2.1 Assumptions on the Exogenous Variable

2.1.1 Economic Growth Rates of the US and the Euro Area

In 2019, the prevalence of US trade protectionism has not only severely inhibited the growth of global trade, but also slowed down the growth of US private consumer spending. As the effect of the large-scale fiscal stimulus in the early stage has weakened, although the Federal Reserve cut interest rates three times in the year, the US economy grew by 2.3%, the lowest in nearly three years, less than the target of 3% set by the Trump administration. In the short term, the US economic growth is expected to continue to decline, due to the weakening effect of large-scale fiscal stimulus in the early stage, the narrowing space of the monetary policies, and the rising of geopolitical tensions. According to the World Economic Outlook updated by the International Monetary Fund (IMF) in January 2020, the US economy will grow by 2.0% in 2020, a decrease of 0.3 percentage points over the previous year, and it will further decline to 1.7% in 2021.¹

On the other hand, the rebound of global trade growth will boost the growth of Germany’s manufacturing industry. The final conclusion of the BREXIT will largely eliminate the uncertainty of economic growth in the Euro area. With the continuation of the effect of early loose monetary policies, it is expected that the Euro area will maintain a slow recovery in the next two years. In January, the IMF predicted that the economy of the Euro area will grow by 1.3% in 2020, a slight increase of 0.1 percentage point over the previous year, and may further rise to 1.4% in 2021.

¹On February 22, 2020, the IMF forecast value of China’s economic growth rate to be 5.6% in 2020, which was 0.4 percentage points lower than the forecast value of the world economic outlook updated in January; meanwhile, it lowered the forecast value of global economic grow rate to be 3.2% in 2020, which was 0.1 percentage points lower than the forecast value of the world economic outlook updated in January.
Considering the positive impact of the first phase of China US economic and trade agreement in 2020, the short-term negative impact of the COVID-19 pandemic, and the possible hedging policies adopted by major countries, our research team adjusted the forecast values of the International Monetary Fund (IMF) for the US and Euro area economy on January 20, 2020, assuming that in the next two years, the growth rate of the US is 1.93 and 2.17%, and the growth rate of the Euro area is 1.18 and 1.52%, and the corresponding quarterly growth rate is set as Fig. 2.1.

2.1.2 The Exchange Rates

Based on the above forecast of the slowdown of the US economic growth, it is expected that the US dollar will continue to weaken in the next two years. It is assumed that the exchange rate of Euro against US dollar will gradually increase from 1.11 in the first quarter of 2020 to 1.16 in the fourth quarter of 2021 (see Fig. 2.2). On the other hand, affected by the impact of the COVID-19 pandemic, the exchange rate of RMB against US dollar in the first quarter of 2020 will be close to 7.01; as the decline of COVID-19 pandemic, the RMB will begin to gradually appreciate, reaching 6.72 by the end of 2021 (see Fig. 2.2).
Fig. 2.2 Assumptions on changes in exchange rates. *Note* USD/CNY is the exchange rate between US dollar and RMB, and EUR/USD is the exchange rate between Euro and US dollar. *Source* CQMM team assumptions

### 2.1.3 Growth Rate of the Broad Money Supply (M2)

At the end of 2019, the growth rate of M2 and social financing increased by 8.7 and 10.7% respectively, both of which were slightly higher than the nominal growth rate of GDP. The outbreak of COVID-19 pandemic temporarily caused negative impact on Chinese economy recently, but the long-term trend of economic growth will not change. Based on this, it is expected that the monetary policies will continue to maintain a stable and flexible tone in the next two years. Our research team assumes that the growth rate of M2 will be 8.85 and 8.35% in 2020 and 2021 respectively (see Fig. 2.3). At the same time, with the LPR reform, the interest rate, especially the loan interest rate of small and micro enterprises, is expected to gradually decline.

### 2.2 Scenario Design of Model for Prediction

In 2020, the signing of the first phase of the economic and trade agreement between China and the US laid a good foundation for the two sides to ease and eventually eliminate trade frictions. At the same time, the implementation of loose monetary policies in major countries is expected to lead to a rebound of global trade. The outbreak of COVID-19 pandemic in China in 2020 has brought a great impact to Chinese economy in the first quarter. The outbreak of COVID-19 pandemic outside
China will further form downward pressure on Chinese economic growth through trade channels.

In the short term, the impact of the COVID-19 pandemic will slowdown Chinese economic growth from both supply side and demand side. The direct losses resulted from the decline of consumption expenditure during the Spring Festival, the demand suppression and production stagnation in most provinces especially Hubei Province. The secondary losses resulted from the decline of normal consumption demand due to pandemic prevention and control period, the different time of the resumption of work, production, and business activities, which damaged the normal supply chain and reduced production efficiency, and the damages of the normal supply of the global manufacturing industry chain due to the outbreak of the Covid-19 pandemic outside China.

The macro-economic data of January February 2020 released by the National Bureau of Statistics shows that the impact of the COVID-19 pandemic has led to a sharp decline in the consumption of goods and services in January and February, a significant decline in the growth rate of added value of industries above designated size, and a significant slowdown in fixed asset investment. In response to the impact of the COVID-19 pandemic, the Chinese government issued a series of hedging policies, which effectively boosted the resumption of work, production, and business activities, while maximizing support for COVID-19 pandemic prevention and control.

However, there are still some uncertainties in the first quarter and the second quarter about the progress of the resumption of work, production, and business activities and the capacity recovery. Based on the economic data released by the National Bureau of Statistics, the GDP of January and February accounts for only 60% of GDP of the first quarter, which meant that March will be very important for the growth of

---

2https://www.stats.gov.cn/tjsj/zxfb/202003/t20200316_1732232.html.
the first quarter. After the outbreak of the COVID-19 pandemic outside China, the economic growth in the second quarter will also face some downward pressure due to the cancellation of overseas orders. Based on this, three prediction scenarios are set as follows:

a. **Optimistic scenario: small impact of external risk.** It is assumed that from late February to March 2020, COVID-19 pandemic prevention basically was fully controlled. With full resumption of work and production and business activities, the average production capacity will be increased by 15% over last year. The second quarter can maintain normal production progress.

b. **Benchmark scenario: medium impact of external risk.** It is assumed that from late February to March 2020, COVID-19 pandemic prevention basically was partially controlled. With a delay of the resumption of work and production and business activities, and capacity can at most maintain the same level over last year; in the second quarter, industrial enterprises slowed production progress due to partial cancellation of oversea orders. At the same time, in order to offset the impact of the COVID-19 pandemic, domestic investment accelerated growth.

c. **Pessimistic scenario: big impact of external risks.** The impact of the COVID-19 pandemic outside China is beginning to restrain global demand and affect the normal supply of the global manufacturing industry chain in the first and even second quarter. Because most of the oversea orders of industrial enterprises have been cancelled, the production capacity cannot maintain the level of the same period of last year. At the same time, domestic investment will grow faster to offset the COVID-19 pandemic.

Our research team applied the China’s Quarterly Macroeconometric Model (CQMM) to predict the main economic indicators of China for the eight quarters in 2020 and 2021.

### 2.3 Forecasts of Main Economic Indicators in 2020–2021

#### 2.3.1 The Growth Rate of GDP

With the exogenous assumptions, the forecast based on the CQMM are as follows. **Under the optimistic scenario,** Chinese GDP growth will decline to 5.09% in 2020, down 1.06 percentage points; in 2021, with the base effect, the GDP growth will rebound to 6.61%. From the perspective of quarterly growth, under the optimistic scenario, in the first quarter of 2020, GDP growth rate will decline to 0.94%; with the COVID-19 pandemic under full control in the second quarter and with the rebound in demand and supply, the growth rate of GDP in the second quarter will reach 7.37%. The growth rate in the third and fourth quarters of 2020 will be 6.08 and 5.86%. The growth rate of GDP in each quarter of 2021 will be high in the beginning and low in the end (see Fig. 2.4).
Fig. 2.4 Projected quarterly growth rate of GDP. Note Risk scenario 1 and Risk scenario 2 refer to Benchmark scenario and pessimistic scenario. Source CQMM team calculations

Under the Benchmark scenario, if the resumption of work, production, and business activities is postponed, the impact of COVID-19 pandemic outside China is large, and overseas orders and production capacity can only maintain the average level of the same period of last year, then in the first quarter of 2020, the growth rate of GDP will fall sharply to $-3.81\%$. In 2020, the annual growth rate of GDP will decline to 4.59\%, down 1.55 percentage points over the previous year.

Under the pessimistic scenario, the significant impact of the outbreak of COVID-19 pandemic outside China, in the first quarter of 2020, the growth rate of GDP may drop to $-7.74\%$. In 2020, the annual growth rate of GDP will further fall to 3.18\%, down 2.96 percentage points over the previous year.

The outbreak of the COVID-19 pandemic has a strong impact on the Chinese economy in the first quarter of 2020. The annual GDP growth will slow down significantly. Although the impact of the COVID-19 pandemic on Chinese economy is temporary, in order to achieve the goal of stable growth and high-quality economic development, the implementation of Chinese macro policies in the next two years will face greater challenges.

2.3.2 The Growth Rate of Investment

In 2019, influenced by the slowdown of global trade, the growth rate of Chinese fixed asset investment continued to decline, especially in the private manufacturing industry. In 2020, the rebound of global trade growth and the smooth progress of China and the US trade negotiations are expected to stabilize and enhance the investment growth of private manufacturing industry. The impact of the COVID-19
2.3 Forecasts of Main Economic Indicators in 2020–2021

Table 2.1  Forecast of investment growth rate (current price) from 2020 to 2021: %

| Variables | Scenario    | 2020       | 2021       | 2020       | 2021       |
|-----------|-------------|------------|------------|------------|------------|
|           |             | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Invest 1  | Optimistic  | −4.09 | 9.45 | 6.13 | 2.22 | 11.78 | 0.76 | 3.07 | 4.44 | 3.40 | 4.82 |
|           | Benchmark   | −6.72 | 14.45 | 8.16 | 3.04 | 14.57 | −3.47 | 1.23 | 3.63 | 4.70 | 3.52 |
|           | Pessimistic | −8.99 | 14.34 | 8.30 | 3.26 | 17.66 | −3.18 | 1.29 | 3.60 | 4.20 | 4.22 |
| Invest 2  | Optimistic  | −2.91 | 10.40 | 10.50 | 8.36 | 17.34 | 6.94 | 9.58 | 10.48 | 6.60 | 10.89 |
|           | Benchmark   | −5.31 | 15.14 | 13.00 | 9.63 | 19.04 | 1.63 | 6.31 | 8.53 | 8.13 | 8.41 |
|           | Pessimistic | −7.26 | 15.59 | 14.18 | 11.34 | 23.11 | 2.34 | 6.15 | 7.68 | 8.49 | 9.14 |
| Invest 3  | Optimistic  | −1.44 | 11.46 | 9.41 | 9.72 | 15.80 | 7.34 | 10.86 | 11.13 | 7.28 | 11.16 |
|           | Benchmark   | −4.56 | 18.91 | 12.71 | 11.59 | 18.79 | 0.29 | 6.99 | 8.55 | 9.64 | 8.16 |
|           | Pessimistic | −6.04 | 21.86 | 15.34 | 13.96 | 22.83 | −0.42 | 6.27 | 7.89 | 11.26 | 8.37 |
| Invest 4  | Optimistic  | −3.91 | 10.02 | 10.54 | 7.95 | 18.33 | 6.69 | 8.79 | 10.09 | 6.18 | 10.72 |
|           | Benchmark   | −5.86 | 13.11 | 12.51 | 8.86 | 19.20 | 2.50 | 5.89 | 8.51 | 7.19 | 8.57 |
|           | Pessimistic | −8.09 | 12.02 | 12.79 | 10.19 | 23.29 | 4.19 | 6.08 | 7.55 | 6.78 | 9.63 |

Note: Invest 1 indicates fixed asset formation, Invest 2 indicates fixed assets investment (excluding farmers); Invest 3 indicates investment in state-owned and state-holding enterprises, and Invest 4 indicates investment in non-state-owned enterprises. Source: CQMM team calculations.

The COVID-19 pandemic in the first half of the year will slow down the growth of investment, but the introduction of hedging policies can ease the degree of investment slowdown and maintain the stable growth of investment. The forecast results are as follows.

Under the optimistic scenario, the fixed asset investment (excluding farmers) calculated at current price will grow at 6.60% in 2020, up 1.17 percentage points higher over the previous year; in 2021, if China and the US can withdraw punitive tariffs in the first quarter, then fixed asset investment will increase by 10.89% (Table 2.1).

In terms of quarters, in the first quarter of 2020, the growth rate of investment in fixed assets will −2.91% due to the impact of the COVID-19 pandemic and the delay of the resumption of work, production, and business activities; with the control of the COVID-19 pandemic, the growth rate of investment in the remaining three quarters will rise, reaching 10.40, 10.50 and 8.36% respectively. In the first quarter of 2021, due to the base effect, the investment growth rate may reach 17.34%, and the rest three quarters are expected to maintain more than double-digit growth level (see Fig. 2.5).

In terms of ownerships, in 2020, the investment of state-owned and state-holding enterprises is expected to increase by 7.28%, up 0.62 percentage points over the previous year. Among them, the growth rate of investment in the first quarter may decline to −1.44%. In 2020, non-state-owned investment will grow by 6.18%, up 1.49 percentage points; among them, the growth rate of investment in the first quarter will drop to −3.91%. In 2021, base effect plus the impact of expansion of the global trade, state-owned and state-holding investment will increase by 11.16%, and non-state-owned investment is expected to increase by 10.72% (Table 2.1).
Under the Benchmark scenario, in the first quarter of 2020, the fixed asset investment may shrink by 5.31%. Among them, the investment of state-owned and state-holding enterprises may drop by 4.56% and that of non-state-owned enterprises may drop by 5.86%, indicating that the impact of the COVID-19 pandemic on the investment of non-state-owned enterprises is much greater. In the whole year, the investment in fixed assets will increase by 8.13%, up 2.69 percentage points over the previous year. Among them, the investment of state-owned and state-holding enterprises and non-state-owned enterprises will grow by 9.64 and 7.19%, up 2.99 and 2.50 percentage points respectively.

Under the pessimistic scenario, in the first quarter of 2020, the investment growth rate will decline more significantly (Table 2.1).

The above forecasts show that in 2020, although the impact of the COVID-19 pandemic in the first half of the year will slow down the growth of investment, a stronger hedging policy can slow down the decline of investment growth and keep it stable. The impact of the first quarter COVID-19 pandemic on the investment of non-state-owned enterprises is greater than the impact on the investment of state-owned and state-holding enterprises. Therefore, after the COVID-19 pandemic is completely controlled, China need to continue to ensure the implementation of policies and measures, such as financial services for the real economy, stable manufacturing investment and so on.

2.3.3 The Growth Rate of Residential Income and Consumption

In the first quarter of 2020, the impact of the COVID-19 pandemic significantly reduced the growth of consumption. Although consumption can rebound in the next
three quarters, the annual consumption growth rate will fall slightly. The forecast results are as follow.

Under the optimistic scenario, the growth rate of consumption of residents will increase to 4.47% in 2020, a decrease of 2.17 percentage points over the previous year; it will increase to 7.65% in 2021. The growth rate of total retail sales of social consumption goods will be 7.58%, down 0.45 percentage points, and it can maintain 9.08% in 2021.

Under the Benchmark scenario, the growth rate of total retail sales of social consumption goods may decline to 5.79%. Under the pessimistic scenario, it may further fall to 4.48%.

In term of quarters, in the first quarter of 2020, not only part of the consumption demand of the Spring Festival was directly “evaporated” due to COVID-19 pandemic, but also the need to control the COVID-19 pandemic continues to restrain the consumption for a period of time. The total retail sale of social goods will fall by 0.14, 10.04 and 11.07% under the optimistic, Benchmark and pessimistic scenario, respectively. In the remaining quarters, the total retail sales of consumer goods will grow fast due to the rising prices. In addition, the base effect will lead to a significant rebound in the first quarter of 2021 (see Fig. 2.6).

Under the optimistic scenario, the per capita real disposable income of urban residents is expected to increase by 4.42%, down 0.54 percentage points over the previous year, and it will rise to 5.82% in 2021. The per capita cash income of rural

![Projected consumption growth](image_url)

**Fig. 2.6** Projected consumption growth. *Note* CON_D_C_SA represents the growth rate of total consumption in real term; RETAIL_SA indicates the growth rate of total retail sales in real term of social consumption goods; Risk scenario and Risk scenario 2 are benchmark and pessimistic respectively. *Source* CQMM team calculations
### Quarterly Forecast for 2020–2021

|                  | 2020Q1 | 2020Q2 | 2020Q3 | 2020Q4 | 2021Q1 | 2021Q2 | 2021Q3 | 2021Q4 |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| YD_U_C_PC        | 1.22   | 9.16   | 1.91   | 5.36   | 8.41   | 0.66   | 8.45   | 6.15   |
| Risk scenario 1  | -1.39  | 14.16  | -0.97  | 4.54   | 10.76  | -3.58  | 11.73  | 7.20   |
| Risk scenario 2  | -3.62  | 17.31  | -2.44  | 2.93   | 12.08  | -6.85  | 12.64  | 8.22   |
| YC_R_C_PC        | 5.03   | 8.38   | 6.60   | 5.74   | 11.39  | 7.59   | 7.52   | 9.81   |
| Risk scenario 1  | 2.89   | 8.33   | 6.82   | 5.40   | 14.67  | 8.19   | 7.48   | 10.90  |
| Risk scenario 2  | 1.00   | 7.04   | 5.91   | 4.02   | 16.25  | 9.13   | 7.82   | 12.31  |

Fig. 2.7 Projected income of the residents. Note: YD_U_C_PC represents the real disposable income per capita of urban residents, YC_R_C_PC represents per capita cash income of rural residents. Source: CQMM team assumptions

Residents will increase by 6.44%, down 3.43 percentage points, and it will rise to 9.05% in 2021 (see Fig. 2.7).

Under the benchmark and pessimistic scenario, in 2020, the per capita disposable income of urban residents will increase by 4.09 and 3.55%, down 0.87 and 1.41 percentage points respectively; the per capita cash income of rural residents will increase by 5.87 and 4.51%, down 4.0 and 5.36 percentage points respectively.

Overall, in the next two years, the growth rate of the income and consumption of residents will continue to slow down.

### 2.3.4 The Growth Rates of Other Key Variables

1. **The price indexes**

Under the optimistic scenario, in the first quarter of 2020, the impact of the COVID-19 pandemic on the supply, the rigid demand for essential goods and services, and the high pork prices will produce greater pressure on CPI. CPI may rise by 3.27% in 2020, up 0.37 percentage points higher over the previous year, and exceed the policy target of 3%; in 2021, the base effect may bring CPI down to 0.35%. In each of the four quarters of 2020, CPI will be 5.09, 4.43, 2.96 and 0.71%, compared with the same quarter of the previous year, respectively (see Fig. 2.8). Under the benchmark and pessimistic scenario, CPI growth in 2020 is likely to remain at 3.21–3.33%. The main pressure on CPI growth in the first half of 2020 comes from the rise of food CPI. Although the impact of the COVID-19 pandemic and the rise of pork prices are short-term, the impact of the sharp rise of CPI on the real income of urban and rural
2.3 Forecasts of Main Economic Indicators in 2020–2021

|       | 2020Q1 | 2020Q2 | 2020Q3 | 2020Q4 | 2021Q1 | 2021Q2 | 2021Q3 | 2021Q4 |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| CPI_SA| 5.09   | 4.43   | 2.96   | 0.71   | 0.10   | -0.13  | 0.45   | 0.98   |
| PPI_SA| -1.75  | -4.01  | -3.95  | -3.30  | -1.13  | 1.86   | 3.15   | 4.17   |
| PGDP_SA| 3.70  | 3.38   | 2.16   | 0.70   | -1.43  | -1.17  | 0.37   | 1.66   |

Fig. 2.8 Projected price index. Note CPI_SA, PGDP_SA and PPI_SA represent the seasonally adjusted consumer price index, GDP deflator and producer price index respectively. Source CQMM team calculations.

Residents, especially on the fixed income and low-income residents, needs to be paid enough attention.

Under the optimistic scenario, PPI will be $-3.25$ and $2.00\%$ in 2020 and 2021. In the all quarters of 2020 and the first quarter of 2021, PPI will probably maintain negative growth, and the lowest point may appear in the second quarter of 2020 (see Fig. 2.8). Under the benchmark and pessimistic scenario, the impact of the COVID-19 pandemic on the domestic industrial chain from the demand side to the supply side has made PPI shrink in a larger extent in a longer period of time.

Under the optimistic scenario, the GDP deflator will increase by $2.30\%$ in 2020, $0.74$ percentage points lower than that in 2019, and fall by $0.13\%$ in 2021. On a quarterly basis, the overall trend of its growth is from strong to weak, similar to that of the consumer price index (see Fig. 2.8). Under the benchmark and pessimistic scenarios, the GDP deflator will increase correspondingly.

(2) The imports and exports

In January 2020, China and the US successfully signed the first phase of trade agreement, which laid a good foundation for the two sides to ease and eventually eliminate trade friction. However, the outbreak of COVID-19 pandemic in the first half of the year will have a negative impact on global trade in the short term.

Under the optimistic scenario, Chinese total exports of goods will increase by $4.45\%$ in 2020, up $4.59$ percentage points over the previous year; the total imports of goods will increase by $6.33\%$, up $9.40$ percentage points. In 2021, total exports and imports of goods will increase by $14.30$ and $15.55\%$ respectively (Table 2.2). Under the benchmark and pessimistic scenarios, in 2020, the total exports of goods will increase by $2.58$ and $2.28\%$, up $2.72$ and $2.42$ percentage points respectively.
Table 2.2  Projected growth rates of imports and exports with the major trading partners from 2020 to 2021: %

| Year | Trade partner | Exports | | | Imports | | |
|------|---------------|---------|----------------|----------------|---------|----------------|----------------|
|      |               | Current US$ | Optimistic | Pessimistic | Current RMB | Optimistic | Pessimistic | Current US$ | Optimistic | Pessimistic | Current RMB | Optimistic | Pessimistic |
| 2020 | Total         | 4.45     | 2.28         | 4.52         | 2.31         | 6.33       | 11.73       | 6.33         | 11.73       |
|      | US            | −8.79    | −9.41        | −8.62        | −9.26        | 10.64      | 10.40       | 10.54        | 10.09       |
|      | EU            | 6.48     | 5.48         | 6.55         | 5.54         | 10.93      | 8.68        | 10.97        | 8.72        |
|      | ASEAN         | 18.40    | 18.04        | 18.35        | 17.99        | 4.64       | 4.35        | 4.53         | 4.00        |
|      | The rest      | 4.15     | 3.37         | 4.21         | 3.42         | 5.32       | 5.23        | 5.35         | 5.17        |
| 2021 | Total         | 14.30    | 16.52        | 11.73        | 13.93        | 15.55      | 10.08       | 12.99        | 7.65        |
|      | US            | 14.99    | 15.62        | 12.36        | 12.98        | 19.35      | 21.52       | 16.80        | 19.15       |
|      | EU            | 12.62    | 12.92        | 10.10        | 10.40        | 18.32      | 20.08       | 15.69        | 17.41       |
|      | ASEAN         | 21.22    | 21.32        | 18.51        | 18.61        | 13.67      | 15.35       | 11.23        | 13.14       |
|      | The rest      | 12.49    | 13.31        | 9.96         | 10.77        | 14.99      | 14.95       | 12.43        | 12.48       |

Source CQMM team calculations
The total imports of goods will increase by 11.76 and 11.73%, up 14.83 and 14.79 percentage points respectively.

In terms of countries, although China and the US successfully reached a trade agreement in January 2020, the US still will retain more projects and higher tariffs on Chinese exports, so Chinese exports to the US are likely to continue to shrink. On the other hand, Chinese import from the US will recover slightly due to the tax reduction.

In 2020, Chinese exports to the US will shrink by 8.79% in current dollar, an increase of 3.77 percentage points over the previous year; Chinese imports from the US will increase by 10.64%, an increase of 31.99 percentage points.

In 2020, Chinese exports to the EU will increase by 6.48%, up 2.4 percentage points; Chinese imports from the EU will increase by 10.93%, up 9.84 percentage points. In 2020, Chinese exports to ASEAN will increase by 18.40%, up 6.66 percentage points. Chinese imports from ASEAN will increase by 4.64%, up 0.44 percentage points.

In 2021, if China and the US can remove all punitive tariffs, then Chinese export share to the US will probably stabilize and increase.

Under the pessimistic scenario, in 2020, the growth rate of Chinese total exports may decline to 2.28% in current dollar terms, while the growth rate of total imports will remain at 10.40%.

To sum up, in the next two years, although the downward pressure still exists, some of the downward risks are expected to weaken. In particular, the Chinese government is promoting the transformation of economic structure and enhancing the resilience of the economy to resist downside risks. In terms of the monetary policies, based on the fundamental requirements of financial services for the real economy, the monetary policies adhere to the “stable” tone, while reforming the formation mechanism of the quoted interest rate (LPR) in the loan market through market-oriented reform. The LPR reform with its gradual effects can not only reduce the interest rate of enterprise loans, but also improve the efficiency of market allocation of credit resources, promote the effective adjustment of Chinese investment structure, and improve investment efficiency.

In terms of fiscal policies, with greater reduction of tax and fee, the burden of enterprises has been effectively reduced and the vitality of micro businesses has been enhanced; more importantly, various improvement measures to stabilize the investment in manufacturing industry have ensured the rapid growth of new energy investment, and the investment in the weak areas has been continuously developing and the investment structure has been gradually optimized.

The outbreak of COVID-19 pandemic in China and abroad will inevitably impact on the growth of China and the world economy in the first half of 2020. For the convenience of the readers, the above forecast results are summarized as follows.

1. The GDP growth rate in 2020 and 2021. In 2020, under optimistic, benchmark and pessimistic scenarios, GDP will grow by 5.09, 4.59 and 3.18%, respectively, 1.06, 1.55 and 2.96 percentage points lower than that in 2019. In the first quarter, GDP will grow at 0.94, −3.81 and −7.74%, under each of the three scenarios
respectively, compared with the same quarter of the previous year; In the second quarter, some economic activities suppressed in the early stage will be released gradually. GDP growth will rebound to 7.37–8.81%; the growth rate in the third and fourth quarters will be more stable. It will be in the intervals of 6.08–6.69% and 5.86–6.84%, because of the implementation of a series of more powerful monetary and fiscal hedging policies. In 2021, under the influence of base effect, GDP growth will rebound to 6.61–8.24%.

2. **The growth rate of investment in 2020 and 2021.** In 2020, the fixed asset investment (excluding farmers) calculated at current price is expected to grow at 6.60–8.49%, and the investment will grow slowly. In the first quarter, the fixed asset investment will grow at −2.91 to −7.26% compared with the same period of the previous year. In terms of ownership, the investment of state-owned and state-holding enterprises will grow at 7.28 to −11.26% and the investment of non-state-owned enterprises will grow at 6.18–7.18% in 2020. In the first quarter, the investment growth rate of state-owned and state-holding enterprises will be at −1.44 to −6.04%; the investment growth rate of non-state-owned enterprises will be at −3.91 to −8.09%. It shows that the impact of the first quarter COVID-19 pandemic on the non-state-owned enterprises is greater than the impact on the state-owned and state-holding enterprises. Therefore, after the COVID-19 pandemic has been completely controlled, it is necessary to continue implementing the relevant policies such as financial services for the real economy, stable manufacturing investment and so on. In 2021, investment growth is expected to be 8.41–10.89%.

3. **CPI.** In 2020, with the impact of the COVID-19 pandemic and pork prices, the CPI will to vary among the interval of 3.21–3.33%, exceeding the policy target of 3%. The CPI will be 5.09–5.24, 4.42–4.58, 2.84–2.99 and 0.52–0.71% in each of the four quarters, respectively. Although there is no basis for inflation or deflation, the sharp rise of CPI in the first half of the year will erode the real income of residents, especially of the low-income residents. In 2021, the base effect may make CPI increase to 0.27–0.38%.

4. **PPI.** In 2020, PPI will continue to shrink to 3.01–3.54%, hitting the lowest point in the second quarter. The impact of the COVID-19 pandemic on the domestic industrial chain, together with the sharp fluctuations in oil prices, will make PPI shrink in a longer period. In 2021, PPI may turn positive, increasing to 1.39–2.00%.

5. **The growth of residential income.** The nominal growth rate of total retail sales of social consumption goods may vary among the interval of 4.48–7.58% in 2020, and it is likely to drop sharply to −11.07 to −0.14% in the first quarter. In 2020, the growth rate of per capita real disposable income will be 3.55–4.42 and 4.51–6.44% for urban residents and rural residents respectively. The impact of the COVID-19 pandemic and the high price of pork will erode the real income growth of rural residents, especially of the low-income residents. The policy focus in 2020 should be to stabilize and improve the real income growth of rural residents and low-income residents. In 2021, the nominal growth rate of total retail sales of social consumption goods may rise to 9.08–12.92%.
6. **Exports and imports.** In 2020, the growth rate of Chinese total exports of goods will remain at 2.28–4.45%; the growth rate of total import of goods will be 6.33–11.76%. Among them, Chinese export growth rate to the US will drop to 8.79–9.41%; Chinese import growth rate from the US will be 10.64–11.73%. Chinese export growth to the EU will be 5.48–6.48%; Chinese import growth from the EU will be 8.68–10.93%. Chinese export growth to ASEAN will be 18.04–18.45%; Chinese import growth from ASEAN will be 4.35–4.64%. In 2021, the growth rate of Chinese total export of goods will increase to 14.30–16.52%; the growth rate of total import of goods will be 10.08–15.55%.

To sum up, Chinese economic growth will slow down in 2020. The impact of the COVID-19 pandemic combined with the high pork price, the annual CPI may exceed the policy target of 3%; the impact of the COVID-19 pandemic on the investment growth of non-state-owned enterprises is greater than that of state-owned enterprises and state-holding enterprises; the impact on the actual income of rural residents is greater than that of urban residents; the trend of stable and slow consumption growth throughout the year will continue. However, the impact of the COVID-19 pandemic is short-term and external. By increasing the hedging of macro policies and stimulating the vitality of micro businesses, the losses caused by the COVID-19 pandemic can be minimized, and Chinese economy can still maintain a stable and healthy development trend.