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China's Macroeconomic Outlook

Quarterly Forecast and Analysis Report, September 2022

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Preface

This report is a partial result of China's Quarterly Macroeconomic Model (CQMM), a project developed and maintained by the Center for Macroeconomic Research (CMR) at Xiamen University. The CMR is one of the Key Research Institutes of Humanities and Social Sciences sponsored by the Ministry of Education of China, focusing on China's economic growth and macroeconomic policy. The CMR started to develop CQMM for purpose of short-term forecasting, policy analysis, and simulation in 2005.

Based on CQMM, the CMR and its partners hold press conferences to release forecasts for China' major macroeconomic variables. Since July 2006, 33 quarterly reports on China's macroeconomic outlook have been presented.

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Acknowledgements

To keep abreast of the macroeconomic situation and policy trend, an annual questionnaire survey of China's macroeconomic situation and policy started twice a year starting from the first time in August 2013, held by the Economic Information Daily, Xinhua News Agency and the Center for Macroeconomic Research, Xiamen University, one of the Key Research Institutes of Humanities and Social Sciences of the Ministry of Education of China. This is the 19th questionnaire survey of this study. This questionnaire designed 18 questions directly related to the current macroeconomic operation and policy trend of China. In August 2022, the survey invitation was sent to domestic economists in related fields by email, and responses from 99 experts had been received.

According to the Chinese Pinyin order of their names, the 99 experts who joined this questionnaire survey are Abidusrimu Abelikmu, Ji-yao Bi, Jin-li Zeng, Xin Chang, Chang-bing Chen, Jian-bao Chen, Lang-nan Chen,Lei Chen, Menggen Chen, Shou-dong Chen, Xi-kang Chen, Xue-bin Chen, Yan-bin Chen, Yong-jun Chen, Zhao Chen, Zhi-yong Chen, Kui-zao Dai, Ji-chang Dong, Xi-miao Dong, Bo Gao, Xi-bao Guo. Xiao-he Guo, Zhi-yi Guo, Jing-tong He, Li-ping He, Ercheng Hua, Maoxing Huang, Xin-hua Jiang, Yongmu Jiang, Chong Li, Chunqi Li, Jun Li, Ying-dong Li, Jia-rui Liang, Xue-gui Lin, Fengliang Liu, Jian-ping Liu, Jinquan Liu, Qiong-zhi Liu, Xiao-xin Liu, Han-guang Lu, Yue Ma, Qi-yu Dong, Bao-ping Ren, Ruo-eng Ren, Yi-hang Shao, Guobing Shen, Jin-chuan Shi, Jian Su, Wei Sun, Wei Qin, Ji-jun Tang, Chang-yun Wang, Hongju Wang, Tongsan Wang, Dashu Wang, Guo-cheng Wang, Ji-ping Wang, Jin-zhao Wang, Jin-bin Wang, Jun-bo Wang, Li-yong Wang, Mei-jin Wang, Su-sheng Wang, Xi Wang, Yan-Xing Wang, Yue-sheng Wang, Chuan-hao Wen, Hua-bin Wu, Xing-zhi Xiao,Dan-yang Xie, Pan Xie, Xian-chun Xu, Cheng-yu Yang, Cui-hong Yang, Xian-rong Yi, Xing-min Yin, Heng Yin, Heng Yin, Li Yu, Zuo Yu, Fuhua Yuan, Xu-heng Zang, Dong-hui Zhang, Hong-wei Zhang, Long Zhang, Mo-nan Zhang, Ping Zhang, Ming-hao Zhao, Xin-Dong Zhao, Zhen-quan Zhao, Zhi-jun Zhao, Chaoyu Zheng, Yu-sheng Zheng, Da-lin Zhi, Liqun Zhou,Ze-jiong Zhou, Bao-hua Zhu, and Qi-gui Zhu.

The experts who joined this questionnaire survey are from the National Development and Reform Commission, the Macro Institute, the National Bureau of Statistics, Hengfeng Bank Institute, the Ministry of Commerce Research Institute, the Central Committee of the Communist Party of China Communications in the Modern World Research Center, the China International Economic and Exchange Center, the China Banking Association, the Chinese Academy of Social Sciences Financial Strategic Research Institute, Chinese Academy of Social Sciences Financial Research Institute, Chinese Society Institute of Economics, Institute of Quantitative and Technical Economics, Chinese Academy of Social Sciences, Research Center for Forecasting Sciences, Chinese Academy of Sciences, Academy of Mathematics and Systems Sciences, etc. and Anhui University of Finance and Economics, Beijing University, Beijing University of Aeronautics and Astronautics, Beijing Normal University, Northeast Normal University, Northeast University of Finance and Economics, Fudan University, Guangxi University, Tsinghua University, East China Normal University, Huaqiao University, Jilin University, Jinan University, Lanzhou University, Nanjing University, Nankai University, Shandong University, Shaanxi Normal University, Shanghai University of Finance and Economics, Shanghai Foreign Economic Trade, Capital University of Economic and Trade University, Shanghai Jiaotong University, Sichuan University, Tianjin University of Finance and Economics, Wuhan University, Xi'an Jiaotong University, Northwest University, City University of Hong Kong, Hong Kong Baptist University, Hong Kong University of Science and Technology, the Hong Kong Lingnan University, National University of Singapore, Xinjiang University of Finance and Economics, Zhejiang University, Zhejiang University of Finance and Economics, Chinese Academy of Sciences University, Renmin University of China, Central South through the University of Political Science And Law, Sun Yat-Sen University, Central University of Finance and Economics, Chongqing Technology and Business University, and other universities.

We would like to thank all for the active participation and insights of these experts mentioned above sincerely.

Summary

In the first half of 2022, China's gross domestic product (GDP) reached 114.4 trillion yuan, up 2.5% year-on-year in real terms. It grew by 4.8% in the first quarter and 0.4% in the second quarter. The Chinese economy continued to recover in the first quarter, but under the impact of unexpected factors, such as the Russian-Ukrainian conflict that broke out at the end of the first quarter, especially the frequent spread of the COVID-19 pandemic in China, the main economic indicators fell deeply in April. After that, with the adjustment of a series of policies to stabilize the economy and the gradual improvement of the pandemic prevention and control situation, the decline of main economic indicators began to narrow in May, and stabilized and picked up in June, finally leading to positive economic growth in the second quarter.

Overall, China's economic performance in the first half of 2022 showed the following characteristics: industrial production was improving, and the service sector under pressure was stabilizing. The employment situation fluctuated, and the scissors difference between CPI and PPI continued to converge. The recovery of manufacturing investment accelerated, while investment in infrastructure and real estate remained relatively low. Consumption remained weak, and residents' income kept growing. Imports and exports increased steadily, and the trade mode was continuously optimized. Government bonds boosted the growth of social finance, and the loan structure of enterprises improved. The pressure on government revenue and expenditure increased, and the revenue from land transfer dropped significantly.

In the second half of 2022, the Chinese economy is facing an increasingly severe international environment. First, the long-term effects of the COVID-19 pandemic on America's labor supply are beginning to show. Second, the conflict between Russia and Ukraine directly triggered the energy crisis and food crisis, leading to high global inflation. Third, deglobalization may prolong the duration of inflation.

Since 2022, the Federal Reserve and the European Central Bank have tried to curb high inflation by shrinking their balance sheets and raising interest rates, but it is unlikely to achieve good results in the short term, and accompanied by growing concerns about economic slowdown. As a result, China's exports of investment goods and durable consumer exports are expected to face significant downward pressure in the second half of 2022. In terms of domestic risks, the recurrence of COVID-19

and the possibility of multi-point distribution will still inhibit the rapid growth of service consumption. At the same time, the debt risk of real estate enterprises and the deposit risk of rural banks also threaten the security of the financial system to a certain extent.

In the second half of 2022, the following factors are expected to be major forces for stabilizing growth: First, although exports are under great downward pressure, the gradually improved industrial and supply chains and the domestic market are expected to support manufacturing investment to a certain extent. Second, in the third quarter of 2022, funds from special bond issuance are expected to form physical investment, ensuring a sharp rebound in infrastructure investment. In the fourth quarter, the incremental fiscal support with the pre-issuance of a certain number of special bonds for next year is anticipated to stabilize the growth of infrastructure investment. Infrastructure investment is expected to be the main force supporting investment growth in the second half of 2022. Thirdly, the external slowdown is expected to restrain the rise in commodity prices and reduce the pressure on imported inflation. The deceleration of real income growth and employment pressure is anticipated to continue to restrain the rise of core CPI, but the food CPI is likely to have a large increase in the third quarter due to the volatility of pork prices. In the second half of 2022, the scissors between PPI and CPI are expected to narrow further. Fourthly, the RMB exchange rate is expected to remain stable and the risk of capital outflow is anticipated to be generally under control.

Overall, downward pressure on exports is expected to restrain China's economic growth in the second half of 2022, but solid growth in manufacturing investment and infrastructure investment is anticipated to provide important support for the Chinese economy.

In order to forecast China's main macroeconomic indicators from 2022 to 2023 by using China's Quarterly Macroeconomic Model (CQMM), we set the exogenous variables of CQMM as follows with a comprehensive reference to the information of various parties: In 2022 and 2023, the US economy grew by 1.21% and 1.85%, respectively, while the Eurozone economy grew by 2.47% and 1.77%, respectively, and the corresponding quarterly growth rates were set accordingly. It is expected that the USD/RMB exchange rate will continue to rise in the second half of 2022 with the tightening pace of the Federal Reserve, and return to the appreciation path in 2023 with the adjustment of the fundamentals of the two countries. The Euro/USD exchange rate is expected to continue its downward trend, reaching a stage low of 1.00 in late 2022 and gradually recovering to 1.10 in 2023. M2 growth is expected to gradually decline in the second half of 2022 and return to around 8% in 2023.

Under the above assumptions on exogenous variables of CQMM, the forecast based on CQMM shows that:

1. China's GDP growth is expected to be 4.05% in 2022, which is 1.44 percentage points lower than our Spring Forecast. In 2023, GDP growth rebounded to 6.53%.
2. Investment in fixed assets (excluding rural households) is expected to increase by 5.76% at current prices in 2022, 0.53 percentage points lower than our Spring Forecast. In 2023, the growth rate of investment in fixed assets is expected to be

2.82%. By sector, infrastructure investment is expected to rise sharply by 9.71% in 2022, real estate investment is anticipated to contract by 3.99% due to the impact of risk exposure, and manufacturing investment is expected to grow by 7.94%.

3. Total household consumption at constant prices is projected to grow by 0.42% in 2022 and continue to grow by 5.61% in 2023. In 2022, the total retail sales of consumer goods is expected to increase by 1.45% in nominal terms, 7.05 percentage points lower than our Spring Forecast. In 2023, the nominal growth rate of total retail sales of consumer goods is anticipated to rise to 10.01%.
4. In 2022, CPI is expected to rise 2.26%, 0.43 percentage points higher than our Spring Forecast, and in 2023, CPI growth is anticipated to be 2.89%. PPI is expected to rise by 5.15% in 2022 and contract by 2.63% in 2023.
5. In 2022, China's total value of exports of goods is expected to grow by 9.50% in current dollar terms, down 3.24 percentage points from our Spring Forecast. The total value of imports of goods is anticipated to grow by 5.50%, a sharp 8.72 percentage points lower than our Spring Forecast.

Due to rapidly rising price levels, institutions including the World Bank and the OECD have recently sharply lowered their global economic growth forecasts for 2022–2025. Then, how will the global economic slowdown affect China's economic growth in 2022–2023 and even the 14th Five-Year Plan period? In addition, in the context of the Fed raising interest rates four times and the European Central Bank following suit, what is the policy space for macro-control in China? What measures should be taken to deal with this potential global crisis?

To answer the above questions, we use CQMM to simulate the impact of economic slowdown in the US and Europe on China's economy under two different scenarios and analyze China's macroeconomic policy response measures from 2022 to 2023 on this basis.

Scenario 1: Suppose US and European GDP growth diverges in 2022–2023. Of which the US experienced a sustained mild recession, with real GDP growth shrinking by 0.6% in 2022 and 0.5% in 2023; The euro area real GDP, as set out in the benchmark scenario, grows by 2.5% in 2022 and 1.8% in 2023.

Scenario 2: Suppose the euro area follows the US into a synchronized recession in 2023, of which the real GDP growth of the US keeps the setting of scenario 1, and the real GDP growth in the euro area remained at 2.2% in 2022 and turned negative in 2023 at −0.3%.

The simulation results show that: First, it is unlikely that the US and Europe will have a deep recession from 2022 to 2023. Besides, the US economy is more uncertain than the Eurozone economy. Second, under the assumption of a mild recession in the US and Europe, that is, a decline of less than 1%, the slowdown of the US and Europe's economic growth will have a limited impact on China's economic growth and will not cause a large impact. Thirdly, China's exports and manufacturing investment will be relatively affected by a mild recession in the US and Europe. In particular, China's export growth, which is already expected to be negative, could accelerate and double. Fourthly, compared with fiscal policy, monetary policy has more room to deal with the mild recession in the US and Europe.

According to the simulation results, we discussed the operation of the macroeconomic policy space. First, as long as the US and European economy is not a serious recession, its overall growth change extent of the effect on China's macroeconomic growth is limited, China's economy can achieve expected growth, mainly depends on the domestic market demand, especially consumer demand can be sustained rapid recovery. Second, even a mild recession in both the US and Europe is likely to put more serious constraints on China's export growth. Therefore, how to stabilize foreign trade, especially export growth, will be the focus of economic work this year and next year, which requires greater support and assistance to private enterprises. In addition, we must continue to implement tax and fee reduction policies, especially preferential tax policies for small and medium-sized enterprises and manufacturing enterprises, to hedge against the possible impact of the economic slowdown in the US and Europe on manufacturing investment. Finally, we must maintain the prudent monetary policy tone unchanged, moderately increase the growth of M2, and maintain a relatively easy liquidity environment.

In addition to the policy simulation of the impact of the economic slowdown in the US and Europe, we made the following policy recommendations based on the analysis and outlook of the current economic situation in China: In terms of stabilizing investment, we should continue to work together with monetary and fiscal policies to consolidate the foundation for the transformation and upgrading of the manufacturing sector. Since the faster growth of infrastructure investment than expected is not sustainable, we should be prepared to avoid problems caused by the faster growth of infrastructure investment than expected. While properly handling the debt risks of real estate enterprises, we should continue to adhere to the principle of housing and housing speculation, and take appropriate measures to stabilize real estate investment.

In terms of stabilizing consumption, we should maintain the growth of household income through stabilizing employment and fully ensure the employment growth needs of special groups to accelerate the recovery of consumption. Efforts should be made to expand the middle-income group and narrow the income gap. Through rural revitalization, after eliminating absolute poverty in rural areas, we will steadily and vigorously improve relative poverty.

In addition, under the trend of deglobalization, we should unswervingly promote globalization, and prepare for the possibility of new geopolitical conflicts.

Contents

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Chapter 1
China's Macroeconomic Performance in 2022H1

In the first half of 2022, China's gross domestic product (GDP) reached 114.4 trillion yuan, up 2.5% year-on-year in real terms. It grew by 4.8% in the first quarter and 0.4% in the second quarter (see Fig. 1.1). China's economy continued to recover in the first quarter, but under the impact of unexpected factors, such as the Russian-Ukrainian conflict that broke out at the end of the first quarter, especially the frequent spread of the COVID-19 pandemic in China, the main economic indicators fell deeply in April. After that, with the adjustment of a series of policies to stabilize the economy and the gradual improvement of the pandemic prevention and control situation, the decline of main economic indicators began to narrow in May, and stabilized and picked up in June, finally leading to positive economic growth in the second quarter.

Overall, China's economic performance in the first half of 2022 showed the following characteristics:

1. Industrial production is improving, and the service sector under pressure is stabilizing;
2. The employment situation fluctuated, and the scissors difference between CPI and PPI continued to converge;
3. The recovery of manufacturing investment accelerated, while investment in infrastructure and real estate remained relatively low;
4. Consumption remains weak, and residents' income keeps growing;
5. The import and export increased steadily, and the trade mode was continuously optimized;
6. Government bonds have boosted the growth of social finance, and the loan structure of enterprises has improved;
7. The pressure on government revenue and expenditure has increased, and the revenue from land transfer has dropped significantly.

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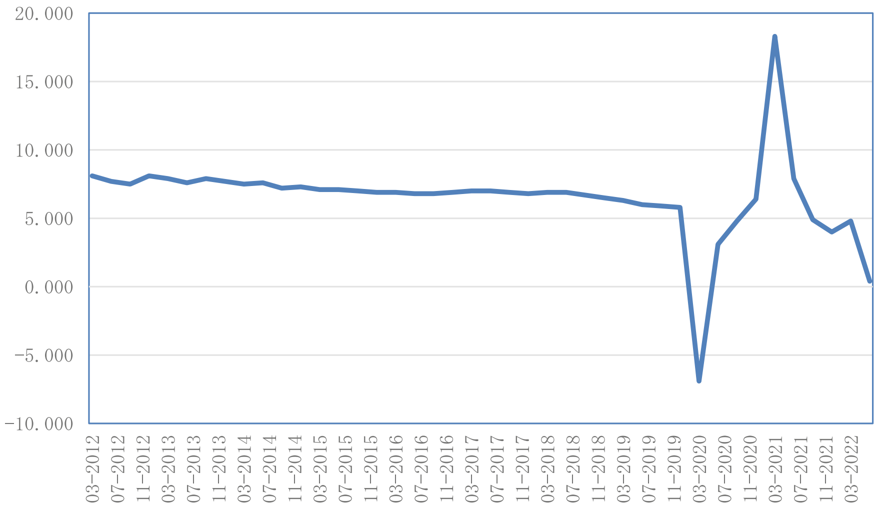

Fig. 1.1 GDP growth: Quarterly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

1.1 Industrial Production Was Improving, and the Service Sector Under Pressure Was Stabilizing

In the first half of 2022, the added value of the primary industry was 2.91 trillion yuan, up 5.0% year-on-year. In the first and second quarters, the growth rate was 6.0 and 4.4%, respectively. The added value of the secondary industry was 22.86 trillion yuan, up 3.2% year-on-year. The growth rate was 5.8 and 0.9% in the first and second quarters, respectively. The added value of the tertiary industry was 30.49 trillion yuan, up 1.8%; It grew by 4.0% in the first quarter and decreased by 0.4% in the second quarter (see Fig. 1.2).

In the first half of 2022, the added value of industrial enterprises above designated size increased by 3.4% year-on-year, of which it fell by 2.9% year-on-year in April, turned negative to 0.7% in May, and recovered to 3.9% in June, up 0.84% month-on-month. This indicates that as the resumption of production continues, the industrial production is gradually returning to normal levels. In terms of three categories, in the first half of 2022, the value added of the mining industry increased by 9.5% year-on-year, manufacturing by 2.8%, and electricity, heat, gas, and water production and supply by 3.9%. The rapid growth of the value added of the mining industry mainly benefited from the significant increase in the prices of international commodities such as oil, gas, and coal. In June, the value added of the mining industry increased by 8.7% year-on-year, manufacturing by 3.4%, and electricity, heat, gas, and water production and supply by 3.3% (see Fig. 1.3).

The high-tech manufacturing sector enjoyed good growth, and the quality of development continued to improve. In the first half of 2022, the value added of high-tech manufacturing grew by 9.6% year-on-year, 6.2 percentage points higher than

Fig. 1.2 Growth of GDP and three main industries: Quarterly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

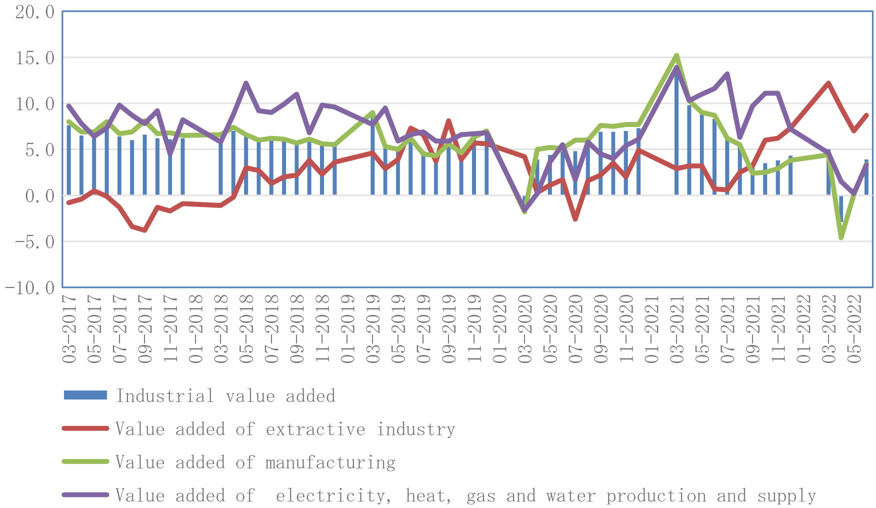

Fig. 1.3 Growth of GDP and value added of three major industrial categories: Monthly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

Fig. 1.4 Growth of high-tech manufacturing and industrial value added: Monthly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

that of industrial enterprises above the designated size. In June, the value added of high-tech manufacturing was 8.4% year-on-year, rapidly approaching the growth rate of the first quarter (see Fig. 1.4).

1.2 The Employment Situation Fluctuated, and the Scissors Difference Between CPI and PPI Continued to Converge

In the first half of 2022, the employment situation fluctuated due to the disruptions caused by the COVID-19 pandemic. From January to February, the employment situation was basically stable. After March, under the influence of the new round of COVID-19, the surveyed unemployment rate in urban areas rose to 5.8%, up 0.5 percentage points year-on-year and 0.3 percentage points month-on-month. It further rose to 6.1% in April, up 1.0 percentage points from a year earlier. In May, with pandemic prevention and control situation improved, the surveyed urban unemployment rate fell to 5.9%. In June, the pandemic was effectively brought under control, and the surveyed urban unemployment rate dropped to 5.5%, showing significant improvement in employment. As the new round of COVID-19 affected Shenzhen, Beijing, Shanghai, and other major cities, the surveyed urban unemployment rate in 31 major cities rose more sharply on a monthly basis, reaching 6.9% in May, an increase of 1.7 percentage points year-on-year. In June, it fell sharply to 5.8% (see Fig. 1.5).

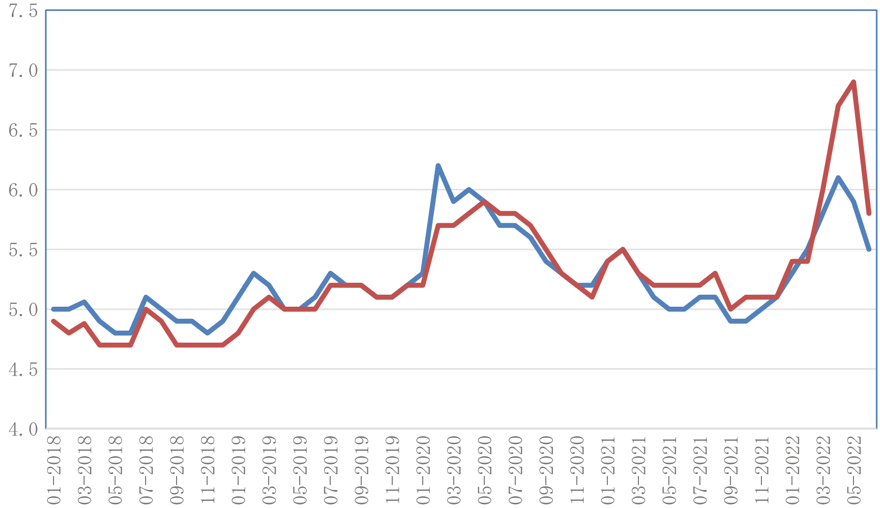

Fig. 1.5 National urban survey unemployment rate and urban survey unemployment rate in 31 big cities: monthly, %. *Source* Calculations on CEIC data by the CQMM team

In the first half of 2022, prices in the consumer sector rose modestly, with consumer price index (CPI) rising 1.7%, of which up 2.1% in May and widening to 2.5% in June (see Fig. 1.6). The rise of CPI in May and June was mainly affected by the lower base in the same period of last year, but there are still some driving factors worthy of attention: first, the price of pork and fuel is on the rise; second, the pressure of international agricultural product prices on China's imported inflation still exists; third, domestic consumer demand may rise after the pandemic continues to be effectively controlled. If CPI would rise above 3% in the second half of the year, it may hamper monetary policy easing.

In the first half of 2022, PPI of industrial producers increased by 7.7%, of which PPI for means of production rose by 9.9%, and PPI for means of subsistence rose by 1.1% (see Fig. 1.7). The rapid rise of PPI for means of production mainly stems from imported factors. Influenced by geopolitical factors such as the Russia-Ukraine conflict, the international energy and metal prices fluctuated at a high level in the first half of 2022, pushing up the prices of domestic oil, natural gas, and nonferrous metals industries, of which the prices of oil and natural gas exploitation industry rose by 46.7%, and prices of oil, coal, and other fuel processing industry increased by 33.5%, and prices of gas production and supply industry pick up by 16.7%, and prices of nonferrous metal smelting and rolling processing industry expanded by 15.4%. However, PPI for the means of living rose quite moderately, with food prices rising by 1.5%, clothing prices by 1.3%, general daily necessities by 1.6%, and durable consumer goods by 0.2% (see Fig. 1.7).

In the first half of 2022, the moderate increase of CPI and PPI's recede from the high levels caused the scissors gap between them to converge month by month (see Fig. 1.8). From the perspective of price transmission mechanism, this has two

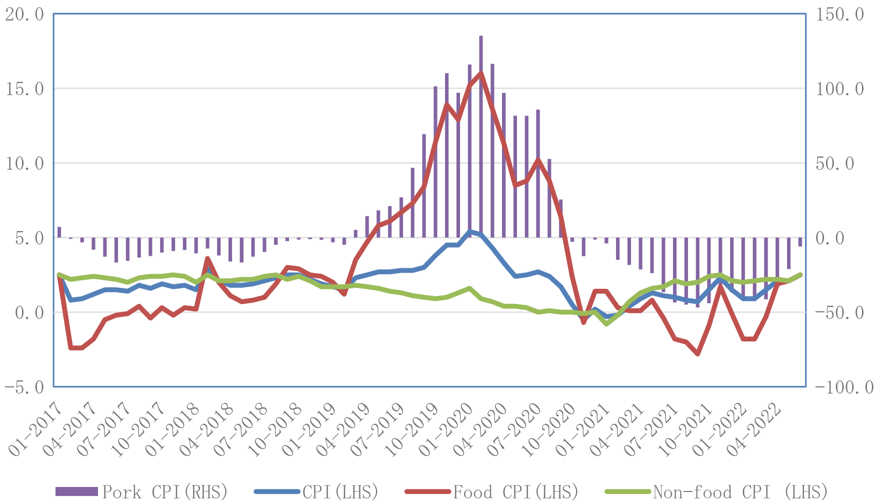

Fig. 1.6 Increase in CPI, food and non-food CPI: Monthly, %. *Source* Calculations on CEIC data by the CQMM team

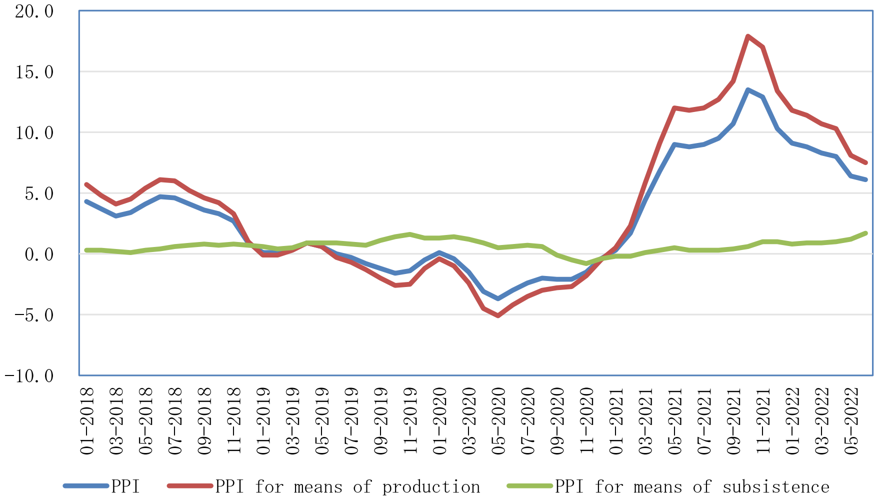

Fig. 1.7 Increase in PPI: Monthly, %. *Source* Calculations on CEIC data by the CQMM team

implications: one is that the price increase of upstream means of production may have been partially transmitted to the price of the downstream consumer sector; the other is that the impact on the price of the consumer sector caused by the high fluctuation or fall of energy price has been weakened.

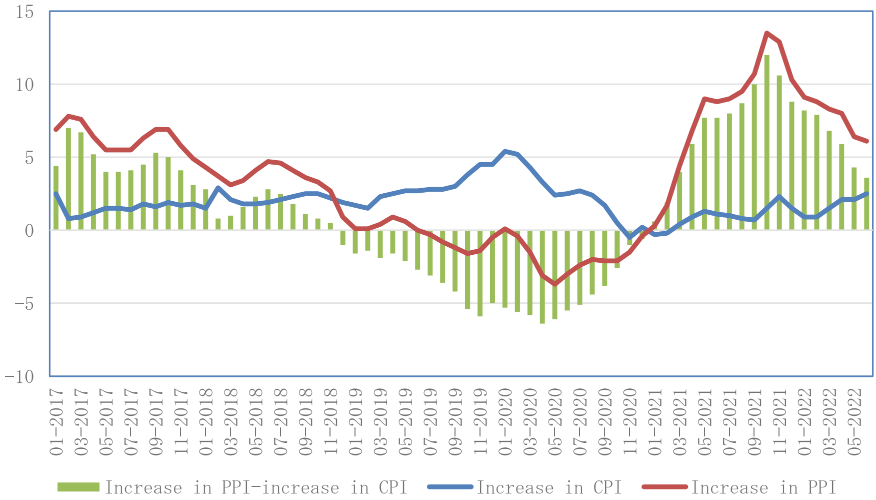

Fig. 1.8 Scissors difference in CPI and PPI: Monthly, %. *Source* Calculations on CEIC data by the CQMM team

1.3 The Recovery of Manufacturing Investment Accelerated, While Investment in Infrastructure and Real Estate Remained Relatively Low

In the first half of 2022, domestic investment became the cornerstone of a stable economy, with national fixed assets investment (excluding rural households) reaching 27.14 trillion yuan, up 6.1% year-on-year, of which private investment in fixed assets was 15.31 trillion yuan, up 3.5% year-on-year (see Fig. 1.9). On a month-on-month basis, China's fixed-asset investment (excluding rural households) rose 0.95% in June, indicating that investment is gradually recovering after a new round of COVID-19 shocks at the end of the first quarter.

In the first half of 2022, manufacturing investment grew by 10.4% year-on-year, 4.3 percentage points higher than total investment, driving total investment growth by 2.5 percentage points (see Fig. 1.10). Fast growth in manufacturing investment has been driven by strong export demand and historically high levels of industrial capacity utilization. It is worth noting that under the influence of factors such as high upstream raw material prices and rising logistics costs, the profits of industrial enterprises have fallen significantly, which may pose a constraint on the sustained and rapid growth of manufacturing investment (see Fig. 1.11).

In the first half of 2022, investment in infrastructure construction grew by 7.1% year-on-year, 1.0 percentage point higher than total investment (see Fig. 1.10). The rapid growth of infrastructure investment is mainly driven by the pre-issuance of special government bonds under the guidance of the policy of stabilizing growth.

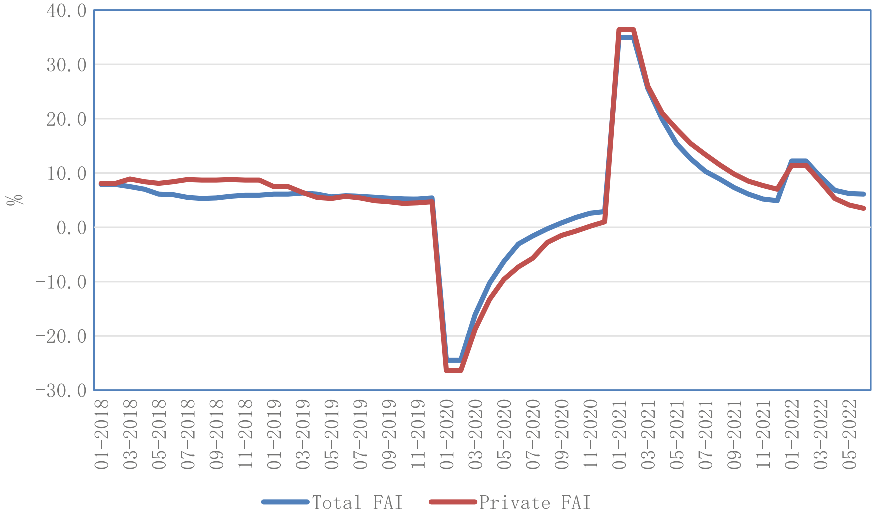

Fig. 1.9 Growth of total and private FAI: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

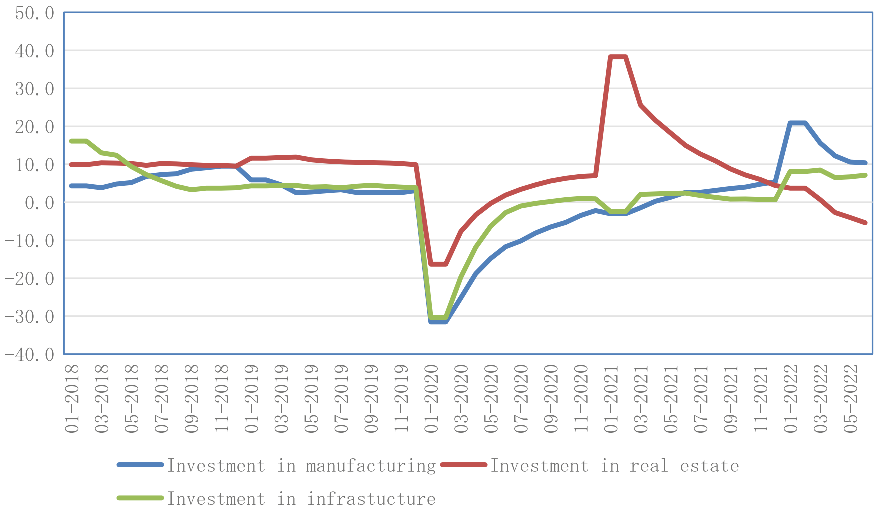

Fig. 1.10 Growth of three major categories of FAI: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

Investment in real estate development fell 5.4% year-on-year in the first half of 2022, with residential investment down 4.5% (see Fig. 1.10). Since the second half of 2021, under the dual influence of the continued implementation of strict regulatory policies in the real estate and the overall tight credit policy, real estate investment began to show a significant downward trend. With the change in residents'

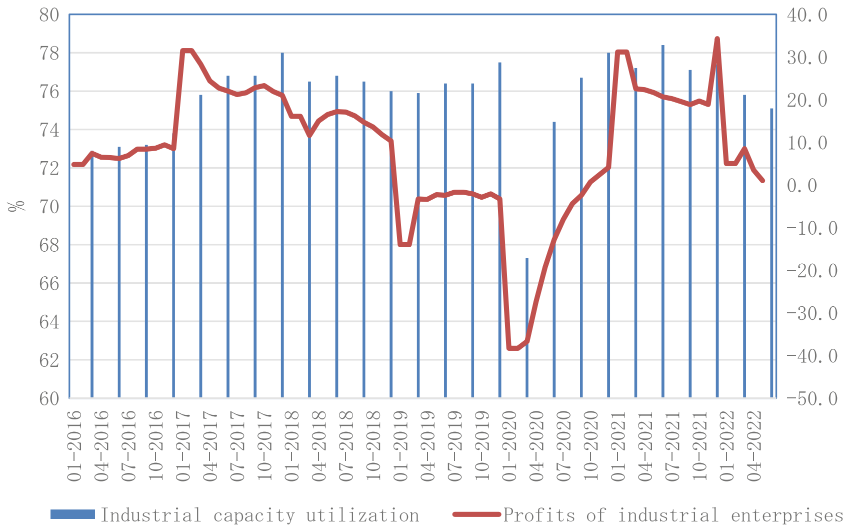

Fig. 1.11 Growth of the profits of industrial enterprises and industrial capacity utilization: YoY, %. *Source* Calculations on CEIC data by The CQMM team

purchase expectations, the pressure of real estate sales increases, and some housing enterprise departments are facing cash flow pressure. It is urgent to cut off the pressure transmission mechanism, stabilize real estate sales, and ease credit pressure, in order to prevent the spread of risks in the real estate.

1.4 Consumption Remained Weak, and Residents' Income Kept Growing

In the first half of 2022, total retail sales of consumer goods edged down 0.7% year-on-year, with total retail sales of the catering industry down 7.7% year-on-year. On a monthly basis, total retail sales of consumer goods and total retail sales of catering industry fell 11.1% and 22.7% year-on-year, respectively, in April, before starting to recover. In June, total retail sales of consumer goods increased by 3.1% year-on-year, while total retail sales of catering industry decreased by 4% year-on-year (see Fig. 1.12). The continuous weakness of consumption growth since 2020 has not only restricted the smooth operation of the domestic grand cycle but also made it more difficult under the repeated impact of the pandemic.

In the first half of 2022, real per capita consumption expenditure grew by 0.8%, with urban real per capita consumption expenditure declining by 0.9% and rural real per capita consumption expenditure increasing by 4.0%. Real per capita disposable income grew by 3.0%, 0.5 percentage points higher than the economic growth rate. Urban real per capita disposable income rose by 1.9%, and rural real per capita

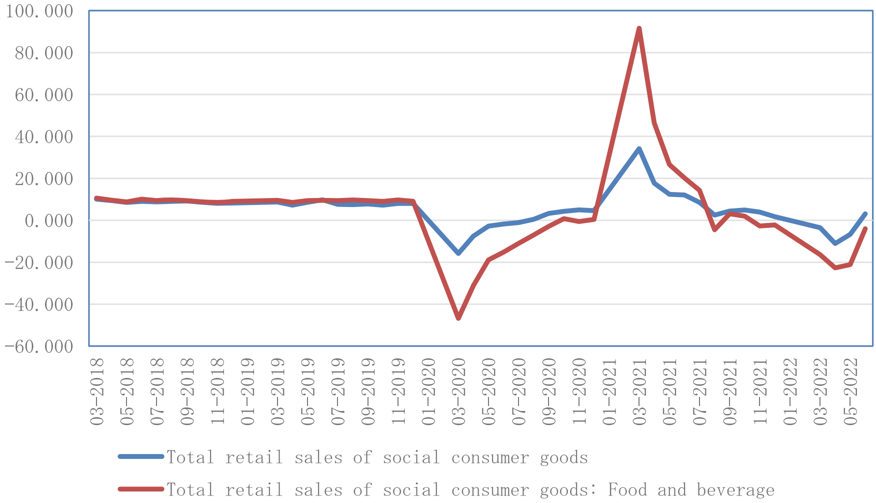

Fig. 1.12 Growth of total retail sales of social consumer goods: monthly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

disposable income rose by 4.2% in real terms (see Fig. 1.13). Despite the gradual improvement in disposable income, the relatively weak recovery in consumption is mainly due to the disruption caused by the scattered outbreak of the pandemic in many places. Under the impact of the pandemic, it is difficult to boost the consumption of offline restaurants and hotels, which constrains the recovery of consumption.

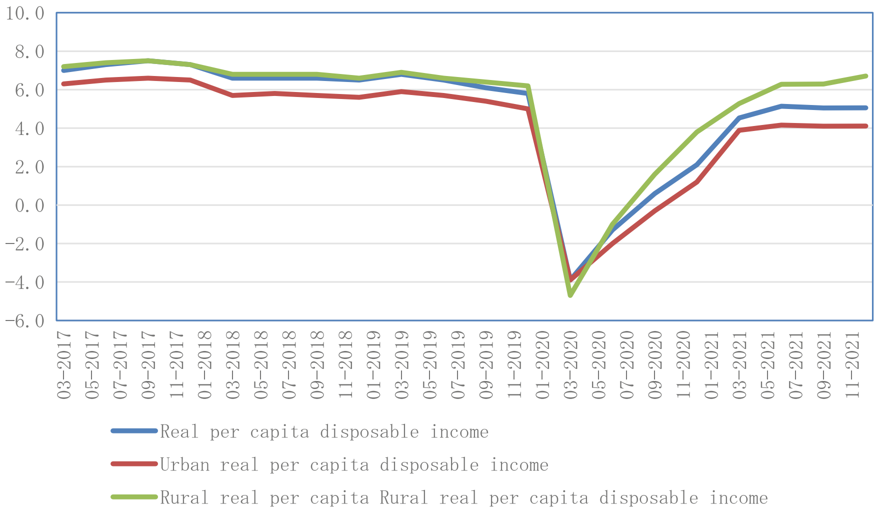

Fig. 1.13 Growth of residents' real disposable income: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

1.5 Imports and Exports Increased Steadily, and the Trade Mode was Continuously Optimized

In the first half of 2022, the value of imports and exports of goods was 3.08 trillion yuan, up 10.31% year-on-year, of which the value of exports reached US $1.73 trillion, up 14.19% year-on-year; and the value of imports was 1.35 trillion dollars, up 5.69% year-on-year. The trade surplus was 385.435 billion dollars (see Fig. 1.14). Despite the complex and severe external environment and the economic downward pressure caused by the COVID-19 pandemic in China in the second quarter, the faster-than-expected export growth is due to the global economic recovery and relatively stable demand in the international market. On the other hand, it is due to the unique advantages of the whole industrial chain of China's manufacturing, which helps to overcome many uncertainties in the international market and thus shows strong resilience. The high growth of China's goods exports in the first half of 2022 has greatly eased the downward pressure on the Chinese economy.

The mode of trade continued to improve. In the first half of 2022, the value of imports and exports of general trade reached US $1.97 trillion, up 14.65% year-on-year, accounting for 64.06% of the total value of imports and exports of goods, up 2.43 percentage points year-on-year. The value of imports and exports of processing trade reached US $5100.21 billion, up 3.09% year-on-year, accounting for 16.56% of the total value of imports and exports of goods, down 1.16 percentage points year-on-year.

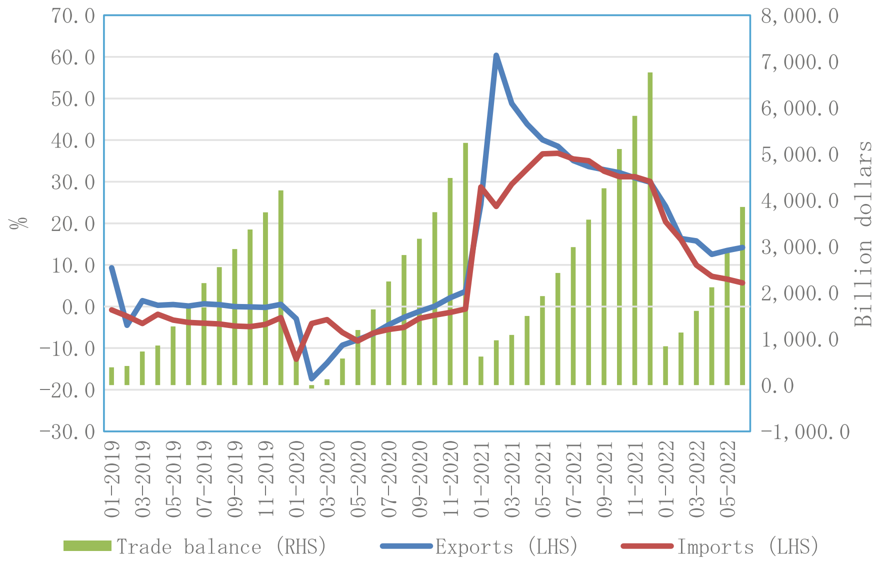

Fig. 1.14 Growth of imports and exports and trade balance: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

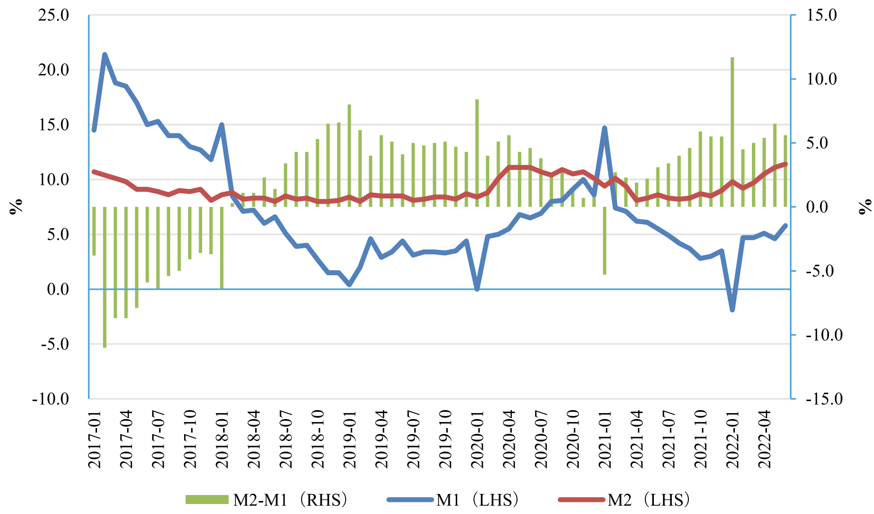

Fig. 1.15 Growth of M1 and M2: monthly, YoY, %. *Source* Calculations on CEIC data by the CQMM team

In terms of trading countries, China's import and export volumes with the ASEAN, the EU, and the US were $407.00 billion, $36.86 billion, and $292.80 billion, respectively, ranking the top three trading partners, accounting for 34.70% of the total import and export volume. Of which the exports to the US were $292.80 billion, up 15.71% year-on-year; and imports from the US amounted to $91.224 billion, up 3.73% year-on-year; the trade surplus was $1,57.6 billion, accounting for 52.30% of the total trade surplus. It was seen that China and the US still have quite close economic and trade relations. During the same period, China's imports and exports to countries along the Belt and Road and RCEP trading partners increased by 17.8 and 5.6%, respectively.

1.6 Government Bonds Boosted the Growth of Social Finance, and the Loan Structure of Enterprises Improved

In terms of money supply, the year-on-year growth rate of narrow money (M1) increased from −1.9% in January to 5.8% in June, and the year-on-year growth rate of broad money (M2) increased from 9.8% in January to 11.4% in June, reflecting the easing tone of monetary policy in the context of steady growth in the second quarter. The gradual boost of fiscal expenditure and the massive growth of credit volume help to raise the growth rates of M2 (see Fig. 1.15).

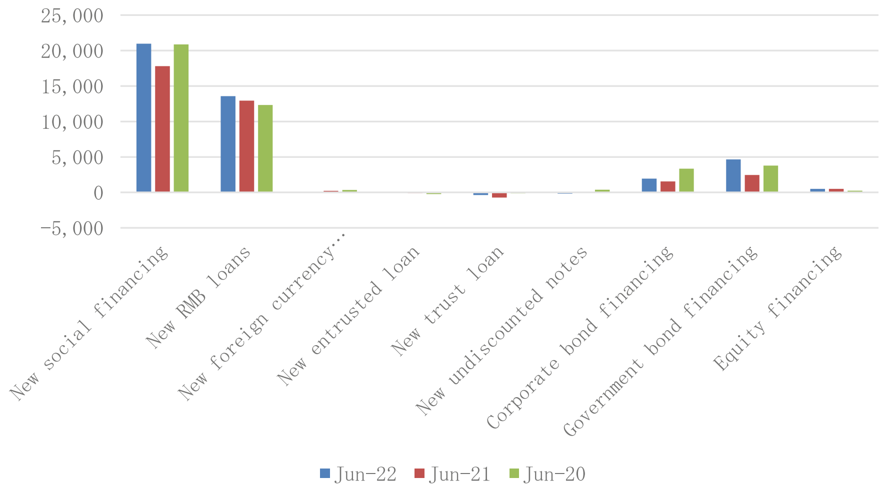

Fig. 1.16 New social financing and its structure: cumulative, billion yuan. *Source* Calculations on CEIC data by the CQMM team

In the first half of 2022, new social financing rose by 20.97 trillion yuan, an increase of 3.17 trillion yuan year-on-year, of which new RMB loans (from the perspective of social financing) were 13.58 trillion yuan, an increase of 637.8 billion yuan year-on-year, which was mainly related to the large increase in corporate loans. And the net financing of corporate bonds was 1.95 trillion yuan, 394.6 billion yuan more than last year. And the net financing of government bonds was 4.65 trillion yuan, an increase of 2.20 trillion yuan year-on-year, which was closely related to the pre-issuance of special government bonds. It can be seen that government bond financing and new credit constitute the two main sources of new social financing. The size of non-standard loans was further reduced, including a 5.4 billion yuan decrease in new entrusted loans, a 375.2 billion yuan decrease in new trust loans, and a 176.8 billion yuan decrease in new undiscounted acceptance bills (see Fig. 1.16).

In the first half of 2022, new RMB loans (from the perspective of credit) reached 13.68 trillion yuan, an increase of 920 billion yuan year-on-year. New loans to enterprises reached 13.40 trillion yuan, an increase of 3.03 trillion yuan year-on-year; Of which the medium-and-long-term loans to enterprises reached 6.22 trillion yuan, a year-on-year increase of 100 billion yuan. However, it is worth noting that the medium-and-long-term loans of enterprises in June reached 14,500 yuan, the highest in the same period of nearly 5 years, and increased by 613 billion yuan year-on-year. Bill financing was 79.6 billion yuan, a year-on-year increase of 195.1 billion yuan. The large increase in medium-and-long-term loans and the small increase in bill financing indicate that there was a long-overdue improvement in the loan structure in June, and the real financing demand showed a significant improvement driven by the effective implementation of a series of policies to stabilize growth (see Fig. 1.17).

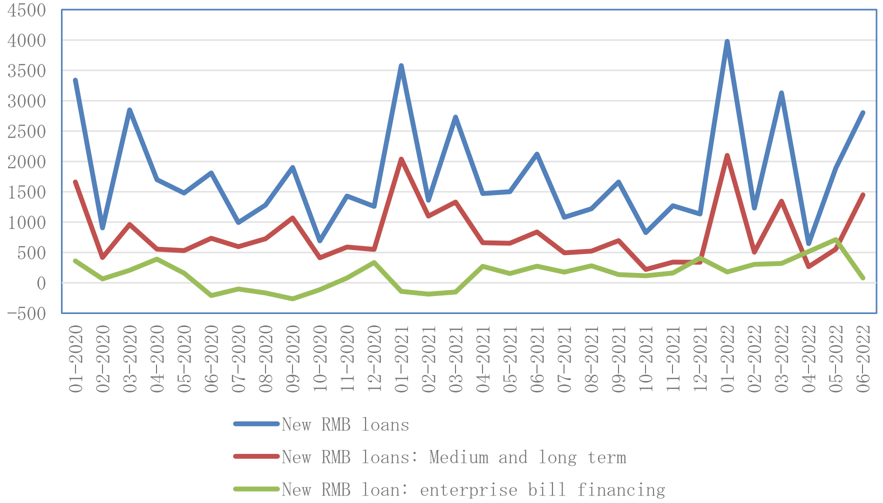

Fig. 1.17 New RMB loan and enterprise loan structure: monthly, billion Yuan. *Source* Calculations on CEIC data by the CQMM team

1.7 The Pressure on Government Revenue and Expenditure Increased, and the Revenue from Land Transfer Dropped Significantly

In the first half of 2022, China's revenue in the general public budget was 10.52 trillion yuan, down 10.16% year-on-year; The tax revenue was 8.56 trillion yuan, down 14.83% year-on-year (see Fig. 1.18). The decline in the growth rate of fiscal and tax revenue was mainly due to the pressure on China's economy caused by the conflict between Russia and Ukraine since the end of the first quarter, especially the repeated spread of the COVID-19 pandemic in China, and the implementation of the large-scale retention tax rebate policy to stabilize growth, which further slowed down the growth rate of fiscal and tax revenue.

In the first half of 2022, the general public budget expenditure was 12.89 trillion yuan, up 5.93% year-on-year. Expenditure of government-managed funds was 5.48 trillion yuan, up 31.48% year-on-year (see Fig. 1.19). The steady growth of expenditures in the general public budget and the rapid growth of expenditures in government-managed funds are in sharp contrast to the economic downturn and the contraction of government revenue, and reflect the rigid growth trend of government expenditures, which is easier to increase than to decrease. As a result, the deficit in the general public budget reached 2.36 trillion yuan, and the deficit in government-managed funds reached 2.69 trillion yuan, both record highs (see Fig. 1.20).

In terms of the main government expenditure structure, in the first half of 2022, the expenditure on education, social security and employment, and health and health care, and other key expenditures increased by 4.20, 3.55, and 7.71% year-on-year,

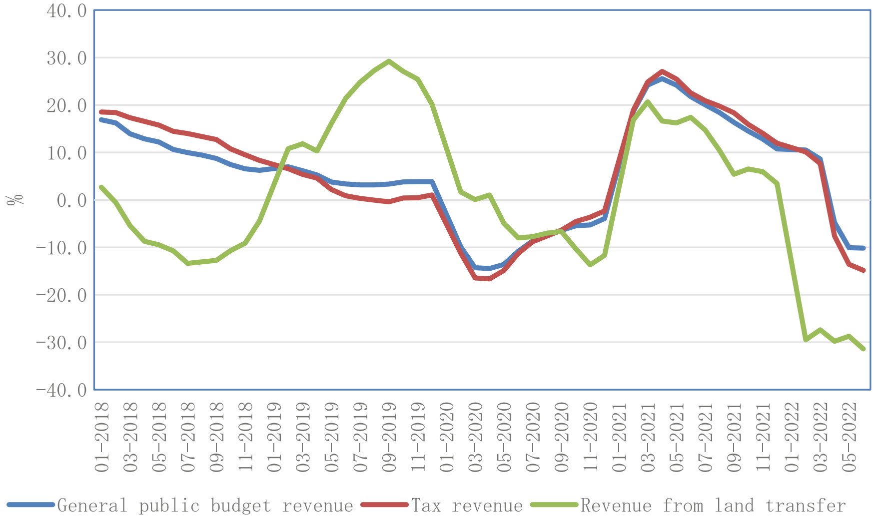

Fig. 1.18 Growth of general public budget revenue: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

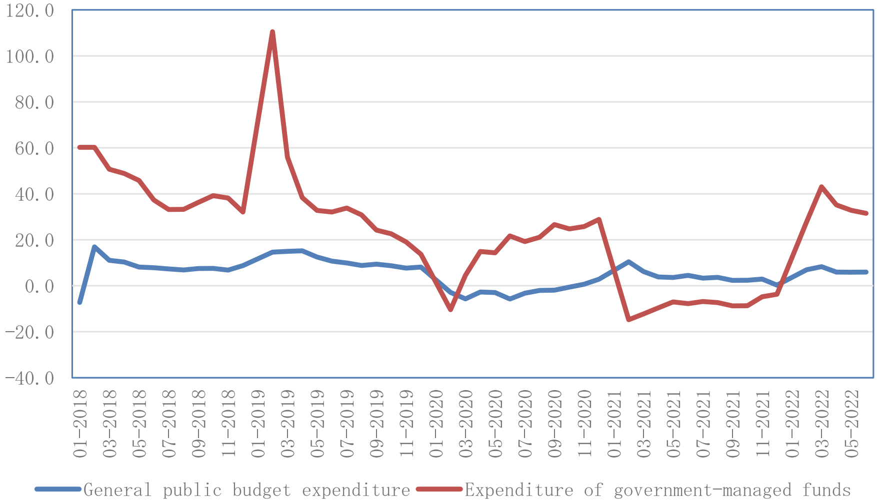

Fig. 1.19 Growth of general public expenditure: cumulative, YoY, %. *Source* Calculations on CEIC data by the CQMM team

respectively. In terms of infrastructure expenditure, the expenditure on urban and rural community affairs rose by 2.82% year-on-year, the expenditure on agriculture, forestry, and water affairs rose by 10.82%, and the expenditure on transport rose by 12.02% (see Fig. 1.21). It can be seen that against the background of the impact of the spread of the COVID-19 pandemic and the economic downturn, pandemic prevention

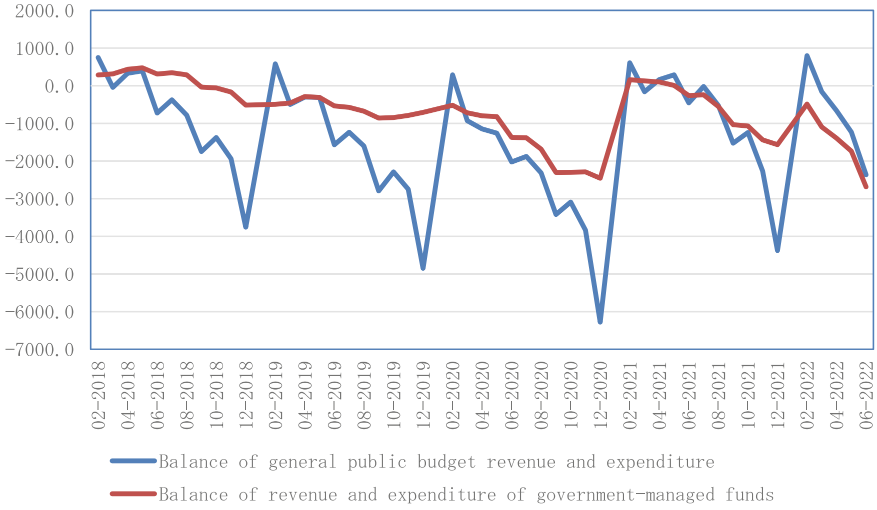

Fig. 1.20 Fiscal balance: cumulative, billion Yuan. *Source* Calculations on CEIC data by the CQMM team

expenditure and stable growth through increasing infrastructure investment have become the main direction of government expenditure policies.

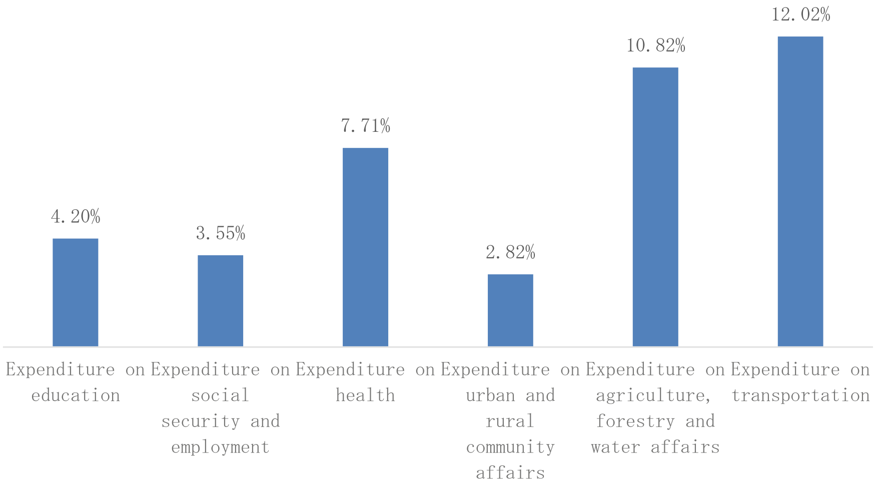

Fig. 1.21 Main fiscal expenditures in 2022H1: %. *Source* Calculations on CEIC data by the CQMM team

Chapter 2
Projection for China's Macroeconomy in 2022–2023

2.1 Outlook for China's Macroeconomy in 2022H2

In the second half of 2022, the Chinese economy is facing an increasingly severe international environment, which is mainly reflected in the following aspects:

First, the long-term effects of the COVID-19 pandemic on America's labor supply are beginning to show. The legacy of the "long coronavirus", which reduced willingness to participate in the labor force after long-term unemployment, has widened the gap between supply and demand in the US labor market. The US labor force participation rate was 62.2% in January 2022, not yet back to the pre-pandemic level of 63.4% in early 2020. The 7% job vacancy rate since 2022 is well above the 4.4% level in February 2020. Labor shortages are starting to push up wages and pushing up inflation at the cost end. The core consumer price index rose 5.9% in June, suggesting a path through which wage costs could be feeding inflation could be forming.

Second, the conflict between Russia and Ukraine directly triggered the energy crisis and food crisis, leading to high global inflation. The US CPI rose 9.1% year-on-year in June, while the euro area's consumer Harmonized price index (HICP) rose 8.6%. Because of the Eurozone's strong dependence on Russian energy, the cost of importing gas from other regions, such as Nigeria, will exceed that of Russia within a year or two, if at all. The high inflation in the eurozone caused by the current energy crisis is unlikely to subside in the short term.

Third, deglobalization may prolong the duration of inflation. After the conflict between Russia and Ukraine, the US and Europe imposed a financial blockade on Russia and stopped buying Russian products. These sanctions impede and may even interrupt the recovery process of global industrial and supply chains, further accelerate the process of deglobalization, and prolong the duration of global inflation.

Since 2022, the Federal Reserve and the European Central Bank have tried to curb high inflation by shrinking their balance sheets and raising interest rates, but it is unlikely to achieve good results in the short term, and is accompanied by growing concerns about economic slowdown. First, higher interest rates will increase the

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debt service burden of the US government and raise the risk of holding US debt. At the same time, higher interest rates will increase the debt burden of US companies and households, curb the investment demand of companies and consumer demand of households, and trigger a recession. Second, higher interest rates will increase the debt burden of southern European countries such as Italy, and worries about the European debt crisis will once again divide the eurozone economy. Finally, higher interest rates boosted the dollar index in the short term, causing money to flow back to the US and devaluing currencies in the euro area, Japan, and emerging market economies due to capital outflows. At the same time, the energy and food crises will not only raise the import costs but also hit the industrial production and export of these economies, leading to the current account deficit of these economies. The endpoint of "current account deficit–capital outflow–currency depreciation" is the starting point of economic recession. It is expected that the euro area and the US will face a high risk of economic deceleration in the third quarter and fourth quarter of 2022.

As a result, China's exports of investment goods and durable consumer exports are expected to face significant downward pressure in the second half of 2022. In terms of domestic risks, the recurrence of COVID-19 and the possibility of multipoint distribution will still inhibit the rapid growth of service consumption. At the same time, the debt risk of real estate enterprises and the deposit risk of rural banks also threaten the security of the financial system to a certain extent.

In the second half of 2022, the following factors are expected to be major forces for stabilizing growth: First, although exports are under great downward pressure, the gradually improved industrial and supply chains and the domestic market are expected to support manufacturing investment to a certain extent. If emerging market economies cannot export parts due to capital outflow and rising import costs, trade substitution is also anticipated to support China's manufacturing exports to a certain extent.

Second, in the third quarter of 2022, funds from special bond issuance are expected to form physical investment, ensuring a sharp rebound in infrastructure investment. In the fourth quarter, the incremental fiscal support with the pre-issuance of a certain number of special bonds for 2023 is anticipated to stabilize the growth of infrastructure investment. Infrastructure investment is expected to be the main force supporting investment growth in the second half of 2022.

Thirdly, the external slowdown is expected to restrain the rise in commodity prices and reduce the pressure on imported inflation. The deceleration of real income growth and employment pressure is anticipated to continue to restrain the rise of core CPI, but the food CPI is likely to have a large increase in the third quarter due to the volatility of pork prices. In the second half of 2022, the scissors between PPI and CPI are expected to narrow further.

Fourthly, the RMB exchange rate is expected to remain stable and the risk of capital outflow is anticipated to be generally under control.

Overall, downward pressure on exports is expected to restrain China's economic growth in the second half of 2022, but solid growth in manufacturing investment and infrastructure investment is anticipated to provide important support for the Chinese economy.

2.2 Assumptions on Exogenous Variables of CQMM

2.2.1 Economic Growth Rates of the United States and the Euro Area

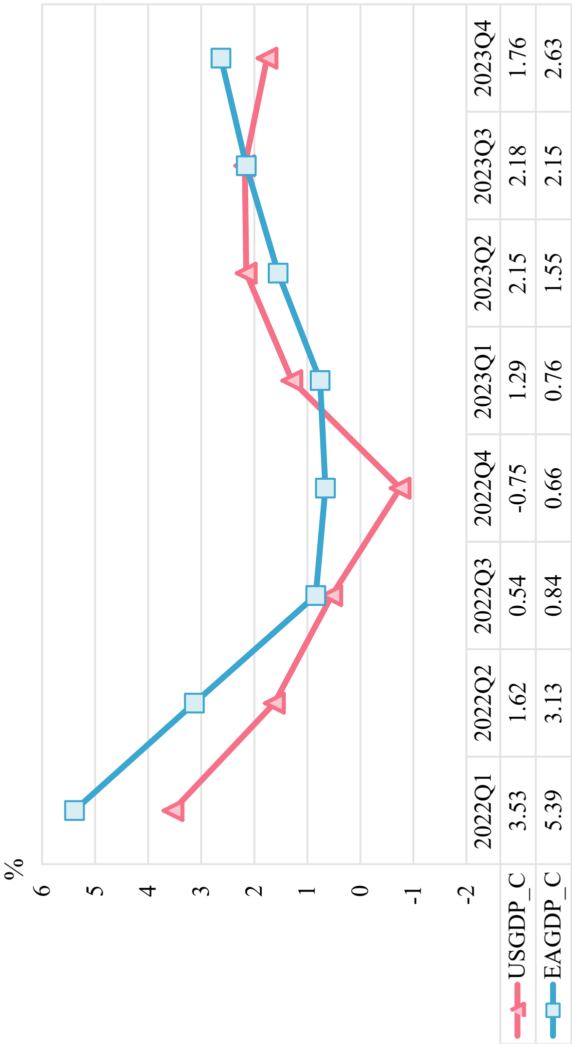
In order to forecast China's main macroeconomic indicators from 2022 to 2023 by using China Quarterly Macroeconomic Model (CQMM), we set the exogenous variables of CQMM as follows with a comprehensive reference to the information of various parties.

In the first half of 2022, the war between Russia and Ukraine sent international energy prices soaring, and the impact of the COVID-19 pandemic caused by a new variant of Omicron with a stronger immunity to escape continued to delay the recovery of global supply chain bottlenecks. Inflation accelerated in major developed economies and many countries started monetary policy contraction. The US and the euro area posted faster economic growth of 3.53 and 4.77% in the first quarter, respectively, but the risks of energy supply shocks, high inflation-driven monetary tightening, supply chain disruptions, extended war with Ukraine and repeated COVID-19 outbreaks remain significant constraints on future growth prospects in the US and Europe.

According to the World Bank's Global Economic Prospects updated in June 2022, the US and the euro area are both expected to grow by 2.5% in 2022, down 1.2 and 1.7 percentage points, respectively, from their January forecasts. In 2023, 2.4 and 1.9%, both 0.2 percentage points lower than its January outlook. On July 27, the IMF forecasted economic growth in the US and the Eurozone to be 2.3 and 2.6% in 2022, while 1.0 and 1.2% in 2023, respectively. However, the US GDP for the second quarter released on July 28 was approximately only 1.62% year-over-year growth, significantly lower than the implied quarterly growth in the annual forecasts mentioned above. Based on various sources of information, our CQMM team assumes that the US economy would grow by 1.21 and 1.85% in 2022 and 2023, while the Eurozone economy grow by 2.47 and 1.77%, respectively, and sets corresponding quarterly growth rates (see Fig. 2.1).

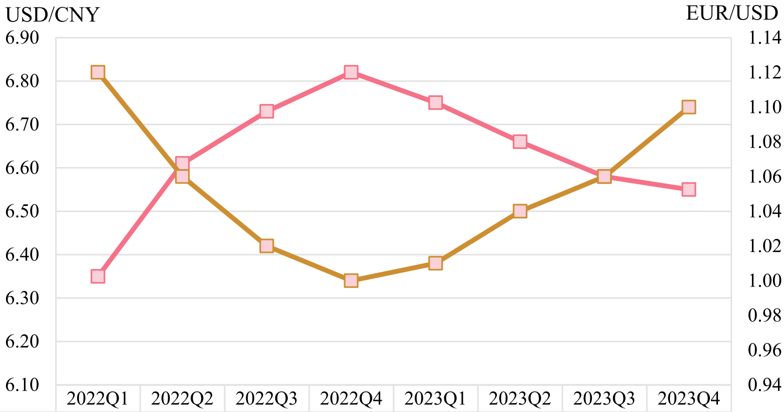
2.2.2 Main Exchange Rates

In the first half of 2022, the Fed's policy shift combined with the downward impact on China's economy, the war between Russia and Ukraine, and the risk of energy supply in Europe led to the rapid appreciation of the US dollar against the RMB and



	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
USGDP_C	3.53	1.62	0.54	-0.75	1.29	2.15	2.18	1.76
EAGDP_C	5.39	3.13	0.84	0.66	0.76	1.55	2.15	2.63

Fig. 2.1 Assumptions on GDP growth of the US and the Euro: seasonally adjusted, YoY. *Note* EAGDP_C denotes the real GDP growth rate in the eurozone, USGDP_C denotes the real GDP growth rate in the US. *Source* Assumptions by the CQMM team



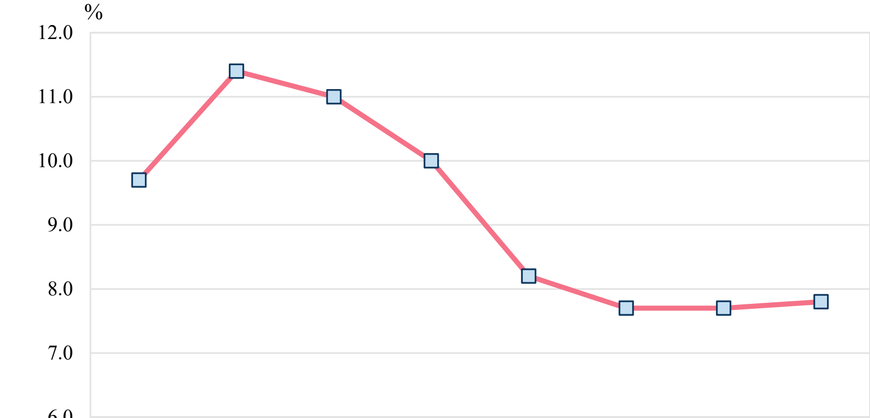
	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
USD/CNY	6.35	6.61	6.73	6.82	6.75	6.66	6.58	6.55
EUR/USD	1.12	1.06	1.02	1.00	1.01	1.04	1.06	1.10

Fig. 2.2 Changes in exchange rates of the US dollar against the Euro and the RMB against the US dollar: YoY. *Note* USD/CNY is the exchange rate of USD against RMB, EUR/USD is the exchange rate of EUR against USD. *Source* Assumptions by the CQMM team

the euro. With inflation currently high and Fed tightening expected to continue, dollar appreciation is likely to continue. It is expected that the USD against RMB exchange rate will continue to rise in the second half of the year with the Fed tightening pace, and return to the appreciation path in 2023 with the adjustment of the fundamentals of the two countries. Faced with an energy gap in the autumn and winter, policy fragmentation and political volatility in the euro area, the EUR against USD exchange rate is expected to continue its downward trend, reaching a stage low of 1.00 in late 2022 and gradually recovering to 1.10 in 2023 (see Fig. 2.2).

2.2.3 Growth Rate of Broad Money Supply (M2)

In the first half of 2022, China's monetary policy of "proactive action" achieved obvious results, with M2 growth reaching 11.40%, giving strong support to economic stabilization. But with monetary policy tightening in major economies, China's monetary policy space is expected to narrow. It is expected that the growth rate of M2 will gradually decline in the second half of the year, and will return to about 8% in 2023 with the stabilization of domestic economic situation and the normalization of foreign monetary policies (see Fig. 2.3).



	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
M2	9.70	11.40	11.00	10.00	8.20	7.70	7.70	7.80

Fig. 2.3 Assumptions on growth rates of M2: YoY. *Source* Assumptions by the CQMM team

2.3 Forecast of China's Main Macroeconomic Indicators in 2022–2023

2.3.1 Projected GDP Growth

Under the above assumptions on exogenous variables, the forecast based on CQMM shows that China's GDP growth is expected to be 4.05% in 2022, which is 1.44 percentage points lower than our Spring Forecast. In 2023, GDP growth rebounded to 6.53%. In the first half of this year, the unexpected impact of the COVID-19 pandemic and exposure to real estate risks significantly deviated from the original recovery path of economic growth in the second quarter, further damaged the household income base, and the recovery process of household consumption may be delayed. In contrast, thanks to the smooth implementation of the policy of ensuring supply and stabilizing price, as well as the internal stability of the domestic industrial chain, the impact of soaring international energy prices on the domestic economy is smaller than that of other economies. In the second half of this year, with the implementation of fiscal and financial policies for incremental and steady growth and continuous improvement of pandemic prevention and control measures, the economy is anticipated to rebound and stabilize. GDP growth is expected to reach a stage high of 5.87% in the third quarter and steady at 5.04% in the fourth quarter. In 2023, barring other shocks, the Chinese economy is expected to maintain a stable growth rate of more than 4.0%, with higher quarterly growth likely in the second quarter of 2023 due to carry-over effects (see Fig. 2.4).

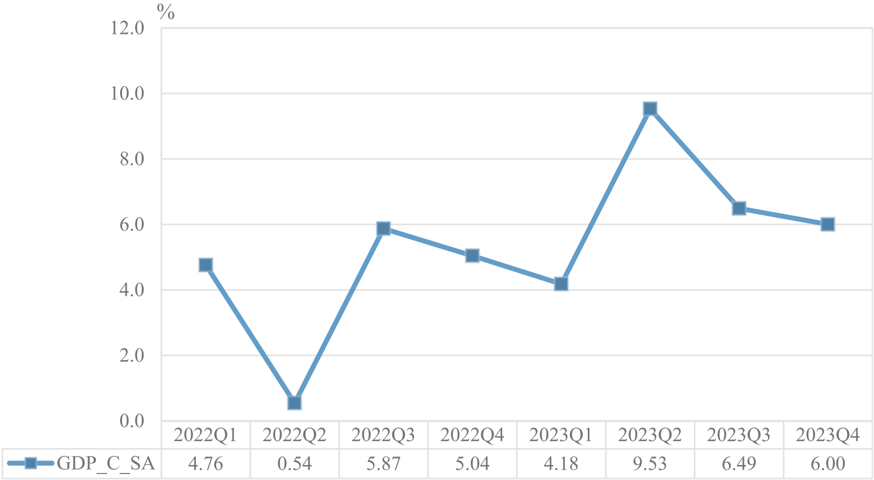


Fig. 2.4 Projected GDP growth. *Source* Calculations by the CQMM team

2.3.2 Projected Investment Growth

CQMM predicts that in 2022, investment in fixed assets (excluding rural households) is expected to increase by 5.76% at current prices, 0.53 percentage points lower than our Spring Forecast. In 2023, the growth rate of investment in fixed assets is expected to be 2.82% (see Table 2.1). In the first quarter of 2022, infrastructure investment and manufacturing investment maintained rapid growth, while real estate investment fell into a downturn due to policy restrictions and risk exposure. It is expected that the growth rate of investment in fixed assets will slow down in the second half of the year after a rebound caused by the slow recovery of real estate investment, the gradual deceleration of manufacturing investment along with the decline of exports, and the strength of infrastructure investment. The growth rate of investment in fixed assets is anticipated to be 6.30% in the third quarter and 2.80% in the fourth quarter.

By sector, infrastructure investment is expected to rise sharply by 9.71%, real estate investment is anticipated to contract by 3.99% due to the impact of risk exposure, and manufacturing investment is expected to grow by 7.94%. First, infrastructure investment increased significantly in the first quarter, but decreased slightly in the second quarter due to factors such as the COVID-19 pandemic impact and the availability of funds. However, the recently introduced incremental policies, such as increasing the credit scale of policy banks by 800 billion yuan and the capital of financial bonds for major projects by 300 billion yuan, are expected to support the steady growth of infrastructure investment. Together with other incremental support policies, infrastructure investment is expected to grow by 15.53% in the third quarter and by nearly 10% for the whole year. Second, risk exposure has a great impact on real estate investment, which will take some time to resolve. It is expected that real estate investment will turn positive in the fourth quarter and the annual growth rate will

Table 2.1 Projected investment growth rate in 2022–2023: %

	2022 Q1–Q4				2023 Q1–Q4				2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Fixed assets Investment (at constant prices)	4.03	0.80	4.27	6.90	3.81	8.14	6.39	6.72	3.99	6.26
Fixed assets Investment (at current prices)	9.22	4.78	6.30	2.80	−1.98	1.81	4.96	6.71	5.76	2.82
Infrastructure investment (at current prices)	9.93	9.61	15.53	4.11	−1.91	3.15	4.68	8.94	9.71	3.63
Real estate investment (at current prices)	1.54	−7.60	−8.20	−1.61	−8.62	2.08	11.24	11.44	−3.99	3.62
Manufacturing investment (at current prices)	16.67	8.49	7.53	0.15	−0.59	1.64	2.33	4.95	7.94	2.07

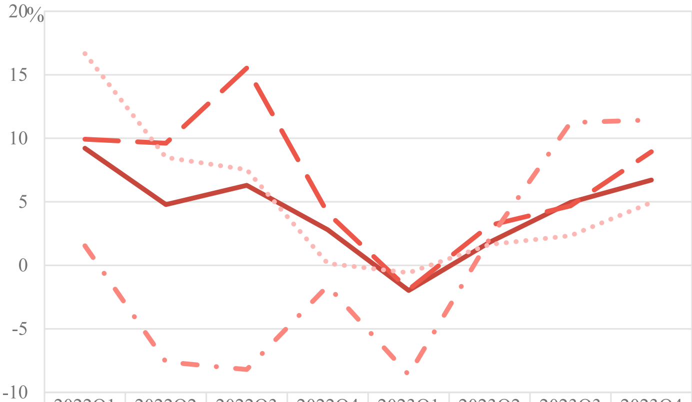
Source Calculations by the CQMM team

remain negative. Thirdly, the slow but persistent recovery of global supply chains, high inflation eroding household incomes in advanced economies, and the brewing risk of recession from the tightening of monetary policy in advanced economies are combusting the room for further growth in Chinese exports, which is not conducive to export-led manufacturing investment. Manufacturing investment is expected to slow down as exports decelerate (see Fig. 2.5).

2.3.3 Projected Consumption Growth

CQMM predicts that total household consumption at constant prices is projected to grow by 0.42% in 2022 and continue to grow by 5.61% in 2023. In 2022, the total retail sales of consumer goods are expected to increase by 1.45% in nominal terms, 7.05 percentage points lower than our Spring Forecast. In 2023, the nominal growth rate of total retail sales of consumer goods is anticipated to rise to 10.01%.

After the COVID-19 pandemic, household consumption was extremely vulnerable due to the impact of decreasing household income, weakening expectations, consumption scenarios restricted by the pandemic prevention and control, and increased precautionary savings under the background of uncertainty. Judging from



	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
FAI_SA	9.22	4.78	6.30	2.80	-1.98	1.81	4.96	6.71
FAI_INFRA_SA	9.93	9.61	15.53	4.11	-1.91	3.15	4.68	8.94
FAI_ESTATE_SA	1.54	-7.60	-8.20	-1.61	-8.62	2.08	11.24	11.44
FAI_MANU_SA	16.67	8.49	7.53	0.15	-0.59	1.64	2.33	4.95

Fig. 2.5 Projected growth rates of FAI: YoY. *Note* FAI_SA is fixed assets investment, FAI_INFRA_SA, FAI_ESTATE_SA, FAI_MANU_SA are infrastructure investment, real estate investment, and manufacturing investment respectively. *Source* Calculations by the CQMM team

the experience of consumption hit by the pandemic in the past 2 years, the slope of consumption recovery is moderate. In the first half of 2022, the long-term recovery process of household consumption was interrupted by the impact of the pandemic. In the second quarter, the growth rate was negative again, and the recovery process may be further delayed. If the pandemic continues to scatter, the continued weakness of contact consumption, the asymmetric impact of the pandemic on different regions and income groups, and the increase in household precautionary savings will also restrain the growth of consumer spending (see Fig. 2.6).

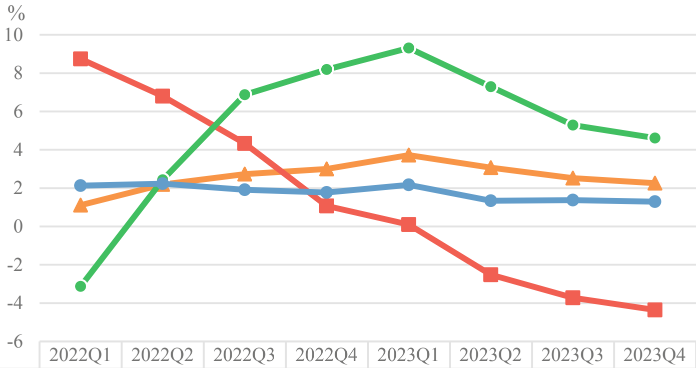
2.3.4 Projected Growth of Key Price Indicators

In 2022, CPI is expected to rise 2.26%, 0.43 percentage points higher than our Spring Forecast, and in 2023, CPI growth is anticipated to be 2.89%. Despite the high inflation in major economies, the successful implementation of the policy of ensuring supply and stabilizing prices, the completeness of the domestic industrial chain, and the relative weakness of consumer demand have kept domestic terminal consumer prices from rising too much. However, the reboosting "pig price cycle" would still drive CPI up, to 2.73% in the third quarter and 3.00% in the fourth quarter. Meanwhile, PPI is expected to rise by 5.15% in 2022 and contract by 2.63% in 2023. The international commodity prices represented by energy are anticipated to have reached the peak, and the upstream input pressure is expected to ease marginally in

	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
RETAIL_SA	3.18	-4.38	3.52	3.58	4.10	13.74	11.48	10.92
CON_D_C_SA	4.00	-4.03	0.31	1.66	3.52	6.72	6.37	5.84

Fig. 2.6 Projected consumption growth rates: YoY. *Note* CON_D_C_SA denotes total residents' consumption at constant prices; RETAIL_SA denotes total retail sales of social consumer goods at current prices. *Source* Calculations by the CQMM team

the future. The year-on-year growth rate of PPI is forecast to be 4.33% in the third quarter, and it will fall back to 1.07% in the fourth quarter under the influence of a higher base (see Fig. 2.7).



	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4
CPI_SA	1.11	2.19	2.73	3.00	3.72	3.07	2.52	2.26
PPI_SA	8.74	6.80	4.33	1.07	0.10	-2.52	-3.72	-4.36
CPI_FOOD_SA	-3.13	2.43	6.87	8.19	9.31	7.29	5.29	4.61
CPI_NOFOOD_SA	2.13	2.23	1.91	1.77	2.17	1.34	1.37	1.29

Fig. 2.7 Projected increase in CPI and PPI: YoY. *Note* CPI_SA, PPI_SA, CPI_FOOD_SA, CPI_NOFOOD_SA denote seasonally adjusted consumer price index, producer price index, consumer price index for food, and consumer price index for non-food, respectively. *Source* Calculations by the CQMM team

Table 2.2 Projected growth of China's exports and imports in 2022–2023: %

	2022 Q1–Q4				2023 Q1–Q4				2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Exports in USD	15.39	13.19	11.68	2.79	−3.05	−3.25	−2.68	1.97	10.55	−1.76
Imports in USD	10.62	2.51	4.45	4.57	4.25	6.06	5.92	6.63	5.45	5.72
Exports in RMB	13.06	15.87	16.17	9.62	3.05	−2.54	−4.85	−2.07	13.62	−1.68
Imports in RMB	8.39	4.94	8.65	11.53	10.8	6.84	3.56	2.41	8.39	5.77

Source Calculations by the CQMM team

2.3.5 Projected Growth of Exports and Imports

In 2022, China's total value of exports of goods is expected to grow by 9.50% in current dollar terms, down 3.24 percentage points from our Spring Forecast. The total value of imports of goods is anticipated to grow by 5.50%, a sharp 8.72 percentage points lower than our Spring Forecast (see Table 2.2).

In the first half of 2022, the international supply chain was slow to repair due to the repeated shocks of the novel coronavirus variant with strong immune escape characteristics, which provided a continuation window for the alternative growth of China's export. However, due to the impact of the COVID-19 pandemic in the Yangtze River Delta and other places, export growth suffered setbacks. Although exports rebounded more than expected in June, in addition to the export resilience brought by the industrial chain advantage and the support of the policy of stabilizing foreign trade, it may also contain the impact of the previously delayed orders, and the rebound may not be able to continue. In the second half of 2022, export growth is expected to turn downward as the global industrial chain continues to be repaired, high inflation erodes the purchasing power of residents in developed countries, monetary policy tightening in developed economies simmers recession risks, nominal growth contribution declines after high overseas inflation peaks and high base. Meanwhile time, import growth was significantly weaker than expected, also due to lower starts and impaired consumption due to the pandemic impact.

Chapter 3
Impact of US and European Economic Slowdown on the Chinese Economy

3.1 Background

In the first half of 2022, the energy and food crises caused by the conflict between Russia and Ukraine, combined with the massive monetary easing implemented in the past two years to cope with the impact of the COVID-19 pandemic, all the world's major economies except China and Japan fell into an overheated inflation situation not seen since the new century. In addition, COVID-19 is still spreading, mutating and repeating, and its restraining effect on the recovery of global supply chains has not been completely reversed, raising the specter of another global stagflation crisis since the 1970s.

However, there are some differences between the current economic situation and the stagflation crises of the 1970s. First, with exception of the US and Europe, price rises in the two largest economies, China and Japan, remain within normal limits. As shown in Fig. 3.1, since December 2020, CPI in the euro area and the US has risen rapidly, and the slope of the curve has risen almost vertically. CPI growth in China and Japan is significantly slower, with a slope of about 45°. Particularly, China's CPI also showed large fluctuations, rather than a trend along the way. And then the current surge in prices can still be seen as a local global phenomenon, and whether it will turn into global inflation will depend on how China and Japan behave.

Second, it can also be seen from Fig. 3.1 that the onset of inflation in the US and Europe can be traced back to the end of 2020. The reasons are as follows: on the one hand, the COVID-19 outbreak interrupted the normal withdrawal pace of quantitative easing monetary policy in the US and Europe, forcing them to further increase the easing policy, leading to excess monetary liquidity in the short term; on the other hand, the strict prevention and control policies in the early stage of the epidemic nearly cut off the production and circulation of goods and services, causing supply shortages in the US and Europe, and driving up the prices of goods and services. In fact, the energy and food crisis triggered by the Russia-Ukraine conflict in early 2022 was not the main reason for the outbreak of inflation in the US and Europe.

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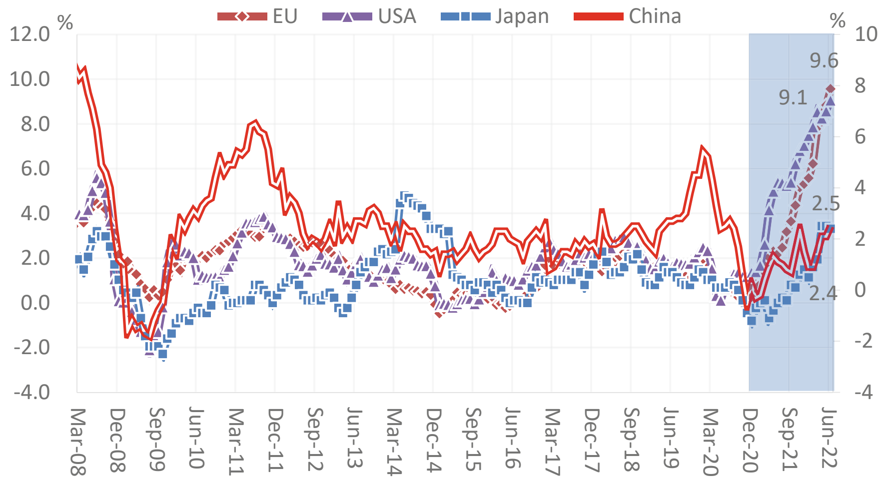

Fig. 3.1 Monthly Changes of CPI in Major Economics Since 2008. *Source* Calculations by the CQMM team

This is a far cry from the global cost-push inflation caused by oil supply shocks in the 1970s.

Third, the world economy is now much less dependent on oil than it was in the 1970s, mitigating the potential economic impact of oil price shocks. Moreover, despite the current tight labor supply in the US and Europe, plans for indexable wage increases are less common and union organization has declined over the past two decades. As a result, the risk of gradual rotational increases in energy prices and labor wages is low and it is difficult to create sustainable inflationary pressures.

However, the above analysis does not mean that we can ignore the changes in inflation in the US and Europe for now. On the contrary, this is the most critical juncture in the evolution of the global economy. In fact, due to rapidly rising price levels, major global institutions have recently slashed their global growth forecasts for 2022 through 2025. As shown in Table 3.1, the World Bank's forecast in June 2022 lowered global economic growth in 2022 by 1.2 percentage points to 2.9% from 4.1% projected in January. The OECD's June forecast will similarly cut global growth for 2022 to 3.0% from 4.5% projected at the end of last year. This suggests that, rather than inflation, we should pay more attention to the global economic slowdown behind inflation, and how will this affect the realization of China's economic growth target in 2022 and 2023 and even the 14th Five-Year Plan period? In addition, in the context of the Fed raising interest rates four times and the European Central Bank following suit, what is the policy space for macro-control in China? What measures should be taken to deal with this potential global crisis?

Table 3.1 World Bank and OECD's projections for major economies in 2022

	Time to forecast	World	Developed economy			Emerging markets			
			US	Euro area	Japan	China	Russia	India	Brazil
OECD	Dec., 2021	4.5	3.7	4.3	3.4	5.1	–	8.1	–
	June, 2022	3	2.5	2.6	1.7	4.4	–	6.9	–
World Bank	Jan., 2022	4.1	3.7	4.2	2.9	5.1	2.4	8.7	1.4
	June, 2022	2.9	2.5	2.5	1.7	4.3	−8.9	7.5	1.5

Note Compiled from the World Bank's January and June 2022 Global Economic Prospects and the OECD's December 2021 and June 2022 Economic Outlook reports. *Source* Calculations by the CQMM team

3.2 Scenario Design

To answer the above questions, our research team used CQMM to simulate the impact of the economic slowdown in the US and Europe on China's economy under two different scenarios, and then analyzed the countermeasures of China's infrastructure investment, fiscal expenditure policy and monetary policy from 2022 to 2023 on this basis.

Scenario 1: Suppose US and European growth diverges in 2022–23, of which the US experiences a sustained mild recession, with real GDP growth shrinking 0.6% in 2022 and 0.5% in 2023, and the euro area real GDP, as set out in the benchmark scenario, grows by 2.5% in 2022 and 1.8% in 2023.

The rationale for Scenario 1 is that projections for the U.S. economy from 2022 to 2023 are controversial. Some think a recession is unlikely. The World Bank's June 2022 forecast, for example, pegged US growth at 2.4% in 2023. The research group also adopted the setting of 2.4% annual growth in 2022 and 2023 in the above forecast part. However, projections based on dynamic general equilibrium models (DSGE) from the Fed's New York branch suggest that the probability of a hard landing for the US economy in 2022–2023 is as high as 80%. By contrast, forecasts for euro area growth are relatively consistent. Including the European central bank Professional Forecasters Survey (ECB Survey of Professional Forecasters, July 2022), OECD (June 2022), World Bank (June 2022), Eurosystem Staff Projection (June 2022), Euro Zone Barometer, May 2022), Consensus Economics (May 2022), the European Commission (May 2022), the IMF (April 2022) and other eight international organizations or the private sector, the average forecast for real GDP growth in 2022 and 2023 is 2.7 and 2.0%, respectively. The lowest estimate for 2023 is 1.5%. It is obvious that many institutions do not expect a recession in the euro area in 2022 and 2023.

Table 3.2 Baseline and scenario of real GDP growth rates in the euro area and the US

Year	Quarter	Real GDP growth rate in the euro area				Real GDP growth rate in the US			
		Scenario		Baseline		Scenario		Baseline	
		Year	Quarter	Year	Quarter	Year	Quarter	Year	Quarter
2022	Q1	2.2	5.4	2.5	5.4	−0.6	3.5	2.4	3.5
	Q2		2.8		3.1		0.8		2.6
	Q3		0.5		0.8		−0.5		2.3
	Q4		0.3		0.7		−6.1		1.4
2023	Q1	−0.3	−1.5	1.8	0.8	−0.5	−0.4	2.4	3
	Q2		−0.4		1.5		−1.2		2.6
	Q3		0.2		2.1		−0.3		2.2
	Q4		0.6		2.6		0.1		1.8

Source Calculations by the CQMM team

Given the possibility of a recession in the US and relative stability in the euro area, we assume in scenario 1 that real GDP growth in the US will shrink by 0.6% in 2022 and 0.5% in 2023, based on the average forecast of the Fed's New York Branch model. At the same time, the growth rate for the euro area is kept exogenous.

Scenario 2: Suppose the euro area follows the US into a synchronized recession in 2023, of which the real GDP growth rate of the US keeps the setting of scenario 1, the real GDP growth in the euro area remained at 2.2% in 2022, and turned negative in 2023 at −0.3%.

Scenario 1 essentially sets the euro area and US economies apart, assuming separate growth rates, but this may not be in line with the reality that the US and European economies are closely related. To this end, the euro area in Scenario 2 is assumed to follow the US economy into a recession in 2023, albeit by a smaller amount. Table 3.2 shows the annual and quarterly breakdown of real GDP growth rates for the euro area and the US for the two scenarios and the benchmark. On this basis, by using CQMM and comparing with the benchmark forecast results in the third part of this report, we can analyze the impact of the US economy and the euro area economy on the Chinese economy in the event of economic recession in 2022 and 2023.

3.3 Analysis of Simulation Results

First, GDP growth falls in both scenarios compared with the baseline forecast. Specifically, in 2022 and 2023, the GDP growth in scenario 1 is 0.21 percentage points lower than the baseline forecast, while, in scenario 2, it is 0.21 and 0.27 percentage points lower than the baseline forecast, respectively (see Fig. 3.2). Therefore, it can

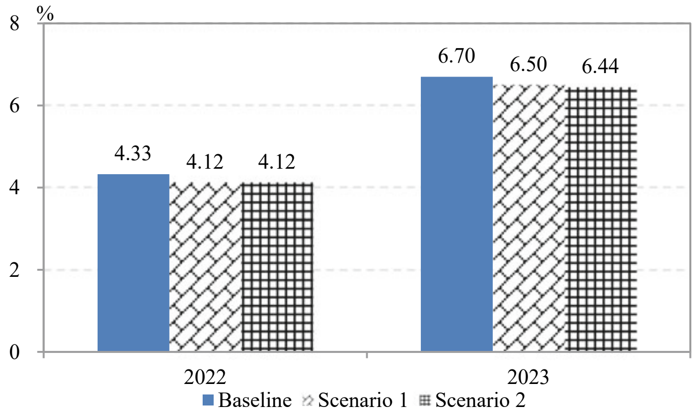

Fig. 3.2 Changes in GDP growth rates under different scenarios. *Source* Calculations by the CQMM team

be seen that a mild recession in the US economy alone or a simultaneous mild recession in the US economy and the euro area economy in 2022 and 2023 will have a relatively limited impact on the change in China's real GDP growth rate. This means that over the forecast horizon, the Chinese economy becomes less dependent on the US and euro area economies and the domestic market contributes more to growth. However, it is important to note that the assumption here is that the US economy will only experience a mild recession (growth within −1%) in 2022 and 2023, rather than a severe recession, and that the Eurozone economy will only follow the US economy into a mild recession in 2023. If there is a serious recession in the US and Europe, the logic of its effect on the Chinese economy may change fundamentally.

Second, the slowdown in export growth is the most direct impact on China's economy from the recession in the US and Europe. As can be seen in Fig. 3.3, in 2022, export growth in dollar terms in Scenario 1 and Scenario 2 will slightly decrease by 1.60 percentage points and 1.63 percentage points, respectively, compared with the benchmark forecast. By 2023, under a mild and synchronized recession in the US and euro area (Scenario 2), export growth falls by 4.35%, 2.93 percentage points lower than the baseline forecast. By contrast, in the case of the divergence between the US and Europe (Scenario 1), export growth shrinks by 3.84%, down 1.42 percentage points from the benchmark forecast. Scenario 2 is 1.5 percentage points lower than Scenario 1, more than doubling the decline. It can be seen that the economic recession in the US and euro area will further worsen the trend of export growth, resulting in a more significant decline in export growth. In addition, once the US and Eurozone economies form a recession resonance, even a mild recession will have a great impact on China's export growth.

It is noted that economic growth deceleration and high inflation are the two main characteristics of the current economic situation of the US and euro area. In fact, the latter feature is more prominent. However, judging from the experience of China's economy in recent years, the imported spillover effect of the price level in the

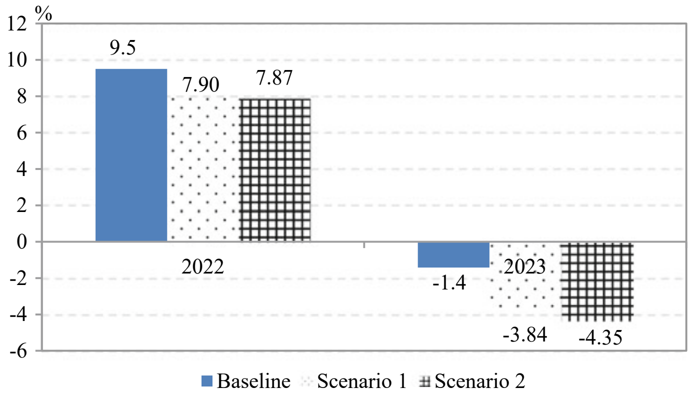

Fig. 3.3 Changes in export growth in USD under different scenarios. *Source* Calculations by the CQMM team

US and euro area on domestic prices is rapidly weakening. This may be because of the new champions league during the COVID-19 outbreaks, dislocation of the outbreak cycles and more successful pandemic prevention and control policy, and make China become the main provider (even the only supplier) of global commodity goods substance. China's domestic market is oversupplied, while the international market is undersupplied. Therefore, the high price in the peripheral market cannot act in reverse on the domestic market of China, which eventually leads to the weakening of the imported inflation effect. On the other hand, it may be that China's domestic consumer market continues to be depressed and the demand is sluggish, which does not form a circular resonance with the cost-push inflation caused by rising energy prices, reducing the probability of global inflation risk. In addition, with the European Central Bank also starting to raise interest rates, the chances of falling inflation in the US and Europe in the second half of the year are rapidly increasing. This means that the spike in inflation in the US and euro area is likely to be localized and temporary, with no sustained transmission to the Chinese market. Therefore, in the model composition of this CQMM, the impact of US and European inflation is endogenous to the import price index. That is, the effect of inflation in the US and Europe is reflected through the change in the import price index, which is transmitted to other macroeconomic variables. What we are really looking at is the impact of the recession in the US and Europe on exports. It can be said that in the model, the change in export is the most important channel to analyze the impact of economic recession in the US and Europe.

Third, the decline in export growth will also spread to the deceleration of investment, especially manufacturing investment. This will have a negative effect on the continuous optimization and improvement of China's fixed assets investment structure over the past 2 years (see Fig. 3.4). In 2022 and 2023, the growth rate of manufacturing investment in the scenario will decrease by 0.35 percentage points and 1.16 percentage points, respectively, compared with the benchmark forecast. In scenario

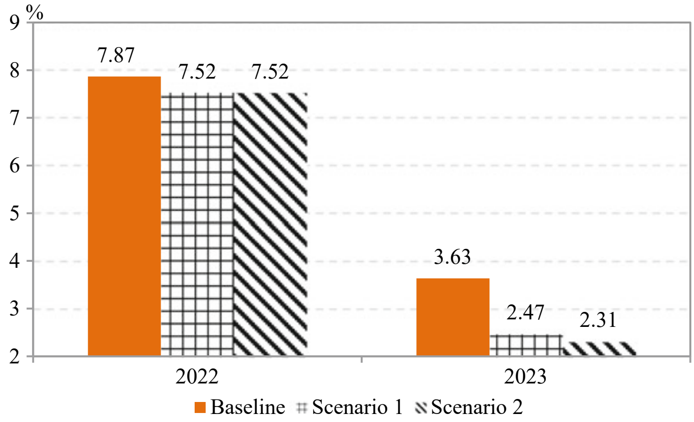

Fig. 3.4 Changes in growth rates of manufacturing investment under different scenarios. *Source* Calculations by the CQMM team

2, manufacturing investment growth is 0.35 and 1.32 percentage points lower than the baseline forecast, respectively. It can be seen that: first, manufacturing investment will decelerate in both scenarios. That is because a recession in America and Europe will dampen investment growth through falling exports. As the composition of China's export products, mainly manufacturing products. The export slowdown is bound to affect the growth of manufacturing investment changes; Second, the decline in manufacturing investment growth in 2023 is significantly greater than that in 2022. In both scenarios, manufacturing investment growth shrank by a third from the baseline. This shows that the economic recession in the US and Europe has a time delay in restricting manufacturing investment.

Considering that investment in the manufacturing sector has been the main driver of fixed-asset investment growth since 2020, due to the continued downturn in infrastructure investment and the deceleration in real estate investment. Therefore, the slowdown in manufacturing investment caused by the recession in the US and Europe in 2022 and 2023 is likely to undermine the recovery in fixed-asset investment growth and interrupt the ongoing improvement in the investment structure. In fact, affected by the deceleration of manufacturing investment, urban fixed assets investment growth in 2023 is projected to be 3.14 and 3.08% in the two scenarios, down 0.22 and 0.28 percentage points from the benchmark forecast, respectively.

Finally, a recession in the US and Europe is likely to shrink domestic consumer demand. Compared with the baseline forecast, the growth rate of total retail sales in 2023 in the two scenarios will be reduced by 0.10 and 0.11 percentage points, respectively. This indicates that the recession of the external economy will also affect the confidence and environment of domestic consumption, which will restrict the growth recovery of consumption to a certain extent.

3.4 Further Analysis

In summary, the simulation results show that: first, the mild recession in the US and Europe will cause the deceleration of China's economic growth, but the impact is limited. This means that the external dependence of China's economic growth has weakened and the endogenous driving force has strengthened. Second, export growth will be more affected by a mild recession in the US and Europe. The simulation shows that in 2023, when the US and Europe experience a synchronized recession, the decline in export growth will more than double the baseline. Third, domestic investment and consumption will also be constrained to some extent by the mild recession in the US and Europe, with investment responding more than consumption. In particular, the growth rate of manufacturing investment will shrink by one-third compared with the benchmark value under different scenarios through the transmission effect of export growth. This shows that, despite the increasing independence of the Chinese economy, external market demand is still an important driver of China's economic growth and still needs to be focused and monitored.

Furthermore, assuming a mild recession in the US and Europe, how should we respond to this change? From the perspective of macroeconomic policies, there are no more than fiscal means and monetary means. But the question is, where is the room for policy?

To answer the above questions, we will then take the benchmark forecast real GDP growth rate as the target variable, and on the basis of scenario 2, we will calculate the growth level of broad money supply (M2) and fiscal expenditure to offset the restriction effect of mild recession in the US and Europe on real GDP growth. The specific calculation results are shown in Figs. 3.5 and 3.6. It can be found:

First, if we only adjust the change in the growth rate of M2, holding other variables constant, then to make up for the deceleration of real economic growth in scenario 2 above, we need to increase M2 growth to 13.4% in 2022, 2.9 percentage points higher than the benchmark forecast set point. By 2023, M2 growth should be maintained at 9.0%, 1.2 percentage points higher than the benchmark forecast set point (see Fig. 3.5). Considering that the M2 growth rate in 2021 is about 8.8%, in fact, it is feasible to use the change of M2 growth rate to offset the impact of the recession risk in the US and Europe.

Second, in terms of the growth rate of fiscal expenditure, if other variables remain unchanged, to make up for the deceleration of real economic growth in Scenario 2, we need to increase the growth rate of fiscal expenditure to 10.7% in 2022, 2.7 percentage points higher than the set point in benchmark forecast. By 2023, fiscal expenditure growth should continue at 8.9%, 1.8 percentage points higher than the baseline forecast (see Fig. 3.6). While such growth rate change seems to be similar to M2 growth rate, it should be noted that, constrained by the high stock of local government debt and the continued decline in fiscal revenue growth, China's fiscal expenditure growth rate was only 2.3% in 2021. In the first half of 2022, fiscal expenditure growth accelerated to 5.9% on the back of strong infrastructure investment, but still fell far short of the 10.7% target. Therefore, it is obviously a difficult task to rely solely

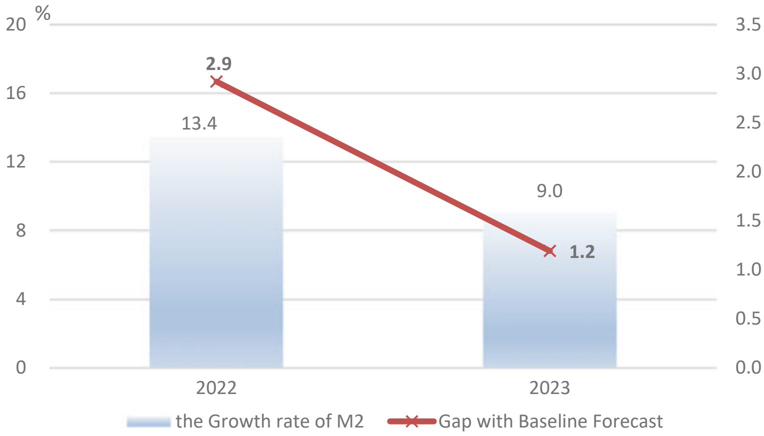

Fig. 3.5 Changes in M2 growth rate to make up for the economic growth gap under Scenario 2. *Source* Calculations by the CQMM team

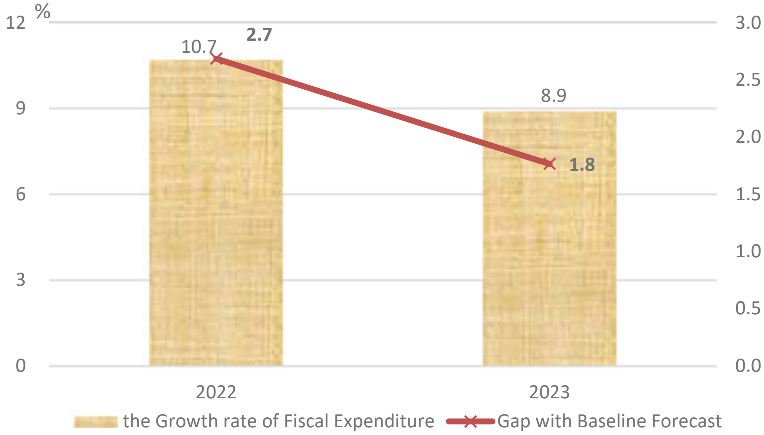

Fig. 3.6 Changes in growth rate of fiscal expenditure to make up for the economic growth gap under Scenario 2. *Source* Calculations by the CQMM team

on the expansion of fiscal spending to cope with the impact of possible economic recession in the US and Europe.

3.5 Policy Implications

Based on CQMM, we simulated the possible impact of the economic recession in the US and Europe on the Chinese economy under different scenarios. The results show that:

1. It is unlikely that the US and Europe will have a deep recession from 2022 to 2023. Besides, the US economy is more uncertain than the eurozone economy.
2. Under the assumption of a mild recession in the US and Europe, that is, a decline of less than 1%, the slowdown of the US and Europe's economic growth will have a limited impact on China's economic growth and will not cause a large impact.
3. China's exports and manufacturing investment will be relatively affected by a mild recession in the US and Europe. In particular, China's export growth, already expected to be negative, could accelerate and double.
4. Compared with fiscal policy, monetary policy has more room to deal with the mild recession in the US and Europe.

In this regard, we discussed the operating space of macroeconomic policy: First, focus on the operational risks of inflation and recession in the US and Europe. As long as there is no serious recession in the US and Europe, the growth changes in the US and Europe will have a limited impact on China's macroeconomic growth as a whole, and will not affect the economic growth targets for 2022 and 2023. Whether the Chinese economy can achieve its growth target mainly depends on whether domestic market demand, especially consumer demand, can sustain a rapid recovery.

Second, attach great importance to the changing response of export growth rate. In 2022 and 2023, even a mild recession in the US and Europe is likely to have a serious constraint on China's export growth. Therefore, how to stabilize foreign trade especially export growth will be the key content of economic work this year and next year. Since the 13th Five-Year Plan, internalization has been a common feature of China's foreign trade development. Among them, private enterprises are the main force of China's export at this stage. Therefore, to stabilize export growth, it is necessary to increase support and support for private enterprises.

Thirdly, continue to implement tax and fee reduction policies, especially preferential tax policies for small and medium-sized enterprises and manufacturing enterprises, to hedge against the possible impact of the economic slowdown in the US and Europe on manufacturing investment.

Chapter 4
Policy Recommendations

In addition to the policy simulation of the impact of the economic slowdown in the US and Europe, we also analyzed and forecasted China's current economic situation. The results showed that: in the first half of 2022, the unexpected pandemic impact forced the government to stabilize the economy through the unexpected growth of infrastructure investment; In the second half of the year, the downward pressure on exports further strengthened the need to accelerate the growth of infrastructure investment. In the long run, the steady growth of the manufacturing sector and its transformation and upgrading are fundamental to promoting economic growth, accelerating the transformation of growth drivers, and achieving high-quality development. More importantly, the transformation and upgrading of the manufacturing sector are related to the long-term growth of labor productivity, which is the basis for ensuring the growth of people's real income and the fundamental driving force for the growth of consumption.

To this end, we proposed: As to stabilize investment, first, we will continue to work together with monetary and fiscal policies to consolidate the foundation for the transformation and upgrading of the manufacturing sector. In recent years, the policy dividend aimed at domestic high-tech enterprises has begun to accelerate and promote the transformation and upgrading of the Chinese manufacturing industry. High-end products have been constantly appearing and gradually occupying the market. Macroeconomic policies in the second half of 2022 should continue to adhere to the current policy tone: monetary policy should continue to implement the financial services for the real economy, and ensure that the new RMB loans to non-financial enterprises and institutions account for no less than 60.0%. Further reduce the financing cost of enterprises to stimulate the growth of private investment, which is more sensitive to the change of interest rate. Improve the efficiency of market allocation of credit resources, promote the adjustment of investment structure, and enhance investment efficiency. Make full use of structural monetary policy to promote the development and expansion of advanced manufacturing. Through

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tax and fee cuts, the fiscal policy will fully serve the potential development of high-tech manufacturing and the employment stability of micro-, small and medium-sized enterprises.

At present, when the manufacturing industry enters the stage of transformation and upgrading, it needs the guarantee of credit funds and policy support more. Small and medium-sized manufacturing industries that cater to the domestic market provide a guarantee for employment. We also need to provide financial services to the real economy to meet capital needs, and cut taxes and fees and costs. Through the joint efforts of monetary and fiscal policies, we will continue to consolidate the financial foundation for the transformation and upgrading of the manufacturing sector, accelerate the repair and improvement of the industrial and supply chains of the manufacturing sector, and further enhance the efficiency and resilience of exports. In the long term, only the high-end manufacturing industry with science and technology innovation as the core and the middle- and low-end manufacturing industry with stable employment growth can help our economic development structure optimization, quality improvement, power transformation, scientific and technological innovation, and high-quality development.

Second, financial security and project reserves are the main conditions to support the rapid growth of infrastructure investment since 2022. However, the expected rapid growth of infrastructure investment is not sustainable. Policy preparations should be made to avoid the possible problems caused by the expected rapid growth of infrastructure investment. At the same time, the implementation of the fiscal policy of tax and fee reduction in the stage of economic downturn should also pay full attention to and alleviate the contradiction between local governments' revenue and expenditure.

Third, at present, the downward pressure of investment growth is increasing, and there are many views that advocate supporting the growth of real estate investment through policies. However, in the long term, with the continuous progress of China's aging population and the urbanization rate has increased to more than 60.0%, the space for the continuous expansion of the real estate industry has been significantly reduced. In the short term, the past few rounds of real estate expansion have led to high household debt ratios, which have largely been the main factor restraining the rapid growth of household consumption expenditure. Therefore, while properly handling the debt risks of real estate enterprises, we should continue to adhere to the principle of housing and housing speculation, and implement policies to stabilize real estate investment.

As to stabilize consumption, first, we need to stabilize the growth of personal income through stable employment, fully ensure the employment needs of special groups, and speed up the recovery of consumption. While stabilizing the total amount of employment, we should focus on improving the structure and quality of employment. It is necessary to guide the coordinated development of industrial transformation and employment promotion in order to achieve stable growth of employment, especially in high-income positions.

Second, full attention should be paid to the asymmetric impact of the pandemic shock on employment and income growth in different regions and income groups.

The expansion of fiscal spending should continue to be more oriented to people's livelihood. On the demand side, tax cuts should be made to increase the per capita transfer income of residents, especially targeting the regions and low-income groups most affected by the pandemic.

Third, we need to expand the middle-income group and narrow the income gap. Through rural revitalization, after eliminating absolute poverty in rural areas, we will steadily and vigorously improve relative poverty, etc.

In addition, under the trend of deglobalization, we should unswervingly promote globalization, and make preparation for the possibility of new geopolitical conflicts.

Appendix
Report on the Questionnaire Survey on China's Macroeconomic Situation and Policy in 2022

(September 2022. No. 19)

To keep abreast of the macroeconomic situation and policy trend, an annual questionnaire survey of China's macroeconomic situation and policy started twice a year starting from the first time in August 2013, held by *the Economic Information Daily*, Xinhua News Agency and the Center for Macroeconomic Research, Xiamen University, one of the Key Research Institutes of Humanities and Social Sciences of the Ministry of Education of China. This is the 19th questionnaire survey of this study. This questionnaire designed 18 questions directly related to the current macroeconomic operation and policy trend of China. In August 2022, the survey invitation was sent to domestic economists in related fields by email, and responses from 99 experts were received. Through this questionnaire survey, we have obtained the latest understanding and judgment of experts on the world economic situation in 2022, China's economic situation, and the trend of China's macroeconomic policies in 2022. The results of this questionnaire survey are published as follows.

The World Economy in 2022

US consumption picked up in the first half of 2022, but high inflation persisted, the trade deficit worsened and economic growth declined for two straight quarters. In its World Economic Outlook released in July, the International Monetary Fund (IMF) forecast that the US economy would grow 2.3% in 2022, down 3.4 percentage points from the previous year. So what will be to the US economy in 2022? According to the survey results, 47% of experts expect the US economy to grow between 2.1 and 2.5% in 2022; 31% of the experts expected between 1.6 and 2.0%; 10% of the experts expected between 1.0 and 1.5%; 9% of the experts expect between 2.6 and

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3.0%; 3% of the experts expected between 3.1 and 3.5%. In general, all the experts expect that the US economy will experience slow growth in 2022.

In July 2022, the IMF forecasted eurozone growth of 2.6% in 2022, down 2.8 percentage points from the previous year. So what will be the eurozone economy in 2022? According to the survey results, 53% of experts expect the eurozone economy to grow between 2.1 and 2.5% in 2022; 19% of the experts expect between 2.6 and 3.0%; 15% of the experts expect between 1.6 and 2.0%; 9% of the experts expect between 1.0 and 1.5%; 4% of the experts expect between 3.1 and 3.5%. Overall, the experts expect the Eurozone economic growth will slow in 2022, with more than 70% of the economists predicting growth will fall below 2.6%.

The risk of recession in the euro area has intensified due to the impact of repeated interest rate hikes in the US and sanctions on Russia in the wake of the Russia–Ukraine conflict. In July 2022, the exchange rate of euro fell to $1.0179. Regarding the possible range of the exchange rate of euro against US dollar at the end of 2022, the survey results show that 59% of experts expect it to be between 1.01 and 1.03; 19% of the experts expect between 1.04 and 1.06; 14% of experts expect between 0.95 and 1.00; 7% of the experts expected between 1.07 and 1.09; 1% of the experts expected between 1.10 and 1.13. Overall, most experts believe the end of 2022 will see a weak euro and a strong dollar.

In the first half of 2022, rising commodity prices, especially food and energy prices, due to geopolitical conflicts and the COVID-19 pandemic, contributed to the rise in overall inflation. The IMF in its July World Economic Outlook forecasted consumer price index growth in advanced economies to reach 6.6% in 2022, up 3.5 percentage points from 2021. According to the survey results, 25% of the experts expect CPI growth in developed economies to be between 6.66 and 6.70% in 2022. Twenty percent of the experts expected between 6.61 and 6.65%; 18% of experts expected between 6.71 and 6.75%; 16% of experts expect between 6.51 and 6.55%; 14% of experts expect between 6.56 and 6.60%; In addition, 5% of the experts expect it to be 6.75% or above, 1% of the experts expect it to be 6.50% or below. It is obvious that the vast majority of experts expect advanced economies to maintain high inflation in 2022.

China's Economic Situation in 2022

According to the preliminary national accounting data released by the National Bureau of Statistics on July 16, 2022, China's GDP growth in the first half of the year was 2.5%, of which the year-on-year growth rate was 4.8% in the first quarter and 0.4% in the second quarter. In July, the IMF forecast that China's economy would grow by 3.3% in 2022, down 4.8 percentage points from the previous year. At the end of June, the World Bank forecast that China's economy would grow by 4.3% in 2022. As for China's GDP growth rate in 2022, the survey results show that 43% of experts expect it to be between 4.01 and 4.50%, 28% of the experts expected between

3.51 and 4.00%, 17% of experts expected between 4.51 and 5.00%, 8% of the experts expected 3.01–3.50%, 3% of the experts expect between 2.50 and 3.00%.

As for the year-on-year growth rate of China's GDP in the third quarter of 2022, 29% of experts expect it to be between 4.01 and 4.50%, 21% of the experts expected between 4.51 and 5.00%, 18% of experts expected between 3.51 and 4.00%, 15% of the experts expected between 3.01 and 3.50%, 8% of the experts expected between 2.50 and 3.00%; In addition, 8% experts expected between 5.01 and 6.00%. Regarding the year-on-year growth rate of China's GDP in the fourth quarter of 2022, 46% of experts expect it to be between 4.51 and 5.00%, 21% of the experts expected between 4.01 and 4.50%, 15% of the experts expected between 5.01 and 7%, 9% of the experts expected between 3.51 and 4.00%, 6% of the experts expected between 3.01 and 3.50%, 3% of the experts expect between 2.50 and 3.00%. According to the results of the survey, all the experts believe that the economic situation in the second half of the year will be better, and the predicted growth rate is higher than that in the first half of the year. They expect that China's economy will recover steadily.

China's consumer price index (CPI) rose 1.7% in the first half of 2022 from the previous year. Monthly, CPI inflation showed a low trend after a high trend. The core CPI, which excludes food and energy prices, rose 1.0% year-on-year, 0.2 percentage points lower than in the first quarter. As for China's CPI increase in 2022, the survey results show that 50% of the experts expect it to be between 2.01 and 2.50%, 29% of the experts expected between 2.51 and 3.00%, 16% of experts expected between 1.51 and 2.00%, 3% of the experts expected between 3.01 and 3.50%, 2% of the experts expected it to be between 1.0 and 1.50%. Overall, the experts surveyed generally see a moderate upward trend in China's CPI in 2022.

China's producer price index (PPI) rose 7.7% in the first half of 2022 from the previous year. Despite up and down month-on-month, the year-on-year increase continued to fall due to the high base of the same period last year. As for the change trend of China's PPI in 2022, the survey results show that 32% of experts expect it to be between 6.6 and 7.0%, 23% of the experts expect between 6.0 and 6.5%, 22% of the experts expect between 7.1 and 7.5%, 14% of experts expect between 7.6 and 8.0%, 2% of experts expect between 8.1 and 8.5%, 6% of the experts expected between 5.0 and 6.0%. Thus, more than 90% of experts expect China's PPI to remain above 6% in 2022.

China's fixed-asset investment grew 6.1% year-on-year in the first half of 2022, down 6.5 percentage points from a year earlier. As for the growth rate of China's fixed assets investment in 2022, the survey results show that 35% of experts expect it to be between 6.6 and 7.0%, 27% of the experts expect between 6.1 and 6.5%, 17% of the experts expect between 5.6 and 6.0%, 12% of the experts expect between 7.1 and 7.5%, 5% of the experts expected between 7.6 and 8.0%, 3% of the experts expected between 4.5 and 5.5%. Compared with the 4.9% growth of China's fixed assets investment in 2021, all the experts believe that the growth rate of China's fixed assets investment will rise in 2022, with more than 90% of the experts anticipating that the growth rate will be above 5.6%. In the first half of 2022, investment in manufacturing rose 10.4% year-on-year, investment in real estate fell 5.4% year-on-year, and investment in infrastructure rose 7.1% year-on-year, down 8.4, 20.4, and 0.7

percentage points respectively from the same period last year. As for the growth trend of manufacturing investment, real estate investment, and infrastructure investment in 2022, more than 80% of experts expect the growth rate of manufacturing investment in 2022 to be above 10.0%, 27% of the experts expect real estate investment growth to be between −4.0 and −3.6% in 2022. Forty-five percent of the experts expect infrastructure investment to grow by more than 7.1% in 2022. Compared with 2021, China's manufacturing investment, real estate investment, and infrastructure investment grew by 13.5, 4.4, and 0.4%, respectively. All experts agree that in 2022 China's manufacturing investment growth will decline, real estate investment growth will decline, and infrastructure investment growth will rise.

Investment by China's state-owned and state-controlled enterprises rose 9.2% year-on-year in the first half of 2022, down 0.4 percentage points from a year earlier. As for the investment growth of state-owned and state-holding enterprises in 2022, the survey results show that 38% of experts expect it to be between 9.1 and 10.0%, 17% of the experts expect between 8.1 and 9.0%, 17% of the experts expected between 10.1 and 11.0%, 17% of the experts expected between 7.1 and 8.0%; 7% of the experts expected between 11.1 and 12.0%, 2% of the experts expect it to be between 5.1 and 6.0%, while 1% expect it to be around 3%. Compared with 2021, investment by state-owned and state-controlled enterprises rose 2.9%. All experts believe that the investment growth of state-owned and state-holding enterprises will rise in 2022. On the other hand, China's private investment grew 3.5% year on year in the first half of 2022, 11.9 percentage points lower than the same period last year. As for the growth rate of private investment in 2022, 52% of experts expect it to be between 3.1 and 4.0%. Sixteen percent of the experts expected between 4.1 and 5.0%, 15% of the experts expect between 2.1 and 3.0%, 11% of the experts expected between 5.1 and 6.0%, 4% of the experts expected between 6.1 and 7.0%, 1% of the experts expected between 1.0 and 1.5%. Compared with 2021, private investment grew by 7.0%, and all experts expect a decline in private investment growth in 2022.

In the first half of 2022, the per capita disposable income of Chinese residents was 18,463 yuan, up 4.7% year-on-year in nominal terms. Deducting price factors, the growth rate was 3.0% in real terms. As for the actual growth rate of per capita disposable income in 2022, the survey results show that 38% of experts expect it to be between 3.0 and 3.4%, 17% of the experts expect between 2.5 and 2.9%, 17% of the experts expect between 3.5 and 3.9%, 14% of experts expect between 2.0 and 2.4%, 12% of the experts expected between 4.0 and 4.4%, 1% of the experts expected between 1.5 and 1.9%. Overall, more than 60% of the experts believe the real growth rate of residents' per capita disposable income in 2022 will be above 3.0%.

In the first half of 2022, the employment situation fluctuated due to the COVID-19 pandemic, but was generally stable. Affected by the new round of COVID-19 and downward pressure on the economy, the surveyed urban unemployment rate rose to 5.8% in March and continued to rise to 6.1% in April. The pandemic situation improved in May and June, with the surveyed urban unemployment rate falling to 5.9 and 5.5%, respectively. As for the urban surveyed unemployment rate in 2022, the survey results show that 48% of experts expect it to be between 5.4 and 5.6%, 22% of the experts expect between 5.7 and 5.9%, 18% of the experts expected between

5.1 and 5.3%, 12% of the experts expected between 6.0 and 6.2%. Compared with 2021, China's urban surveyed unemployment rate averaged 5.1%. All experts agree that the surveyed urban unemployment rate in 2022 will be higher than last year's average, and the employment situation will be grim.

In the first half of 2022, retail sales of consumer goods totaled 2,043.2 billion yuan, down 0.7% year-on-year in nominal terms, of which increased by 3.3% year-on-year in the first quarter, and fell 4.6% in the second quarter. As for the total retail sales growth of consumer goods in 2022, the survey results show that 38% of the experts expect the growth to be between 3.1 and 4.0%, 27% of the experts expect between 2.1 and 3.0%, 17% of the experts expected between 1.1 and 2.0%, 10% of the experts expected between 4.1 and 5.0%, 7% of the experts expected between 0.1 and 1.0%. In contrast, China's total retail sales of consumer goods increased by 12.5% in 2021. All the experts surveyed believe that the growth of total retail sales of consumer goods will decline in 2022.

In 2022, the outbreak of conflict between Russia and Ukraine disrupted global value chains. The World Bank expects global trade growth to slow to 4% in 2022, down 4.5 percentage points from the previous year. In the first half of 2022, China's total exports of goods in RMB terms grew by 13.2%, 14.9 percentage points lower than the same period last year. As for the growth rate of China's total exports in 2022, the survey results show that 46% of the experts expect it to be between 13.1 and 15.0%, 25% of the experts expected between 11.1 and 13.0%, 21% of the experts expected between 15.1 and 17.0%, 7% of the experts expected between 9.1 and 11.0%, 1% of the experts expect between 17.1 and 19.0%. In contrast, China's exports of goods grew by 21.2% in 2021. Most of the experts see a slowdown in the growth of China's total exports in 2022. On the other hand, in the first half of 2022, China's total imports of goods grew by 4.8%, 21.1 percentage points lower than the same period last year. As for the growth rate of China's total imports in 2022, the survey results show that 61% of the experts expect it to be between 4.1 and 6.0%, 22% of the experts expected between 6.1 and 8.0%, 13% of experts expect between 2.1 and 4.0%, 3% of the experts expected between 8.1% and 10.0%, 1% of the experts expected between 0.0 and 2.0%. In contrast, China's imports of goods grew by 21.5% in 2021. All experts see a slowdown in the growth of China's total imports in 2022.

From January to July 2022, the central parity rate of the RMB against the US dollar was basically kept below 7 yuan per US dollar. As for the central parity rate of RMB against US dollar by the end of 2022, the survey results show that 33% of the experts expect it to be between 6.76 and 6.80, 26% of the experts expected between 6.71 and 6.75, 20% of the experts expected between 6.81 and 6.85, 13% of the experts expected between 6.66 and 6.70, 4% of the experts expected between 6.60 and 6.65, 3% of the experts expect between 6.85 and 7.10. Almost all experts believe that the central parity rate of the RMB against the dollar will be below 7 by the end of 2022.

Outlook for China's Macroeconomic Policies in 2022

At a meeting of the Political Bureau of the CPC Central Committee held at the end of July 2022, it was proposed that in the second half of 2022 China's monetary policy should maintain reasonable and abundant liquidity, increase credit support to enterprises, and make good use of new credit from policy banks and investment funds for infrastructure construction. At the end of June, the balance of M2 was 258.15 trillion yuan, up 11.4% year-on-year, 2.8 percentage points higher than the same period last year. As for the growth of M2 in 2022, the survey results show that 40% of the experts expect it to be between 11.6 and 12.0%, 29% of the experts expected between 11.1 and 11.5%, 14% of the experts expected between 10.6 and 11.0%, 11% of the experts expected between 12.1 and 12.5%, 5% of the experts expected between 10.1 and 10.5%. Overall, the experts surveyed expect the Chinese government will likely maintain a moderately loose monetary policy in 2022.

China's central bank cut the reserve requirement ratio by 0.25 percentage points on April 25, 2022. The 1-year lending rate was lowered by 0.1 percentage point in January, while the five-year lending rate was lowered by 0.05 percentage points in January and 0.15 percentage points in May. On whether the central bank will use LPR cuts and interest rate cuts in the second half of 2022 to guide interest rates in the lending market downward, the survey results show that 34% of the experts believe that the central bank will not further cut the LPR, 26% think the reserve requirement ratio will be further cut, 16% of the experts think both the reserve requirement ratio and the interest rate will be cut further, 11% of the experts think the central bank will cut interest rates further, 6% think the central bank will not cut interest rates further, 3% of the experts think there will be no further cut in the reserve requirement ratio and interest rate, 2% of the experts believe that the reserve requirement ratio will be further cut but not further interest rate cut, 2% of the experts think the central bank will take measures to cut the reserve ratio and interest rates in the second half of 2022. Overall, more than 90% of the experts believe there is room for further declines in the reserve requirement ratio and the policy rate.

Since the beginning of 2022, the international situation has been complex and grim, and the world economic growth has slowed down significantly. In the first half of 2022, the COVID-19 pandemic occurred frequently in China, which greatly impacted the consumer market and caused a year-on-year decline in market sales. At a meeting of the Political Bureau of the CPC Central Committee held at the end of July 2022, it was emphasized that macroeconomic policies should be active in expanding demand, fiscal and monetary policies should effectively make up for the shortage of social demand, and we will make good use of funds from local government special bonds and support local governments in making full use of the special debt limit. Regarding the scope for China's macroeconomic policies to expand demand in the second half of 2022, the survey results show that 78% of the experts believe that some existing policies to support consumption should be optimized to integrate short-term consumption stimulus with improved consumption expectations, strengthen public consumption policies, and accelerate digital consumption. Seventy-six percent of the experts believe that the construction of new types of infrastructure should be accelerated, major regional development strategies should be further promoted, and regional economic layout featuring complementary advantages and high-quality development should be promoted. Seventy-three percent of the experts believe that structural policy adjustment should be strengthened, and we will intensify structural policy adjustments with the focus on stabilizing market entities and effectively promote structural policy adjustments in the labor market to effectively cope with employment pressure. Sixty-nine percent of the experts believe that private investment should be stabilized and expanded, and private investment should be encouraged to focus on urban infrastructure and participate in projects in key areas through a comprehensive development model. Sixty-nine percent of the experts believe that the consumer environment should be improved, mid-to-high-end consumption growth points should be fostered, consumption of automobiles and other durable consumer goods should be expanded, and consumer consumption should be transformed and upgraded. In addition, some experts proposed to increase the amount of tax rebate policy, stimulate the growth of enterprise production and investment demand, rescue real estate companies to ensure the delivery of buildings, change the epidemic prevention policy, and so on.

China's current economy is facing three pressures: demand contraction, supply shock, and weakening expectations. At a meeting of the Political Bureau of the CPC Central Committee at the end of July 2022, it was pointed out that monetary policy should maintain reasonable and abundant liquidity, increase credit support for enterprises, and make good use of new credit from policy banks and investment funds for infrastructure construction. As for the room for monetary policy implementation in the second half of 2022, the survey results show that 79% of the experts believe that structural monetary policy tools should be targeted to increasing support for inclusive small and microloans, and support stable employment of small, medium, and microenterprises. Seventy-five percent of the experts believe that we should further improve the transmission mechanism of monetary policy, maintain reasonable and adequate liquidity, enhance the stability of total credit growth, and keep the growth of money supply and social financing basically in line with nominal economic growth. Seventy-four percent of the experts believe that we should improve the market-based interest rate formation and transmission mechanism, optimize the policy interest rate system of the central bank, strengthen supervision of deposit interest rates, strive to stabilize the cost of bank liabilities, give full play to the effectiveness and guiding role of the reform of the quoted interest rate in the loan market, and promote the reduction of enterprises' comprehensive financing costs. Seventy-one percent of the experts believe that we need to give full play to both the aggregate and structure of monetary policy tools, respond proactively, boost confidence, provide stronger support to the real economy, and stabilize the macroeconomy. Sixty-six percent of the experts believe that we should deepen the structural reform of the financial supply side, guide the service focus of large banks to sink, encourage small and medium-sized banks to focus on their main responsibilities and main business, support banks to replenish capital, and jointly maintain the stable development of the financial market. In addition, some experts suggested that financial institutions should be guided to increase rescue support for offline service industries, such as catering, cultural tourism, and aviation, which are severely affected by the epidemic, and strengthen credit support for small and microenterprises. We should pay attention to and effectively respond to and deal with the problems of rotten buildings, rural banks, and debt arrears, and prevent the creation of systemic financial risks and other suggestions.

The current global economy is slowing down, inflation is running high, geopolitical conflicts continue, and the external environment is becoming more complex and severe. China's economic development is facing three pressures: demand contraction, supply shock, and weakening expectations. At a meeting of the Political Bureau of the CPC Central Committee at the end of July 2022, it was pointed out that the general principle of seeking progress while maintaining stability and the requirements of preventing the epidemic, ensuring economic stability, and ensuring safe development should be fully implemented to consolidate the positive trend of economic recovery. As for the specific measures needed to stabilize the macro-economic market under the current internal and external pressures, the survey results show that 90% of the experts believe that financial and related policy support should be adopted to stabilize market entities and stabilize employment, and we should implement tax credits for both stock and incremental deposits in more industries, support small, medium, and microenterprises in recruiting college graduates, and extend unemployment insurance training subsidies to all enterprises in need of insurance coverage. Eighty-two percent of the experts believe that financial policy support should be carried out, and the amount and proportion of supporting instruments for inclusive small and microloans will be doubled this year. For loans to small, medium, and microenterprises and individual businesses, truck and vehicle loans, and consumer loans to individuals temporarily in difficulty, we should support banks to postpone repayment of principal and interest this year, and shorten the acceptance period of commercial bills from 1 year to 6 months. Eighty-two percent of the experts believe that industrial and supply chains should be stabilized, policies for resuming production should be optimized, services for whitelisted enterprises should be improved, freight transportation should be ensured, restrictions on travel from low-risk areas should be lifted, and unreasonable regulations and charges should be lifted. We should increase domestic and international passenger flights in an orderly manner and formulate measures to facilitate the exchange of foreign employees. Seventy-nine percent of the experts believe that we should ensure the basic livelihood of the people, do a good job in unemployment insurance, subsistence allowances, and assistance to people in need, and promptly launch a mechanism to link social assistance and social security benefits with price increases in light of the situation. Seventy-six percent of the experts believe that consumption and effective investment should be promoted, car purchase limits should be relaxed, some passenger car purchase taxes should be phased down, urban policies should be implemented to support rigid and improved housing demand, banks should be guided to provide long-term loans of scale, and a new round of rural road construction and upgrading should be launched. In addition, some experts suggested that all fiscal and monetary policies should play an effective role on the premise of scientific and precise optimization of epidemic prevention and control. To ensure food and energy security policies, improve grain income guarantee and grain

Table A.1 Forecast of key indicators of China's economy by the CQMM team and the experts

	By the CQMM team: %	By experts: %	
		Interval	Ratio
GDP	4.05	4.01–4.50 3.51–4.00	43 28
CPI	2.26	2.01–2.50 2.51–3.00	50 29
PPI	5.15	6.6–7.0 6.0–6.5	32 23
Total retail sales of consumer goods	5.61	3.1–4.0 2.1–3.0	38 27
Total FAI	5.76	6.6–7.0 6.1–6.5	35 27

reserve policies, and increase coal, oil, and other energy resources reserve capacity. We should improve our ability to ensure energy and resources supply, strengthen planning and construction of a new energy supply and digestion system, stabilize the market to stabilize the economy, implement anti-monopoly to adjust income distribution structure, and make good use of the economic conditions brought about by the changing world situation.

Comparison of the forecast results of the CQMM team and the surveyed experts on China's main macroeconomic indicators is demonstrated in Table A.1.