



China Economic Monitor

Q3 2019

October 2019

kpmg.com/cn



Contents

	Executive summary	2
1	Economic trends	5
	❑ Overall economic growth continued to slow in Q2, but industrial production recovered in June	6
	❑ The growth rate of fixed-asset investment rebounded slightly, and real estate investment faced downward pressure	10
	❑ There was a marked rebound in consumption due to inventory shedding, but this growth trend is not sustainable	14
	❑ Inflation remained stable. Fruit and pork prices provided the main upward pressure on CPI	17
	❑ TSF continued to increase, and the financing environment of the real economy continued to improve	19
	❑ Growth in exports has declined, and downward pressure on growth in the next stage has increased	22
2	Policy analysis	25
	❑ The Ministry of Industry and Information Technology speeds up the commercialization of 5G	26
	❑ Vocational education reform enters a new stage	30
	❑ National network security deployment speeds up again	34
	❑ Three ministries promote the upgrading of key consumer goods	38
	❑ New special debt financing policy announced	39
3	Special Research: The Sci-Tech Innovation Board (STAR market) and Shanghai-London Stock Connect	43
	❑ Sci-Tech Innovation Board deepens capital market reform	44
	❑ Shanghai-London Stock Connect accelerates the Chinese financial sector's openness to the world	50
	Appendix: Key indicators	56

Executive Summary

China's economic growth slowed further in Q2 2019 as GDP increased by 6.2% year-on-year, down 0.2 percentage points from Q1. Over the first half of the year, GDP increased by 6.3% year-on-year, 0.3 percentage points lower than the 6.6% growth rate posted for the whole of 2018.

- In terms of industrial structure, the service sector contributed 60.3% to GDP growth and continued to lead other industrial sectors. The growth rate of secondary sector dropped by 0.5 percentage points from Q1, which was the main drag on GDP growth.
- On the demand side, consumption remains the chief support for economic growth. From January to June, consumption's contribution to GDP was 60.1%, driving economic growth by 3.8 percentage points, despite a slight fall from Q1. The performance of retail sales in June was impressive, with a nominal growth rate of 9.8%, an increase of 1.2 percentage points from May. The actual growth rate was 7.9%, an increase of 1.5 percentage points from May. The rebound in auto sales was the main reason for the record high growth in consumption in June. As dealers were carrying out promotions to reduce inventory that does not meet the new emission standards, growth in auto sales hit 17.2% in June, up 15 percentage points from May.
- Investment growth rebounded slightly. In the first half of the year, fixed-asset investment increased by 5.8% year-on-year and growth increased by 0.2 percentage points from January to May. There was a minor rebound in infrastructure and manufacturing investment, while real estate investment faced downward pressure due to a decline in sales and the tightening of the financing environment.
- In the first half of the year, China's exports were down 9.8 percentage points from 2018. Year-on-year growth in exports for June remained negative, at -1.3%. China's import growth rate was -4.3% in the first half of the year, a sharp drop of 20.1 percentage points from 2018. Due to the slowdown in exports and the sharp drop in imports, the trade surplus in the first half of the

year was USD181.2 billion, an increase of USD45.9 billion year-on-year. However, we expect the trade surplus to shrink in the second half of the year.

- Industrial added value in June increased by 6.3% year-on-year, which was significantly higher than in May. However, due to weak domestic and external demand, industrial added value in the first half of the year was 0.2 percentage points lower than that for the whole of 2018. From January to June, the added value of industrial strategic emerging industries and high-tech manufacturing industries was higher than industrial enterprises, indicating the industrial structure continues to optimize.

On the international front, the global economy remained weak in the first half of 2019. In June, the global manufacturing Purchasing Managers' Index (PMI) registered 49.4, marking the 14th consecutive month of decline and its second month below the 50 point level. Among the world's major economies, the PMIs of the US, Europe and Japan also hit new lows, closing at 51.7, 47.6 and 49.3 in June, down from the previous month. The continuous decline in PMI indicates that global economic growth may face a large shock in the second half of 2019.

Some international institutions have lowered their economic growth forecasts for 2019; for example, the International Monetary Fund (IMF) lowered its forecasts (the fourth time since October 2018) to 3.2%, significantly lower than the original 3.9%. The World Bank also lowered its global economic growth forecast for 2019 from 2.9% in January to 2.6% in June. As global economic growth slows, there will be a further shrinkage in external demand and an increase in downward pressure on domestic economic growth.

US-China trade friction recently escalated after a series of developments. Tensions heightened after President Trump announced that from May, tariffs on USD200 billion of Chinese imports would be raised from 10% to 25% and US companies were prohibited from supplying components to Huawei. At the G20

summit in late June, leaders from the two sides agreed to restart economic and trade talks. The US side said that no new tariffs would be added to Chinese exports during this period, and that US companies would be allowed to supply components to Huawei, helping to ease the trade conflict. On 1 August, just one day after the conclusion of the 12th round of trade negotiations between China and the US in Shanghai, the US President posted four tweets announcing that a 10% tariff would be imposed on USD300 billion of Chinese goods from September, leading to a re-escalation in the US-China trade frictions. The uncertainty brought about by trade friction led to a 7.8% drop in Chinese exports to the US in June this year. The proportion of China's exports to the US also fell from 19.2% in 2018 to 17.0% in the first half of 2019, which was less than to the EU and indicates that the US is no longer China's largest export destination. In the second half of the year, US-China trade issues are expected to remain the most important issue for China's external environment.

Faced with pressure from the internal and external environment, China has adopted more proactive fiscal policies in four main areas to strengthen counter-cyclical adjustments: 1) increasing the special debt quota and expediting the issuance; 2) increasing the budget for government deficit; 3) increasing fiscal expenditure; and 4) cutting taxes and fees on a large scale. The first half of the year saw the implementation of various fiscal policies. By the end of June, special bond issuance had reached RMB1.39 trillion, accounting for 65% of the new annual issuance limits; the annual issuance quota is expected to be reached in September. The fiscal deficit was RMB157 billion, accounting for 57% of the annual fiscal deficit. The national general public budget revenue was RMB10.78 trillion, up 3.4% year-on-year, of which the growth in Q2 was only 0.8%, while the fiscal expenditure in the first half was RMB12.35 trillion, a year-on-year increase of 10.7%. The national tax revenue growth was only 0.9%, the lowest value in the past decade, and largely due to the big tax and fee cuts. Intensive fiscal stimulus led to the smooth running of the economy in the first half of the year and effectively curbed the downward trend and the overall economy has showed some resilience. However, it should be noted that the expansion of the fiscal revenue and expenditure gap in the first half of the year is bound to limit the intensiveness of fiscal policy in the second half of the year; if the economy sees new downward pressure in the second half of the year, China may need to roll out new policy tools.

Since 2019, the stocks of total social financing (TSF) have returned to double-digit growth. In June, they increased by 10.9% year-on-year, 0.3 percentage points higher than that in May. The growth rate of M2 also reached 8.5%, reflecting sustained improvement in the financing environment of China's real economy. The global economic downturn and weak markets have led to a change in the US Federal Reserve's attitude since the beginning of this year. Its interest rate forecast for 2019 dropped from three hikes in September 2018 to two in December 2018, then to no hikes and suspension of the contraction in March 2019. In July's Federal Open Market Committee (FOMC) meeting, Fed announced to cut the interest rates by 25 basis points, while lowering the federal funds rate target range to 2.00–2.25%. As Fed's first interest rate cut in 10 years, this move not only marks the end of the current round of monetary policy tightening initiated in 2015 but will also certainly drive global capital markets back to the easing state. Since May, developed economies such as Australia, New Zealand and South Korea, as well as emerging markets such as Malaysia, India and Russia, have also announced benchmark interest rate cuts.

The shift in international monetary policy will enable China's monetary policy to be more flexible and give it more space, which will help stabilize economic growth. We believe that the People's Bank of China (PBOC) will continue to implement a prudent monetary policy, focusing on structural reforms in the financial supply side and promoting interest rate integration and market-oriented reforms. It will also help improve the interest rate transmission mechanism and build a triangular framework of supply, demand and financial systems, compensating for the problem of liquidity stratification from the perspective of the financial supply side.

The Central Political Bureau meeting held on 30 July defined the current economic situation as "steady and progressive". This is more optimistic than last year's pronouncement of "change amid stability" for the Chinese economy, reflecting political commitment. Regarding the direction of the next phase of fiscal policy, this Politburo meeting will continue to implement the tax and fee cuts in addition to the previous tone of "implementing a proactive fiscal policy" and "increasing efficiency of fiscal policy". Since the scale of fiscal expenditure is subject to fiscal revenue, fiscal policy is expected to place more emphasis on "implementation" rather than "larger expenditure" in the second half of the year. Monetary policy continued the "moderate" expression of the April meeting, while increasing "maintaining sufficient liquidity", which means

financial support for entities will likely not weaken in the second half of the year.

We believe that by tough, complex internal and external situation needs to be dealt with by carrying out fiscal and monetary policies while avoiding strong stimulus plans. More important, however, is the promotion of reform and opening up, lowering the threshold to market access, enhancing business confidence, and stimulating economic dynamics.

Special research: Sci-Tech Innovation Board (STAR market) and Shanghai-London Stock Connect

In recent years, China has launched a series of policies to promote the reform and opening up of the financial sector, a process that has accelerated significantly since the Boao Forum for Asia in April 2018.

The Shanghai Stock Exchange Sci-Tech Innovation Board (STAR market) is a major initiative in reforming China's capital markets that was officially opened on 13 June 2019 at the opening ceremony of the 11th Lujiazui Finance Forum. In addition to improving the financing structure of the country's capital markets, the STAR market will drive change in direct financing. Its establishment has also created a financing and investment platform for innovative tech enterprises, making up for the institutional shortcomings of the country's capital markets when it comes to tech.

The Shanghai-London Stock Connect, which was officially launched on 17 June 2019, is a milestone in the opening up of China's financial sector. Compared with the earlier Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect, the Shanghai-London Stock Connect brings further impetus to the internationalization of the RMB and A-share market in two regards. On one hand, both the Shanghai Stock Exchange and the London Stock Exchange are two highly influential stock markets with massive scale, whose interconnection will undoubtedly have a significant impact. On the other hand, the Shanghai-London Stock Connect will introduce new and complex problems. Factors such as cross-border transactions, capital flows and transaction taxes may accelerate the process of interconnection between the A-share market and other countries, greatly increasing the level of attention among foreign investors toward the A-share market and significantly accelerating the integration of the A-share market into the international capital market system.

With this economic symbiosis and shared prosperity, the gradual progress in the reform and opening up of capital markets will inevitably help develop China's economy. High-quality growth in the real economy will also lead to a large number of outstanding listed companies with sustained profitability and stability, a cornerstone in the sustainable growth of the capital markets.

1

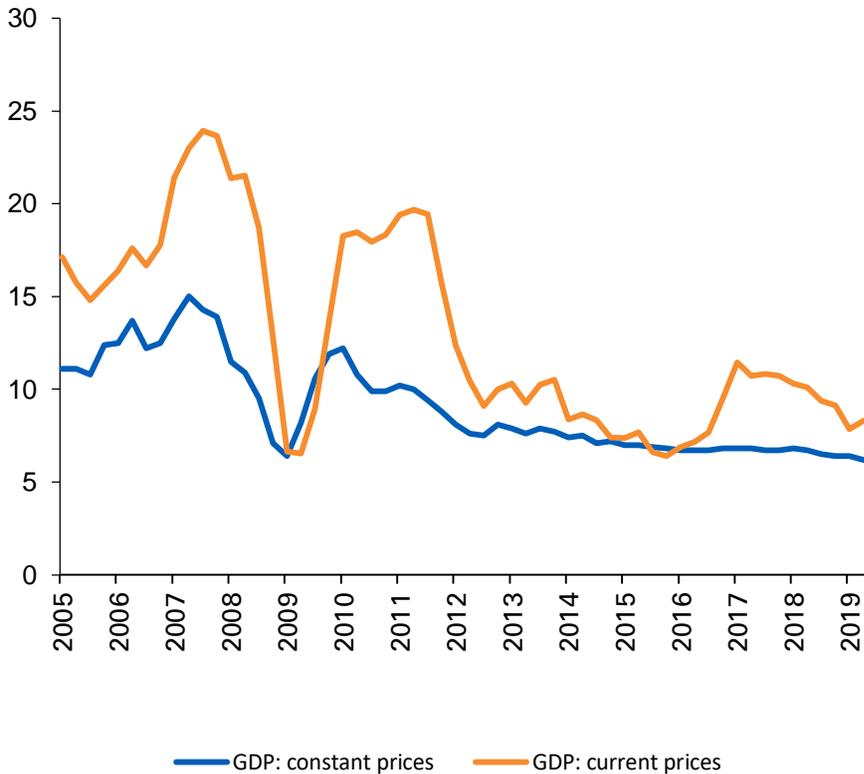
Economic trends



Overall economic growth continued to slow in Q2, but industrial production recovered in June

In Q2 2019, China's real GDP grew by 6.2% year-on-year, down 0.2 percentage points from Q1. In the first half of the year, it increased by 6.3%, which was 0.3 percentage points lower than for the whole of 2018 (6.6%). In Q2, nominal growth was 8.3%, which was 0.5 percentage points higher than that in Q1 and 1.4 percentage points slower than that for the whole of 2018.

Figure 1: GDP growth rate, quarterly YOY, %

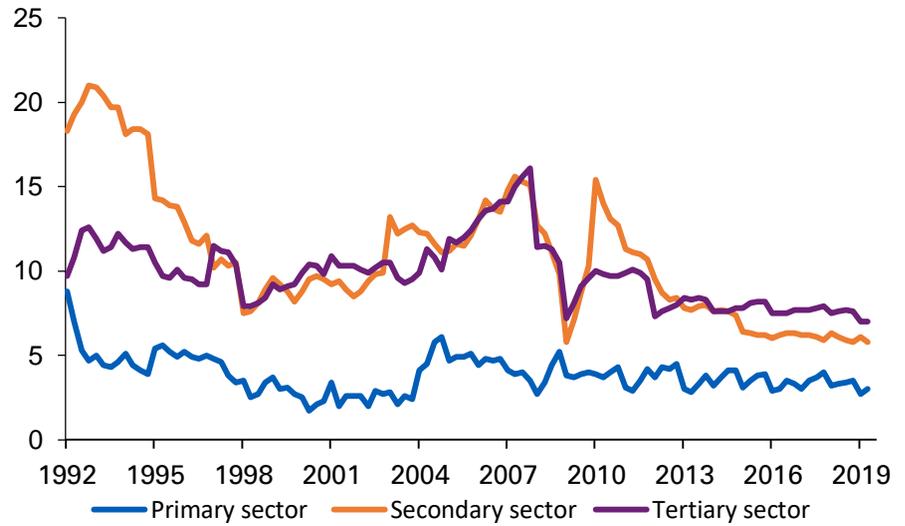


Source: Wind, KPMG analysis

Growth rate of the service sector continues to lead other industrial sectors. In the first half of the year, the service sector grew by 7% year-on-year, which was same as growth in Q1 and higher than GDP growth for the same period. Its contribution to GDP growth was 60.3%, a slight decrease of 0.2 percentage points over the same period last year. Growth in the secondary sector¹ slowed — it increased by 5.8% year-on-year in Q2, which was 0.5 percentage points less than that in Q1 and the main reason for the slowdown in GDP growth.

¹ The three-sector model in economics divides economies into three sectors of activity: extraction of raw materials (primary), manufacturing (secondary), and services (tertiary).

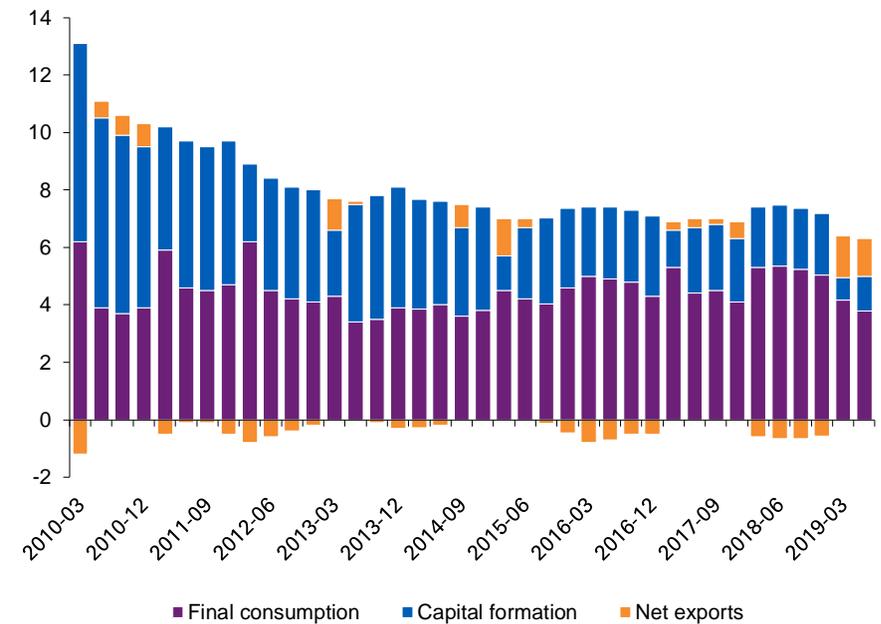
Figure 2: Cumulative YOY growth rate of the three sectors, %



Source: Wind, KPMG analysis

On the demand side, consumption remains an important support for economic growth. From January to June, the contribution to GDP of final consumption expenditure was 60.1%, driving economic growth by 3.8 percentage points. Although it fell slightly from Q1, it still dominated. Capital formation's contribution to GDP increased by 7 percentage points compared with Q1 to 19.2%, driving economic growth by 1.2 percentage points. Net exports' contribution to GDP remained at 20.7%, driving economic growth by 1.3 percentage points.

Figure 3: Growth of GDP in various sectors, cumulative value, %



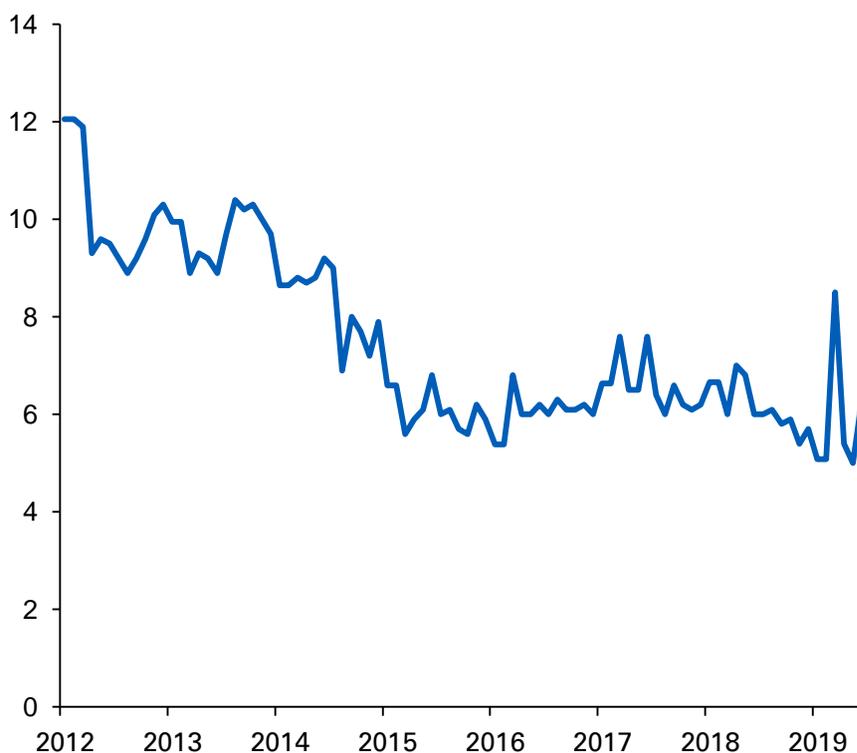
Source: Wind, KPMG analysis



In terms of output, the growth rate of added value of industrial enterprises above a designated size in the first half of the year was 6%, down from 6.7% in the same period last year and 6.5% in Q1. However, the added value in June increased by 6.3% year-on-year, which was significantly higher than in May. China's manufacturing Purchasing Managers' Index (PMI) entered the contraction zone again in May after a brief return to the expansion range in March and April (50.5 and 50.1, respectively). Both the May and June indices stood at 49.4, indicating that a boost to manufacturing is still needed.

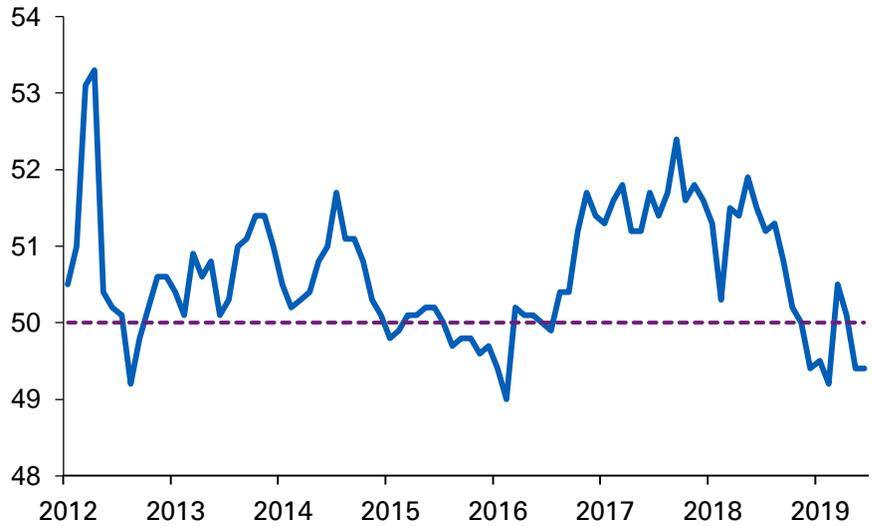
In terms of industries, the largest decline in the first half of the year was in automobile manufacturing, which fell to -1.4% from 10.1% in the same period last year. This was the only negative growth in the major industrial sectors. In addition, the pharmaceutical manufacturing sector dropped from 6.9% in the same period last year to 6.6%, computer communications dropped from 12.4% to 9.6%, general-purpose equipment from 7.9% to 5.1%, and special equipment from 11.11% to 8.3%. Unlike the general decline in industrial growth in emerging industries, traditional industries such as non-ferrous metal smelting, non-metallic mineral manufacturing, metal products and railway ships recorded rising growth rates.

Figure 4: Added value growth rate of industrial enterprises in major industries, cumulative YOY, %



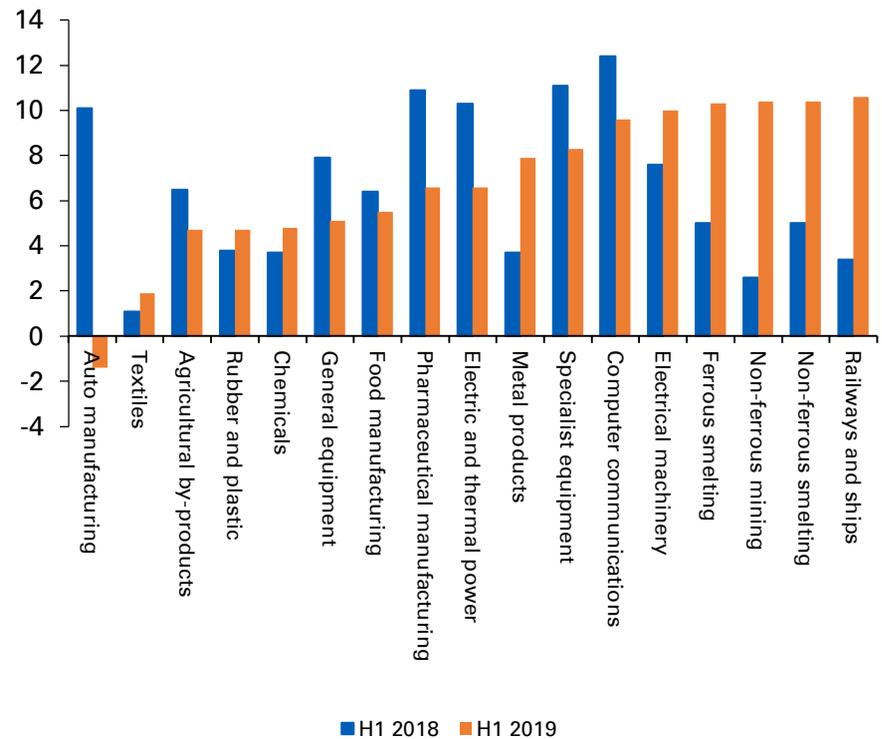
Source: Wind, KPMG analysis

Figure 5: China's Manufacturing PMI



Source: Wind, KPMG analysis

Figure 6: Added value growth rate of industrial enterprises in major industries, cumulative YOY, %

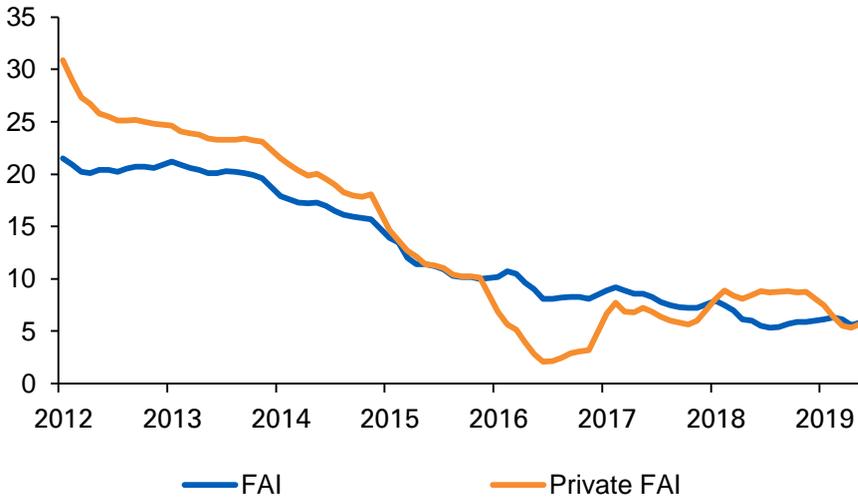


Source: Wind, KPMG analysis

The growth rate of fixed-asset investment rebounded slightly, and real estate investment faced downward pressure

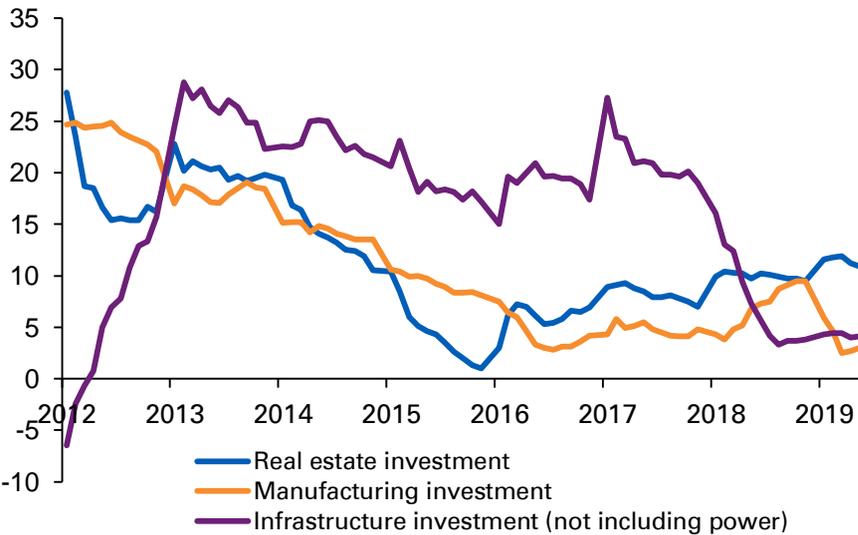
The growth rate of fixed-asset investment rebounded slightly. In the first half of the year, total public fixed-asset investment increased by 5.8% year-on-year. The growth rate was 0.2 percentage points higher than that for January-May. Private fixed-asset investment increased by 5.7% year-on-year, 0.4 percentage points higher than that for January-May.

Figure 7: Fixed-asset investment, cumulative YOY, %



Source: Wind, KPMG analysis

Figure 8: Fixed-asset investment in subsectors, cumulative YOY, %



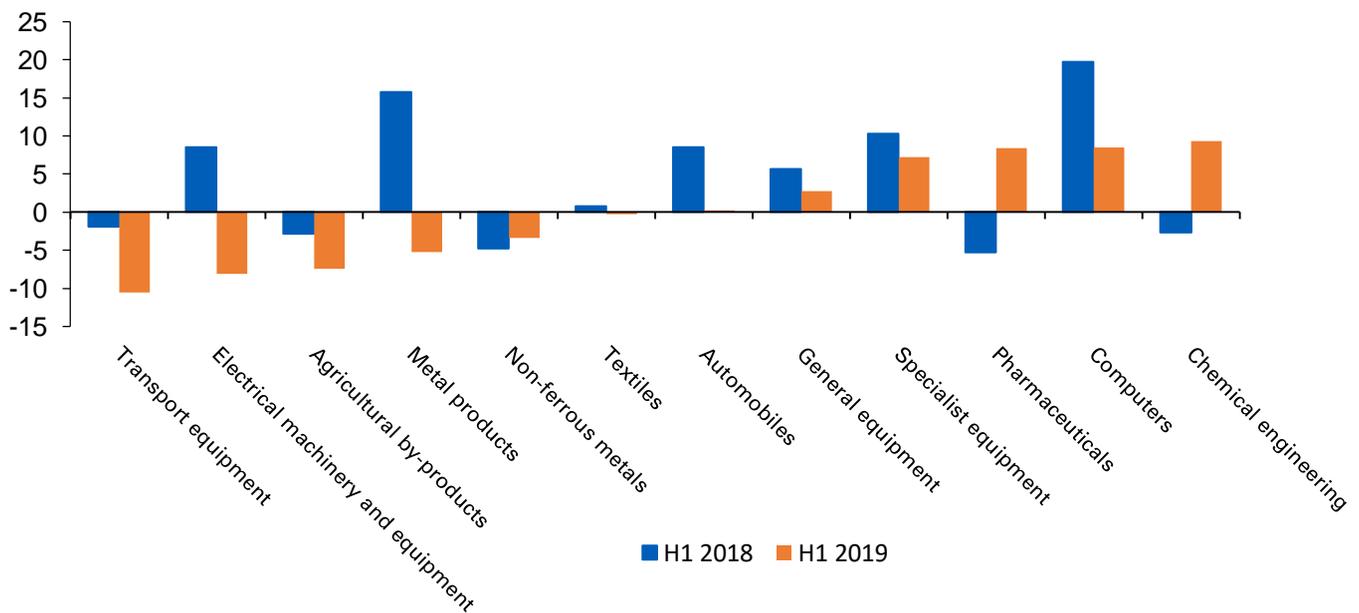
Source: Wind, KPMG analysis

Manufacturing investment showed a low-level rebound, with outstanding performance in high-tech manufacturing

From January to June, manufacturing investment grew at 3% year-on-year. This was a slight increase of 0.3 percentage points from the growth in January to May, but still represented historically low levels. From the perspective of major industries, although the growth rate of many industries experienced varying degrees of decline compared with the same period of last year, it improved from January to May. Among emerging industries, there was a significant rebound in general equipment, special equipment and computer investment. The cumulative values from January to June were 2.8%, 7.2% and 8.5%, respectively, which was 1.4, 1.0 and 2.3 percentage points higher than that in January–May. Auto investment also turned from negative to positive, with cumulative year-on-year at 0.2% for January–June, up 0.3 percentage points from January to May.

In traditional industries, figures for non-ferrous metals and chemical manufacturing in January–June were -3.4% and 9.3%, respectively, compared with rebounds of 6.3 and 1.9 percentage points for January–May. From January to June, high-tech manufacturing investment grew by 10.4%, 4.6 percentage points faster than fixed investment and significantly higher than the overall manufacturing growth rate. This demonstrates that although overall investment in manufacturing remains at low levels, the investment structure is gradually being optimized. It is foreseeable that in the future, the state will continue to increase investment in high-tech industries, increasing financial, credit and industrial policy support to hedge against downward pressure on traditional manufacturing.

Figure 9: Investment growth rate of manufacturing subsectors, cumulative YOY, %



Source: Wind, KPMG analysis

Capital construction investment rebounded, and fiscal policy helped create stable growth

From January to June, the growth rate of infrastructure investment (excluding electricity) was 4.1%, a slight increase of 0.1 percentage points from January to May. The growth rate in June rebounded to 4.4%, which was an important driving force for the rebound in infrastructure investment in the first half of the year. The speed of the issuance of local government special bonds in June boosted the growth rate of infrastructure investment. According to the data released by the Ministry of Finance, as of the end of June, RMB1.39 trillion of newly added local special bonds had been issued, representing 65% of the new annual quota. The annual issuance quota is expected to be met before the end of September.

On 10 June, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council promulgated the Notice on Effectively Conducting the Issuance of Special Bonds for Local Governments and Ancillary Financing of Projects. Two highlights were allowing special debt as capital for eligible major projects and clarifying project criteria for market-based financing support in special debt projects. Special debts can be used as capital, which would help local governments resolve capital issues. Taken together with market-based financing to support special debt projects, this will help move forward major projects invested in by the government and bring stability to infrastructure investment.

Supported by proactive fiscal policy, infrastructure will continue to rebound in the next quarter, however, due to the reduction of local public fiscal revenue following large-scale reductions in taxes and fees, as well as the central government's strict control of invisible debt, there is limited room for a recovery in investment.

Real estate sales were cooling, financing was tightening, and investment was facing downward pressure

From January to June, real estate investment increased by 10.9% year-on-year, down 0.3 percentage points from January to May. In June, it was up 10.1% year-on-year, down 0.6 percentage points from the previous month. At the same time, the land purchase area of real estate developers in the first half of the year was 80.35 million square meters, down 27.5% year-on-year. The decline was 5.7 percentage points lower than that in January–May; the land transaction price was RMB381.1 billion, down 27.6% year-on-year and representing a narrowing in the decline by 8 percentage points. Excluding land acquisition fees, the real estate investment growth rate in January–June was 5.5%, which was 0.3 percentage points higher than that in January–May.

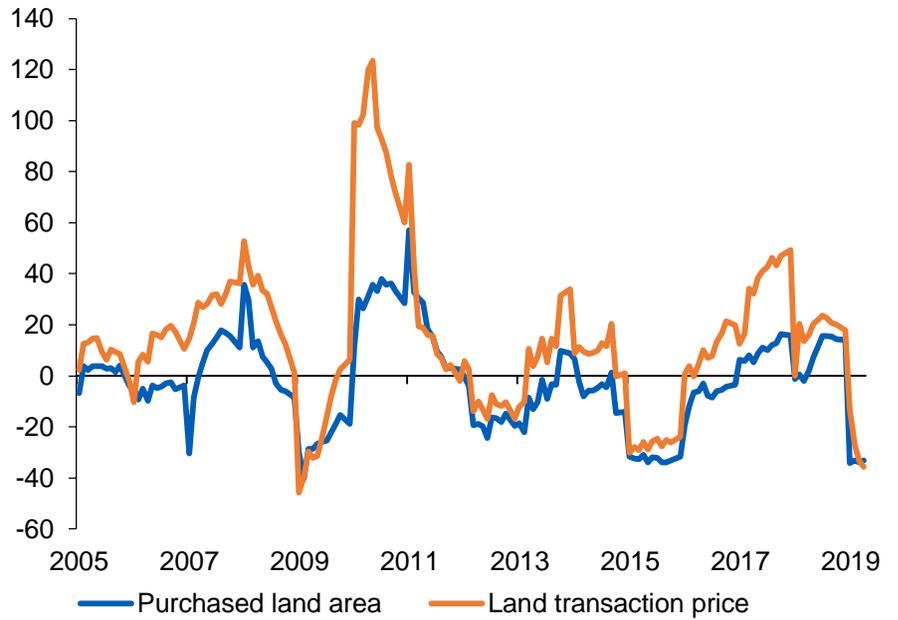
At the sales level, the sales area of commercial housing in the first half of the year was 757.86 million square meters, down 1.8% year-on-year and a further decline of 0.2 percentage points from Jan–May. Sales of commercial housing hit RMB 706.98 billion, representing a year-on-year increase of 5.6% but a 0.5-percentage-point drop in growth rate.

On 17 May, the China Banking and Insurance Regulatory Commission (CBIRC) issued Circular No. 23: Notice of Commencing the Work on "Consolidating Achievements in Irregularity Rectification and Promoting Compliance Building", which placed stringent requirements on the development of real estate by trust companies and strictly limited the front-end model of development. The circular represents further tightening of the financing environment for real estate companies, and real estate investment may slow in the future; however, it will remain relatively stable thanks to support from the government's implementation of its "according to urban conditions" policy and developers restocking their inventory.²

² Refers to the pre-funding in the case where the project does not have four certificates and thus cannot obtain development loans.



Figure 10: Growth rate of purchased land area vs. land transaction price increase, cumulative YOY, %



Source: Wind, KPMG analysis

Figure 11: New construction and sales area of real estate, cumulative YOY, %



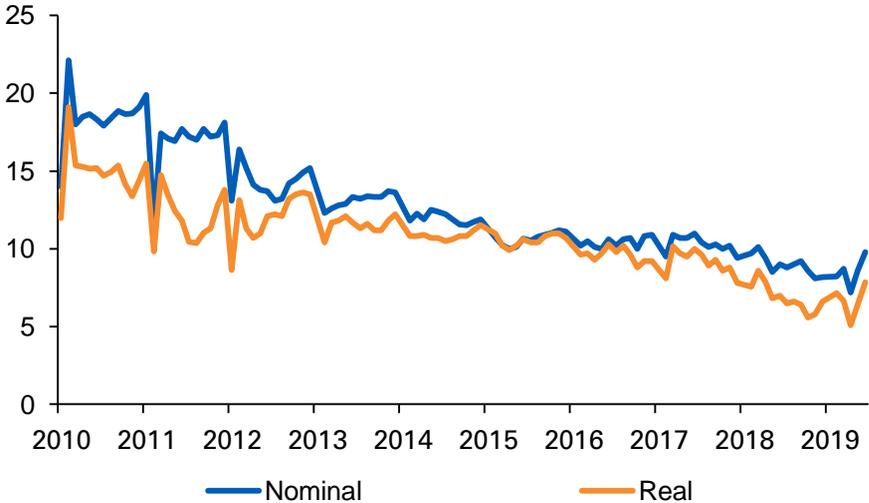
Source: Wind, KPMG analysis

There was a marked rebound in consumption due to inventory shedding, but this growth trend is not sustainable

From January to June, total retail sales of consumer goods increased by 8.4% year-on-year. Growth increased by 0.2 percentage points from Q1 but was still lower than 2018's 9% growth rate. Total retail sales for social consumption excluding price factors actually grew 6.7% in the first half of the year, down 0.3 percentage points from Q1. Retail sales performance in June was impressive, with a nominal growth rate of 9.8%, up 1.2 percentage points from May; the actual growth rate was 7.9%, an increase of 1.5 percentage points from May.

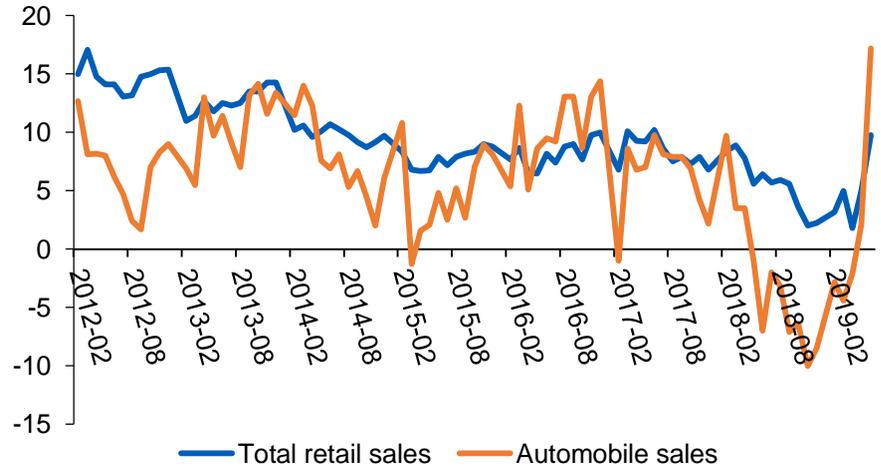
The rebound in automobile consumption was the main reason for the record high growth in consumption in June. In the first half of the year, lower automobile sales led to a decline in consumption growth. However, growth in auto sales hit 17.2% in June — this was an increase of 15 percentage points from May and was the main factor in the recovery of consumption. The surge in auto sales was mainly attributable to the "National VI" vehicle emission standards in some cities on 1 July, which led to car companies lowering prices to get rid of vehicles that did not meet the "National VI" standards. However, given that sales promotions stopped after July, when license plates ceased to be issued for "National V" models, and that large-scale promotions tend to "overdraw" on subsequent consumption, the high pace of auto sales is unsustainable, and may decline.

Figure 12: Total retail sales of consumer goods, YOY, %



Source: Wind, KPMG analysis

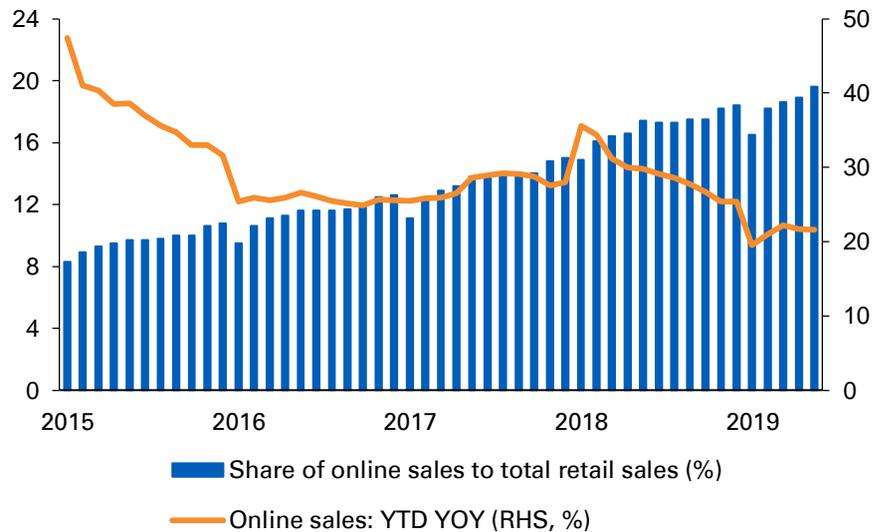
Figure 13: Total retail sales vs. auto sales, YOY, %



Source: Wind, KPMG analysis

From January to June, online retail sales of physical goods increased by 21.6% year-on-year, a slight increase of 0.6 percentage points from Q1 and down from 25.4% in 2018. Despite this, the growth of online retail is still much higher than the overall growth rate of social retail sales. Its proportion of total consumer purchases has been steadily rising; it reached a high of 19.6% in June and is the main driving force for consumption growth.

Figure 14: Online sales of physical goods and its growth rate, %

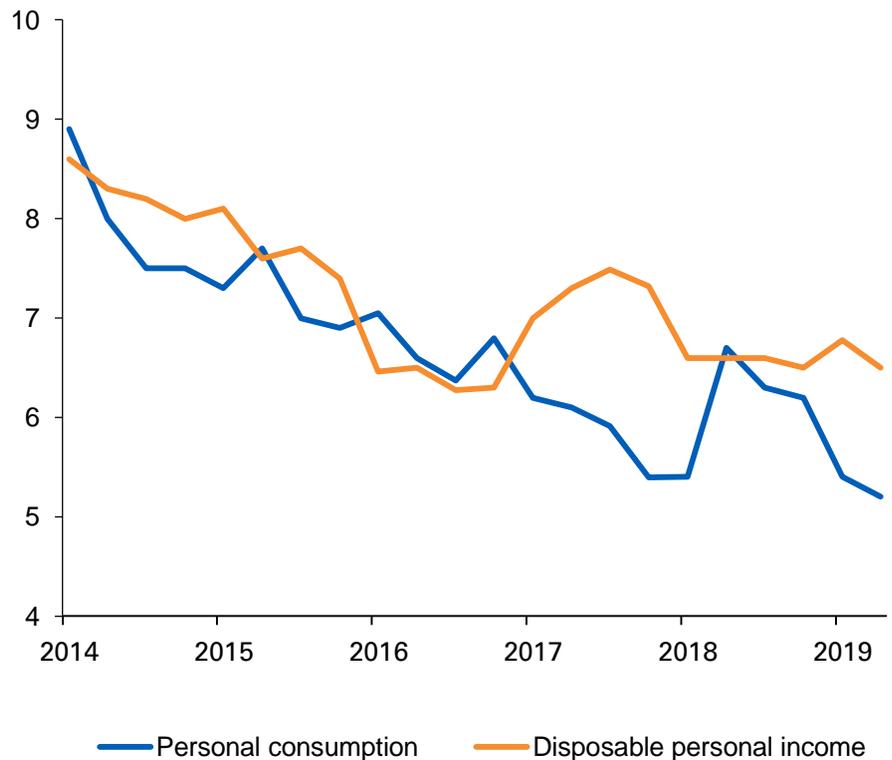


Source: Wind, KPMG analysis

From January to June, household disposable income increased by 6.5% year-on-year, 0.3 percentage points lower than Q1 but 0.2 percentage points higher than the economic growth rate for the same period. From January to June, per capita consumption expenditure increased by 5.2% year-on-year, a slight decrease of 0.2 percentage points from Q1. From the second half of 2018, growth trends in disposable income and spending among residents began to show more obvious differentiation. The deviation between purchase power and the willingness to spend indicates that consumers are likely to lower their marginal propensity to consume — this will have a negative impact on future growth.

In the short term, the boost to consumption still requires policy support such as the implementation of tax and fee cuts, employment priorities, and direct stimulus policies for the replacement of durable goods. However, in the long term, Chinese consumption can only be truly released by accelerating structural reforms and a further expansion of the country’s opening up to the outside world.

Figure 15: Per capita household disposable income vs. per capita household spending, actual cumulative YOY, %



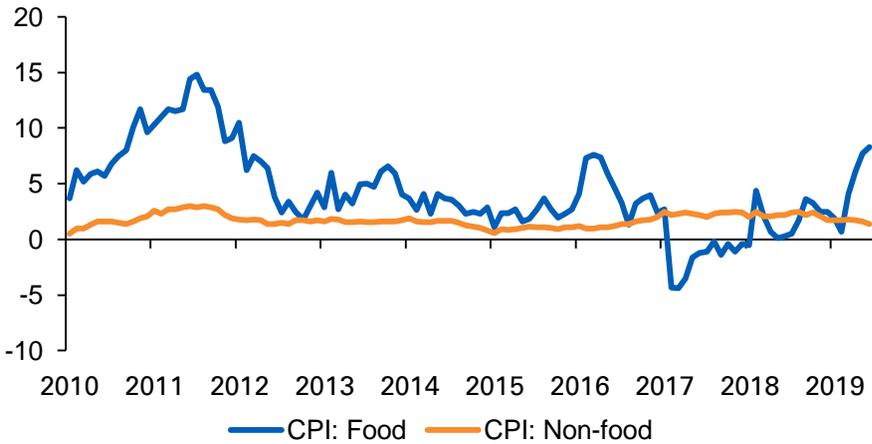
Source: Wind, KPMG analysis

Inflation remained stable, and fruit and pork prices were the main upward pressure on CPI

In the first half of 2019, the consumer price index (CPI) increased by 2.2% year-on-year, an increase of 0.2 percentage points over the same period last year. June's CPI rose by 2.7% year-on-year, the same as the previous month. The increase in fresh fruit and pork prices was the main driver of the CPI growth rate, and oil prices were the main drag. Specifically, food prices in June rose by 8.3% year-on-year, of which fresh fruit rose to 42.7% year-on-year, up 16 percentage points from the previous month. This was mainly because of insufficient stocks of certain fruit this year due to the impact of low temperatures last year. In addition, there was more precipitation in the south this year, which affects the picking and transportation of fresh fruit. After the seasonal fruit is marketed in July, the price of fresh fruit is expected to fall back and will not continue to drive inflation. The continuation of African swine flu led to a 21.1% year-on-year increase in the price of pork. This was up 2.9 percentage points from the previous month and remained the main cause of rising inflation.

The decline in non-food prices was down to the implementation of the VAT tax reduction policy on 1 April this year; however, even if some commodity prices were lowered, the main reason was due to the rapid decline in oil prices. In June this year, the National Development and Reform Commission made two consecutive sharp cuts in the sales price of refined oil. On 12 June, the price per ton of gasoline and diesel was lowered by RMB 465 and RMB 445, respectively; on 26 June, the price was again lowered by RMB 120 and RMB 115, respectively.

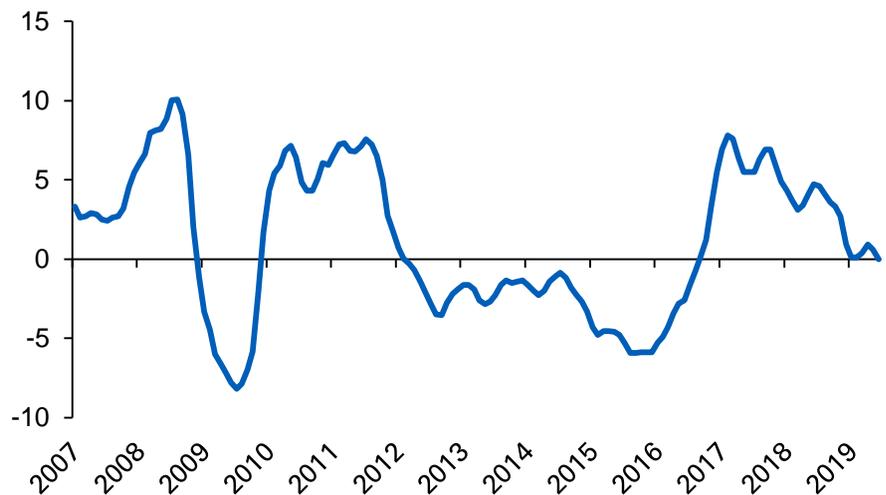
Figure 16: Food and non-food CPI, YOY, %



Source: Wind, KPMG analysis

In the first half of 2019, the industrial producer price index (PPI) increased by 0.3% year-on-year, a slight increase of 0.1 percentage points from Q1. The PPI in June remained level with last year, at 0.6 percentage points lower than the growth rate of the previous month. This is consistent with the direction of the CPI non-food sub-item, reflecting the weak demand in the real economy. In the industrial sector, the crude oil industry chain was the main drag on the declining PPI growth. Prices in the upstream and midstream oil, natural gas mining and oil processing industries fell by 3.9% and 1.9%, respectively; downstream chemical fiber manufacturing prices fell by 3.1%. In addition, steel production has increased significantly since Q2 this year, resulting in price ratios for the ferrous metal smelting and rolling processing industry turning from positive to negative, at -1.3%. Looking to the future, with the gradual decline on the demand side — particularly in investment demand — coupled with the context of a high base, PPI's year-on-year growth rate is expected to continue to fall and may drop into the negative range, with industrial product price deflation risks rising. More tax cuts and fee reduction policies may be needed.

Figure 17: Industrial PPI, YOY, %



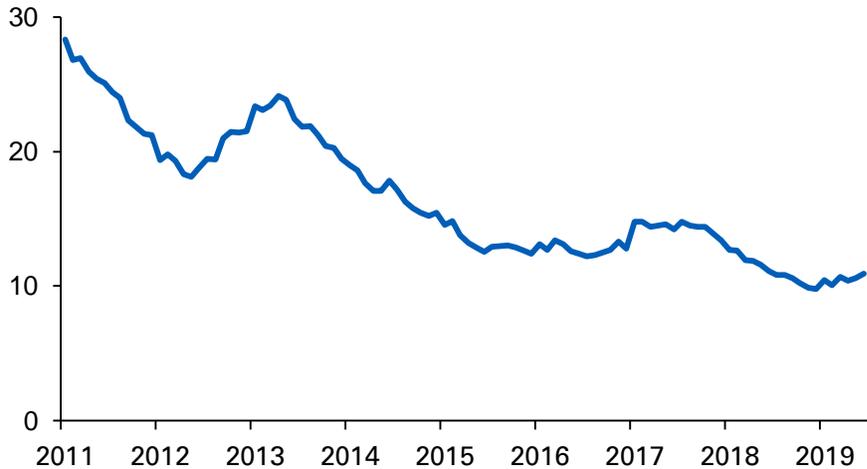
Source: Wind, KPMG analysis



TSF continued to increase, and the financing environment of the real economy continued to improve

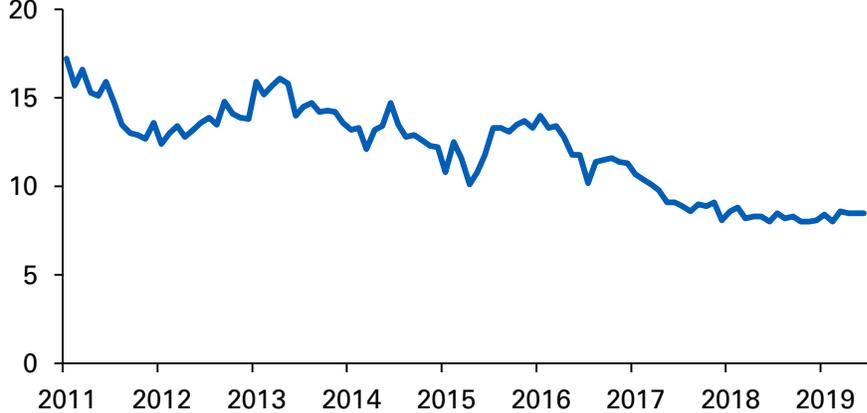
Total Social Financing (TSF) is an indicator of the financial system's financial support of the real economy (i.e. non-financial companies and households). Since 2019, TSF stock has returned to double-digit growth. In June, it increased by 10.9% year-on-year, 0.3 percentage points higher than that in May. The continued rise in TSF indicates that the real economy's financing environment continues to improve. M2 growth remained stable; in June it was 8.5%, which was the same as that in April and May and an increase of 0.5 percentage points compared with the same period last year. The stabilization of M2 growth also reflected the strength of financial support for the real economy.

Figure 18: TSF stock, monthly YOY, %



Source: Wind, KPMG analysis

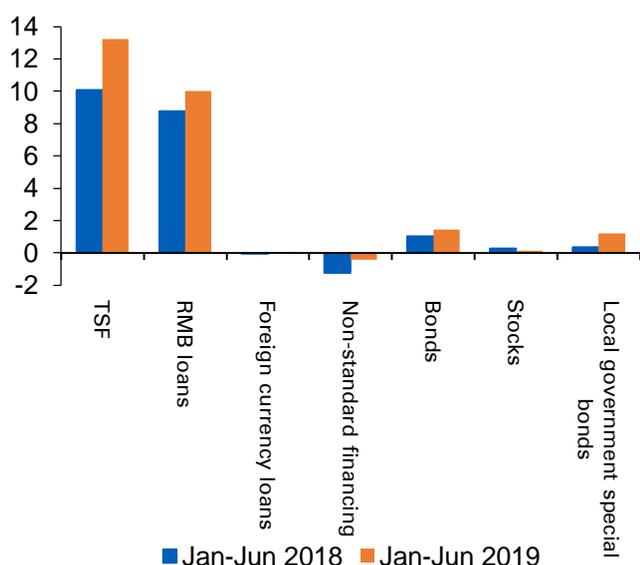
Figure 19: Broad money (M2), YOY, %



Source: Wind, KPMG analysis

In the first half of 2019, TSF added RMB13.2 trillion, which was RMB3.1 trillion more than the same period last year and represented a 30% increase. In terms of specific financing structure, new RMB loans stood at RMB 10.0 trillion, an increase of RMB1.3 trillion over the same period last year; non-standard financing (including entrusted loans, trust loans and undiscounted bills) decreased to RMB439.4 billion, which was RMB819.3 billion less than last year; and new direct financing was RMB2.8 trillion, an increase of RMB 1.1 trillion over the same period last year. Of this, new corporate bond financing stood at RMB1.5 trillion, an increase of RMB 418.3 billion over the same period last year, and new stock financing stood at RMB 120.5 billion, a decrease of RMB130.6 billion over the same period last year. New local government special bond financing stood at RMB1.2 trillion, an increase of RMB829.2 billion over the same period last year. Fiscal policy provided strong support for the growth of TSF.

Figure 20: Composition of newly added financing, RMB trillion



Source: Wind, KPMG analysis

Bank loans made the greatest contribution to the rebound in social financing growth. In terms of the credit supply structure, demand for short-term financing continued to rise. In the first half of the year, short-term loans and bill financing reached RMB3.7 trillion, an increase of RMB1.3 trillion year-on-year and accounting for 38% of all loans. However, there was no sign of significant improvement in medium- and long-term financing. Medium- and long-term loans in the first half of the year stood at RMB6.2 trillion. This

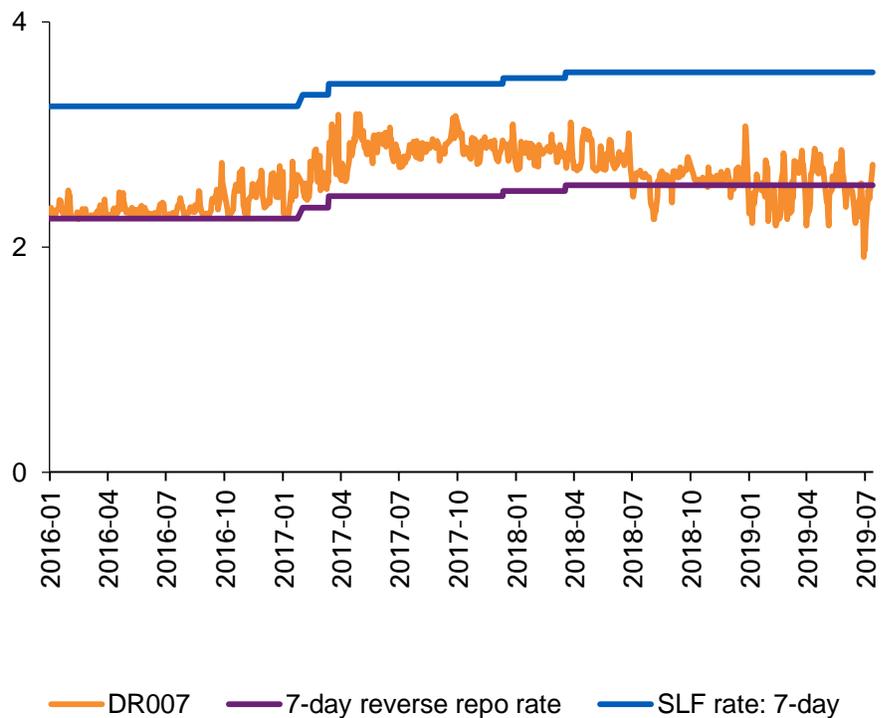
was basically no different from the same period last year and represented a lower proportion, dropping from 69% to 64%. Supported by a slight rebound in real estate sales, the medium- and long-term loans of the household sector increased by RMB 250 billion. However, medium- and long-term loans in the corporate sector decreased by RMB 240 billion year-on-year. Growth in medium- and long-term enterprise loans was weak. On the one hand, this reflected weak incentives for enterprises to expand investment, sluggish financing demand among high-quality enterprises and insufficient effective financing demand in the real economy. On the other hand, the continued impact of the Baoshang Bank takeover has led other commercial banks to remain risk-averse.

The low base effect of non-standard financing boosted the growth rate of social financing in the first half of the year. In June 2018, non-standard financing plummeted following the release of new regulations of capital management. Total non-standard financing contracted by nearly RMB 700 billion. Due to the low base effect in 2018, non-standard financing maintained a small increase this year and was the main contributor to the rebound in social financing growth. However, in the first half of 2019, the proportion of trust funds invested in the real estate sector continued to rise, provoking concern among regulatory authorities, which issued a number of policies to regulate real estate financing. For example, on 17 May, the CBIRC issued the Notice of Commencing the Work on "Consolidating Achievements in Irregularity Rectification and Promoting Compliance Building", which called for strict regulation of the real estate trusts, stressing that providing direct financing to real estate development projects where the "four certificates" are incomplete, the developers or their controlling shareholders are not up to standard, or capital has not been fully put in place is not permitted. On 13 June, CBIRC Chairman Guo Shuqing made it clear at the Lujiazui Forum that there should not be an overreliance on the real estate development economy, and that real estate enterprises must be prevented from over-squeezing the bank credit resources. On 6 July, CBIRC stated that it would strengthen risk prevention and control in the field of real estate trusts as well as require trust companies to control business growth and improve levels of risk management. As such, in the second half of the year, attention should be paid to the chain effect of real estate trust financing tightening on trust financing and three off-balance sheet financing instruments including trust loans, entrusted loans and undiscounted banker's acceptances .

The interbank market interest rate is trending downwards; the seven-day interbank pledge-style repo rate (R007) representing the average financing cost of the market and the deposit institutions' seven-day pledge-style repo rate (DR007) are far from the upper limit of the interest rate corridor (standing loan facility, SLF). Overall liquidity is still relatively abundant.

In the short term, although open market operations can alleviate the funding gap, the short-term maturity is not conducive to providing medium- and long-term financing support to the real economy. On 2 July, at the 13th Summer Davos Forum, Premier Li Keqiang announced that he would use some medium- and long-term financing tools (TMLF, targeted RRR, etc.) to support small and medium banks in lending to small and medium enterprises and private enterprises as well as further lower actual interest rate levels. PBOC will continue to implement a prudent monetary policy in the future, focusing on structural reforms in the financial supply side. This will include promoting interest rate integration and market-oriented reforms; improving the interest rate transmission mechanisms and building a triangular framework of supply, demand and financial systems; and compensating for the liquidity stratification from the perspective of the financial supply side.

Figure 21: Interbank market interest rate, %



Source: Wind, KPMG analysis

Growth in exports has declined, and downward pressure on growth in the next stage has increased

On the export side, China's export growth rate was 0.1% from January to June 2019, down 9.8 percentage points compared with the whole of 2018. Of this, the year-on-year growth rate of exports in June once more turned negative, at -1.3%, down 2.4 percentage points from May. The decline in export growth was mainly due to the following reasons. First, there was a downturn in the global economy; among the major overseas economies, the manufacturing PMIs of the US, Europe and Japan fell, and overall external demand was weak. Second, the rush to export in Q2 last year brought about a high base effect. Third, we saw the negative impact of US-China trade friction on exports.

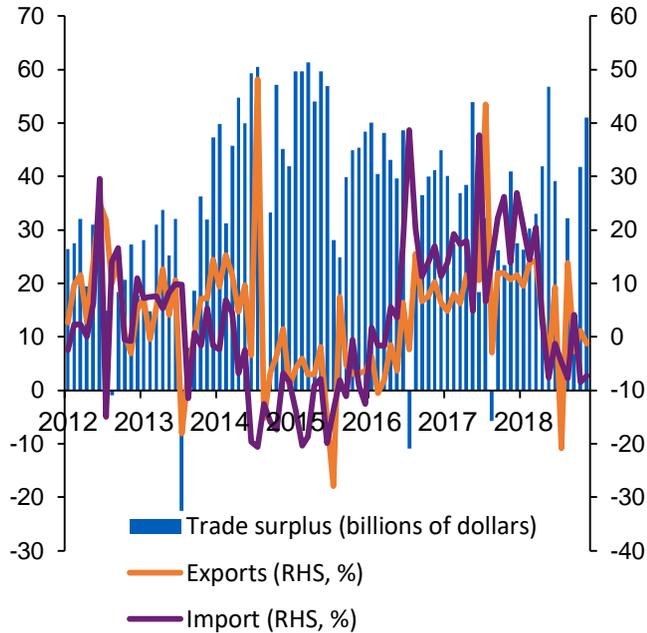
In terms of countries and regions, China's exports to the US have declined significantly. In the first half of 2019, exports to the US decreased by 8.1% year-on-year; exports to Japan also fell slightly by 1.1% from the same period last year. At the same time, however, China's exports to the EU and Southeast Asian countries maintained rapid growth, rising by 6% and 7.9%, respectively. China's exports to the US as a proportion of total exports fell from 19.2% in 2018 to 17% in the first half of 2019, while its share of exports to the EU rose from 16.4% to 17.3% — meaning the US became China's second-largest export destination.

In terms of imports, China's import growth rate was -4.3% from January to June 2019, a sharp drop of 20.1 percentage points compared with the whole of 2018. Of this, the growth rate of imports in June rose slightly by 1.2 percentage points from May, to -7.3%, mainly due to the low base of imports during the same period last year. The main reason for the decline in import growth in the first half of the year was that domestic demand remained weak. The import growth rate is expected to fall in the future.

In the first half of 2019, the trade surplus reached USD181.2 billion, an increase of USD45.9 billion compared with the same period of last year. The trade surplus in June was USD50.98 billion, an increase of USD9.25 billion from May. Due to the slowdown in export growth and the sharp drop in imports, the trade surplus is expected to continue to increase in the future.



Figure 22: Import and export activities, current monthly value



Source: Wind, KPMG analysis

US-China trade friction has continued to worsen. In May this year, negotiations broke down as President Trump announced that from May, tariffs on USD200 billion of Chinese imports would be raised from 10% to 25% and US companies would be prohibited from supplying components to Huawei, heightening the friction. At the G20 summit in late June, China and the US finally agreed to restart economic and trade negotiations. The US said that during the negotiation period, it would no longer add new tariffs to Chinese exports, and would allow US companies to supply components to Huawei; helping to ease the US-China trade conflict. Uncertainty in the external environment, coupled with the global economic

downturn, has led to sluggish external demand. Trade is expected to remain under pressure in the future, and downward pressure on export growth will increase over the next period. The State Council, at its executive meeting held on 10 July, proposed continuing to reduce the overall level of import tariffs, improve export tax rebate policies and other measures, as well as stabilize foreign trade by further expanding China's opening up to the outside world.

On the whole, the RMB exchange rate had been relatively stable in 2019 until the reappearance of trade friction in May, which brought new pressure to the currency. The RMB exchange rate rose from 6.8118 on 10 May to 6.9332 on 10 June, reaching the highest level in recent times. After the first G20 summit in the middle of June, US-China trade friction eased, trade negotiations got back on track, the RMB exchange rate started to rebound, and the RMB depreciation pressure eased overall; the CFETS RMB exchange rate index has shown a downward trend since May this year but began to rebound after the end of June, rising from 92.7 on 28 June to 93.2 on 12 July and causing the market to revise its previous pessimism.

Looking at the US dollar index, the dollar has entered the end of a strong cycle. Although the US dollar index rebounded slightly in early July, the US dollar index is expected to fall in the second half of the year as the Fed enters the interest rate cut cycle. It is expected to close at around 94-95 at the end of the year. As the US dollar index continues to fall, the RMB exchange rate will stabilize and may even appreciate slightly. The RMB exchange rate is expected to remain at around 1:6.8 at the end of the year.

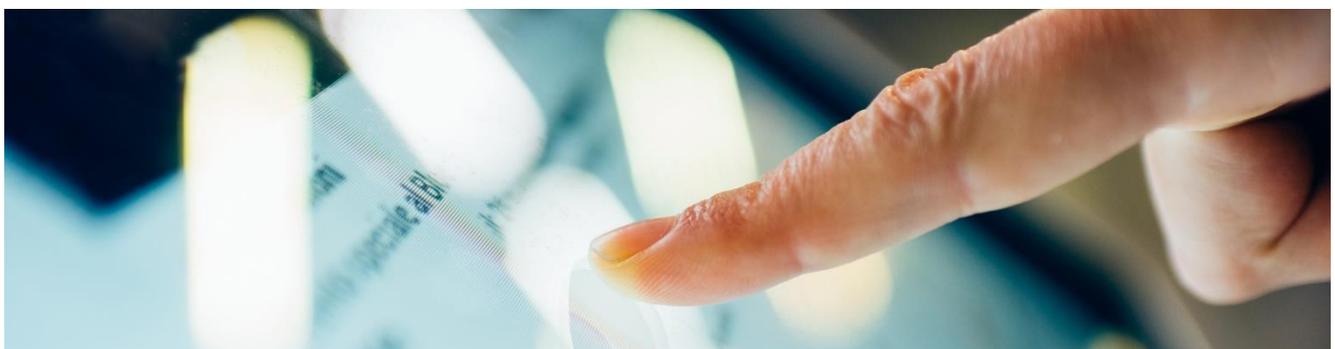
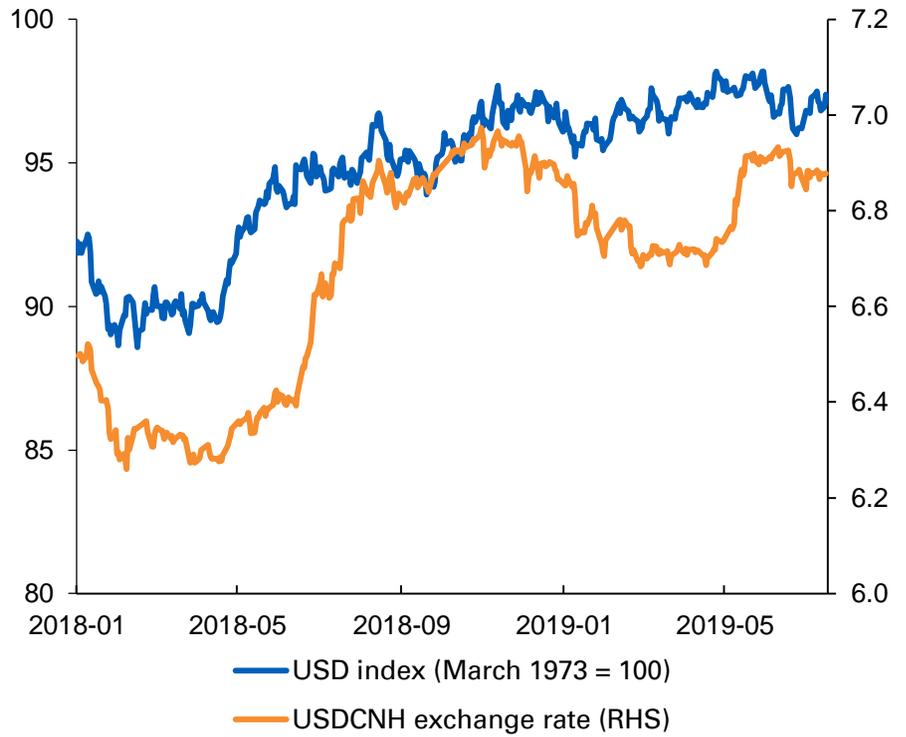
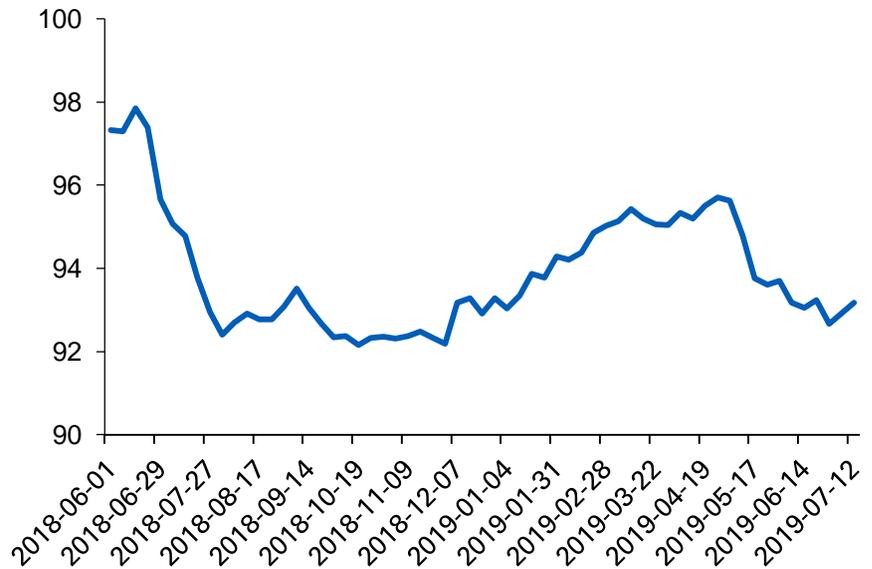


Figure 23: USD index and RMB exchange rate



Source: Wind, KPMG analysis

Figure 24: CFETS RMB exchange rate index



Source: Wind, KPMG analysis

2

Policy analysis



The Ministry of Industry and Information Technology speeds up the commercialization of 5G

On 6 June 2019, the Ministry of Industry and Information Technology issued 5G commercial licenses to China Telecom, China Mobile, China Unicom and the China Broadcasting Network (CBN), officially marking China's entry into the era of commercial 5G. The issuance of commercial 5G licenses is set to boost the creation of a domestic 5G network and increase the scale of investment; stronger policy support will also help drive the development of the 5G industry chain.

Table 1: Major events in 5G since the end of 2018

10 December 2018	The Ministry of Industry and Information Technology issued low- and medium-frequency 5G test frequency licenses to China Telecom, China Mobile and China Unicom, ushering in the start of large-scale 5G testing across the country.
21 December 2018	The Central Economic Work Conference was held in Beijing. It proposed accelerating the pace of 5G commercialization and strengthening the construction of new infrastructure such as artificial intelligence, the industrial Internet and the Internet of Things (IoT).
30 March 2019	The world's first 5G network in an administrative region was built in Shanghai and trials were started.
6 June 2019	The Ministry of Industry and Information Technology revised the Telecom Business Classification Catalogue (2015 Edition) to add a category for 5G. On the same day, 5G commercial licenses were officially issued to China Telecom, China Mobile, China Unicom and the CBN, marking China's official entry into the era of commercial 5G. China became the fifth country in the world to launch 5G services after South Korea, the US, Switzerland and the United Kingdom.
25 June 2019	Huawei's Mate 20 X (5G) dual-mode mobile phone received the first terminal license for a 5G network. Its license number is 001 — this means that a 5G terminal finally made the move from factory to market, signifying the start of the 5G era.

► 5G base station construction layout

Base station construction is the only way for operators to build 5G networks, and the number of base stations will directly affect the coverage area and network capacity of each operator's 5G services. At present, three major operators have announced base station construction plans for 2019.

Table 2: Base station construction plans for three major operators in 2019

Company	No. of 5G base stations to be built in 2019	5G investment amount (RMB billion)
China Mobile	30,000-50,000	17.2
China Telecom	20,000 (planned)	9.0
China Unicom	20,000 (planned)	6.0-8.0

Source: Public Information, KPMG analysis

► 5G pilot cities

Following the release of commercial 5G licenses, China's first batch of 5G pilot cities were unveiled. China Telecom, China Mobile and China Unicom will each create networks in at least 40 cities this year. 5G services will be launched in selected cities. Information from the media indicates China Mobile and China Unicom have selected the same 40 cities. China Telecom has not disclosed the complete list of its 40 cities, but Yingtan and Qionghai will be the pilot cities exclusive to China Telecom.

Figure 25: China Mobile, China Unicom's first batch of 5G cities



Source: Public Information, KPMG analysis



Figure 26: China Mobile, China Unicom's first batch of 5G cities



Source: Public Information, KPMG analysis

► **5G device strategy**

At present, the three major operators have already unveiled their 5G plans. All will begin early commercial operations in 2019 and wide-scale commercial operations in 2020. Each operator has a different focus in their 5G device strategy: China Telecom is sticking by innovative, smart 5G devices that work on all major networks; China Unicom is leaning toward being the first to release a 5G device; and China Mobile is promoting its 5G device "Forerunner Initiative".

Table 3: Three major operators' 5G investment plans

Operator	5G terminal plan
China Mobile	Launch of the 5G device Forerunner Initiative. Release of a 5G mobile and the first China Mobile-branded 5G phone devices. Acceleration of innovation and the commercial applications of 5G chips and devices. Centralized procurement of 10,000 sets of 5G devices. Investment of RMB 1-2 billion for device subsidies to carry out trials and develop user affinity.
China Unicom	Launch of the 5G Forerunner Initiative. Leaning towards starting with light subsidies for 5G devices; launch of 5G device NSA networks in Q1 2019; expected to launch 5G device NSA trials for commercial use and release new 5G terminal in Q2 2019; 5G device Non-Standalone/ Standalone (NSA/SA) commercial use trials in 2019 Q3; large-scale market launch of 5G commercial devices in Q4 2019. Establishment of a joint innovation laboratory for 5G terminals and a team of 5G device experts (headquarters) at the same time.
China Telecom	Focus on 5G for all major network, innovation in ubiquitous smart devices. Release of a 5G prototype in September this year, with technical verification for 60 units. Release of 1,200 test devices in March 2019. Release of pilot commercial devices in Q3 2019, with end-to-end network and commercial testing for 2,500+ devices.

Source: Public Information, KPMG analysis

The CBN is the country's fourth 5G communications operator after China Unicom, China Mobile and China Telecom. In 2010, the State Council had proposed the requirement for the creation of a national cable TV network in the Overall Plan for Promoting the Integration of the Three Networks. Preparations for the creation of the CBN began the same year. According to the plan, the creation of the CBN will unify cable networks throughout China into a single market entity. It will be licensed as a broadband network operator and become the "fourth operator" after China Mobile, China Telecom and China Unicom, as well as a catalyst for "triple play" integration.

On 5 May 2016, the Ministry of Industry and Information Technology issued a Basic Telecommunications Business Operation Permit to the CBN, providing approval for the CBN and its holding subsidiary China Cable TV Network to operate domestic Internet data transmission services and domestic communication facilities services. This makes the CBN the fourth largest operator in China.

The CBN differs from the other three operators in its creation of a 5G network. Speaking of the CBN's plan for future growth, Vice President Zeng Qingjun has said that the 5G network will be a high-tech network that integrates modern communication and Internet of Things (IoT) services for broadcasting and television, enabling the vast majority of users to truly experience modern ultra-high-definition TV. The smart radio and television services brought by the modern IoT, and even the "socialized" smart city services, will enable China's technology services to lead the way in 5G."³

KPMG analysis⁴

The telecom sector has always been a focus for KPMG China, and we have kept a close eye on local and global developments in 5G. Our interpretation is as follows:

5G technology provides strong support for enterprise customers through five major value drivers.

Globally, 5G has entered a critical phase of commercial deployment. Prior to the age of 5G, 2G, 3G and 4G technology chiefly improved communication between people. The major impact of 5G commercial licensing is that, thanks to five value drivers (capacity, reliability, latency, bandwidth and efficiency), its future development will not just impact people-to-people communication but also bring major improvements to machine-people and machine-machine communication. In China, 5G will be a major network tool providing further support for the development of artificial intelligence, big data analytics and cloud computing.

Operators investing heavily in building emerging networks must consider the profit and return cycles they will bring. Considering the value and potential benefits of 5G technology, we believe that in addition to serving

³ Ministry of Industry and Information Technology awards 5G licenses for China Broadcasting Network; effectively awards it to the nationwide cable and TV industry, Interface News, June 2019, <https://www.jiemian.com/article/3193810.html>

⁴ For more details, please refer to Ministry of Industry and Information Technology officially issues 5G commercial licenses! KPMG analyzes 5G technology implementation path and potential market value, KPMG China, June 2019, <https://home.kpmg/cn/zh/home/social/2019/06/kpmg-analyzes-5g-technology-implementation-path-and-potential-market-value.html>

users in the public market, operators should focus on corporate customers, providing strong support for empowering these enterprise clients.

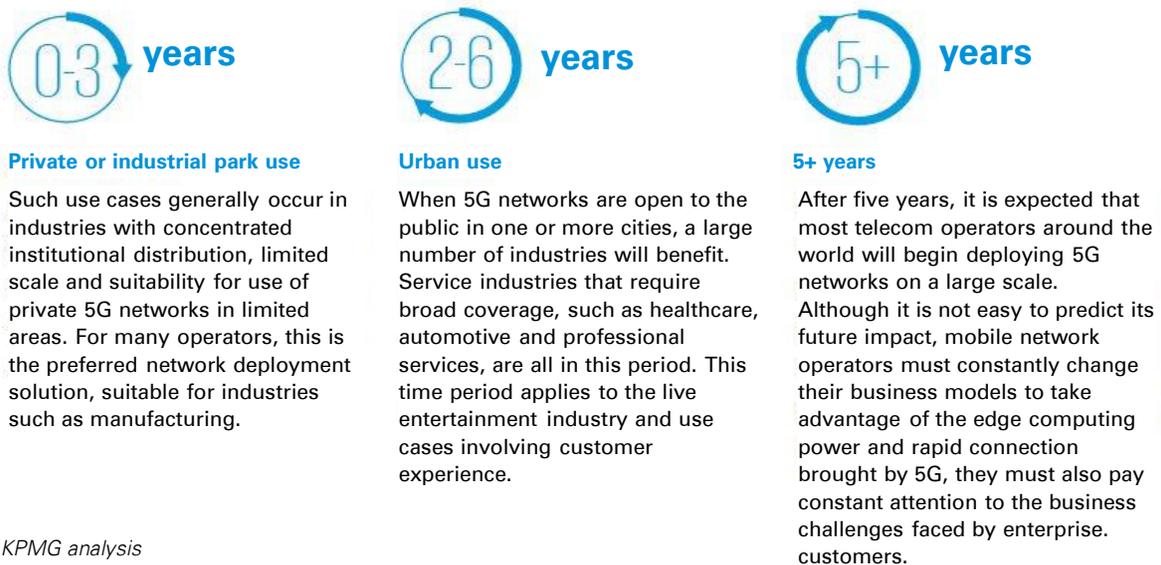
Locked into three major development cycles, 5G technology will have a far-reaching impact on different vertical industries.

After evaluating the nature of the sector, we believe that 5G technology's development cycles in vertical industries will cover the following three time periods: please see the figure below for details.

5G has a potential global market value of USD 4.3 trillion.

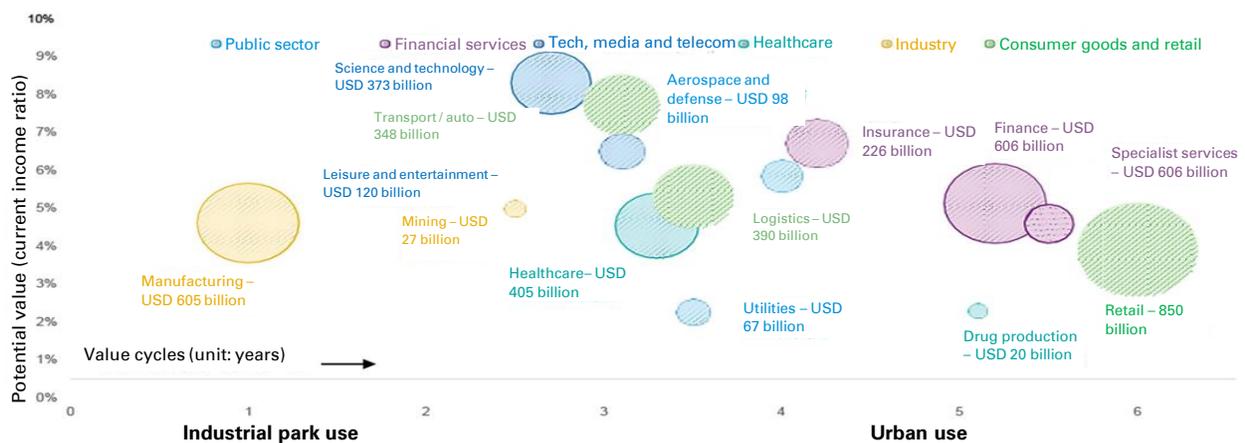
According to our estimates, the current potential value of 5G technology in the global vertical market is expected to reach USD 4.3 trillion over a period of 0–6 years. For operators, retail, finance, manufacturing and healthcare are 5G applications that can maximize revenue.

Figure 27: 5G technology value cycles



Source: KPMG analysis

Figure 28: Analysis of the 5G technology value cycle in vertical industries



Source: KPMG analysis

Vocational education reform enters a new stage

On 13 February 2019, the State Council issued the National Vocational Education Reform Implementation Plan. The plan stressed that in 5–10 years, vocational education should complete the shift from government-organized management to government oversight and diversified "social" management. The focus was on the reform of vocational education and piloting the "1 + X" model that offers graduates with an educational qualification and a number of skills certificates. Since the beginning of the year, vocational educational policies have come thick and fast; government support has gradually intensified, and top-level design has gradually improved, proving that the state attaches a high value to vocational education.

China's educational system is chiefly divided into pre-school education, compulsory education, high school education (ordinary high school education and secondary vocational education), higher education (higher vocational colleges, general undergraduate institutions of higher learning) and continuing education (part-time education and occupational training). The vocational education system covers academic and non-academic education. Academic education includes full-time secondary vocational education, higher vocational education, undergraduate vocational education and part-time academic education (adult colleges, online education, etc.). Non-academic education includes continuing education such as vocational training.

Vocational education is a category of education that serves the needs of economic and social development. Targeted at the front line of economic and social development as well as production services, it nurtures high-quality workers and technically skilled personnel, and promotes the sustainable career development of all workers. Driven by China's economic structure and the transformation of traditional industries, there is growing demand for talent in the market. The establishment of a modern vocational education system is of great significance to upgrading China's economy, creating a greater "talent dividend", promoting employment and improving people's livelihoods. Following advances in industry and developments in science and technology, the modern vocational education system has increasingly become an important support for national competitiveness.

Article Nine of the National Vocational Education Reform Implementation Plan proposes that, drawing on the "dual system" model and distilling the experiences in modern apprenticeships and company apprenticeships, schools and enterprises should work together to formulate programs for nurturing talent; incorporate new technologies, new techniques and new norms into teaching standards and teaching content; and focus on the practical training of students.

Germany is the model of the "dual system" of vocational education. This system is based on the mutual promotion of the real economy and vocational education and is a major element in the core competitiveness of the country. The "dual system" of education refers to the two locations in which participants are trained: one is vocational schools, whose chief

Table 4: Major development policies for vocational education in 2019

Date	Regulation	Regulatory Authority	Summary
13 February 2019	Notice of the State Council on Printing and Distributing the Implementation Plan of the National Vocational Education Reform	State Council	Launch testing for the "1+X" certificate system; draw on the "dual system" and other models, sum up the experiences in modern apprenticeship programs and new apprenticeship pilot programs, jointly study and formulate talent training programs.
23 February 2019	The Central Committee of the Communist Party of China and the State Council issue China Education Modernization 2035	State Council	Accelerate the development of modern vocational training and continually optimize the structure and layout of vocational education; encourage the organic interconnection and deep integration of vocational education and the development of industry; concentrate efforts on creating a number of top-notch vocational colleges and degrees with Chinese characteristics.
23 February 2019	The General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issue the Implementation Plan for Accelerating the Modernization of Education (2018-2022)	State Council	Build a new system for nurturing and training talent in industry; create a modern vocational educational system with an equal emphasis on academic education and practical training; vigorously promote the integration of industry and education and collaboration between schools and enterprises; launch national pilot programs that bring together companies and colleges.
1 April 2019	The Ministry of Education and the Ministry of Finance issue the Opinions on Implementing High-level Higher Vocational Schools with Chinese Characteristics and Degree Construction Plans	Ministry of Education, Ministry of Finance	Focus efforts on establishing a group of world-class vocational colleges and degrees that lead reform, support development and have Chinese characteristics.
3 April 2019	Notice of National Development and Reform Commission and Ministry of Education on Printing and Distributing the Implementation Measures for Constructing Industry-Education Integrated Enterprises (Trial)	Development and Reform Commission, Ministry of Education	Focus on nurturing high-quality enterprises that actively promote the transformation and upgrading of the manufacturing industry, enterprises in industries with an urgent need. Such industries included modern agriculture, intelligent manufacturing, high-end equipment, new-generation information technology, biomedicine, energy conservation and environmental protection, as well as pensions, housekeeping, childcare, and health. Priority consideration given to enterprises that are closely aligned with China's major strategies, have a strong demand for technical and skilled personnel, are actively increasing investment in human capital, have great development potential and have made outstanding contributions to fulfilling their social responsibility.
10 April 2019	Four ministries including the Ministry of Education issue the "Educational Certificate + Certain Vocational Skills Level Certificates" System in Colleges and Universities"	Four ministries including the Ministry of Education	In 2019, "educational certificate + several vocational skill level certificates" pilot programs were launched in vocational colleges and applied undergraduate colleges.
13 May 2019	Notice of the State Council on Printing and Distributing the Implementation Plan for Enrolment Expansion in Higher Vocational Education	Six ministries including the Ministry of Education	Expanded enrollment of 1 million students in higher vocational education; establishment of 2019 provincial higher vocational education enrollment programs; focus around top vocational colleges and degrees where there is high demand in the regional economy, a significant social lack, and high employment, as well as poverty-stricken areas — particularly contiguous poverty-stricken areas.
5 July 2019	Notice of Ministry of Finance on Adjusting the Scholarship and Subsidy Policy for Vocational Colleges	Ministry of Finance	Broaden scholarship coverage; increase bursary criteria; establish national secondary vocational education scholarships in higher vocational colleges.

Source: Wolters Kluwer, KPMG analysis

function is to impart specialist occupational expertise, and the other is the company or public institution outside the school, whose chief function is to allow students to learn professional skills inside a company.

The focus of the "dual system" is learning for the sake of future employment. The ratio of theoretical teaching and practical teaching is 30% and 70%, or 20% and 80%. The chief aim of theoretical teaching is to meet practical needs, ensuring the quality and efficiency of training. Students of the "dual system" receive two types of certificates: a diploma provided by the vocational school, and a training certificate certified by the German Chamber of Commerce and Industry.

Each year, the German government allocates significant funds to support vocational education and has released major bills to ensure its development. Germany has introduced the Professional Education Law and the Federal Vocational and Technical Education Law to provide a strong legal guarantee for the development of vocational education and provide a more scientific path for its evolution. The government has been an important force in driving the progress of vocational education.

KPMG analysis

The "dual system" educational model is the best way for trainees to combine theory and practice. Working in companies gives them an early familiarity with the division of labor and the ways that companies work, laying a foundation for future employment. In factories, they have access to the latest machines and technical equipment and apply the expertise they have learned in vocational school, allowing them to put their knowledge to use.

At present in China, vocational education is not highly valued among the different categories and levels of education. In the National Vocational Education Reform Implementation Plan, which is regarded as a blueprint for top-level design and construction of vocational education in the new era, the first sentence states that "vocational education and general education are two different types of education that are of equal importance"; this not only articulates vocational education's important place in China's educational system but also proposes a future form of development for vocational education in China.

In the last two years, China's leaders have repeatedly expressed their support for the development of this area. In the 2019 executive meeting of the State Council, Premier Li Keqiang brought up vocational education and discussed the expanded enrollment of one million students in higher vocational colleges; the decision was made to expand the coverage of higher vocational college scholarship, increase bursary criteria, and establish a national scholarship for secondary vocational education. In July 2018, on the occasion of the fifth round of Sino-German government talks, the Ministry of Education and the German Federal Ministry of Education and Research signed the Joint Intentional Statement on Deepening Cooperation in Higher Education and Vocational Education, which will see the introduction of vocational teacher training programs under the frameworks of Made in China 2025 and Industry 4.0. Each year, heads and tutors from Chinese vocational schools will be sent to Germany for training in order to gain a deeper knowledge of how Germany integrates production and education/schools and companies. The two sides will encourage vocational colleges and enterprises to provide joint training, work together to formulate teaching and training programs, and nurture the practical talent that industrial enterprises require. Further government support is expected to assist the development of vocational education.

Vocational education is of utmost importance to China's development. Competition in the world economy is largely competition in science and manufacturing. This kind of competition not only requires management and research talent but also the very best skilled craftspeople. To promote the shift from Made in China to Created in China, from Chinese speed to Chinese quality, and from a large-scale manufacturer to a leader in manufacturing, requires creating a team of high-quality industrial workers and training more craftspeople fit for a major national power. At present, promoting high-quality development and expanding the real economy require a sufficient number of skilled technical personnel as support. Vocational education plays the role of imparting technical skills and nurturing diverse talent, meeting market demand, and launching vocational education and training on a greater scale. It can help students master a skill, achieve higher levels of quality and seize more fulfilling opportunities in order to gain employment or start their own businesses.

National network security deployment speeds up once more

On 13 May, the State Administration for Market Supervision (SAMR) and the Standardization Administration of China (SAC) held a press conference to mark the official release of core MLPS 2.0 series of national standards ("MLPS 2.0 series of standards"), including the GB/T 22239-2019 Information Security Technology–Baseline for Classified Protection of Cybersecurity, the GB/T 25070-2019 Information Security Technology–Technical Requirements of Security Design for Classified Protection of Cybersecurity and the GB/T 28448-2019 Information Security Technology–Evaluation Requirements for Classified Protection of Cybersecurity.

MLPS 2.0 standards apply to supervision and management of the creation, operation, maintenance and use of networks both in China and abroad. MLPS 2.0 standards are catered to changes in the network environment brought about by new technology. They standardize the work of multi-level protection in the areas of cloud computing, the IoT, the mobile Internet and industrial control, and provide full implementation of the Cyber Security Law. To give associated industries an in-depth understanding of MLPS 2.0 standards and help them successfully comply with these standards, KPMG has carried out an extensive analysis of MLPS 2.0 and provided suggestions for how companies can comply with them.

On 30 June, the Ministry of Industry and Information Technology officially released the National Cyber Security Industry Development Plan. The plan states that by 2020, industrial parks will be used to drive the scale of Beijing's cyber security industry to more than RMB 100 billion, taking GDP growth to more than RMB 330 billion and creating no less than three backbone enterprises with an annual income of more than RMB 10 billion.

The release of the National Cyber Security Industry Development Plan offered further affirmation of China's strategic position on cyber security. It went a long way toward guiding the future development of the information security industry and could usher in rapid growth in the domestic security market. In addition, the Ministry of Industry and Information Security issued the Special Action Plan for Enhancing Network Data Security Protection Capabilities in the Telecom and Internet Industry, with the aim of increasing the protection of network data in the industry.

Cyber security refers to the protection of hardware, software and data in network systems, preventing them from being damaged, altered or leaked due to accidental or malicious reasons so that systems run continuously and reliably, and network service is not interrupted. Cyber security chiefly includes the network system data security, network data transmission security, network data content security and operating system security.

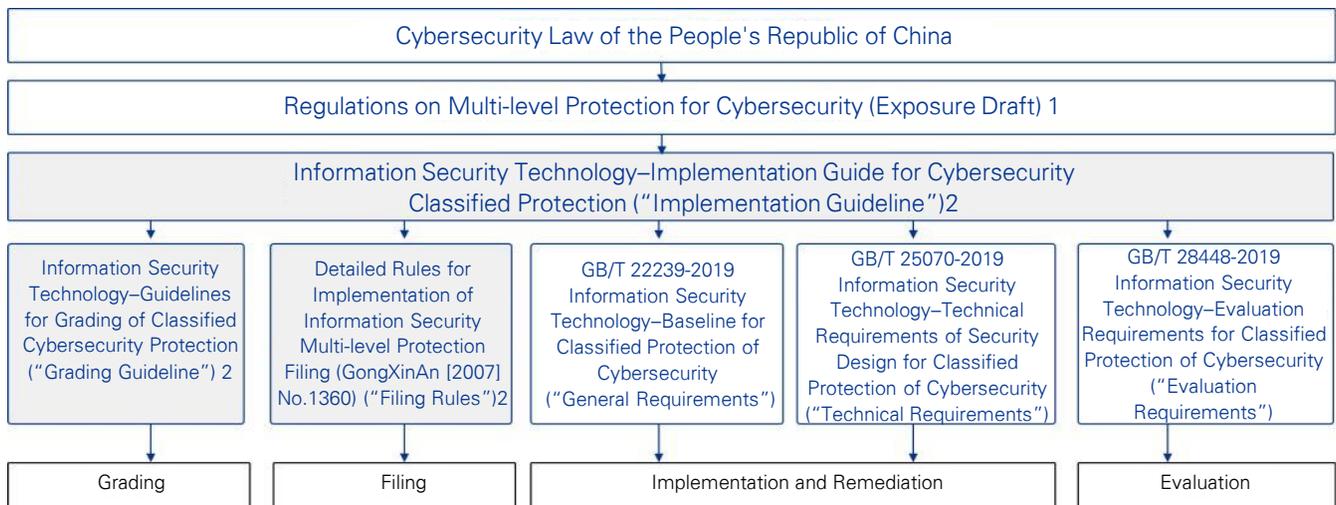
► **MLPS 2.0 brings new challenges⁵**

Based on the network operator's security protection obligations stipulated by the Network Security Law, the MLPS regulations clarified and specified network operators' network security and protection obligations with respect to different tiers of security and protection. This is a new change to MLPS 2.0 as a "regulation". It is not only the focus of public security departments but also the focus of construction and evaluation by network operators. Network operators should refer to the requirements of the MLPS 2.0 standards:

- Grading: Establish security grades and entities and specific individuals responsible for security.
- Launch network grading and filing, cyber construction and rectification, as well as grading evaluation and self-evaluation.
- Introduce relevant management and technical measures and fulfill security protection obligations.

With the rapid development of the next generation of information technology such as the mobile Internet, big data, cloud computing and artificial intelligence, there has been explosive growth in network- and data-based services and applications. An increasing number of network security risks are exposed in rich application scenarios, which on a global scale have a wide-ranging impact. At the same time, there has been continual improvement in raising the awareness of data security among countries, enterprises and individuals. Each year cyber attacks and cybercrime activities result in significant losses and threats, presenting tremendous challenges to the development and governance of the Internet in different countries.

Figure 29: MLPS 2.0 system



Source: KPMG analysis

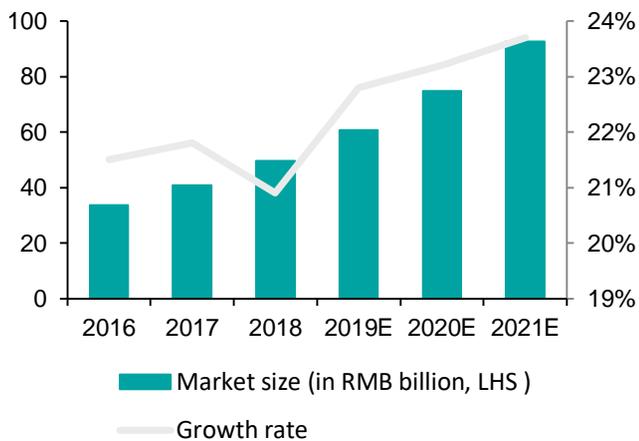
Note 1: Based on the MLPS Administrative Measures, the Ministry of Public Security, together with other relevant departments, has drafted the MLPS Regulation. Currently, the MLPS Administrative Measures are still active, while the MLPS Regulation is in draft inviting public reviews and comments.

Note 2: Part of the MLPS Regulations are still in the process of getting approved.

⁵ For more details, please see MLPS 2.0: Insights and Strategies, KPMG China, May 2019, <https://home.kpmg/cn/zh/home/insights/2019/05/mlps-insights-strategies.html>

According to statistics, the global cybersecurity market was worth USD 126.98 billion in 2018, an increase of 8.5% YOY. In 2018, China's cyber security market was worth USD 49.52 billion, a growth rate of 20.9%. With the development of the digital economy and the gradual advancement of the IoT, network security is a necessary guarantee for the development of the digital economy, and investment in it will continue to increase until 2021, when China's network information security market will be worth RMB 92.68 billion⁶. Data indicates that growth in China's network security market is far above global levels. If measured according to the global average, the growth space of China's network security market has nearly doubled, making it a market worth hundreds of billions of yuan.

Figure 30: China's network information security market size and growth



KPMG Analysis

A senior figure from the Network Security Administration of the Ministry of Industry and Information Technology has said that data security management is an emerging field. As countries all over the world get to grips with the work of legislating and monitoring cybersecurity, data security management in China is faced with two main challenges.

First, a balance must be struck between development and security. Faced with the new circumstances and challenges brought about by the rapid development of big data, some companies have, when grappling with vast data resources, placed more emphasis on collection than security when it comes to the safety

of their data; there is also an urgent need to guide and encourage enterprises to fulfill their data security responsibilities. At the same time, trading data is what brings it to life; its value increases when it is shared. Under the precondition of maintaining data security, the development and use of data should be actively promoted in order to enhance security capabilities and help the high-quality development of the digital economy.

Second, data security faces more risks and challenges in the era of big data. Managing data security involves multiple steps such as data collection, storage, use, transmission and sharing. Traditional network security supervision methods and capabilities struggle to effectively cope with the new environment where data as a production material is ubiquitous. Management methods must be continuously improved in practice to further strengthen the protection and management of data throughout its lifecycle.

KPMG analysis

At present, there are various indications of the arrival of a "springtime" in China's cyber security industry. Driven by strong state support and significant market demand, cybersecurity in China is on the verge of a period of breakneck growth. Since establishing the National Security Committee and the Central Committee of Cybersecurity and Informatization of the CPC Central Committee, China has established an important leadership and decision-making body for cyber security in the country. Over the past six months, the Internet Information Office has solicited opinions on various regulations such as the Network Security Vulnerability Management Regulations, Data Security Management Measures and Network Security Review Measures, stipulating how network product and service providers, operators, and third-party organizations and individuals should deal with vulnerabilities and prepare at the legal level against the use of vulnerabilities to threaten network security.

The rapid development of big data and the digital economy has been accompanied by a rise in the economic value of data. Cyber security involves hardware, software, data, services and many other areas. Industries in every sphere of society are

⁶ 2019 White Paper on China's Cyber Security Development, CCID Consulting, 2019

undergoing digital transformation; everything will be driven by data, which is set to become a basic production material in all fields. As such, the issue of data security affects all industries and involves products, services, staff, sharing mechanisms, etc. Cyber security is also an important part of national security. The protection of personal privacy is intertwined with commercial interests and national security. In the third National Cyber Security Week held in 2018, President Xi Jinping spoke of how maintaining network security requires the participation of government, enterprises, social organizations and the majority of Internet users. He said there is a need to establish the correct view toward cyber security and actively develop the network security industry. As such, promoting cooperation between the government, companies, industries, third-party organizations and other stakeholders is of utmost importance. Only by forming effective coordination through their respective advantages will it be possible to establish a collaborative governance model suited to the current digital age.

digital technologies and the expansion of application scenarios, some prominent cybersecurity issues should be given special attention. Cybersecurity firm Fortinet has listed five threats to watch out for in 2019: the sustained use of AI Fuzzing, zero-day vulnerabilities, zombie networks, focused attacks and machine learning. The cyber world is constantly changing. Only by building capacity and openness in talent, technology and data to create a stable and orderly online environment, can there be further promotion of sustainable and healthy development of the digital economy progress of data security governance.⁷

6 Five Major Cyber Threat Trend Forecasts in 2019, Fortinet, 2018



Three ministries promote the upgrading of key consumer goods.

In June, the Development and Reform Commission and other departments issued the Notice on Printing and Distributing the Implementation Plan for Promoting the Recycling of Key Consumer Goods and Unblocking Resources (2019-2020) (referred as “the Plan” below). Focused on the fields of automobiles, home appliances and consumer electronics, the plan is centered around promoting three major iterations in consumption: one is promoting the conversion of gasoline vehicles to new energy vehicles; the second is encouraging the commercialization of 5G mobile phones as soon as possible and accelerating the creation of 5G infrastructure to create the conditions for a revolution in consumption based on 5G; and the third is continuing to promote consumer goods, particularly the shift to green household consumer goods.⁸

Over the past two years, in response to changes in the consumer market, China has introduced a series of measures to reduce taxes and fees and expand openness. Measures were taken to promote upgrading in key consumer products and encourage the formation of a strong domestic market. At the same time, various localities have also introduced a series of detailed policies and measures to promote consumption, particularly with regard to key commodities such as automobiles and home appliances.

In the first half of the year, growth in consumption hit 60.1%, contributing more than 60% to economic growth. Internal upgrades to consumption continue to advance. The total retail sales of consumer goods increased by 9.8% year-on-year in June, up by 1.2 percentage points from May — one reason for which is that auto sales were better than expected. This was chiefly down to the switch from “National V” to “National VI”, which led to an increase in sales and offers on vehicles in June. Excluding the above units, growth in auto sales increased by 17%, driving the total retail sales of consumer goods up by about 1.6 percentage points.

As another important area in the consumer market, last year's consumption of household appliances accounted for the fifth largest proportion of total retail sales of consumer goods. According to Wang Wei, director of the Market Economy Research Institute of the Development Research Center of the State Council, the most important policy measures to encourage home appliance consumption are to promote the overall transformation and upgrading of the home appliance industry and better meet the needs of residents' high-quality home appliances. At present, the penetration rate of household appliances in China is already very high. The number of home appliances per 100 households in cities is heading towards saturation, but there is still room for replacement and upgrades, especially for green, energy-saving and smart appliances.

KPMG analysis

The promulgation of the Plan has undoubtedly helped stimulate residents' consumption potential, but this is only a prelude to the release of the consumer policy dividend. Among the major areas of consumption of automobiles, household goods, culture and tourism, the direction for nurturing new consumption growth is clear; associated rules are being accelerated and improved and they are expected to be introduced soon. Creating regional consumption centers and international consumer cities, and implementing consumption policies for automobiles, home appliances, data, aged care, child-rearing and housekeeping will play a positive role in consumption growth in the second half of the year. Advancing and introducing individual tax reforms and lowering the personal tax burden will also help boost consumption to a certain extent.

⁸ Compared to the Implementation Plan for the Further Development of Renewable Consumption of Automobiles, Home Appliances, and Consumer Electronics to Promote Circular Economy Development (2019) (Draft for Comment) issued by the Development and Reform Commission in April, the formal plan removed some content and the stimulus was relatively moderate.

New special debt financing policy announced.

On 10 June, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issued the Notice on Effectively Conducting the Issuance of Special Bonds for Local Governments and Ancillary Financing of Projects. Compared with previous related policies, a major highlight of the new policy is the use of special bonds as capital for eligible major projects.

Project capital of investment projects refers to the amount of capital contributed by investors to total project investment. For investment projects, it is a non-debt fund and the project legal person does not bear any interest or debts for this portion of the funds. Investors enjoy owner's rights and interests in accordance with the proportion of their capital contribution, and may also transfer their capital contributions, but may not withdraw them in any way.

For the provisions on project capital, the latest policy is the Opinions on Promoting the Sound Development of Public-Private Partnership issued by the Ministry of Finance in March this year, which clearly states that debt funds should not act as project capital in PPP projects. In the Notice on Further Strengthening the Standardized Management of Public-Private Partnership (PPP) Demonstration Projects issued in 2018 and the Notice on Regulating the Management of the Project Database on Public-Private Partnership (PPP) Integrated Information Platform issued in 2017, it is pointed out that debt capital of the project's contracting firm must not be used as the funding capital for major projects. This often-mentioned regulation was interpreted by the market as strict regulation of the capital system for fixed-asset investment projects at the regulatory layer. For the market, strict management of the capital system will bring more challenges to local government and social capital. As such, the new policy permits the use of special bonds as capital for eligible major projects,

exceeding market expectations to some extent.

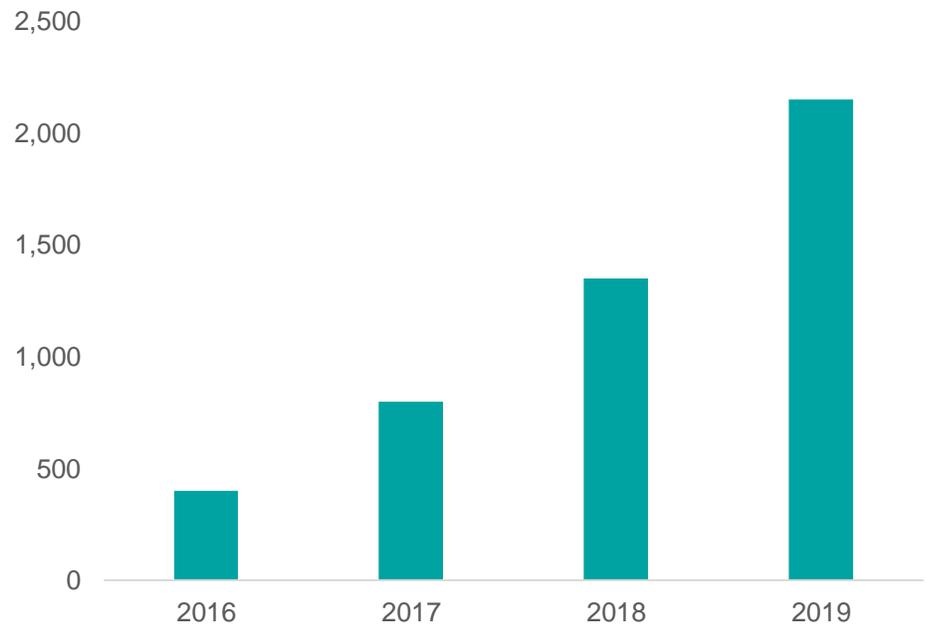
Some PPP analysts believe that allowing special debt to be used as major project capital may be largely down to the issuance of special bonds in Q1, a large part of which cannot be invested for various reasons including issues with local government capital.

Concerning issuance scale, the 2019 Government Work Report requires a significant increase in the scale of local government special bonds this year. It proposes arranging RMB 2.15 trillion of local government special bonds (a year-on-year increase of RMB 800 billion) with a focus on supporting the construction and flaw remediation of ongoing projects. In 2016, 2017 and 2018, the amount of new local government special debts was RMB 400 billion, RMB 800 billion and RMB 1.35 trillion, respectively. Evidently, the amount of new local government special debts is increasing every year, mainly because a decline in land sales revenue and tax cuts have led to a reduction in fiscal revenue. At the same time, the government has implemented a proactive fiscal policy for countercyclical regulation and control, using the issuance of local government special bonds to compensate for the fiscal funding gap and maintain economic stability.

As a result, the market is paying more attention to increases in local government special bonds. According to new data released by the Ministry of Finance, as of the end of June, RMB 1.39 trillion of new local special bonds had been issued, which was 65% of the new annual limit. Both the new policy and the Opinions on Properly Issuing Local Government Bonds released by the Ministry of Finance in April this year proposed speeding up the issuance of special bonds and striving to complete the issuance of new bonds by the end of September.



Figure 31: New local government special debt (RMB billion)



Source: Government Work Report, KPMG analysis

Speaking of the use of funds, a senior figure in the Ministry of Finance has said that to prohibit the use of special bonds as capital for major projects, the policy increases leverage at every level, permitting the use of some special bond funds as a certain proportion of project capital under three conditions. First, it should be a highly influential project supported by special bonds and complying with the major decision-making arrangements of the Party Central Committee and the State Council. Second, the main fields should be nationally supported railways, national highways and local high-speed highways that support the implementation of major national strategies. Third, when assessing project income, after repayment of the principal and interest of special bonds, other operating special incomes have items that can be marketed to financial institutions.

In terms of capital ratio, to date, project capital has been adjusted three times — in 1996, 2009 and 2015. By category, according to the Notice of the State Council on Adjusting and Improving the Capital System of Fixed Asset Investment Projects issued by the State Council, the minimum capital ratio of fixed-asset investment projects in the infrastructure and public service areas covered by PPP is 20%; ports, coastal and inland navigation, and airport projects are 25%, and integrated underground urban pipe corridors, urban parking projects and major construction projects approved by the State Council such as power plants can be appropriately lowered on the basis of the minimum capital ratio.

Table 5: Minimum capital requirements for fixed-asset investment projects

Category	Project	Minimum capital ratio
Urban and transportation infrastructure	Urban rail transit projects	20%
	Port, coastal and inland river navigation, airport projects	25%
	Railway and highway projects	20%
Real estate development	Indemnificatory housing and general commodity housing projects	20%
	Other	25%
Overcapacity industry	Steel, electrolytic aluminum projects	40%
	Cement projects	35%
	Coal, calcium carbide, ferroalloy, caustic soda, coke, yellow phosphorus, polysilicon project	30%
Other industrial projects	Corn deep processing projects	20%
	Fertilizer (except potash) projects	25%
Electricity and other projects		20%

Source: State Council, KPMG analysis

KPMG analysis

This year's work report clearly states that relevant departments have already begun examining appropriate reductions in the capital ratio of infrastructure and other projects. In addition to the National Development and Reform Commission, the Ministry of Transport will further deepen the reform of the financing system and the mechanisms for transportation investment, and also accelerate the construction of a "government-led, hierarchically responsible, multi-funded, standardized and efficient" transportation investment and financing system.

In one regard, permitting special bonds to be used as capital for eligible major projects can, via the leverage effect, encourage more infrastructure financing, solving the issue of a lack of capital that affects many major projects and helping to guarantee that construction of some of the country's major transport facilities and major projects is completed on schedule. In another regard, the new policy alters the previous closed model of special bonds, rationalizing the financial support criteria based on the characteristics of special bond projects. Many experts believe that the new policy will promote improvements in local governments' debt financing mechanisms.

When it comes to innovations in investment and financing for local government infrastructure projects under the current policy environment, we propose addressing the relationship between government and the market, using government investment, platform investment and PPP to invest in construction based on whether projects are capable of creating significant amounts of operational revenue, thus achieving diversification of investment and financing entities. Full consideration should be given to feasibility issues concerning practical operations; for example, current risk control requirements for financial institutions cannot be ignored when reducing the capital ratio.⁹

⁹ Innovation in Local Infrastructure Investment and Financing Paths Against the New Background, KPMG China, May 2019



3

Special Research: The Sci-Tech Innovation Board (STAR market) and Shanghai-London Stock Connect



Sci-Tech Innovation Board deepens capital market reform

Recent years have seen a slowdown in economic growth and an increase in external uncertainty. US-China trade friction could also become a long-term issue. At the same time, the Chinese economy is also accelerating its transition to high-quality growth, and there is an urgent need to change its development approach and growth drivers. How to deal with external uncertainties and promote the sustainable development of China's economy against this background? Perhaps China's best response is concentrating on doing its own thing: deepening measures for reform and opening up.

The financial industry is closely tied to the macroeconomy and plays an important role in supporting the development of the real economy, promoting innovation and strengthening integration with the world's capital markets. In recent years, China has launched a series of policies to promote the reform and opening up of the financial industry, a process that has accelerated significantly since the Boao Forum for Asia in April 2018. On 13 June 2019, the opening ceremony of the 11th Lujiazui Finance Forum saw the official launch of a major new initiative for reforming capital markets: the Shanghai Stock Exchange's Sci-Tech Innovation Board. Only four days later, the China Securities Regulatory Commission and the UK Financial Conduct Authority jointly announced the official launch of the Shanghai-London Stock Connect, marking a new step in the opening up of China's financial industry. Focusing on the two major initiatives of the Sci-Tech Innovation Board and Shanghai-London Stock Connect, this section will give an overview of the current state and prospects of the reform and opening up of China's capital markets.

Sci-Tech Innovation Board deepens capital market reform

On 13 June 2019, the Shanghai Stock Exchange Sci-Tech Innovation Board was officially launched at the opening ceremony of the 11th Lujiazui Finance Forum. The official name of the board was confirmed as the "SSE STAR MARKET" (Sci-Tech Innovation Board). This came just seven months after President Xi Jinping announced the creation of the new board and a pilot registration system during the China International Import Expo in Shanghai in November last year. The rapid creation of the Sci-Tech Innovation Board reflects China's determination to reform its capital markets. The board will help make up for the technological shortcomings of capital markets, promote the development of high-tech industries and strategic emerging industries, and enhance the capabilities of financial services in the real economy — these will help implement China's innovation-driven development strategy as well as promote high-quality economic development and industrial restructuring.

¹⁰ Shanghai Stock Exchange Sci-Tech Innovation Board stock issuance and listing review project dynamics, <http://kcb.sse.com.cn/renewal/>



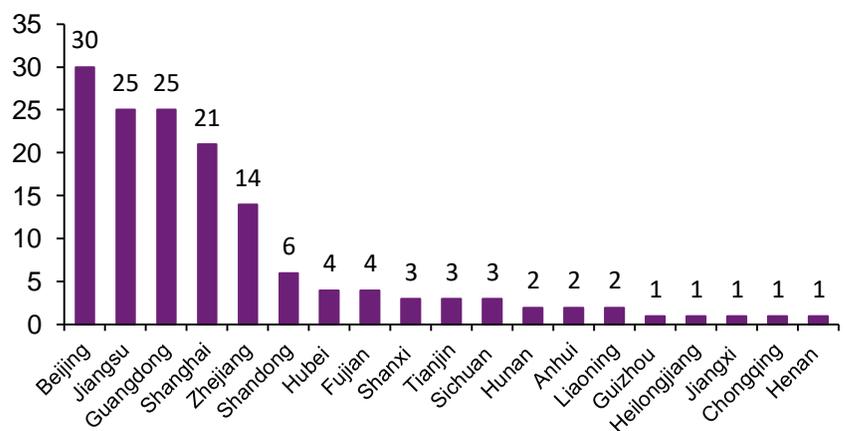
► Overview of Sci-Tech Innovation Board progress

On 22 July 2019, the Sci-Tech Innovation Board officially opened for trading as investors were introduced to the first batch of 25 Sci-Tech enterprises. The board was announced on 5 November 2018 and launched on 22 July 2019. The eight months in-between saw the rapid execution of preparatory work and wide-scale implementation of supporting regulations and organizations, as well as successful implementation of the work of receiving and reviewing listing applications and technological approvals. According to data from the Shanghai Stock Exchange, as of 22 July, 149 companies had submitted listing applications, of which the Sci-Tech Innovation Board Listing Committee had already approved 35. A total of 28 companies had already received CSRC registration approval.¹⁰

From a regional standpoint, of the 149 companies that have already applied for registration, Beijing accounts for the majority (30), followed by Jiangsu (25) and Guangdong (25); Shanghai (21) and Zhejiang (14) are ranked at fourth and fifth, respectively. In addition, submissions have been received from Shandong, Hubei and Fujian.

The prevalence of companies from Beijing, Jiangsu, Guangdong and Shanghai is due to national policies and the pace of these areas' economic development. In recent years, national policies have provided strong support for the development of the Guangdong-Hong Kong-Macao Greater Bay Area and Yangtze River Delta; the industrial structure of these areas also complements the areas targeted by the Sci-Tech Innovation Board, providing the conditions for their listing.

Figure 32: Distribution of applicants by place of registration



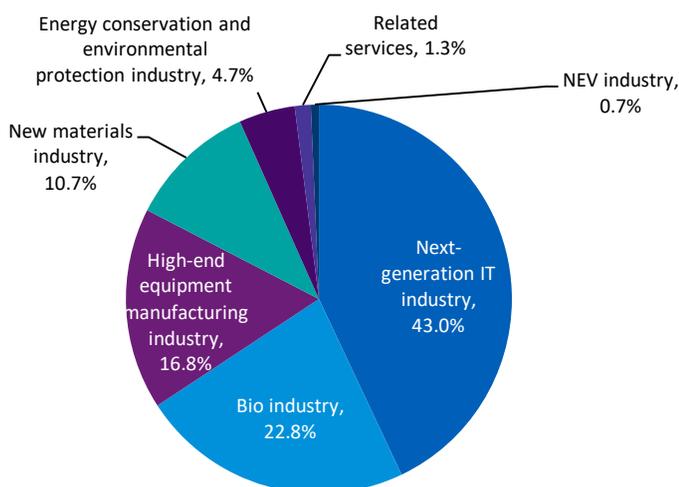
Source: Wind, KPMG analysis

In terms of industry distribution, the majority (64) of the 149 applicants are next-generation tech companies; these are followed by bio-tech, accounting for 34 companies and 22.8% of the total; 25 are from the high-end equipment manufacturing industry, accounting for 16.8% of the total; 16 are from the new materials industry, accounting for 10.7% of the total; and the remainder are innovative companies, accounting for

¹⁰ Shanghai Stock Exchange Sci-Tech Innovation Board stock issuance and listing review project dynamics, <http://kcb.sse.com.cn/renewal/>

6.7% of the total. These figures match the Sci-Tech Innovation Board's focus on supporting high-tech and strategic emerging industries, including next-generation digital technology, high-end equipment, new materials, new energy, energy conservation and environmental protection, and biomedicine.

Figure 33: Distribution of applicants by industry



Source: Wind, KPMG analysis

► Sci-Tech Innovation Board's main innovations

The board has established diverse and inclusive listing conditions based on its own orientation and the characteristics of innovative tech companies, permitting companies that match its brief, are not yet profitable or which have accumulated unrecoverable losses, to list on the board. Added to that are companies that meet relevant requirements and have a special shareholding structure (different shares with equivalent rights), as well as red chip companies. The board is also piloting a registration system in which auditing is carried out by the Shanghai Stock Exchange and registration by CSRC, which is conducive to improving China's multi-tiered capital market structure, eliminating shell companies and optimizing the investment efficiency of capital markets. The Sci-Tech Innovation Board also features innovations in R&D investment criteria.

Market value-based listing criteria are more inclusive.

It has been almost 30 years since the advent of China's capital markets, during which time their basic system has undergone a number of developments. The only thing that has not changed is that the listing standards are based on profit. Whether it is the main board, the GEM or the SME board, companies that fail to meet their respective profit targets lose the ability of applying for listing. The Science-tech Innovation Board dispenses with the current A-share restrictions on profitability, creating a tech-oriented board for China's capital markets that takes estimated market value as the core listing criterion.

The board is highly inclusive when it comes to listing selection. First, companies that have yet to make a profit are permitted to go public; second, companies with different voting rights structures (similar shares but different rights) are permitted to go public; third, red chip companies and those with a variable interest entities (VIE) architecture can also be listed. The Sci-Tech Innovation Board sets five listing criteria for eligible general enterprises, and four for listing by red chip enterprises, which is more conducive to using three-dimensional indicators to identify highly innovative companies. Such listing criteria are, in fact, closely aligned with the growth and development of tech companies, many of which experience a disconnection between investment and revenue during early-stage technical research and product development and are excluded from capital markets as a result. For the first time, the Sci-Tech Innovation Board introduces a market value design and incorporates financial indicators such as income, cash flow, net profits and R&D investment, establishing differentiated listing standards, building a more rational listing index system and better matching the listing requirements of tech enterprises.¹¹

Pilot registration system

The establishment of Chinese capital markets was followed by the wide-scale implementation of the new review system. The SSE STAR Market introduces a pilot registration system in which the CSRC no longer focuses on the pre-approval and substantive judgments for enterprises, but starts with the needs of investors, conducting reviews based on the completeness, consistency and understand ability of information disclosure, urging the issuer and its sponsors and securities service providers to disclose information in a true, accurate and complete manner, and giving the right to make judgments and choices to

¹¹ Please refer to KPMG China Economic Watch: Q2 2019, May 2019.

investors. The introduction of the registration system can shorten the time to market, with it taking a maximum of six months from submission to the results of listing reviews; of this, the review period is no more than three months, and the time for replying to the Exchange's inquiries by issuers, their sponsors and securities service agencies is no longer than three months.

However, the Sci-Tech Innovation Board's introduction of the new registration system does not represent a relaxing of the requirements toward the quality of listed enterprises. On the contrary, the board implements clearer and more stringent requirements on information disclosure. In addition to the disclosure required by the Main Board rules, general information disclosure requirements including industry information disclosure, phased disclosure and voluntary information disclosure have also been added, and there are increased penalties for information disclosure violations. For example, Ninebot became the first company whose review was suspended due to incomplete information.¹²

Higher R&D investment requirements

The Sci-Tech Innovation Board's listing criteria stipulate that the proportion of accumulated R&D investment in the last three years to the accumulated operating income for the same period be no less than 15%. Taking the main board market as an example, according to the R&D investment data disclosed by 3,088 A-share listed companies in their 2018 annual reports, R&D investment was RMB 725.54 billion. This accounted for just 2% of operating income and was the highest level of the last three years. A total of 62 companies had R&D investment that exceeded 15%, accounting for just 2% of A-share listed companies. Another comparable criterion is the National High-tech Enterprise Certification Standard, which requires R&D investment to account for 3–5%. As such, the board's 15% tech investment requirement is very high, and only suitable for truly high-tech companies with high R&D investment.¹³

In addition, the board differs from the current A-share market in the areas of trading mechanism, information disclosure regulatory requirements, delisting system, investor suitability requirements and issuance underwriting process.

► Sci-Tech Innovation Board helps improve the financing structure of capital markets and promote financial supply-side reform

At this stage, the focus of capital market reform is to balance the proportion of direct financing and indirect financing, improving the financing structure. China has always chiefly relied on bank loans for indirect financing; direct financing, especially equity financing, accounts for a relatively low proportion of financing. Taking 2018 as an example, the total amount of annual TSF was RMB 19.26 trillion, of which stocks and bonds totaled RMB 2.84 trillion, accounting for only 15% of total

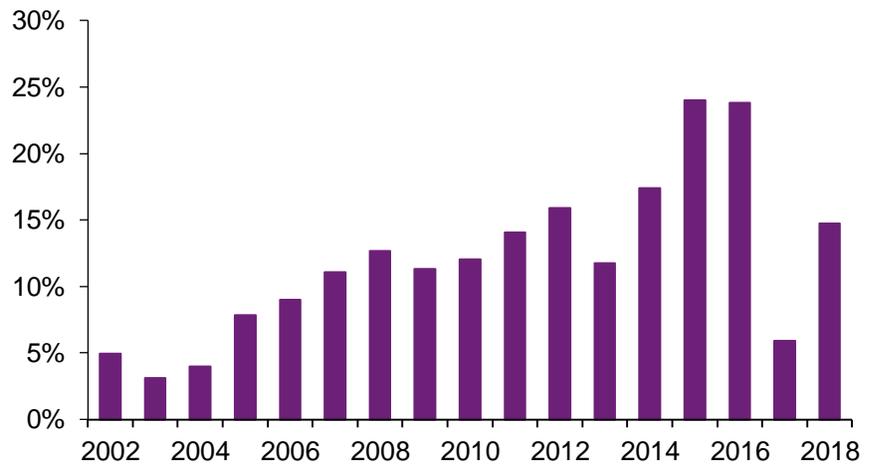
¹² Company Suspended in Sci-Tech Innovation Board Registration Restarts Application Procedure, Xinhuanet, 5 June 2019, http://www.xinhuanet.com/fortune/2019-06/05/c_1210151635.htm

¹³ Data source: <http://news.stcn.com/2019/05/06/15092059.shtml>



financing. The amount of new RMB loans in the same year was RMB 15.67 trillion, accounting for 81% of total financing.

Figure 34: Share of stocks and bonds in TSF



Source: Wind, KPMG analysis

Indirect financing based on bank loans not only pushes up the leverage ratio but is incapable of meeting the needs of high-quality development. At the 11th Lujiazui Forum, Guo Shuqing, Chairman of China Banking and Insurance Regulatory Commission (CBIRC), stated, "Enterprises are over-reliant on banks and there is a mismatch with the life cycle and production cycle of enterprises; this makes it easy for large and medium-sized enterprises to squeeze credit resources, and deprives small and microenterprises of the necessary incubation funds". As such, encouraging the development of multi-tiered capital markets by promoting the growth of direct financing has become the direction of financing structure reform and is also an important part of national financial supply-side reform.

Tech companies have a particular need for flexible capital markets for financial support. Data shows that the top 10 companies in terms of market capitalization in Shanghai and Shenzhen A-share markets were all traditional enterprises, of which five were banks, two were insurance companies, two were traditional energy companies and one was a liquor company. In contrast, the US stock market is mainly driven by high-tech and emerging industries; tech companies like Microsoft, Amazon, Apple, Google and Facebook account for the most valuable companies, meaning that US stocks grow ever higher with the rapid development of high-tech industries. China's Alibaba places seventh among US stocks. Given the restrictions of A-shares and long waiting times, some high-quality Chinese tech companies have chosen to list overseas.

However, listing overseas presents many problems, the first being the high cost. In addition to pre-listing preparation costs, after a successful listing there are numerous follow-up fees such as accountants, lawyers and exchange fees. More important are issues related to poor communication, language and culture; overseas investors are often incapable of fully understanding the investment value of Chinese enterprises, and may even be affected by prejudices and

misunderstanding, which is not conducive to the establishment of an international brand and reputation. From the standpoint of investors, the growth of Chinese Internet companies has come from the extensive support of Chinese consumers. Yet domestic investors are incapable of enjoying the fruits of these companies' growth. Take Tencent as an example: the company's market value has increased 10 times in the past five years; at present, the total market value is more than one trillion Hong Kong dollars, local investors without overseas bank accounts are unable to participate, as the shares are not traded in Mainland China. The establishment of the Sci-Tech Innovation Board creates a platform for equity financing and investment for tech companies and makes up for the shortcomings in share rights of China's capital markets.

Table 6: Comparison of Top 10 A-shares and US stocks¹⁴

Ranking	A-shares			US stocks		
	Company name	Total market value (USD billion)	Industry	Company name	Total market value (USD billion)	Industry
1	ICBC	291.60	Banking	Microsoft	1026.28	Software and services
2	Ping An	225.04	Insurance	Amazon	934.36	Retail industry
3	China Construction Bank	212.58	Banking	Apple	919.29	Technical hardware and equipment
4	Agricultural Bank of China	180.81	Banking	Google (Alphabet)-A	750.01	Software and services
5	Guizhou Maotai	178.99	Food, beverages and tobacco	Google (Alphabet)-C	749.64	Software and services
6	China Petroleum	176.21	Energy	Facebook	535.67	Software and services
7	Bank of China	149.43	Banking	Alibaba	439.97	Retail industry
8	China Merchants Bank	129.13	Banking	Johnson & Johnson	376.62	Healthcare equipment and services
9	China Life Insurance	102.82	Insurance	JP Morgan Chase	351.91	Banking
10	Sinopec	93.19	Energy	VISA	339.47	Software and services

Source: Wind, KPMG analysis

¹⁴ As of 27 June 2019, the spot exchange rate used is: 1 USD = 6.8768 RMB. ¹² Data source: <http://news.stcn.com/2019/05/06/15092059.shtml>

Shanghai-London Stock Connect accelerates the Chinese financial industry's openness to the outside world.

On 17 June 2019, the China Securities Regulatory Commission and the Financial Conduct Authority (FCA) jointly announced the approval, in principle, of the interconnection of depositary receipts for the Shanghai Stock Exchange and the London Stock Exchange: the Shanghai-London Stock Connect. Soon after, Huatai Securities held the GDR issuance and listing ceremony on the London Stock Exchange, making it the first company to list A-shares on the London Stock Exchange. The launch of the Shanghai-London Stock Connect is an important step in the internationalization of A-shares and a landmark event in the greater openness of the country's financial sector to the outside world. It provides more financing channels for Chinese listed companies and increases the investment options of Chinese investors.

► China's financial industry keeps up the pace of its opening to the outside world.

A look back from the official launch of the Shanghai-London Stock Connect shows the sustained progress in opening up China's financial industry in recent years. In particular, since April 2018, when People's Bank of China Governor Yi Gang announced specific measures and a timetable for further expansion of opening up China's financial industry to the outside world during the Boao Forum for Asia, there have been a succession of measures for opening up financial sectors including banking, securities, insurance and funds. The proportion of foreign-invested shares of joint-venture securities companies, fund management companies and futures companies has been greatly relaxed, and foreign financial institutions have made significant progress in entering the Chinese market. For example:

- USB's shareholding in UBS Securities increased to 51%, achieving absolute control.
- Allianz China Insurance was established and became the first foreign insurance holding company in China.
- US Standard & Poor's has gained access to the Chinese credit rating market.
- American Express has initiated the establishment of a joint venture company in China, and the application for the preparation of the bank card clearing institution has been reviewed and approved.
- On 29 March 2019, the China Securities

Regulatory Commission officially approved the establishment of Nomura Oriental International Securities Co., Ltd. and JP Morgan Chase Securities (China) Co., Ltd., making them the first foreign-controlled joint venture securities company since the introduction of the new management measures.

China's efforts in opening up the financial industry are plain to see and have achieved good results. Since 2019, China has stepped up its reform of the financial industry and done more to encourage its opening up. On 1 May 2019, the Bank of China Insurance Regulatory Commission issued a press release of an interview with CBIRC Chairman Guo Shuqing indicating that it plans to introduce 12 new measures for opening up to the outside world, involving core business areas of the banking and insurance industries. Subsequently, on 13 June 2019 at the Lujiazui Forum, Chairman of the China Securities Regulatory Commission Yi Huiman announced nine policy measures to further open up China's capital markets to the outside world. These will facilitate the entry of long-term overseas funds into Chinese capital markets, encourage high-quality overseas securities funds to begin operating in China, promote healthy competition in the industry and improve service levels in the industry.



The main highlights of the 12 new policies for the banking and insurance industry are as follows. The first is the cancellation of total asset requirements for foreign banks, foreign insurance brokers and trust companies to conduct business in China, giving small to medium sized financial institutions the chance to come to China to participate and compete. The second is further relaxation of restrictions on foreign-funded banks in launching renminbi businesses in China — something that has been long-awaited by foreign banking institutions.

This series of measures indicates that China's opening up to the outside world is still ongoing. On 20 July, the Office of the Financial Stability Development Committee of the State Council announced the introduction of 11 measures for opening up the financial industry. Of these measures, eight involved access by financial institutions, of which four related to insurance institutions; the remaining three measures involved the opening up of bond markets. Among them, "encouraging overseas financial institutions to participate in the establishment and investment in commercial bank financial management subsidiaries" has become one of the highlights of this new opening-up initiative; the proposal to "allow overseas asset management institutions to establish joint ventures with subsidiaries of Chinese banks or insurance companies to establish wealth management companies controlled by foreign parties", meanwhile, will also bring a whole new type of financial institution to the market.

If these new policies can be implemented this year, the further relaxation of access to financial and capital markets is bound to achieve equal treatment between foreign and domestic capital, thus enriching market entities and encouraging healthy competition in the industry.

► **Shanghai-London Stock Connect will help attract foreign capital and boost the internationalization of A-shares**

As the openness of China's financial industry continues to increase, the A-share market has been included in several major international indices. In addition, global capital is continuing to increase the allocation of Chinese assets. For example, in June 2018, A-shares were officially included in the MSCI index and their proportion was gradually increased. On 24 June 2019, FTSE Russell officially included China's A-shares in its global stock index series, going a long way towards making the A-share market more international and increasing demand for foreign investment in A-shares.



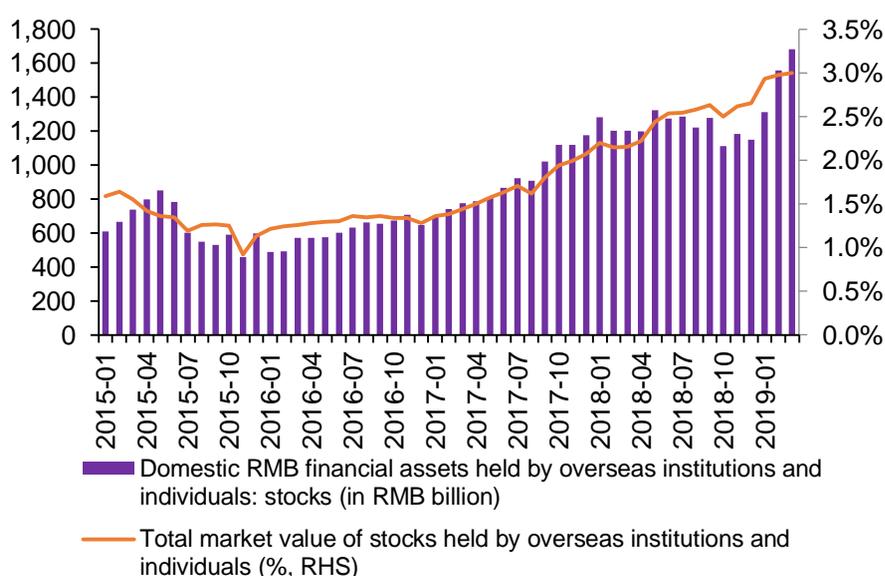
Table 7: Analysis of further opening-up measures in the financial industry (2019)

	Proposed new policies for 2019
Banking and financial asset management companies	<ul style="list-style-type: none"> • Cancel single Chinese-funded bank and single foreign-funded bank shareholding restrictions for Chinese-funded bank shareholding ratios. • Cancel the requirement that foreign banks establish a foreign-funded corporate bank and branches when they come to China. • Relax restrictions on Chinese shareholders of Sino-foreign joint venture banks and cancel the requirement that the Chinese side or main shareholder must be a financial institution. • Cancel approval for the launching of RMB business by foreign banks and permit foreign banks to operate RMB business when they launch operations. • Allow foreign banks to operate “agent collection and payment” business • Allow foreign-invested institutions to rate all types of bonds in the inter-bank bond market and the exchange bond market when conducting credit rating business in China. • Encourage overseas financial institutions to participate in the establishment and investment of shares in commercial banks' financial management subsidiaries. • Allow overseas asset management institutions to establish joint ventures with subsidiaries of Chinese banks or insurance companies to create wealth management companies controlled by foreign parties. • Support use of foreign capital to create currency brokerage companies fully or partly funded by foreign funds.
Securities	<ul style="list-style-type: none"> • Permit overseas shareholders to practice "1+1" principles for joint venture securities companies and joint venture fund management companies; i.e., permit institutions to participate in not more than two securities companies (fund management companies), of which no more than one can be holding securities companies (fund management companies). • Launch the H-share "full circulation" reform on a large scale. Full circulation refers to legal person shares and state-owned shares held by mainland enterprises listed in Hong Kong, all of which convert H-share transactions. • Bring forward the time limit for the cancellation of the foreign share ratio of securities companies, fund management companies and futures companies from 2021 to 2020. • Allow foreign institutions to obtain Class A lead underwriting licenses in the inter-bank bond market. • Further facilitate foreign institutional investors to invest in the interbank bond market.
Fund management	<ul style="list-style-type: none"> • Relax restrictions on the participation of private equity products managed by foreign private equity investment fund managers in "Hong Kong Stock Connect" transactions. • Allow overseas financial institutions to invest in pension management companies.
Futures	<ul style="list-style-type: none"> • Following the opening of crude oil, iron ore and PTA futures to international investors as a specific variety in 2018, further liberalize the scope of specific varieties.
Insurance	<ul style="list-style-type: none"> • Allow foreign financial institutions to invest in foreign-invested insurance companies in China. • Cancel the requirement that foreign insurance companies operating in China must have been operating for 30 years and have total assets of no less than USD 200 million. • Allow foreign insurance groups to invest in the establishment of insurance institutions; allow domestic and foreign insurance groups to initiate the establishment of insurance institutions according to the eligibility requirements for Chinese insurance groups. • The transition period for restriction on personal insurance foreign stocks from 51% to 100% is brought forward from 2021 to 2020. • Cancel the requirement that the domestic insurance company's total holding of the insurance asset management company's shares must be no less than 75%; allow foreign investors to hold more than 25% shares. • Relax the conditions for entry of foreign-invested insurance companies and cancel the requirement that they have been operating for 30 years.

Source: Online public data compilation, KPMG analysis

In recent years, foreign institutions have invested in the Chinese securities market through channels such as QFII, RQFII, the Shanghai-Hong Kong Stock Connect and the Shenzhen-Hong Kong Stock Connect. At present, the size of foreign-owned A-shares exceeds RMB 1.6 trillion, doubling the total market value of A-shares from 1.4% at the beginning of 2017 to 3% at present. There is still much room to increase the scale of foreign ownership, and we expect further change in the future.

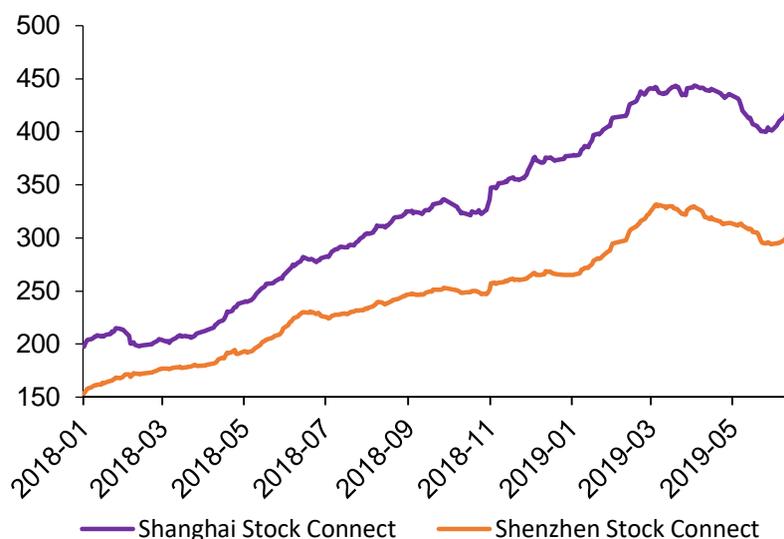
Figure 35: Market value and proportion of shares held by overseas funds



Source: Wind, KPMG analysis

In order to promote overseas institutional investors' investment in the A-share market, the Securities and Futures Commission (SFC) also expanded the daily quota of the Shanghai Stock Connect and Shenzhen Stock Connect by four times and adjusted it to RMB 52 billion. Since their launch, the net inflows of Shanghai Stock Connect and Shenzhen Stock Connect reached RMB 424.95 billion and RMB 302.84 billion, respectively, in mid-June 2019. However, the data shows that despite significant increases in daily quotas, the average daily quota of the Shanghai Stock Connect and Shenzhen Stock Connect is still less than 4%. The attractiveness of A-shares to foreign investment still needs further exploration. The opening of the securities market is a complicated and long-term process. It is not enough to open the market alone; efforts must still be made to reform the market system to truly integrate A-shares with the international market.

Figure 36: Shanghai Stock Connect and Shenzhen Stock Connect total capital inflow, in RMB billion



Source: Wind, KPMG analysis

Compared with Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect, the Shanghai-London Stock Connect will have a deeper influence in promoting the internationalization of the RMB and A-shares. On the one hand, both the Shanghai Stock Exchange and the London Stock Exchange are two highly influential stock markets with massive scale, whose interconnection will undoubtedly have a significant impact. On the other hand, the Shanghai-London Stock Connect will introduce more complex problems. Factors such as cross-border transactions, capital flows and transaction taxes may accelerate the process of interconnection between A-shares and other countries, greatly increasing the level of attention among foreign investors toward A-shares and greatly accelerating A-shares' integration into the international capital market system.

Conclusion

Just as finance provides a service to the real economy, the stability and prosperity of the economy also provides tremendous support for the growth and development of financial markets. It is foreseeable that gradual progress in the reform and opening up of capital markets will assist the development of China's economy. High-quality growth in the real economy will also lead to a large number of outstanding listed companies that possess sustained profitability and stability, which form a cornerstone in the sustainable growth of capital markets.

Appendix: Key indicators

			2017	2018	2019					
	Indicator	Unit	Annual	Annual	Jan	Feb	Mar	Apr	May	Jun
Economic activity	Nominal GDP	Trillion RMB	82.1	90.0	21.3			23.8		
	Real GDP	% YOY	6.8	6.6	6.4			6.2		
	Industrial production	% YOY	6.6	6.2	6.8	3.4	8.5	5.4	5.0	6.3
	Industrial profit	% YOY YTD	21.0	22.0	0.0	-14.0	-3.3	-3.4	-2.3	-2.4
	Retail sales	% YOY	10.2	9.0	0.0	8.2	8.7	7.2	8.6	9.8
	Fixed asset investment	% YOY YTD	7.2	5.9	0.0	6.1	6.3	6.1	5.6	5.8
	Property starts	% YOY YTD	7.0	17.2	0.0	6.0	11.9	13.1	10.5	10.1
	Property sales	% YOY YTD	7.7	1.3	0.0	-3.6	-0.9	-0.3	-1.6	-1.8
	Land purchases	% YOY YTD	15.8	14.2	0.0	-34.1	-33.1	-33.8	-33.2	-27.5
	Manufacturing PMI	Index	51.6	50.9	49.5	49.2	50.5	50.1	49.4	49.4
International trade and investments	Exports	% YOY	7.9	9.9	9.2	-20.8	13.8	-2.8	1.0	-1.3
	Imports	% YOY	16.1	15.8	-1.3	-4.6	-7.6	4.2	-8.5	-7.3
	Trade balance	USD billion	419.6	350.9	38.9	3.2	31.9	13.5	41.7	50.7
	Foreign direct investment (FDI)	USD billion	131.0	132.0	12.4	9.3	14.1	9.3	9.5	16.1
	Outbound direct investment (ODI)	USD billion	120.1	120.5	9.2	6.5	9.6	9.4	9.9	9.3
Financial market	RMB exchange rate	USD/RMB	6.75	6.62	6.79	6.74	6.71	6.72	6.85	6.88
	RMB real effective exchange rate	Index	121.0	122.6	122.1	124.5	124.4	124.0	122.2	120.4
	Shanghai Composite Index (Period end)	Index	3307	2494	2585	2941	3091	3078	2899	2979
	Money supply (M2)	% YOY	8.1	8.1	8.4	8.0	8.6	8.5	8.5	8.5
	Stock of Total Social Financing (TSF)	% YOY	12.0	12.0	10.4	10.1	10.7	10.4	10.6	10.9
	New TSF	RMB billion	19440	19440	4602	710	2859	1386	1407	2263
	New bank loans	RMB billion	13523	16166	3230	886	1690	1020	1180	1660
	Shibor (overnight)	%	2.63	2.48	2.0	2.1	2.3	2.3	2.2	1.5
Price	Consumer price index (CPI)	% YOY	1.6	2.1	1.7	1.5	2.3	2.5	2.7	2.7
	Produce price index (PPI)	% YOY	6.3	3.5	0.1	0.1	0.4	0.9	0.6	0.0
	Crude oil (WTI)	USD/barrel	50.9	64.9	51.7	55.0	58.2	63.9	60.8	54.7
	Steel (rebar)	RMB/ ton	3878	4177	3853	3922	3967	4117	4119	3980
	Housing price index (70 cities)	% YOY	8.5	7.3	10.8	11.1	11.3	11.4	11.3	10.8

Source: Wind, KPMG Analysis

Contact Us



Jacky Zou
Senior Partner, Northern Region
KPMG China
+86 (10) 85087038
jacky.zou@kpmg.com



William Gong
Senior Partner, Eastern & Western
Region, KPMG China
+86 (21) 22122999
william.gong@kpmg.com



Ricky Wong
Senior Partner, Southern Region
KPMG China
+86 (20) 38138833
ricky.wong@kpmg.com



Andrew Weir
Senior Partner, Hong Kong
KPMG China
+852 28267243
andrew.weir@kpmg.com



Raymond Ng
Head of Markets
KPMG China
+86 (10) 85087067
raymond.kk.ng@kpmg.com



Thomas Stanley
COO of Markets
KPMG China
+86 (21) 22123884
thomas.stanley@kpmg.com



Kevin Kang
Chief Economist
KPMG China
+86 (10) 85087198
k.kang@kpmg.com

For information on finance sector services, please contact:



Abby Wang
Senior Partner
Asset Management
KPMG China
+86 (21) 22122428
abby.wang@kpmg.com



Nelly Su
Senior Partner
Mainland Capital Markets,
KPMG China
+86 (10) 85087312
nelly.su@kpmg.com

- Thanks to Wei Wang, Lorna Meng, Abby Zheng, Mia Zhou (intern), Lynne (Design) for their contributions to this report.

kpmg.com/cn/socialmedia



For a list of KPMG China offices, please scan the QR code or visit our website:
<https://home.kpmg.com/cn/en/home/about/offices.html>.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

© 2019 KPMG, KPMG Huazhen LLP, a People's Republic of China partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in China.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

Publication number: EN-MKT19-0006

Publication date: October 2019