61 percentage points over last year, then down to 16.32 % for 2014.

Compared to the same period of the previous year, the growth rate of consumption at constant price is expected to continue to go up for each quarter in 2013, and reach 11.1 % in the fourth quarter of 2013; it would be around 8.32 % through 2014. The growth rate of retail sales of consumer goods at current price would rise to 24.32 % in the fourth quarter of 2013 from 15.15 % in the second quarter of 2013. After a slowdown to 15.4 % in the first quarter of 2014, it would gradually rise to 17.12 % in the fourth quarter of 2014 (Fig. 2.9).

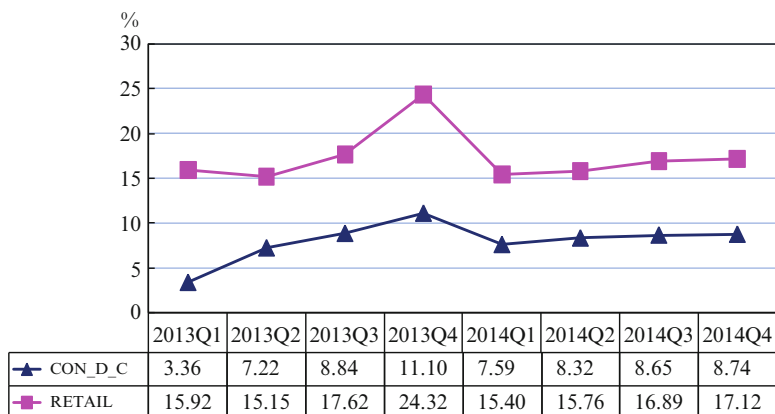|	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014Q4
CON_D_C	3.36	7.22	8.84	11.10	7.59	8.32	8.65	8.74
RETAIL	15.92	15.15	17.62	24.32	15.40	15.76	16.89	17.12

Fig. 2.9 Expected growth of consumption (year on year) (Note: *CON_D_C* denotes the growth rate of resident consumption at constant price, and *RETAIL* denotes the growth rate of retail sales of consumer goods at current price)

2.4   Conclusions

Firstly, China's economic growth is projected to remain stable and grow by 8.23 %, 0.43 percentage points higher than in 2012, despite considerable uncertainty and economic downside pressure from external demand. Although monetary easing of external economies would bring in inflationary pressures to some extent, it is unlikely to have severe inflation in China, and CPI is expected to stay around a level of 3.11 %. Steady economic growth is favorable for policy implementation on the market-oriented reforms and rebalancing the economic structure.

Secondly, in 2013, China's imports and exports would rebound due to alleviative economic uncertainty in the euro zone, and robust economic recovering in the United States. The promotion of urbanization would help to boost fixed assets investment, and the continuously improvement of income of urban and rural residents should promote stronger consumption. However, in short term the high ratio of investment to GDP implies that investment is still the main engine of economic growth. Thus, there is a long way to adjust the national economic structure and to switch the current investment-driven development pattern into a harmonious and sustainable one. Moreover, accelerating the transformation of the pattern of economic development is an arduous and challenging task. China needs to make greater efforts on the transformation of economic development strategy, structural reforms and fiscal adjustments.

Chapter 3
Policy Simulation

The final consumption, especially the share of resident consumption in GDP, has kept declining in China, which has been the most significant feature of the structural imbalance of national economy over the past decade. Although series tax cuts and other policies which aimed at stimulating consumption demand have ensured the steady growth of China's resident consumption to some extent, the structural imbalance has not yet changed completely. Compared to final consumption, the share of investment in GDP has been too high. The contribution rate of final consumption to economic growth continued to drop in 2012, a decline of 3.8 percentage points over the previous year. Therefore, "high investment, high export and low consumption as a share in GDP", that is, so-called "two high and one low" problem could not be solved in the short term. It requires long term efforts to transform the pattern of economic development and to make final consumption especially resident consumption to be the key driving force of economic growth.

Unbalanced aggregate expenditure is determined by an unfair national income distribution. The adjustment of national income distribution is the fundamental measure to alter structural imbalance. Two ratios related to national income distribution need to be noted and adjusted: (1) the share of government revenue in GDP; (2) the income gap or the proportions of income distribution within residents. Chairman Hu's report at the Eighteenth National Congress of the Communist Party of China says that: "Deepening reform is crucial for accelerating the change of the growth model. The underlying issue we face in the economic structural reform is how to strike a balance between the role of the government and that of the market", thus "We should support people's congresses and their standing committees... in tightening examination and oversight of all government budgets and final accounts", and "On the basis of making China's development much more balanced, coordinated and sustainable, we should double its 2010 GDP and per capita income for both urban and rural residents".[1]

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[1] "Firmly March on the Path of Socialism with Chinese Characteristics and Strive to Complete The Building of a Moderately Prosperous Society in All Respects, Report to the Eighteenth National Congress of the Communist Party of China" By Hu Jintao.

Therefore, it is crucial to curb the growth of government revenue and increase residents' income, especially that of low-income residents, in order to correct the unbalanced economic structure and to transform the pattern of economic development.

In the past few years our research team has carried out many policy analyses on the issues such as economic structure adjustments and improvements of resident consumption and people's wellbeing from different perspectives via policy simulations based on CQMM. In this report, in order to investigate effects on the economy of income redistribution, two policy simulations are implemented under two scenarios. In both scenarios, the research team assumes that the Chinese government can reduce the growth rate of government revenue by certain percentage points, and in turn, the government can transfer the corresponding decrease in government revenue to residents. By doing so, the share of resident income and consumption in GDP will increase. A slowdown in the growth of government revenue has negative effect on China's economic growth, while an increase in the share of resident income and consumption has positive effect. The research team attempt to show that the total effect will be positive under either scenario, to compare the effectiveness between the two scenarios.

The two scenarios are designed as follows:

In the first scenario, the governments redistribute decreased part of government revenue evenly to all residents in urban as well as rural areas;
In the second scenario, the governments redistribute decreased part of government revenue evenly to those whose income below the 20th percentile in urban residents and those below the 40th percentile in rural residents.

Two policy simulations are implemented respectively based on the two scenarios. Suppose that when all other conditions were held unchanged, the Chinese government decrease the growth rate of its fiscal revenue by 1 percentage point, which can reduce the total government revenue by 41.72, 104.71, 176.9, 285.74, 443.67 and 601.89 billion Yuan respectively in the period 2007–2012. As a result, the share of the government fiscal revenue in GDP would drop by 0.7, 1.0 and 1.2 percentage points respectively in 2010–2012 (Fig. 3.1).
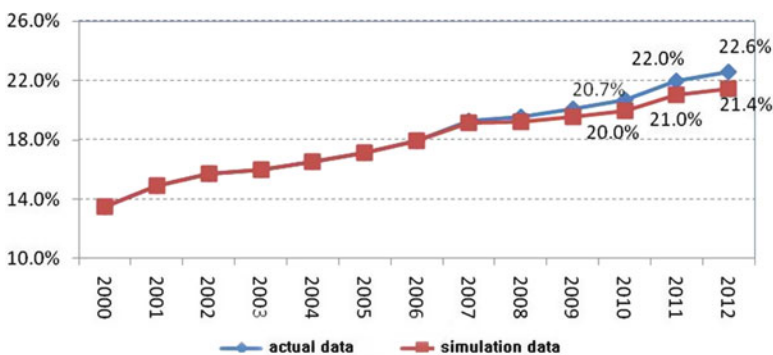

Fig. 3.1   The changes in the share of the government fiscal revenue in GDP

3.1   Policy Simulation in the First Scenario

Redistribute the decrease in government revenue evenly to all residents in China.

In the first scenario, we assumes that GDP remained unchanged, and the decreased part of the government fiscal revenue could be transferred to urban and rural residents equally to increase their income through some mechanisms, such as tax-cuts or transfer payments, from 2007 to 2012. Under these assumptions, the quarterly growth rate of GDP on year-to-year basis could increase slightly by 0.08 percentage points on average. The average growth rate of resident consumption could increase by 1.03 percentage points; the average growth rate of gross fixed capital formation would decrease by 0.49 percentage points; the growth of exports would decline and the growth of import would increase, with a slightly negative net effect on the net exports. Therefore, 1 percentage point decrease in the growth rate of the government fiscal revenue would not undermine economic growth. The improvement of resident income would steadily increase the proportion of resident consumption in GDP, and decrease that of investment, which would lead to an appropriate adjustment of the national economic structure. Specifically, the results of the simulation in detail are given as follows:

1. **When the decreased part of the government fiscal revenue is transferred to all residents equally, GDP would grow slightly**.

   In the first scenario, on year-on-year basis, and compared to the baseline model, the growth rate of GDP is much higher in 2010. Although this growth rate is lower since the third quarter of 2011, the growth rate on average is 0.08 percentage points higher over the whole simulation period (Fig. 3.2).

2. **Resident Consumption would grow significantly faster, which would Increase the Share of Resident Consumption in GDP.**
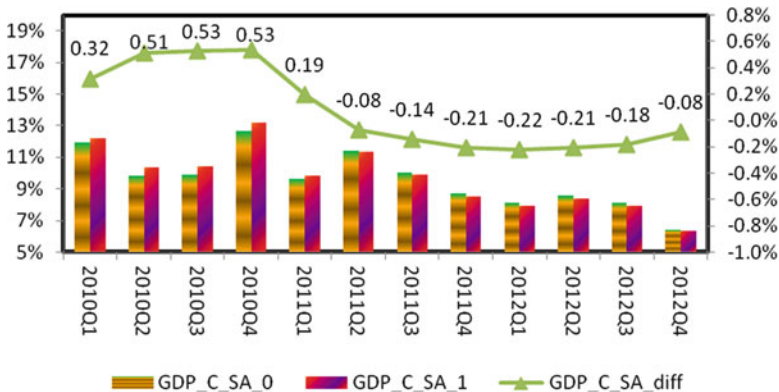

Fig. 3.2 The effect of transferring the government fiscal revenue on GDP Growth (Note: *GDP_C_SA_0* denotes the growth rate of GDP in the baseline model; *GDP_C_SA_1* denotes the counterpart in the first scenario; *GDP_C_SA_diff* denotes the difference between the above two results (year-on-year, after seasonal adjustment))
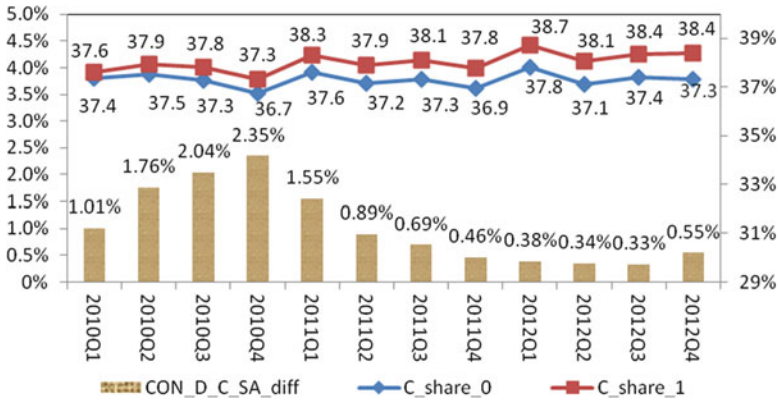
Fig. 3.3 The effect of redistributing government fiscal revenue on consumption (Note: *C_share_0* denotes the share of the final consumption in GDP in the baseline model; *C_share_1* denotes the counterpart in the policy simulation; *CON_D_C_SA_diff* denotes the difference between the above two ratios (and year-on-year, after seasonal adjustment))

In the first scenario, the quarterly growth rate of resident consumption would be considerably higher than that in the baseline model, an increase of 7.16 percentage points for 2010. As the increase of GDP would turn from positive to negative from 2011 to 2012, the final increase of resident consumption would drop to 3.60 and 1.59 % respectively. As a result, the share of final consumption in GDP would rise slightly, 0.02 percentage points higher in the first quarter of 2010 and 1.1 percentage points higher in the fourth quarter of 2012 (Fig. 3.3).

3. **The Growth Rate of Investment Would Drop, and the Share of Gross Fixed Capital Formation in GDP Would Decline**

   In the first scenario, on year-on-year basis, the growth rate of gross fixed capital formation would be lower than that in the baseline, 0.05 percentage points lower in the first quarter of 2010 and 0.74 percentage points lower in the second quarter of 2011, after which the drop would tend to be much smaller, only 0.41 % lower in the fourth quarter of 2012. Consequently, the share of gross capital formation in GDP would decrease by 0.2 percentage points in the first quarter of 2010 and 0.7 percentage points in the fourth quarter of 2012 (Fig. 3.4).

4. **Net Exports Would Decline Slightly**

   In the first scenario, although the share of net exports in GDP would not change much, it would be much lower than that in the baseline: it would decrease by 0.04 percentage points in the first quarter of 2010 and 0.2 percentage points in the fourth quarter of 2012 (Fig. 3.5).

In the first scenario, on year-on-year basis, the growth rate of gross exports would decrease by 0.06 percentage points in the first quarter of 2010 and 0.57 percentage points in the second quarter of 2011. Since then the growth rate would continue to drop to 0.33 % in the fourth quarter of 2012. On the other hand, the growth rate of gross imports would not change much, 0.82 percentage points higher in the fourth quarter of 2010, and would decrease by 0.39 percentage points in 2011
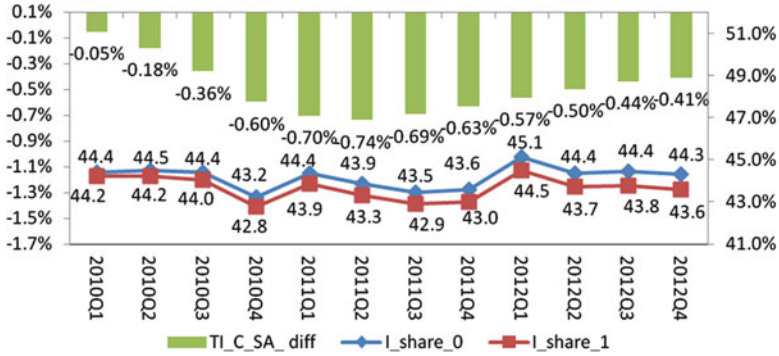
Fig. 3.4 The effect of redistributing the government fiscal revenue on investment (Note: *I_share_0* denotes the share of gross capital formation in GDP in the baseline model; *I_share_1* denotes the counterpart in the policy simulation; *TI_C_SA_diff* denotes the difference between the above two ratios (year-on-year, after seasonal adjustment))
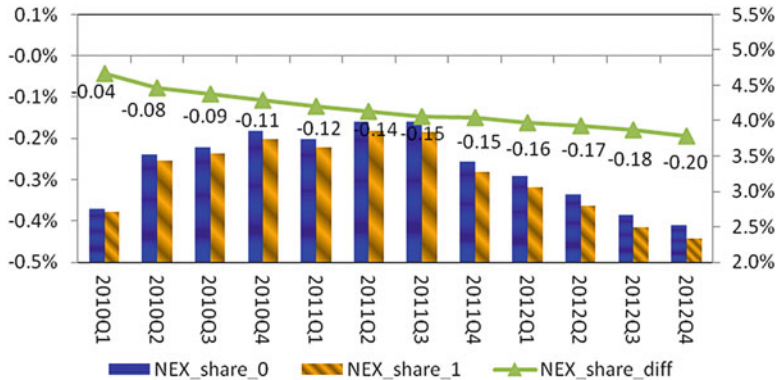
Fig. 3.5 The effect of the transfer of fiscal revenue on the share of net exports in GDP (Note: *NEX_share_0* denotes the share of net exports in GDP in the baseline model; *NEX_share_1* denotes the counterpart in the policy simulation, and *NEX_share_diff* denotes the difference between the two ratios above (annualized and year-on-year, after seasonal adjustment))

and 0.28 percentage points in 2012. As a result, the share of net exports in GDP would decrease slightly (Fig. 3.6).

In conclusion, if the Chinese government could reduce the growth rate of fiscal revenue appropriately (1 percentage point for example), and transfer the decreased part of the government revenue evenly to all the residents in urban and rural areas, the possible macroeconomic impacts would be as follows:

Firstly, it would improve the disposable income of urban and rural residents, which could stimulate resident consumption, and then offset negative effect on the economic growth resulted by a decrease in the growth rate of the government fiscal revenue. Economic growth would maintain a steady and slight increase.
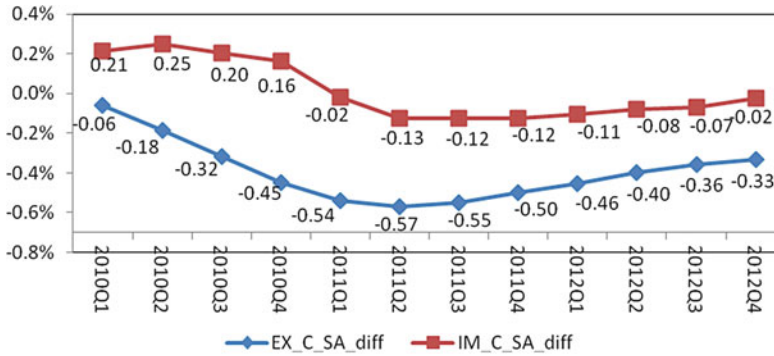
Fig. 3.6 The effect of redistributing the government fiscal revenue on imports and exports (Note: *IM_C_SA_diff* denotes the difference between the gross imports of the policy simulation and that in baseline model; *EX_C_SA_diff* denotes the difference between the gross exports of the policy simulation and that in baseline model (annualized and year-on-year, after seasonal adjustment))

Secondly, the share of resident consumption in GDP would increase, while the share of gross capital formation and net exports in GDP would decrease. As a result, the aggregate demand structure would be improved. All the above shows that the measures of transferring the part of the government revenue to residents would not only balance the structure of national income distribution, but also shall contribute to restructuring the aggregate demand.

Thirdly, it could expand the demand for imports, reduce the growth of exports, decrease net exports slightly, which would be helpful to narrow trade surplus.

3.2   Policy Simulation in the Second Scenario

Redistribute the decrease in government revenue evenly to those whose income lie below the 20th percentile for urban residents and those below the 40th percentile for rural residents.

Different from the first scenario, in the second scenario, we assume that the decreased part of the government fiscal revenue would only be transferred to low-income residents in order to narrow the income gap among residents. The "Guidelines on deepening reform in the income distribution system" which was issued by the State Council on February third, 2013 pointed out that one of the major goals of deepening the reform of income distribution would be to reduce poverty significantly, to expand the number of the middle-income residents, and thus gradually form the distribution structure as "rugby-shaped".

The research team assumes that the decreased part of the government fiscal revenue would be only transferred to the low-income residents. Specifically, the urban residents group consisted of the lowest-income and low-income groups, that each group accounts for 10 % of the urban population; the rural residents group is

consisted of the lowest-income and low-income groups, that each group accounts for 20 % of the rural population. With the redistribution of the government fiscal revenue, the per capita income of the beneficiaries would increase by 716.2, 1115.9 and 1522.0 Yuan respectively from 2010 to 2012 on average. As a result, in 2012 the income of the low-income residents in rural area would increase to 6329.0 Yuan. Thus the ratio of income of lowest-income residents to that of low-income residents in the rural area would raise from 68.27 to 89.89 %; the income per capita of lowest-income urban residents would increase to 13945.5 Yuan,[2] which would account for 83.20 % of the income of low-income urban residents (16761.0 Yuan) other than the original 74.12 %.

In the second scenario, the results of simulation show that the quarterly growth rate of GDP on year-to-year basis averagely would rise by 0.05 percentage points compared to the results from the first scenario. The growth rate of resident consumption would rise by 0.54 percentage points on average; and the growth rate of gross fixed capital formation would decrease by more than 0.25 percentage points than that in the first scenario. As a result, the share of resident consumption in GDP would further increase, while the proportion of capital formation and net exports in GDP would decline. Thus, the improvement of the aggregate demand structure in the second scenario would be much more significant than that in the first scenario. Specifically, the detail results of the simulation are given as follows:

1. GDP would grow fast to some degree regardless the negative effect of the decreased part of the government revenue

   The quarterly growth rate of GDP would rise by nearly 1.14 percentage points in 2010 than that in the first scenario, which is on average an increase of 0.05 percentage points. This result shows that the measure of improving the low-income resident income in urban and rural areas could sustain the steady growth of GDP (Fig. 3.7).

2. The share of resident consumption in GDP would further increase, and the share of capital formation and net exports would decrease.

   As a result, the improvement of aggregate demand structure is evident. Compared with the first scenario, the share of resident consumption in GDP would continue to rise, with an increase of 0.19 percentage points again in the first quarter of 2010, and would rise by 0.57 percentage points in the fourth quarter of 2012. The share of capital formation would decrease by 0.12 percentage points in the first quarter of 2010, and then would drop by 0.39 percentage points in the fourth quarter of 2012 (Fig. 3.8).

In addition, the result of policy simulation shows that compared with the results from the first scenario, the share of net exports would drop by 0.03 percentage

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[2] As the Chinese National Bureau of Statistics announced only the income of three groups such as the lower-middle income, middle income and upper-middle income residents, these data was estimated by the CMR-CMU.
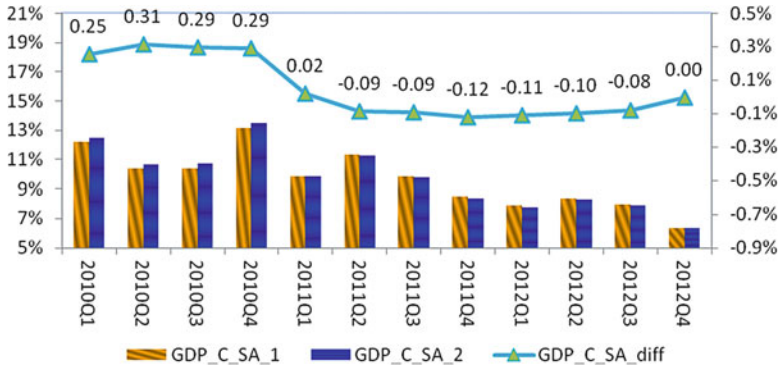
Fig. 3.7 The GDP growth rates in the first and the second scenario (Note: *GDP_C_SA_1* denotes the growth rate of GDP in the first scenario; *GDP_C_SA_2* denotes the growth rate of GDP under the scenario 2nd, and *GDP_C_SA_diff* denotes the difference between the above two cases (annualized and year-on-year, after seasonal adjustment))
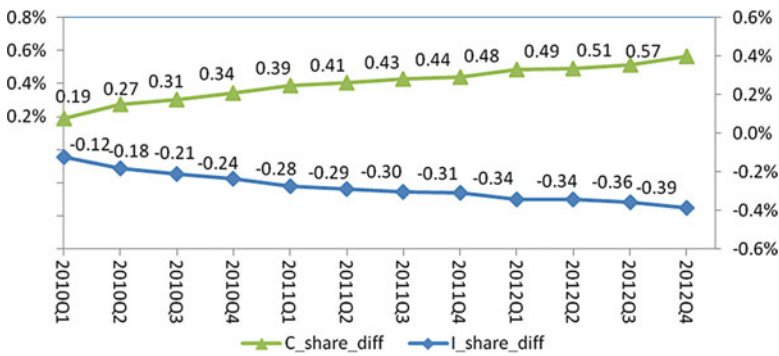
Fig. 3.8 The growth rates of resident consumption and gross capital formation in the first and the second scenario (Note: *C_share_diff* denotes the difference of the share of consumption in GDP between the cases under the scenario 1 and scenario 2, and *I_share_diff* denotes the difference of the share of gross capital formation in GDP between the cases under the scenario 1 and scenario 2 (annualized and year-on-year, after seasonal adjustment))

points in the first quarter of 2010, and drop by 0.12 percentage points in the fourth quarter of 2012 in the second scenario 2 (Fig. 3.9).

In conclusion, if the Chinese government could transfer the decreased part of the government revenue to the low-income residents in the urban and rural areas, although it could not completely eliminate the income gap between the low-income residents and the middle-income residents in the urban and rural areas, there would be a distinct increase in resident income for the low-income residents. The policy would stimulate consumption and promote economic growth, which would improve the structure of aggregate demand considerably. All above indicates that the measure of income redistribution (by reducing the growth of the
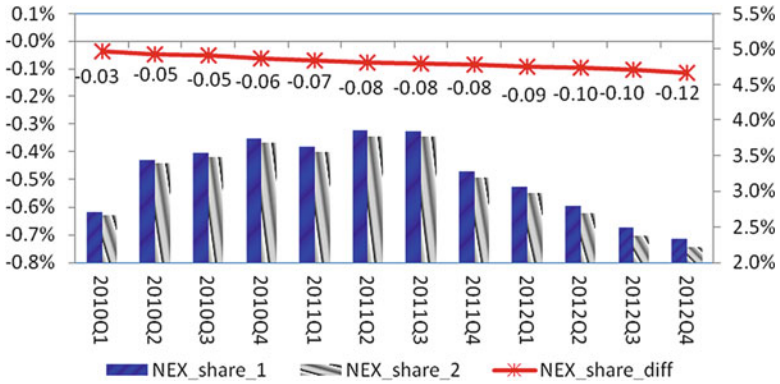
Fig. 3.9 The difference of the share of net exports in GDP between the case under the scenario 1 and scenario 2 (Note: *NEX_share_1* denotes the share of net exports in GDP for the scenario 1, NEX_share_2 for the scenario 2, and *NEX_share_diff* denotes the difference between the above two cases (annualized and year-on-year, after seasonal adjustment))

fiscal revenue and then transfer the decreased part of the government revenue to the low-income residents in the urban and rural areas) could narrow the income gap among the residents, boost the resident consumption, reduce further the share of investment, and improve the aggregate demand structure more effectively, thus far would promote economic growth in China.

Chapter 4
Policy Implications and Suggestions

Based on the results from policy simulations, this report makes two policy suggestions as follows:

1. Reduce the growth rate of the government fiscal revenue moderately;
2. Transfer the decreased part of the government fiscal revenue to all residents or to the low-income residents in the urban and rural areas. This policy of income redistribution not only could improve income distribution between the sectors of government and residents, but also could narrow the income gap among residents.

   Simulations of these policy hypotheses indicate that they could not only promote economic growth and narrow the income gap among residents but also increase the resident consumption and lower the share of investment in GDP. What's more, they could reduce exports and expand imports, stimulate domestic demand and narrow trade surplus. In one word, these policies of income redistribution have desirable effects on the Chinese economy.

   However, though the conclusions are based on the policy simulations, it is reasonable to conclude that it is necessary as well as feasible to carry out the above policy at present conditions.

   So far, we have made a policy suggestion on increasing the resident income of low and lower-middle income cohorts and on narrowing the income gap among residents. We are confident that such a policy would be supported by the majority of the Chinese people, since the resident income gap is already very large and the Gini coefficient had reached 0.474 in 2012 according to the National Bureau of Statistics.

   There are some issues open to further discussion: (1) Is the growth rate of the government fiscal revenue too high in China? (2) Does the share of the Chinese government revenue in GDP grow too fast that it is necessary to slow it down?

   Our research team holds such positions:

1. To appropriately slow the growth rate of the government fiscal revenue, and to curb the share of government revenue in GDP is the key measure to deepen the reform of economic system, maintain a balance between the government and
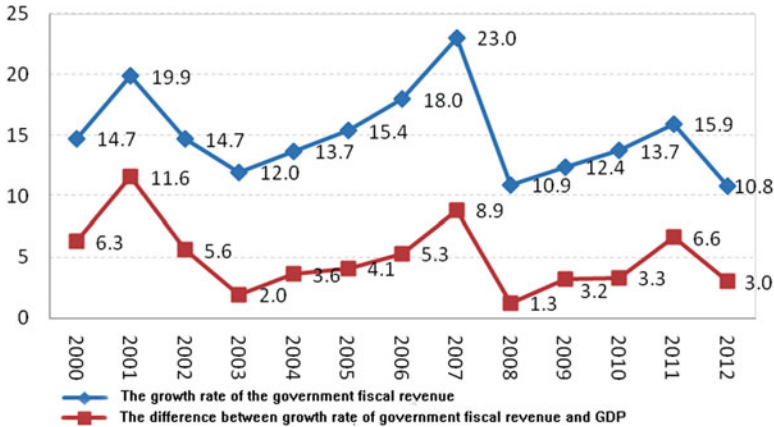
Fig. 4.1 The growth rate of the government fiscal revenue in real term in China, 2000–2012 (Source: CEIC Data)

market, and promote the transformation of economic development. Obviously, the growth of government fiscal revenue and the share of government revenue in GDP are closely related. Only under the condition that the share of government revenue in GDP is too large compared with a normal level, it is necessary to reduce the actual growth rate of government fiscal revenue in order to make it consistent with economic growth.

Since 2000, the growth rate of the government fiscal revenue in China has continued to go up faster than economic growth. Meanwhile, the financial base increase substantially, and the revenue of the government budget increased to 11.72 trillion Yuan in 2012 from 1.34 trillion Yuan in 2000, an increase of 8.75 times with an average annual nominal growth rate reaching up to 19.8 % which was about 9.8 percentage points much higher than the growth rate of GDP over the same period. After inflation adjustment, the growth rate of the government fiscal revenue in real term in China is approximately 15.0 % on average in the period 2000–2012, which is about 5 percentage points higher than the growth rate of GDP over the same period (Fig. 4.1).

As the government fiscal revenue has been growing over-rapidly for many years, the share of government fiscal revenue in GDP has been growing rapidly, too. This share increased to 22.6 % in 2012 from 13.5 % in 2000, an increase of 0.75 percentage points on average per year.

It is worth noting that the government fiscal revenue is only a part of the Chinese government financial resource. According to some estimates,[1] even after exclude the profits of state-owned enterprises (SOEs), the total disposable income of the Chinese government was far more than its fiscal revenue, more than 30 % of GDP

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[1] Junyuan Zhang and Wenpu Li, "A Preliminary estimate of the proportion of government revenue and expenditure structure in GDP," working paper in CMR, 2012.

in 2008 and 35 % of GDP in 2010, and it keep increasing.[2] Specially, in 2010, the proportion was 40.5 % (Table 4.1). Therefore, the main cause of the imbalance in the national economy and income distribution is that the government revenue grew too fast, which also undermined the improvement of resident income as well as their consumption. In addition, because the evaluation system of local government's achievement stress on the GDP growth too much, the local governments have the incentive to promote economic growth by investment, which are the fundamental obstacles for the structural improvement of the aggregate demand. Especially, such incentives would hinder the goal of promoting domestic demand or the final consumption. For a decade, especially since 2007, the share of tax burden in GDP has continued to rise whenever the share of tax burden in GDP in the major developed countries and major developing countries has been declining in some extent (Table 4.2).

In addition, in the above policy simulation, we only focused on the adjustment of the government revenue, did not take the government expenditure into account. If the Chinese government could further optimize its fiscal expenditure on the basis of adjustment of its revenue, such as cutting the administrative costs and making more transfer payment for the social welfare especially for the rural residents, the economic structure would be improved significantly. Specially, in 2007, transfer payments from the U.S. government accounted for 40 % of GDP, and that was 60 % of GDP in Japan, which were 2.14 times and 3.27 times as much as in China respectively; And the proportion of redistribution expenditure in GDP in the United States and Japan was 12.4 and 20.7 % respectively, 3.1 and 5.2 times as much as in China respectively over the same period.[3] Both the share of transfer payment in total government spending and the proportion of the redistribution in GDP in the developed countries, such as the United States or Japan, etc., were much higher than in China.

The fact that too much government revenue were used for government dominated investment projects would inevitably lead to an excessive size of the government, interfere with the market economy and finally undermine the fundamental transformation of the pattern of the economic development. In the case of too much government consumption, it would lead to waste and corruption, and make resource allocation inefficient. Therefore, if the central and local governments could strictly

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[2] Although the transfer of profits of SOEs to the public finance is rather low, and the retained profits by SOEs do not account for part of the public finance, the owner equity of SOEs should be owned by the government, just a deputy of the people as in law the equity of SOEs belong to all the people after excluding the welfare expenditure in the inner of SOEs according to the regulations. Therefore, all the profits of SOEs (excluding with the cost of employees) should belong to the whole society even these profits are the results of market competition with the other kinds of enterprises. Besides, some research pointed out that the current profits of SOEs contained much rents which should be levied by the government, and the average profits of SOEs were negative once excluding such rents from them. In other words, the current profits of SOEs were an abnormal transfer of state resource. Clearly, according to the actual source of the profits of SOEs, their profits were rather the resource revenue which belong to all the people.

[3] Pan Xie, International Comparison of the Distribution of National Income, working paper in CMR, 2011.

Table 4.1 The total disposable income of the Chinese government from 2008 to 2010 (100 million Yuan)

Year	GDP	Total government revenue							The profit of SOEs	The share in GDP with the profit of SOEs
		Public finance income	Extra-budgetary revenues	General fund revenue	Income of state-owned capital management budget	Social contribution fund	Total	The share in GDP		
2007	265,810	51321.8	6820.3	10,737	140	8,729	77748.1	29.2	16,200	35.3
2008	314,045	61330.4	6617.3	14,985	444	10,805	94181.7	30.0	13335.2	34.2
2009	340,903	68518.3	6414.7	18,351	989	12,780	107,053	31.4	15606.8	36.0
2010	401,513	83101.5	5794.4	36,785	–	17,071	142751.9	35.6	19870.6	40.5

Source: CEIC and "Finance Year Book of China"

Table 4.2 The share of tax revenue in GDP in major countries (%)

Year	The United States	Germany	France	The United Kingdom	Japan	China	Brazil	India
2001	34.3	45.0	50.0	37.8	30.3	15.1	33.9	17.1
2002	31.8	44.6	49.6	36.4	28.9	15.9	35.1	17.6
2003	31.2	44.8	49.3	35.9	28.4	16.2	34.0	18.2
2004	31.5	43.6	49.6	36.4	27.9	16.6	33.3	18.9
2005	33.0	43.8	50.6	36.9	29.3	17.2	34.4	19.1
2006	33.8	43.9	50.6	37.7	30.8	18.2	34.6	20.2
2007	33.9	43.7	49.8	37.3	31.2	19.8	34.3	21.8
2008	32.5	44.0	49.9	37.9	31.6	19.7	34.9	20.1
2009	30.9	44.9	49.2	36.6	29.6	20.2	33.9	19.2
2010	31.7	43.6	49.5	36.4	29.6	21.3	35.4	18.7

Source: CEIC Data (calculation according to the definition of the World Bank)

adhere to the principles made by the Political Bureau of the General Committee of the Communist Party of China, such as more cuts on unnecessary public consumption and the welfare of the government officers, it would even achieve the results of the policy simulation by reducing the government fiscal expenditure.

2. The government should pay more attention to adjusting the ratio of national income between the sectors of government and residents in order to increase the resident consumption.

The important content of the ongoing reform of tax system in China is to change the current tax system that is biased to indirect taxes and increase the proportion of direct taxes, in order to narrow the income gap among residents and to expand the resident consumption. The sum of the four major taxes in China, which are the value-added tax, consumption tax, business tax and tariff tax, amounted to about 4.74 trillion Yuan in 2011, accounting for 52.9 % of the total tax revenue of the Chinese government. Including the value-added tax and consumption tax on imported merchandises, the indirect tax in China was about 6.10 trillion Yuan in 2011, accounting for 68.0 % of the total tax revenue. Meanwhile the total value of corporate tax, resident income tax and property tax was about 2.39 trillion Yuan, accounting for 26.7 % of total the tax revenue. Specially, the property tax took only a proportion of 1.23 % of the total tax revenue. This structure of tax revenue was different from the one in developed countries. For example, in 2011 the total government fiscal revenue of the federal, state and local budget in the United States was 3.63 trillion dollars, almost 75 % of which was from the direct tax payment of individuals while the indirect tax such as consumption tax accounted for only about 5 %. As the indirect tax was mainly based on the production and circulation process, whose price pressure could easily be transferred to consumers, it could result in the problems that the tax burden is mainly or completely born by the final consumers whose tax burden has been already too heavy. Therefore, in general, the higher of the proportion of the indirect tax in total, which means a lower share of the direct tax, the less conducive for the government to narrow the income gap among the residents and improve their consumption.

However, there are two options to increase the proportion of direct tax. One is to adjust the tax structure by increasing the proportion of direct tax, while the indirect tax may increase, and may increase the tax burden of residents. The other one is to alleviate the tax burden of residents directly. These two options would lead to different effects on resident consumption. By analyzing the effects of these two options, it has been proved that the second option would have much greater positive effect on resident consumption. Therefore, the effect of the tax structure adjustments plays a less proactive role on boosting resident consumption. To increase the ratio of direct tax by mean of increasing the tax burden of residents, could hardly produce sufficient positive effects to compensate the negative effects owing to the rise of tax burden on the resident consumption.[4] As a result, under the condition that the proportion of government fiscal revenue in GDP, especially the total tax burden does not drop, the adjustment of tax structure would by no means effectively promote the resident consumption.

In conclusion, although the Chinese government has been implementing the structural adjustment of the tax system, the government should also reduce the tax burden on the residents gradually, in order to improve the income distribution between the government and the residents, and to expand resident consumption.

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[4] Yanwu Wang, and Xi, Tian, Effect of Tax Burden and Structure on Consumption: Chinese Experience, working paper of CMR, 2012.

Chapter 5
Comments and Discussions

5.1 Professor Liu Shucheng, Academician with the Chinese Academy of Social Sciences

This report is an earnest work, and the simulation focused on fiscal policy and people's wellbeing, which is a good choice. I think that the conclusions made by the research team with Xiamen University are clear and fresh. More importantly, their work is also a brave attempt. I'd like to talk about the following points of view:

First of all, so far, there are four different views on the outlook of the Chinese economy in 2013. The first one is that China would suffer a severe economic decline. Some domestic scholars hold that the Chinese economy may hit the bottom of growth and the growth rate of GDP would decrease to a level between 5 and 6 %. Some of international scholars share with similar views holding that the Chinese economy would face the risk of "hard landing", in which its growth rate would drop to 5 % or below. The second view is that China would enter "the era of 7 percent", which means that the growth rate of 7 % would become rather normal in the near future. Furthermore, it is hard to maintain the upside trend of GDP growth in the fourth quarter of 2012. The third position is that the Chinese economy would resume a high growth rate of 9.3 %, which is the most optimistic projection for 2013. The last point of view is that the Chinese economy would rebound modestly. For example, according to the Chinese Academy of Social Sciences forecast, the growth rate of GDP would rebound to 8.2 % in 2013, which is close to forecast of 8.4 % from World Bank, and 8.2 % of IMF, and respectively. This report happens to match my expectation.

On the other hand, in my opinion, it is rather difficult to double per capita real income until 2020. Although the goal of doubling GDP and real resident income per capita is put forward in the report of the Eighteenth National Congress of the Communist Party of China, it should be very difficult to realize these two "doubles" in the next 8 years, especially to double the real resident income per capita, which means that the economy must maintain an annual growth of at least 6 % on average in the 7 years. The reasons are as follows: first, the growth rate of resident income has been slower than the growth rate of GDP for nearly two-thirds of the years since

the reform and opening up of 1978. On average the annual growth rate of resident income is 2.5 percentage points lower than that of GDP. Secondly, the potential growth rate of GDP is expected to drop to 7 % in the long term. Subtracting 2.5 % from 7 %, the growth rate of resident income could only maintain at a lever of about 4.5 %, which means that it is highly likely that the mission of doubling the resident income within the next 8 years could not be fulfilled. Besides, although the growth of per capita income out-performed that of GDP in 2012, such trend is unlikely to continue as the corporate profits under-performed GDP.

Finally, my policy suggestions include: First, to reform the income distribution among the government, enterprises and residents is the most fundamental measure for improving the resident income; Second, to improve workers' compensation is the key to increasing the resident income; Third, it is necessary to improve the income of farmers as well as the property income of the residents through multi-channels; Fourth, income redistribution should put the improvement of low-income resident cohorts at the first priority; Fifth, it is important to prevent inflation from eroding the growth of residents' real income.

5.2   Mr. Wang Yida, Deputy Director of the General Affairs, Department of Chinese Ministry of Finance

It is the most important thing to improve people's well-being. It is not only the focus of the society but also a matter of the transformation of economic development. In recent years, the public finance has concerned and improved people's well-being with significant results. Some measures and achievements are as follows:

First, the government takes many measures via public finance to benefit farmers. The government increases the subsidies to farmers, adopts incentive policies to expand the grain production counties, supports the public infrastructure of water conservancy, and improves the income of the poor. These measures do a great favor to promote the agricultural production and development, and in turn, to improve the income of farmers.

Second, the government encourages the development of education. By increasing education expenditure, the target of 4 % of government fiscal education expenditure as a share of GDP was achieved in 2012. Moreover, the government also supports pre-school development, and improves compulsory education funds and the quality of higher education.

Third, the government accelerates the pace of reforming of health care system. The public finance increases fiscal assistance for the new type of cooperative medical care in the rural area and basic medical security for the residents in the urban area. The government advances the reform of public dispensary hospital especially those in county level, implements the primary health institutions and the essential medicine compensations, establishes the funds for the health services, and improves public health as well.

Fourth, the government improves the social welfare. We try to achieve full coverage of a new social pension on the residents, to keep rising the basic pension for the enterprise retirees, and to increase the lowest assistance for the residents. Meanwhile, we focus on the policies in favor to promote employment and social welfare net.

Fifth, a large part of the public finance goes to the low-income housing projects. A substantial increase in fiscal assistance as well as varieties of tax incentives, ensures affordable housing construction, and releases the housing pressure for the low-income families.

Sixth, the government promotes the development of cultural affairs. We construct more free cultural facilities such as museums and public libraries, support the key cultural projects, improve the services of public cultural department, and help upgrade the cultural industries.

In the future, the public finance would try to make more progress to improve the financial regulation system, and strive for the sustainable economic development. And we would further promote taxation system reform, improve the structure of government fiscal revenue and people's well-being. At the same time, we would also optimize fiscal expenditure structure, including an increase in the share of fiscal expenditure for education, health care, social security, employment benefit, housing and culture affairs, etc. And we would promote the equalization of basic public services, and let all the people enjoy the fruits of economic development.

5.3   Professor Jia Kang, Director of the Institute of Fiscal Science of Chinese Ministry of Finance

First, I agree with Xiamen University's report and am impressed by their work. They use quantitative models and policy simulation methods to study the Chinese macro-economy as well as related policy designs. Nowadays, the society pays much attention to macroeconomics, and economists should turn to forecast and policy simulation based on quantitative models, from the original emphasis on economic idea, qualitative and theoretical analysis. In this sense, this report by Xiamen University is extraordinary and worthy.

Second, it is necessary to focus on the widening income gap caused by the inequality in income distribution; and we need to reshape income distribution in order to achieve a sustainable development. I suggest that the research team could consider to analyze the medium or long term economy in the follow-up research, which means that we not only care about total income distribution and the related problems about income gap, but also concern with the fundamental reasons of such problems and the corresponding solutions.

Third, this report includes the transfer of exempting a part of fiscal revenue to the low-income residents in urban and rural areas through structural tax cuts, which hypothetically can be down by appropriately controlling the growth of the government

fiscal revenue. However, I think we should also pay attention to the aspect of the administrative costs of the governments, as well as related fiscal reforms such as optimization of the fiscal expenditure structure and increase of government transfer payment for social welfare spending. Such policies would also be significant for people's well-being.

5.4   Professor Li Shantong, Former Researcher Minister of Development Strategy and Regional Economy Research Department in Development Research Center of the State Council

First of all, I'd like to talk about the fundamental changes in the Chinese economy from the perspective of the medium or long term.

First, let's take a look at the changes in resident income. Since 2010 China has became one of the middle-high income countries. However, in fact, according to the standard of World Bank, China only ranked not better than 120th according to World Bank in the world, and this ranking was true not only based on purchasing power parity (PPP), but also on the nominal exchange rate.

Second, I want to talk about the changes in the population and labor supply. According to the latest forecast of the United Nations, the peak of the population in China is expected to arrive in 2025 or around, while the Chinese labor force has begun to decrease. Such demographic change would impact seriously total consumption, saving, and further the industrial structure. In fact, the decline of potential economic growth in China is closely associated with such demographic changes.

Third, let's turn to the changes in industrial structure. Over the past 30 years, the share of China's non-agricultural industries has increased by 20 percentage points, and such structural transformation has played a very important role in promoting China's economic growth. However, once the proportion of non-agricultural industries reaches more than 90 % in the future, there would be no much room for rising. In my opinion, China's industrialization process is facing a turning point.

Fourth, look at income distribution. A rise of Gini coefficient has slowed down recently. Specially, the resident income gap between urban and rural areas has become narrow mainly owing to the price hikes of agricultural productions and the fast improvement of wages for migrant workers from the rural areas. However, the income gap within the urban residents became more evident, which was mainly due to the income inequality related to monopolistic industries. What changes would happen about the income distribution in China? I think it is not known yet.

Fifth, on the side of government fiscal revenue, at the beginning of the reform and opening up in 1978, the share of fiscal revenue in GDP was more than 30 %, and then gradually decreased, once at a lowest of 11 %, before it restored to about 20 % until now. It is necessary to consider the risk of financial debts including the local governments' debts and railway debts if we want to assess the share of fiscal

revenue correctly. In addition, the policy makers should take the aging problems of the population into account. The more the aging people are, the more the financial burden would be.

On the other hand, I think that several problems require attentions in this report. First, the "Troika" (including the consumption, investment, net exports and imports) what we are referring to is actually a result of accounting, and each one cannot really tell us its role in the economic growth. For example, if the net exports are zero, obviously we could not interpret that the foreign trade has nothing to do with economic growth. Because exports could create new jobs, and imports would support the economic growth on the supply side, each of them has positive effect on the economy. Second, the policy makers should not only care about the positive effect of consumption on the economy, but also concern about the growth of consumption itself. Third, we should pay more attention to the middle-income residents as well as to the low-income resident cohorts, and it would be helpful for the sustained growth of China.

5.5   Professor Zhang Ping, Deputy Director of the Institute of Economic Research of the Chinese Academy of Social Sciences

I'd like to talk about my personal view on urbanization and the adjustment of fiscal system. Specially, it includes the following:

1. In recent years, the urbanization rate in China has exceeded 50 %. Mean while urbanization itself gradually has become a new force for the economic development. Urbanization in the past days was mainly boosted by industrialization, a result of demand. However, nowadays urbanization cannot only rely on industrialization, but more significant on the compatibility of urbanization and industrialization, such from the perspective of supply especially including of reshaping the production function of the urban. According to the agglomeration effects of urbanization, there would be technical innovations and high efficiency of the public service. We should promote the development of the service industry through more labor division, and owing to knowledge spillovers by investment on the people's concepts, knowledge, education and institutions, urbanization could get increasing returns to scale, which would create more employment, high-quality output.

2. Based on the adjustment of urbanization, China's existing taxation system should turn to adjust to urbanization rather than industrialization. The main source of tax revenue based on industrialization is the value-added tax, 90 % of which is from the enterprises. The tax based on urbanization is mainly focused on the families in the urban area, including the enterprises and the individuals. By increasing local tax such as property tax and consumption tax, the taxation system would be of broad tax base but low tax rate. Once finished this transformation, such taxation system could not only fuel industrialization and

urbanization, but also establish a social welfare system wherever the tax on the residents could keep pace with the social welfare during the urbanization process. In addition, it would do favor to decide the ratio of the fiscal expenditure or revenue between the central and local government more conveniently and justifiably. Specially, such reform of tax system could solve the fundamental problems of government which were not solved in the taxation reform of 1994 especially the allocation of government revenue between the central and local government.

3. I think it needs supporting policies for the transformation of fiscal system. Such policies may be as follows: First, the government should reduce the nominal tax rate of the existing turnover taxes. If the existing tax burden did not decline, once the government increased the consumption taxes similar as Europe and the United States do, it would not make the enterprise more profitable and eventually transfer the tax burden to the consumers. The principle of tax reform is "broad tax base but low tax rate", by levying consumption tax in order to broaden the tax base but reducing significantly the rate of value-added tax. Second, the government could further optimize the tax structure by keeping corporate tax cuts while increasing the personal tax, which means that it should increase the proportion of direct taxes while appropriately reducing the proportion of the indirect taxes. Meanwhile, the government should pay more attention to promoting the social welfare such as free medical care, social security and public services. Third, the expenditure of public finance should be corresponding to its revenue, and the government should increase the expenditure of public services.

4. In order to improve the frame of CQMM, it is recommended that the analysis of the supply side should be added into this model, by which we could fully consider the interactions of supply and demand together.

5.6   Professor Li Xuesong, Deputy Director of the Institute of Quantitative and Technical Economic of the Chinese Academy of Social Sciences

First of all, the forecast of this report is basically the same as the earlier view of the Chinese Academy of Social Science about the ongoing economic growth and inflation. In my opinion, as the Chinese economy begins to recover, the policy should support this upside trend. At the same time, the pressure of inflation may appear in the future. Secondly, it is worth noting that the Chinese economy also has downside risks owing to the weakness of the real economy. Although in general the Chinese economy in 2013 would be better than it was in 2012, the policy makers should pay enough attention to the downside risks caused by the uncertainty of the euro area and the debt ceiling in the United States. The main mission for the macroeconomic administration in 2013 is to support robust growth, also care for the price hikes in the real estates, and appropriately to consider the risks of inflation.

The policies should channel more funds back to the real economy through the adjustment of economic structure.

I think there are two key issues on the adjustment of fiscal system, one is the structural tax cuts and the transform to the value-added tax from the original business tax; the other is the expansion of the scope of the real estate tax. Specially, the transform to the value-added tax from the business tax is a measure for structural tax cuts. Although the real estate tax would increase tax burden, its value is rather small that its main force is to adjust the tax structure and local tax system. The real estate tax would do favor to undermine the speculative in the real estate market by stabilizing the price. In this case, I think we could take measures once took by Japan in the real estate during its speculative period, it means that the government should supply more land for the building of small or medium sized housing in the large cities where the housing price is too high, and this measure could ease the housing price pressure fundamentally.

5.7 Professor Wang Luolin, Ad Hoc Consultant of Chinese Academy of Social Sciences

First, it is recommended that this report should keep pace with the central government, and pay more attention to whether the development is healthy or not under the condition of robust growth.

Secondly, I think the forecast on foreign trade may be too optimistic. The impact of ASEAN markets on the Chinese foreign trade is still relative limited, and in fairly a long period the Chinese foreign trade would still heavily rely on the markets of western developed countries.

Third, the policy and price are the main two bases for the differences views among the research agencies. Until now, it seems that the government is still not determined for the future economic development. In my opinion, the policy should not be too easing that it may be harmful for the future development. So far, I basically agree with the projection of 8.23 % for 2013.

Finally, I'd like to talk about financial problems. This report presents a very important policy recommendation in the long term, i.e. to appropriately control the growth of government fiscal revenue, and transfer the exempted revenue to the low-income residents. Although generally macroeconomic forecasts would not discuss in the very long term, I think this report is a good try. Besides, the adjustment of fiscal policy is a big problem, and it is related to national income distribution. It seems that it is difficult to discuss such problems perfectly in only one report. At least it needs to illustrate what we should do in the short term for such adjustment. I suggest that the report should include policy suggestions which are more targeted and easy to operate in the next research.