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CHINA ECONOMIC UPDATE
DECEMBER 2018

FISCAL POLICIES FOR REBALANCING

WORLD BANK GROUP

Acknowledgements

The World Bank *Economic Update* provides an overview of recent economic and social developments and policies in China and presents findings from ongoing World Bank work on China. The *Update* was led by Elitza Mileva (Senior Economist) under the guidance of John Litwack (Lead Economist) and with contributions from Luan Zhao (Economist) on recent economic developments and outlook and fiscal policy support, Elitza Mileva and Luan Zhao on fiscal spending, and Wei Han (Health Economist) on healthcare reform. The team would like to thank Huangfu Zhen and Yufan Liu for excellent research assistance. Helpful comments are gratefully acknowledged from Ning Fu, Bert Hofman, Yang Huang, Ergys Islamaj, Deepak Mishra, Ekaterine Vashakmadze, and Dewen Wang. The team would also like to thank Tianshu Chen, Li Li, Xiaoting Li, Lin Yang, and Ying Yu for support in the production and dissemination of this report. The findings, interpretations, and conclusions expressed in this report do not necessarily reflect the views of the Executive Directors of the World Bank or governments they represent. Questions and feedback can be addressed to Li Li (lli2@worldbank.org).

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Executive Summary

GDP growth has moderated, but China's economy remains resilient. Growth slowed to 6.5 percent year on year (yoy) in the third quarter from 6.8 percent in the first half of 2018. This moderation has been mainly due to weaker growth in investment and exports, while consumption growth increased. Investment growth again decelerated in 2018 as the economy continues to rebalance. Robust domestic demand supported imports, while slower global trade growth weighed on exports, resulting in a negative GDP growth contribution from net exports.

The current account recorded a small deficit in the first three quarters of 2018, driven by stronger imports. Growth in China's exports to the US subject to 25-percent tariffs slowed significantly. But China's exports subject to 10-percent tariffs have so far remained robust. This likely reflects strong US economic activity, Renminbi depreciation against the US dollar, and some front-loading of exports ahead of new tariffs. In contrast, China's imports from the US have declined in recent months.

After two quarters of net capital inflows, rising trade tensions and uncertainty contributed to US$19 billion of net outflows in the third quarter. Foreign investors reduced sharply bond and stock purchases and lowered FDI somewhat. While US investment into China remains stable, China's FDI into the US has declined significantly. This decrease was partly due to stricter implementation of China's capital controls in 2016-17, but it has also coincided with a rise in China's investment in other advanced countries and could be linked to concerns over potential investment restrictions.

Financial markets have declined. The Shanghai Composite Index lost 20 percent and the Renminbi depreciated by 5.5 percent against the US dollar in the year to December 13. In response to weakening growth and trade tensions, the People's Bank of China (PBOC) gradually loosened monetary policy and intervened in currency markets to reduce the volatility of the Renminbi. Nevertheless, growth in lending to the non-financial sector continued to moderate, owing to a combination of regulatory tightening, higher uncertainty, and lower demand for credit.

In the base case, the World bank projects growth at 6.5 percent in 2018 and 6.2 percent in 2019-20. Consumption will remain the main driver of growth, while higher investor uncertainty and slower credit growth are expected to weigh on investment. A deceleration in global demand growth and higher US import tariffs will negatively affect net exports. The baseline projections assume that policymakers are successful in offsetting to a large extent the direct negative impact of higher tariffs on China's exports.

In response to slowing growth and a challenging external environment, the government introduced tax incentives for households and firms, additional support for small businesses, and higher local government capital spending. Historically, China relied on large public investment to stimulate the economy, but today infrastructure investment could hinder efforts to reduce financial risks and improve resource allocation. In fact, despite a more expansionary fiscal stance since July, the authorities remain committed to budget reform, with growth in off-budget borrowing by local governments continuing to slow.

To stimulate the economy, China has room to shift government spending toward health, education, and social protection. Higher and better targeted fiscal spending would create jobs, enhance public services, and provide better support to the poor and vulnerable. This, in turn, would boost disposable incomes and consumption and contribute to economic rebalancing. In the long run, these policies would boost worker productivity and China's growth potential and help the country achieve a more equal society.

Finally, an overview of the health care sector argues that reforms are needed to deal with the rapid growth in health costs. A transition from a hospital-centric delivery system to a people-centered integrated care, from passive purchasing to strategic purchasing of health services, and from 'sick' care to prevention would lower health costs and improve outcomes.

A. Recent Economic Developments and Outlook

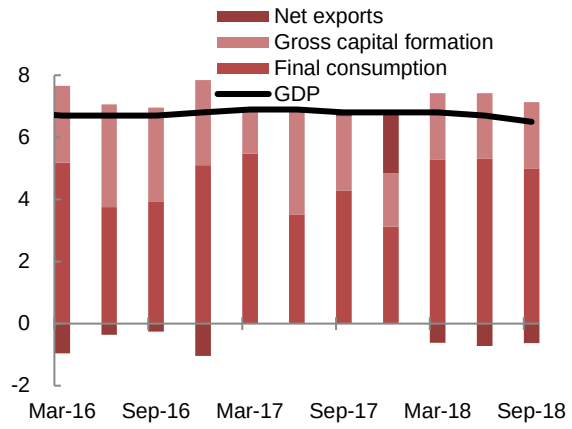
1. Growth has moderated as net exports and investment have weakened

GDP growth slowed to 6.5 yoy in the third quarter from 6.8 percent yoy in the first half of 2018 and 6.9 percent in 2017. This moderation has been mainly due to somewhat weaker growth in exports and investment. Net exports contributed -0.7 percentage points (pp) to growth in the first three quarters of 2018 (Figure 1). Export growth weakened as global trade lost momentum this year (Figure 2), while robust domestic demand supported strong import growth.

Investment growth slowed in the first three quarters of 2018, continuing to track the medium-term trend of rebalancing toward final consumption. Gross capital formation contributed 2.1 pp yoy to growth in the first three quarters of 2018, compared to 2.4 pp during the same period in 2017. Data on real fixed asset investment shows infrastructure investment contracting and investment spending in the manufacturing sector accelerating. The same indicator suggests that private fixed asset investment rebounded, while state capital spending declined.

Figure 1: Contribution to real GDP growth

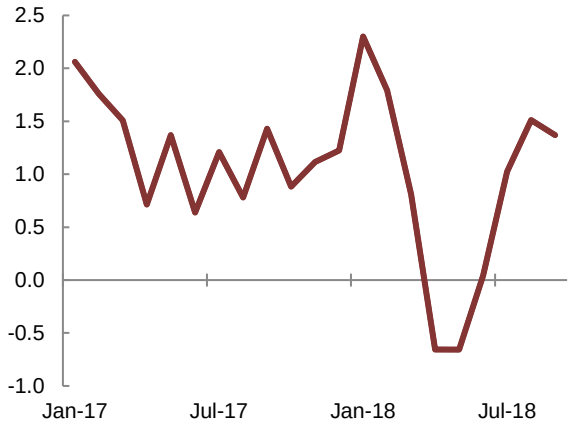
(percent yoy)



Source: National Bureau of Statistics (NBS), World Bank staff calculations.

Figure 2: Real world trade growth

(3-month on 3-month growth, seasonally adjusted, percent)



Source: CPB Netherlands Bureau for Economic Policy Analysis "CPB World Trade Monitor", World Bank staff calculations.

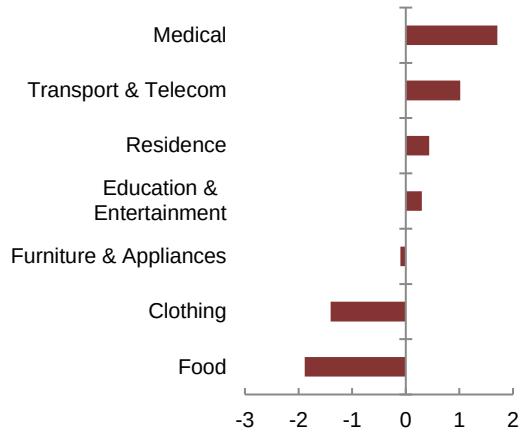
Consumption continues to drive the expansion of GDP, contributing 5.2 pp yoy in the first three quarters of 2018, up from 4.4 pp yoy in the same period last year. According to household survey data, households seem to be spending more and saving less. Growth in real disposable income per capita decelerated from 7.5 percent yoy in the first three quarters of 2017 to 6.6 percent in Q1-Q3 2018. Over the same period, growth in consumption expenditure per capita rose from 5.9 to 6.3 percent yoy. Households are spending an increasing share of their budget on health care, transport and telecommunication, and housing and a lower share on food and clothing. (Figure 3). The rising share of health in household spending is likely due to higher inflation in healthcare costs compared to the other items in consumer budgets.

From the production perspective, strong growth was observed in services, particularly information technology-related sectors. As the economy continued to rebalance, services grew by 7.7 percent yoy in the first three quarters of 2018. Growth of industry, at 5.8 percent yoy over the same period, continued to moderate. Automobile production declined in the third quarter, owing to weaker demand as temporary tax incentives for new car purchases expired. Growth in the mining and raw materials industries remained weak, reflecting ongoing efforts to reduce overcapacity and enforce environmental protection standards.

Within services, software and IT rose at double-digit rates, contributing 1.1 pp to growth in the first three quarters. The targeted tightening policies continue to weigh on economic activity in construction, real estate, and financial intermediation.

Figure 3: Change in the composition of household expenditures

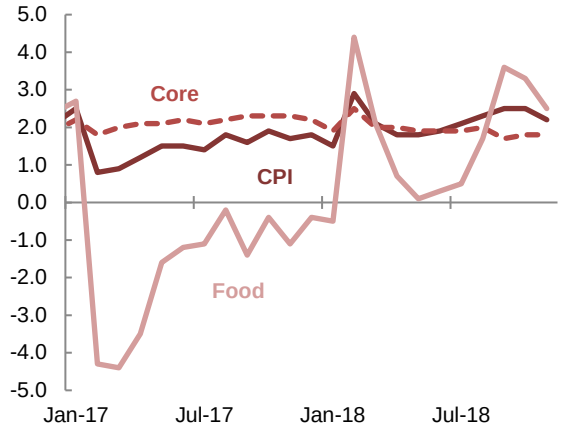
(2018 Q1-Q3 versus 2013 Q1-Q3, share of total consumption expenditure, pp year to date)



Source: NBS, World Bank staff calculations.

Figure 4: Monthly change in consumer prices

(percent yoy)



Source: NBS, World Bank staff calculations.

Consumer price inflation increased in recent months on higher growth in energy and food prices, while producer price inflation further moderated. Consumer prices increased by an average of 2.1 percent yoy in the first eleven months of 2018, up from an average of 1.6 percent in 2017 (Figure 4). The main reason for higher inflation was rising energy and food prices which increased by an average of 14.0 and 1.7 percent yoy in January-November 2018, compared to 10.0 and -1.4 percent in 2017. Core inflation, excluding food and energy prices, has remained broadly stable. Driven by weaker coal and metals price growth, producer price inflation moderated to 3.8 percent yoy in January-November 2018, from 6.3 percent last year.

2. Strong imports lowered the current account balance

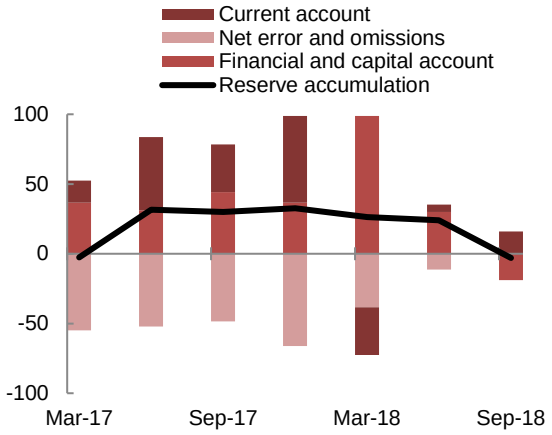
The current account recorded a deficit of US$12.8 billion (0.1 percent of GDP) in the first three quarters of 2018, compared with a surplus of 1.3 percent of GDP in 2017 (Figure 5). The current account deficit was primarily driven by stronger imports, which grew by 18.8 percent yoy in the first nine months of 2018, up from 15.3 percent during the same period last year. China's ongoing rebalancing toward consumption has increased import demand for consumer goods and services. Outbound tourist spending, at US$215 billion (2.2 percent of GDP) in the first three quarters of 2018, contributed most of the rise in services imports. Compared to 2017, export growth remained relatively stable at 11.1 percent yoy in the first nine months.

After two quarters of net capital inflows, rising trade tensions and heightened uncertainty contributed to small net capital outflows in Q3 2018. Net capital inflows (including errors and omissions) totaled US$79 billion in the first half of this year and turned into outflows of US$19 billion in the third quarter. FDI inflows declined to US$24 billion in the third quarter, down from US$53 billion in the previous quarter. Outward FDI has remained relatively stable at US$23 billion in Q3 and US$28 billion in Q2 2018. In recent months, foreign investors reduced sharply bond and stock purchases. Foreign equity inflows through the Shanghai/Shenzhen Stock Connect declined from a monthly average of US$4.1 billion in the first eight months of 2018 to US$2.5 billion in September, while foreign bond purchases decreased from an average

of US$10 billion to US$0.8 billion during this period (Figure 6). Gross foreign exchange reserves declined by US$30 billion in Q3, compared to a gain of US$50 billion in the first half of 2018.

Figure 5: Balance of payments

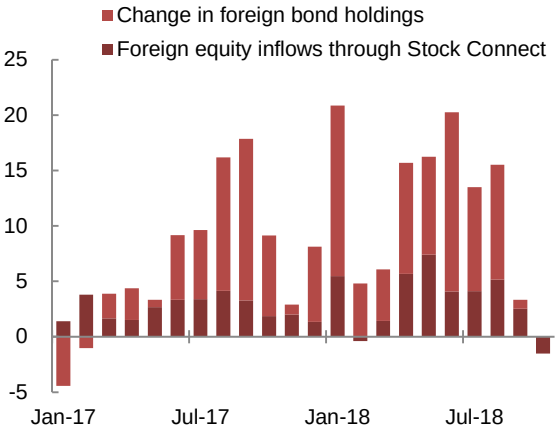
(USD billion)



Source: PBOC, World Bank staff calculations.

Figure 6: Foreign equity and bond inflows

(USD billion)



Source: PBOC, Bond Connect Company Ltd., World Bank staff calculations.

Box 1: Recent developments in China-US trade and investment

New tariffs on trade between the US and China have so far been associated with weaker growth in imports from the US, while exports to the US have held up. Growth in China's goods imports from the US peaked in 2017, weakened to 11 percent yoy in the first seven months of 2018, and averaged -7.1 percent yoy in August-November (Figure 7). By contrast, growth in goods exports to the US has remained robust at 12.3 percent yoy in January-November 2018, compared with an average of 11.0 percent in 2017. This likely reflects strong US economic activity, Renminbi depreciation against the US dollar, and some front-loading of exports ahead of new trade tariffs. Growth in exports from the list of products worth US$50 billion, subject to 25-percent tariffs as of July and August, slowed significantly (Figure 8). Other exports to the US have continued to grow rapidly. As a result, China's goods trade surplus with the US widened to US$295 billion in the first eleven months of 2018, from $252 billion during the same period in 2017.

The rise in trade tensions has also affected foreign direct investment between the two countries. While US FDI into China rose in 2016 and 2017, China's investment into the US declined significantly (Figure 9). US data show that China invested over US$25 billion in 2016 but these flows turned slightly negative in 2017 (-US$0.5 billion) and in the first half of this year (-US$0.2 billion). This decrease was in part due to stricter implementation of China's capital controls in 2016-17. However, data from the China Global Investment Tracker[1] suggest that the decline in China's investment in the US has coincided with a rise in China's investment in some other advanced countries (Figure 10). Reportedly, Chinese investors have diverted technology-related investment from the US as concerns over potential investment restrictions have grown.[2]

[1] http://www.aei.org/china-global-investment-tracker/.

[2] See "Amid Growing Trade Tensions, Chinese Investors Pull Back From U.S. Tech" https://www.forbes.com/sites/ywang/2018/07/05/amid-growing-trade-tensions-chinese-investors-pull-back-from-u-s-tech/#155c96df643e

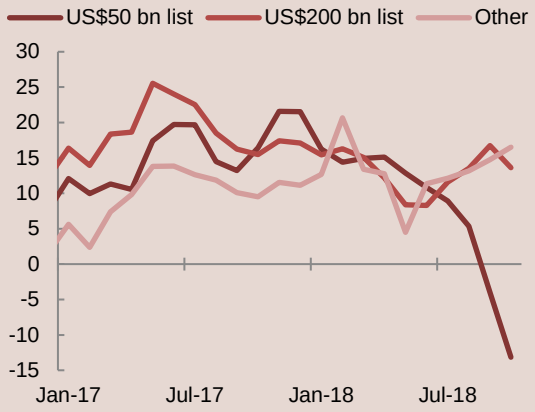
Figure 7: Total trade in goods between China and the US

(percent yoy; 6mma)

Source: NBS, World Bank staff calculations.

Figure 8: China's goods exports to the US by product list subject to new tariffs

(percent yoy, 3mma)



Source: US Bureau of Economic Analysis, World Bank staff calculations.

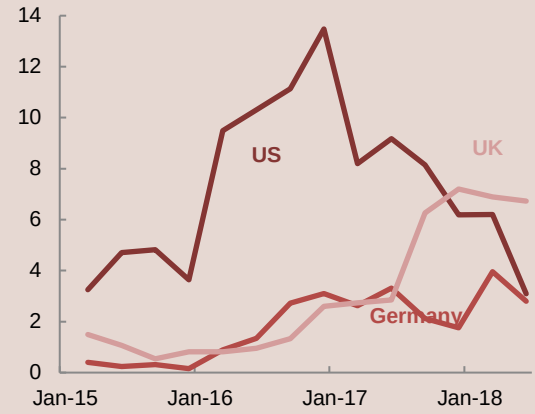
Figure 9: Direct investment flows between China and the US

(USD billion)

Source: US Bureau of Economic Analysis, World Bank staff calculations.

Figure 10: China's direct investment in selected advanced countries

(USD billion, 4-quarter moving average)



Source: American Enterprise Institute's China Global Investment Tracker, World Bank staff calculations.

3. High uncertainty weighs on China's financial markets

Stock prices and the Renminbi have experienced continued downward pressures. The Shanghai Composite Index lost 20.4 percent in the year to December 13. China's equities have underperformed global markets in recent months: between June 29 and December 12, the MSCI China Index declined by 13.7 percent while the MSCI Emerging Markets Index (a global benchmark) decreased by 8.5 percent (Figure 11). In the year to December 13, the Renminbi depreciated by 5.5 percent against the US dollar, while the MSCI Emerging Markets Currency Index lost 4.2 percent of its value. Since August the PBOC re-introduced a 20-percent reserve requirement on foreign currency forward contracts and has undertaken more interventions in currency markets to reduce the volatility of the exchange rate (Figure 12).

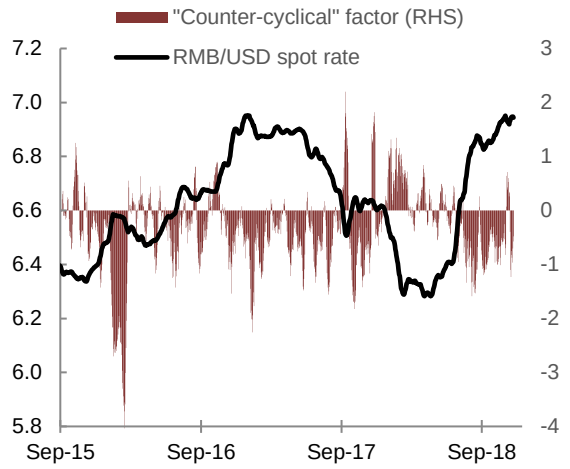
Figure 11: MSCI equity price indices

(June 29, 2018=100; in USD)

Source: Investing. com, Financial Times, World Bank staff calculations.

Figure 12: Renminbi exchange rate

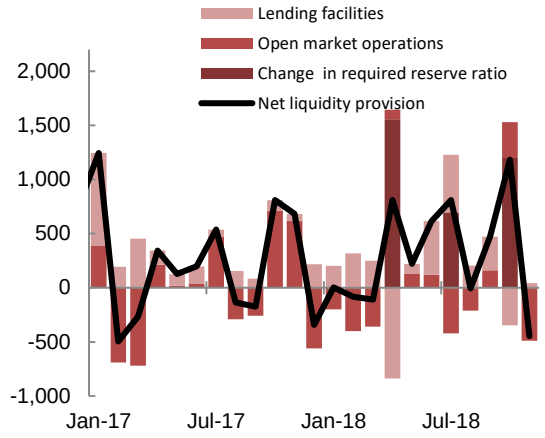
(10-day moving average; RMB/USD, basis points (RHS))



Note: The "counter-cyclical" factor in the RMB/USD daily fixing formula gives the PBOC discretionary control over the currency.[3]
Source: PBOC, Wind Info, World Bank staff calculations.

Figure 13: PBOC liquidity provision

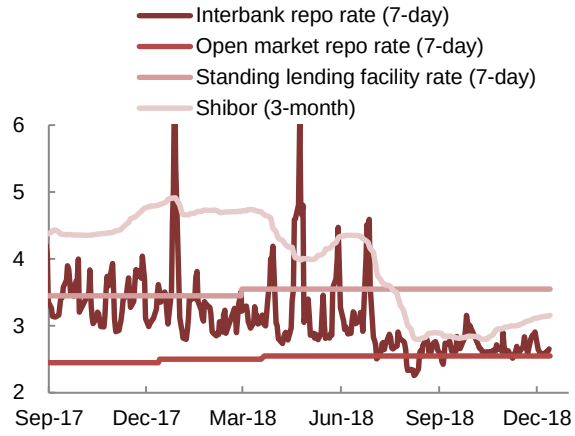
(RMB billion)



Source: PBOC, World Bank staff calculations.

Figure 14: PBOC policy and interbank rates

(percent per year)



Source: PBOC, World Bank staff calculations.

The PBOC has gradually shifted towards a looser monetary policy stance in response to weakening growth and a challenging external environment. The central bank reduced the reserves that banks are required to maintain at the PBOC three times this year by a total of 2.5 percent of liquid liabilities. After accounting for maturing medium-term lending facility loans and changes to open market operations, the PBOC injected net liquidity of RMB 3.5 trillion in the first eleven months of 2018, compared with RMB 2.9 trillion during the same period in 2017 (Figure 13). In addition, the PBOC has kept the 7-day repo rate unchanged since March 2018 despite two additional US interest rate hikes. With easing liquidity conditions, interbank rates

[3] Here the counter-cyclical factor is approximated by the difference between the daily PBOC fixing rate and the sum of the previous RMB/USD spot market closing price and the change in the RMB/USD rate required to offset the overnight change in the USD value against the currencies included in the CFETS trade-weighted basket.

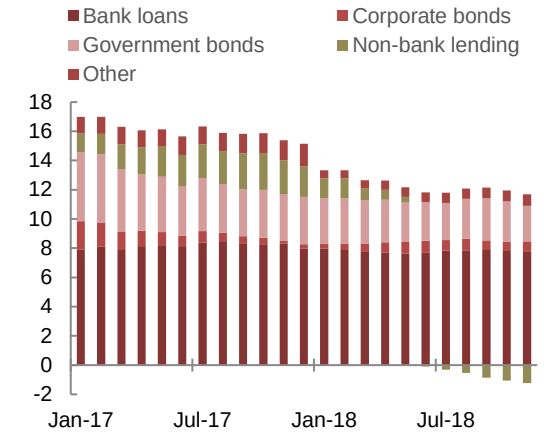
have declined substantially in recent months. In mid-December, the 3-month Shanghai Interbank Offered Rate (Shibor) was about 120 basis points lower compared to June this year (Figure 14).

Easier liquidity conditions have not led to a pickup in credit growth. Growth in total credit to the non-financial sector[4] declined to an average of 11.9 percent yoy in July-November from 13.4 percent in the first half of 2018 (Figure 15). In the third quarter of 2018, the authorities accelerated the issuance of special purpose local government bonds to bolster infrastructure spending: RMB 1.3 trillion was issued, up from RMB 0.4 trillion in January-June. Bank loans increased by 12.6 percent yoy in July-November, slightly up from 12.4 percent yoy in the first six months. In contrast, regulatory tightening continues to weigh on non-bank lending,[5] which has contracted since June. Furthermore, the demand for credit may be lower due to adequate profit growth, slower investment growth, and higher uncertainty.

In addition to providing more liquidity, the authorities encouraged banks to lend to private and small enterprises. Growth in micro and small enterprise loans outstanding has decelerated considerably since September 2017 (Figure 16). The PBOC announced targeted cuts in the required reserve ratio, lowered the re-lending rate and increased the re-lending quotas, a mechanism to support banks to lend to small and medium enterprises (SMEs). The Ministry of Finance introduced an exemption from value added tax (VAT) for banks' interest income from SME loans. As easing access to finance for SMEs is a major policy challenge in most countries, achieving significant results may take time.

Figure 15: Credit to the non-financial sector

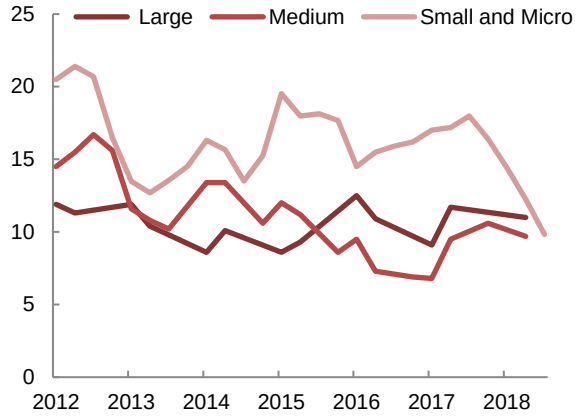
(contributions to credit growth, pp yoy)



Source: PBOC, World Bank staff calculations

Figure 16: Corporate loans by firm size

(growth yoy, percent)



Source: PBOC, World Bank staff calculations.

4. Additional fiscal easing measures have been introduced in recent months

Fiscal policy has become somewhat more expansionary since July by means of tax cuts and higher local government investment. In the first half of 2018, government revenues grew faster while expenditure slower compared to the same period in 2017, resulting in a less accommodative fiscal stance.[6] However,

[4] Total credit = total social financing – equity financing + government bonds – local government special bonds, using the revised definition of TSF which includes special government bonds, asset-backed securities held by banks, and loan write-offs.

[5] Non-bank lending refers to entrusted loans, trust loans and banker's acceptance bills.

[6] China's budget system consists of (i) a Public Finance Budget which includes tax and non-tax revenues, current expenditures, and a portion of capital expenditures; (ii) a Government Fund Budget which reflects mainly land-lease revenues of local governments and expenditures for specific infrastructure and social projects; (iii) a Social Security Fund Budget which records social insurance contributions and disbursements; and (iv) an SOE Fund Budget which is the state-owned assets operation budget. Revenues and expenditures in this section refer to the sum of (i) and (ii). The consolidated budget balance refers to the sum of (i), (ii), (iii), and (iv) minus net withdrawals from the stabilization fund.

this reversed in the third quarter: while fiscal revenue growth slowed, expenditure growth picked up. Partly due to tax cuts for enterprises, corporate income taxes declined by an average of 1.5 percent yoy in July-November, compared with an increase of 12.1 percent yoy in the first half of the year. A weaker real estate market led to moderation in growth in property-related taxes. Fiscal expenditures grew by 13.8 percent yoy in July-November, with overall capital spending by local governments accelerating. Assuming that Social Security and State-Owned Enterprise (SOE) Fund net revenues equal the 2018 Budget targets, fiscal data through November point to an estimated consolidated deficit of 3.0 percent of GDP (Table 1).

Table 1: Government finance

(RMB billion unless otherwise noted)	2016	2017	2018 Budget	Jan-Nov 2018
Public Finance Budget				
Revenues	**16,682**	**18,271**	**18,603**	**17,233**
Central government	7,236	8,112	8,536	8,217
Local government (excludes transfers from central budget)	8,719	9,145	9,782	9,017
Withdrawal from Stabilization Fund	727	1,014	285	
Expenditures	**18,862**	**20,651**	**20,983**	**19,175**
Central government (excludes transfers to local governments)	2,740	2,986	3,247	2,810
Local government	16,044	17,347	17,736	16,365
Contribution to Stabilization Fund	78	318	0	
Public Finance Budget balance	**-2,180**	**-2,380**	**-2,380**	**-1,942**
Public Finance Budget balance (% of GDP)	**-2.9**	**-2.9**	**-2.6**	**-2.2**
Government Fund Budget				
Revenues	**5,087**	**6,177**	**7,805**	**5,540**
Land-lease revenues	3,746	5,206		5,336
Local government special bond issuance	400	800	1,350	1,350
Net withdrawal from Stabilization Fund	25	30	39	
Expenditures	**4,685**	**6,070**	**7,805**	**5,598**
Social security net revenue	**435**	**643**	**643**	
SOE Fund net revenue	**43**	**57**	**56**	
Adjusted fiscal balance*	**-2,374**	**-3,100**	**-3,354**	**-2,709**
Adjusted fiscal balance (% of GDP)	**-3.2**	**-3.7**	**-3.7**	**-3.0**
*Memo: Nominal GDP***	*74,413*	*82,712*	*90,200*	*90,200*

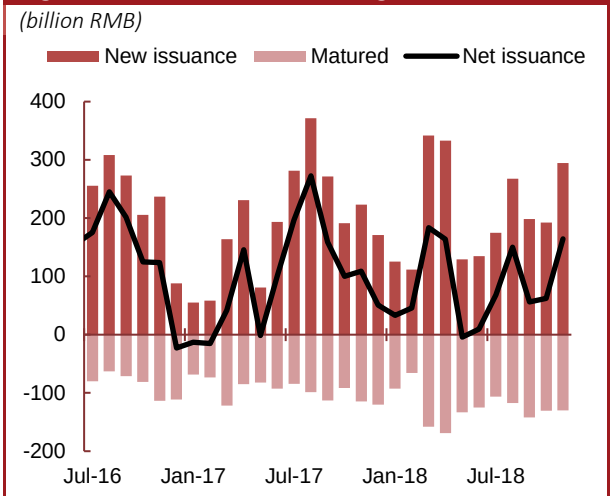
Note: * The consolidated fiscal balance = Public Finance Budget balance + Government Fund Budget balance + Social security and SOE Fund net revenues - Net withdrawal from Stabilization Fund. The consolidated balance of the 2018 Budget assumes net Social Security Fund revenues unchanged from 2017 (RMB 643 billion). The estimated consolidated balance for Jan.-Nov. 2018 assumes Social Security and SOE Fund net revenues equal to 11/12ths of the (assumed) Budget targets. ** World Bank forecast for 2018.
Source: Ministry of Finance, NBS, World Bank staff calculations.

Additional accommodative fiscal measures were introduced in the fourth quarter. An amendment to the Individual Income Tax Law, which raised the minimum threshold for personal income and introduced deductions for health, education and other expenses, became effective in October. In addition, the VAT refund rates for most export goods were raised by more than 1 pp on average as of November 1. The Ministry of Finance estimates that the total tax cuts in 2018 will exceed RMB1.3 trillion (1.4 percent of GDP).[7]

[7] https://www.reuters.com/article/us-china-economy-tax-cuts/chinas-total-tax-cut-to-exceed-1-3-trillion-yuan-this-year-above-target-idUSKCN1M903Y.

Despite a somewhat more expansionary fiscal stance since the third quarter, the authorities still appear committed to reducing off-budget borrowing. Since mid-2016, China has taken a series of important measures to restrict rapid growth in borrowing by local government financing vehicles (LGFVs), as well as from fast-expanding local public-private partnerships (PPPs) and other off-budget funds. Despite recent calls for more support to be extended to LGFVs, data suggest local government off-budget borrowing has remained contained. Net new issuance of LGFV bonds declined to RMB 934 billion in January-November 2018, from RMB 1,097 billion in the same period last year (Figure 17).

Figure 17: LGFV bond financing



Source: MOF, Wind Info, World Bank staff calculations.

5. Policy options to manage moderating growth and higher risks

In the base case, the World Bank forecasts GDP growth of 6.5 percent in 2018 and 6.2 percent in 2019-20 (Table 2). Consumption will remain the main driver of growth as economic rebalancing continues. Higher investor uncertainty and slower credit growth are expected to weigh on investment. The contribution of net exports will remain negative because of the expected deceleration in global demand growth and the adverse impact of US import tariffs. The baseline projections assume that policymakers are successful in offsetting to a large extent the direct negative impact of higher tariffs on China's exports.

Table 2: Macroeconomic indicators and outlook

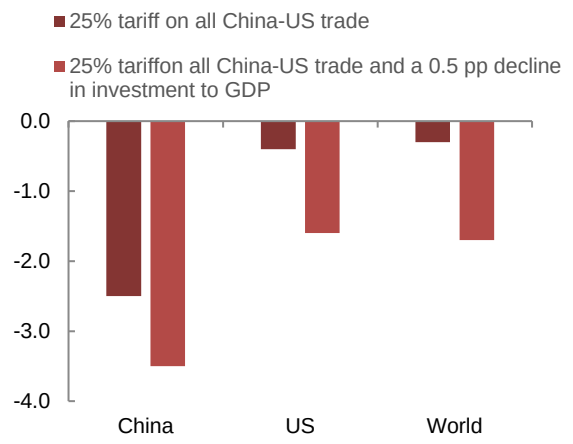
	2015	2016	2017	2018e	2019f	2020f
Real GDP growth, at constant market prices (percent)	6.9	6.7	6.9	6.5	6.2	6.2
Contributions to growth (pp):						
Final consumption	4.1	4.5	4.0	4.5	4.3	4.3
Gross fixed capital investment	2.9	2.9	2.2	2.3	2.2	2.2
Net exports	-0.1	-0.6	0.6	-0.3	-0.3	-0.3
Real GDP growth, at constant factor prices (percent)	6.9	6.7	6.9	6.5	6.2	6.2
Contributions to growth (pp):						
Agriculture	0.3	0.3	0.3	0.3	0.3	0.3
Industry	2.5	2.5	2.5	2.4	2.2	2.1
Services	4.0	3.8	4.0	3.8	3.7	3.7
Inflation (average percent change in Consumer Price Index)	1.4	2.0	1.6	2.0	2.1	2.2
Current account balance (% of GDP)	2.7	1.8	1.4	0.0	-0.2	-0.4
Financial and capital account (% of GDP)	-3.9	-3.7	1.2	1.3	-0.4	0.3
Net foreign direct investment (% of GDP)	0.6	-0.4	0.6	0.8	0.3	0.2
Consolidated fiscal balance (% of GDP) *	-2.7	-3.2	-3.7	-3.7	-3.8	-3.6

Note: f-forecast. * The consolidated fiscal balance sums the Public Finance, Government Fund, Social Security Fund, and SOE Management Fund budgets. Numbers may not add up due to rounding.
Source: Ministry of Finance, NBS, SAFE, World Bank staff calculations and projections.

A continued escalation of trade tensions could add to deteriorating investor confidence, with significant consequences for global trade and income. While the World bank estimates that the direct economic impact of the announced trade measures would be relatively limited, the effect of a wider trade war and higher investor risk aversion could potentially be large. Simulations show that the long-term impact of a 25-percent tariff on all China-US trade (including services), coupled with a 0.5 pp decline in the ratio of investment to GDP, would be a 9.3 pp fall in China's export revenues and 3.5 pp decrease in income compared with a baseline of no trade war (Freund et al., 2018) (Figure 18).[8] Although third party countries benefit from increased exports to the US and China in this scenario, these gains are more than offset by negative income effects stemming from higher investor risk aversion. In the long run, global income is estimated to be 1.7 pp lower compared with the baseline.

Figure 18: Long-term impact of trade dispute on income growth

(percentage points deviation from baseline)



Source: Freund, et al. (2018).

In this environment of higher uncertainty, the authorities have announced a series of measures to support growth and improve investor confidence. This includes fiscal incentives for households and businesses, higher infrastructure investment, higher liquidity provision by the central bank, and guidance to ease the financing constraints of the private sector and SMEs. In addition, the authorities made significant improvements in the investment climate. China now ranks 46th in the 2018 World Bank Doing Business rankings, gaining more than 30 positions from last year (World Bank, 2019). China also reduced foreign ownership caps in some sectors (e.g., financial services, car, ship, and aircraft manufacturing) and lowered import tariffs on more than 40 percent of product categories. The authorities expect the 2018 tariff reductions to lower the average most-favored-nation tariff rate for goods from 9.8 percent in 2017 to 7.5 percent. In 2018, China also reduced the time and cost to export and import by implementing a single window, eliminating administrative charges, and increasing transparency.

Looking ahead, China's key policy challenge is to manage trade-related headwinds while maintaining efforts to limit financial risks. The scope for further monetary easing is limited by the risk of faster Renminbi depreciation due to the trade tensions and higher US interest rates, as well as by the authorities' efforts to stabilize corporate debt levels. While there is room to increase government spending, there are two challenges associated with such policies. First, efforts to stimulate demand should not derail the Government's core objective of reducing risk in the financial system. Relaxing the financing constraints of LGFVs would risk pushing off-track recent efforts to implement the 2014 Budget Reform and place local government finance on a sustainable path. Second, any new investments should go to areas with high return. Evidence suggests that the recent deterioration in the efficiency of China's investment is mainly due to infrastructure and housing (see Part B.1).

To stimulate the economy, fiscal policy could focus on boosting household consumption rather than public infrastructure. An amendment to the Individual Income Tax Law raised the minimum threshold for personal income and introduced expense deductions, reducing the tax burden. On the expenditure side, the

[8] The simulations are based on a multi-sector, multi-region dynamic computable general equilibrium (CGE) model. The analysis focuses on long-term effects, with product prices and exchange rates adjusting in response to the trade measures. The simulations limited to tariffs and do not account for other policy responses.

Government could increase spending on health care, education, and social protection. Some measures, such as improving the delivery of public services to lower-income provinces or better targeting the poor and vulnerable, would boost household disposable incomes. Other policies, such as closing the pension system funding gap, would encourage households to reduce their high rate of precautionary saving (see Part B.1).

China also has room to further lower business taxes. In 2018, the Government lowered the VAT rate for some sectors, raised the threshold so that more small enterprises get preferential VAT and income tax rates, and increased the tax deductions for new equipment and research and development. Additional measures could include temporary cuts in the corporate income tax rate and social security taxes. China's statutory corporate income tax rate is 25 percent, compared to an average of 22 percent in the OECD and, despite recent reforms, social security taxes paid by employers account for 33 percent of the wage bill compared to 21 percent in the OECD (World Bank, 2018).

However, the effectiveness of any tax incentives in increasing investment will also depend on business confidence. To increase investment opportunities and lower costs, the authorities would need to deepen structural reforms. For example, improved regulatory transparency and strengthened competition would raise investor sentiment. Enforcing fair competition for private and state-owned firms, as well as financial discipline, are important. Building on the business climate reforms introduced in 2018, further progress in enhancing government to business services would lower costs and encourage more investments.

Finally, while continuing the dialogue with the US Administration, China could intensify its efforts to address trading partners' concerns over technology transfer and reciprocity in investment conditions. Removing ambiguities in China's intellectual property (IP) policy and better enforcing IP rights would encourage firms to develop frontier technology in China or transfer such technology to China-based entities. In early December, the authorities announced tougher punishment for IP violations and approved a draft amendment to the Patent Law aiming to strengthen IP protection. The Government could commit to further shorten the negative investment list and limit it to industries involving national security. Over the medium term, such policies would also contribute to productivity-led, higher-quality growth in China.

B. Medium-Term Development Agenda

1. The scope for fiscal spending to support high-quality growth in China

In 2018, concerns about slowing growth and a challenging external environment have once again brought attention to the role of fiscal policy in cushioning the economic downturn. This year, the authorities have announced tax incentives aimed at increasing household spending, supporting SMEs, and boosting business spending on research and development and new equipment (see Parts A.4 and A.5). On the expenditure side, local governments have been encouraged to fulfil their special bond issuance quotas and spend on capital projects.

As China's economy has reached a new stage of development, the relative effectiveness of various policy instruments has changed. When designing the appropriate fiscal policy mix, several important issues need to be taken into consideration: the effectiveness of fiscal measures, economic and financial sustainability, and the impact on long-term growth and equity. Historically, China was very successful in using public investment to stimulate the economy, but the costs, benefits, and financial risks of different fiscal measures aimed at stimulating growth have changed with economic development. Focusing on local public investment stimulus in recent years has brought lower returns to growth and a growing burden of debt.

At the same time, China has significant room to improve the level and efficiency of spending on health, education, and social protection. In the short term, such measures would create jobs, deliver higher-quality public services, and provide better support to poor and vulnerable households. This, in turn, would boost disposable incomes and consumption and contribute to economic rebalancing. In the long run, these policies would enhance worker productivity and long-term growth, and help reduce the inequality between rural and urban residents and across provinces.

a. Assessing the expected impact of fiscal measures

Estimating the effect of fiscal policy on GDP growth is difficult due to data limitations, as well as the two-way relationship between fiscal measures and GDP.[9] In the economics literature, the effect of a change in tax policy or fiscal spending on GDP growth is measured by the fiscal multiplier. While research on this topic has proliferated, economists are far from reaching a consensus on the size of various fiscal multipliers. Calculating multipliers in countries experiencing rapid development and institutional change is particularly challenging. Nevertheless, several findings from empirical studies can help understand the policy choices.

First, the size of fiscal multipliers can vary greatly with economic conditions (Batini et al., 2014). Earlier studies found that first-year multipliers typically lie between 0 and 1 in "normal times". However, recent papers conclude that the size can exceed 1 in "abnormal circumstances". Economies close to full employment have significantly smaller multipliers than those with significant unemployment and excess capacity. In the former case, more government spending can simply lead to inflation and crowding out of the private sector, with no impact on growth. Fiscal multipliers are also lower in countries with tax or transfer rules that are naturally countercyclical (i.e., automatic stabilizers); these arrangements compensate partly for any changes in proactive fiscal policy.

Second, fiscal multipliers vary with economic development, the type of exchange rate regime, the degree of trade openness, and the level of debt (Ilzetzki et al, 2013). In emerging and developing economies (EMDEs), the output effect of an increase in government consumption tends to be smaller than in advanced economies. This may be due to higher rate of precautionary saving in a more uncertain environment or

[9] For example, higher GDP growth automatically raises tax revenues. However, the government could increase taxes during periods of rapid growth to reduce the risk of overheating. It is empirically difficult to disentangle the two effects.

inefficiencies of revenue administration or public expenditure management in EMDEs, among other factors. Fiscal multipliers tend to be lower in countries with flexible exchange rates as exchange rate movements may offset the fiscal impact. Fiscal multipliers also tend to be lower in open economies, because the increase in domestic demand raises imports with little impact on growth. Fiscal multipliers are lower (or negative) in high sovereign debt countries, as more fiscal spending increases the probability of macroeconomic instability and adjustment and reduces investor risk appetite.

Third, the size of the multiplier may also vary by type of fiscal instrument. Earlier research showed that government spending multipliers were typically larger than revenue ones (tax cuts or transfers), but the latest studies do not support this view (Batini et al., 2014). With respect to the composition of government spending, investment and consumption multipliers are similar in high-income countries. But in EMDEs, the effect of increases in government consumption appears insignificant, while increases in government investment are associated with higher GDP (Ilzetzki et al., 2013).

The above studies suggest that China's fiscal multipliers have changed with time and are likely smaller today than in the past. Rapid development and structural change mean that relationship between fiscal policy and growth evolves continuously. A more open economy and, in recent years, a more flexible exchange rate are likely to have reduced the fiscal multiplier. As in other EMDEs, the government investment multiplier may be larger than the consumption one. Finally, given that China today operates at close to full capacity, any fiscal stimulus is likely to contribute less to growth than in a scenario with excess capacity and higher unemployment.

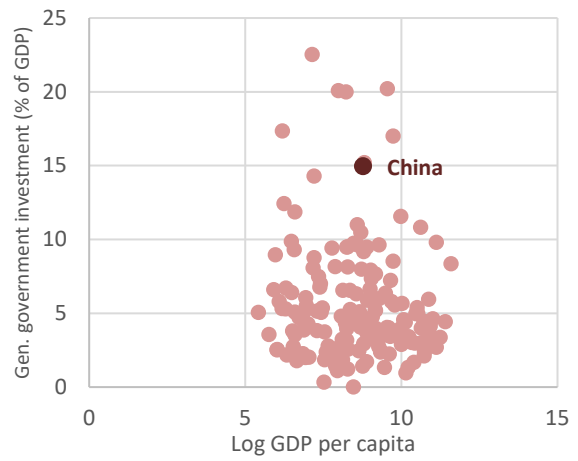
Recent empirical estimates for China suggest that the expenditure multiplier remains sizeable. The effect of capital spending by local governments, which are responsible for most public spending in China, has been about 0.6-0.8 since the 2000s. In 2000-2009, the multiplier on investment was stronger than the one on consumption: RMB 1 of county government spending increased in-county investment by RMB 1.2 and in-county consumption by RMB 0.03 (Guo at al., 2016). In addition, the fiscal multiplier has changed over time: it rose from 0.75 in 2001-2008 to 1.4 in 2010-2015 (Chen at al., 2017).[10]

b. Government investment, economic rebalancing, and deleveraging

China's strong emphasis on public investment makes it an outlier by international standards. According to IMF data, in 2011-2015 government capital spending was about 15 percent of GDP (Figure 19). The eight countries that spent more on public investment were mostly commodity-dependent economies such as Angola and Equatorial Guinea. In fact, China's public investment share of GDP has averaged 16 percent since 1978 when the reform and opening up process began. This high capital spending rate has already brought the government capital stock per worker up to OECD levels (World Bank, 2018a). In contrast to China, the OECD countries spent on average 3.7 percent of GDP on public investment.

Figure 19: General government investment, 2011-2015 average

(percent of GDP, y-axis; International USD in logs, x-axis)



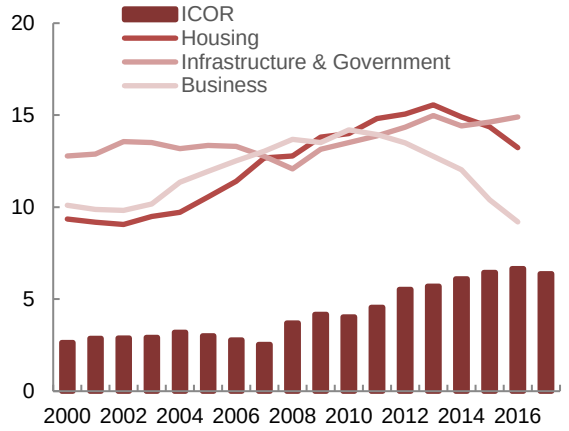
Source: IMF (2017), WDI, World Bank staff calculations.

[10] Both studies use local government balance sheet data and exclude off-budget spending.

There is evidence that, in recent years, high public investment has played a role in resource misallocation and loss in productivity. Since 2007, the efficiency of China's investment, as measured by the rapid rise in the incremental capital-output ratio (ICOR), has declined. The main reason for lower efficiency seems to be the high growth in infrastructure and housing investment over the same period (Figure 20). Over the same period, the decline in the returns to investment in the business sector was more limited (World Bank, 2017). Therefore, lower public capital spending in the future is likely to contribute to a better allocation of resources towards more productive investments and contribute to economic rebalancing.

Figure 20: Growth in capital stock by sector and the ICOR

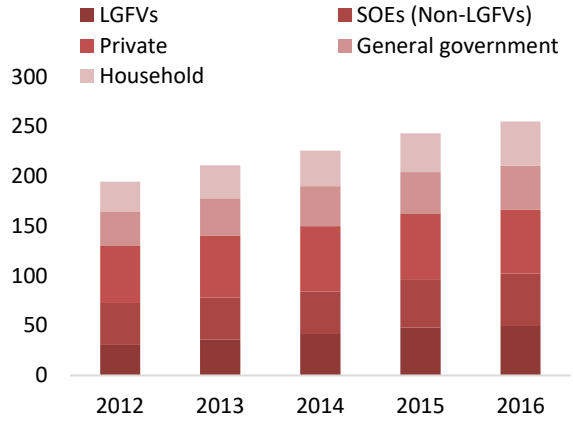
(ICOR ratio; growth in capital stock, 5-year moving average, percent per year)



Note: ICOR is the ratio of the average real gross capital formation in (t-1) and (t) to the change in real GDP between (t-1) and (t).
Source: Herd (2017), NBS, World Bank staff calculations.

Figure 21: Estimated composition of debt

(percent of GDP)



Source: BIS, PBOC, CEIC, Wind Info, World Bank staff calculations.

In addition, rapid growth in infrastructure investment in recent years has contributed to heightened financial risks. In 2013-2016, credit to the non-financial sector grew by twice the pace of GDP, reaching almost 250 percent of GDP in 2017. SOEs leverage, which increased from 73 to 103 percent of GDP between 2012 and 2016, accounted for most of the rise in indebtedness (Figure 21). In the same period, LGFV debt rose from an estimated 31 percent of GDP to 50 percent, driving the increase in the share of SOE debt. By 2016, infrastructure, construction, and housing accounted for more than 40 percent of new debt in the non-financial sector. A jump in public investment and credit to the corporate sector is reflected in growing exposure to risk among smaller regional banks and in the rapid increase in shadow banking activities. Research suggests that there is a link between the acceleration in shadow banking growth after 2012 and the increase in the financing needs of LGFVs, including the rollover of maturing bank loans taken on at the time of the 2009 fiscal stimulus (Chen at al., 2017).

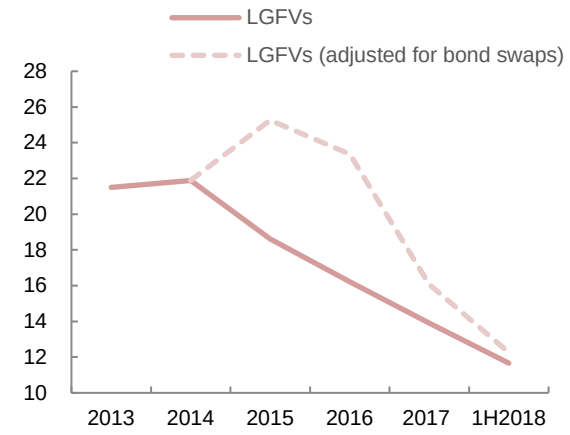
Starting in late 2016, the government began introducing a series of important measures aimed at curbing the rapid growth in credit. Local government budgeting, finance, and debt management were strengthened, leading to a significant slowdown in the growth of LGFV liabilities and of infrastructure investment (as measured by fixed asset investment data). According to Wind Info, the total liabilities of LGFVs that have issued bonds (adjusted for bond swaps)[11] grew by 16.1 percent in 2017 and an annualized rate of 12.3 percent in the first half of 2018, compared with over 20 percent a year in 2012-2016 (Figure 22). Growth in investment by PPPs decelerated significantly last year and turned negative in early 2018 (Figure 23). With

[11] The local government debt swap program was introduced in 2015 to convert debt recognized as public debt in LGFVs into government bonds.

slowing public investment growth, the debt-to-GDP ratio of the non-financial sector has stabilized. Perhaps not coincidentally, 2017 witnessed an acceleration in productivity growth and a decline in the ICOR.

Figure 22: Growth in LGFV liabilities

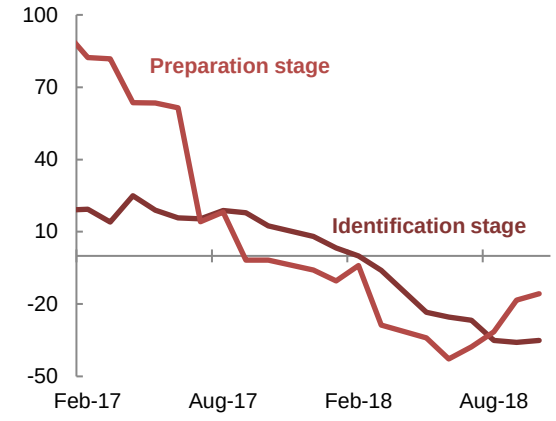
(percent yoy)



Source: Wind Info, World Bank staff calculations.

Figure 23: Growth in PPP investment

(percent yoy ytd)



Source: MOF, Wind Info, World Bank staff calculations.

c. Directing more spending toward social services

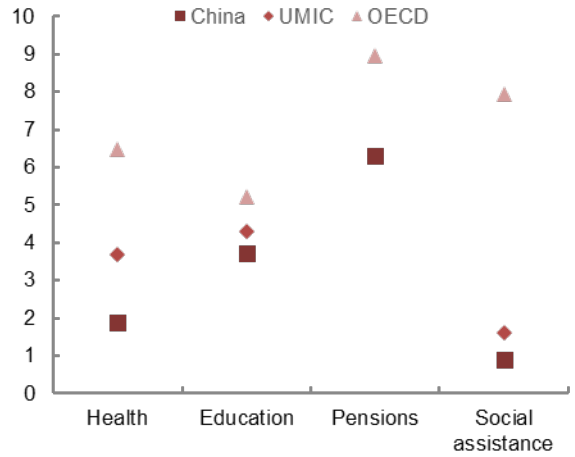
While infrastructure investment may remain an important policy lever, the government has significant room to shift fiscal resources toward social spending. Over time, China has made important improvements in public service delivery, with large increases in education and health expenditure since 2000. Basic education is now universal and secondary schooling is on track to become universal too. Pension coverage is also relatively high for a country at China's income level. However, health, education and social assistance spending, at 1.9, 3.7, and 0.9 percent of GDP in 2016, respectively, are below average compared with the upper middle income countries (UMICs) and OECD (Figure 24).[12]

Furthermore, China still faces disparities in the provision of public services between rural and urban areas and across provinces. Redistribution through intergovernmental transfers is progressive, with provinces with lower GDP per capita getting higher transfers per capita (Wang and Herd 2013). Nevertheless, it still does not fully compensate for the increase in regional inequality. Public spending on health and education per capita is higher in richer provinces (Figures 25 and 26). While most Eastern provinces are ranked in the top 20 percent globally on the Healthcare Access and Quality index, all Western and Central provinces are in the bottom 50 percent (see Section B.2). With respect to education, the number of students per teacher has steadily declined, but the ratio remains lower in wealthier provinces (Figure 27). Access to high-quality public services also varies considerably between rural and urban areas (World Bank, 2018b).

[12] China's social assistance spending is calculated using 2016 data from the Ministry of Civil Affairs, the Ministry of Housing and Urban-Rural Development, and the Ministry of Human Resources and Social Security. A large portion of China's social assistance (0.5 percent of GDP) consists of housing subsidies. International comparisons of spending on social protection are often difficult as the structure of social programs can vary substantially by country.

Figure 24: Selected general government expenditures

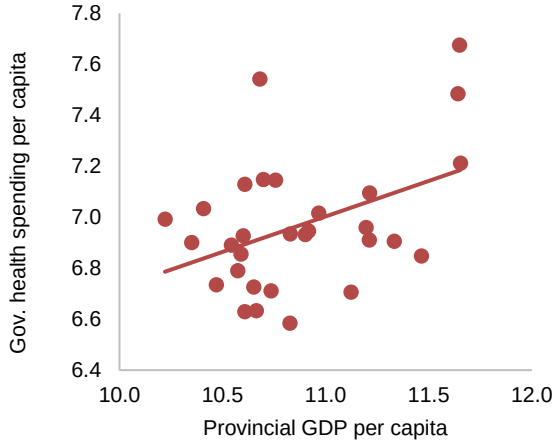
(percent of GDP)



Note 2016 data for China, 2015 for the OECD.
Source: China Health Statistical Yearbook, China Educational Finance Statistical Yearbook, Ministry of Finance, Ministry of Civil Affairs, Ministry of Housing and Urban-Rural Development, Ministry of Human Resources and Social Security, OECD, World Bank staff calculations.

Figure 25: Public spending on health by province, 2016

(logs)



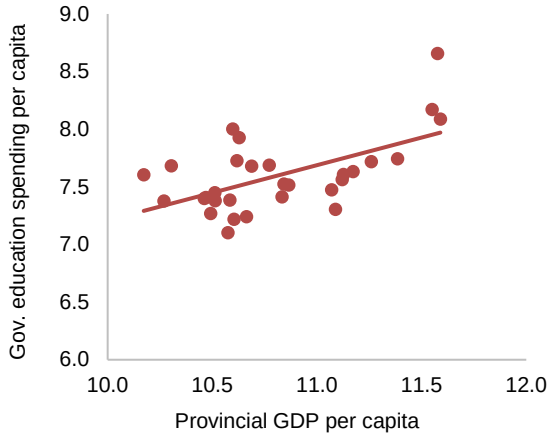
Note: Tibet is an outlier and is excluded.
Source: China Health Statistical Yearbook (2018), NBS, World Bank staff calculations.

Higher, better targeted, and more efficient social spending could be used to create jobs, support disposable incomes, and stimulate household consumption and GDP growth. In health care, measures could aim at reducing individual out-of-pocket expenditures which remain high for the poor and for rural residents. More resources could also go toward hiring and retaining health care workers in rural areas and in provinces where access to health services is relatively more limited (see Part B.2). Elderly care is another area where higher spending is needed. Similarly, public funding for education could be raised in some areas, such as early childhood education, and in villages and provinces with limited resources. In social assistance, the *Dibao* program, the backbone welfare program which provides a minimum income guarantee, needs to be strengthened to meet the basic needs of the poor and low-income families (World Bank, 2018b). In addition, pension coverage among rural, migrant, and urban informal sector workers is relatively low and benefits are often inadequate to pay living costs (World Bank, 2017).

Furthermore, strengthening the social security system would encourage households to save less and consume more. A central adjustment fund was created to pool funds from the provinces and redistribute them between regions. With a more centralized pension system workers would be able to transfer pension rights across provinces. In 2017, the Government announced the transfer of 10 percent of SOE equity into the social security funds (World Bank, 2017). To reduce the financing gap policy makers could allocate SOE dividends and new capital (by issuing government bonds) to the Social Security Fund. In addition to reducing household precautionary saving, a financially sustainable social security system is likely to require lower pension contributions from workers, further contributing to higher disposable incomes and spending.

Figure 26: Public spending on education by province, 2015

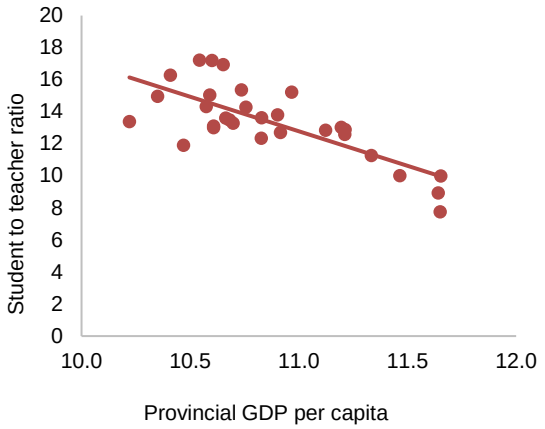
(logs)



Note: Beijing and Tibet are outliers and are excluded.
Source: China Educational Finance Statistical Yearbook (2016), NBS, World Bank staff calculations.

Figure 27: Student to teacher ratio by province, senior high school, 2016

(number of students per teacher, y-axis; logs, x-axis)



Source: China Statistical Yearbook (2017), World Bank staff calculations.

d. Aligning fiscal spending with higher-quality growth

The possibility of additional stimulus in 2019 provides the authorities with an opportunity to reassess the relative advantages and disadvantages of different fiscal measures. The attractiveness of public infrastructure investment lies in its effectiveness in raising growth in the short run. However, it increasingly comes at the cost of inefficient allocation of resources over the longer term. On the other hand, as in other EMDEs, the contribution to growth of higher current spending on social services could be somewhat lower in the short term, but it will contribute to economic rebalancing by increasing the purchasing power of households. Improving the social safety net and better protect against economic and health shocks would encourage households to save less and spend more. Over the long run, better and more inclusive health and education services would also enhance human capital (i.e., the productivity and skills of the labor force) and raise China's growth potential.

If local public investment is to be part of a renewed stimulus, the government should avoid giving an unfunded mandate to local governments. If a potential stimulus package requires resources above the explicit borrowing limits for local governments, the central government could provide the needed financing. Otherwise, a renewed build-up of off-budget debt could undo some of the recent improvements in local government debt sustainability and financial sector risk.

2. Achieving more value for money in the health sector

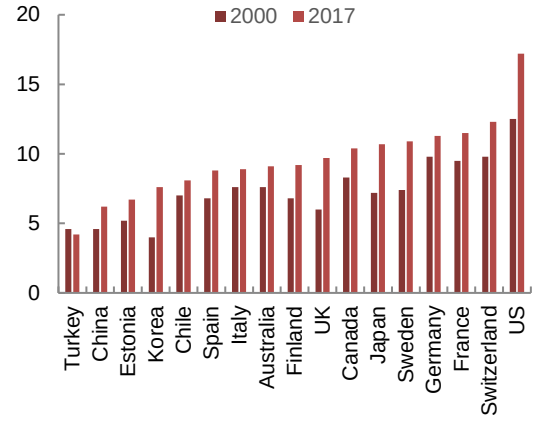
China has significantly increased access to health services, reduced child and maternal mortality and the incidence of infectious disease, and improved life expectancy. In contrast to many other countries, much of this has been achieved at a relatively low cost. But China has now reached a turning point. Demographic and epidemiological changes and rising health care costs threaten the health landscape. The number of people aged 60 or older is expected to reach a quarter of the population by 2030. The number of non-communicable disease (NCD) cases among people over age 40 is projected to double or even triple over the next two decades. In a business-as-usual scenario, health spending could increase by 8.4 percent per year between 2015-2035, exceeding 9 percent of GDP in 2035. However, that growth rate can be controlled by prudent choices in the provision of health care and the efficient use of resources. Achieving more value for the money for investments in health is an urgent priority for China.

a. Health costs are expected to grow fast in the future

Since the 2000s, growth in health spending accelerated and has exceeded that of household income in recent years. Total health expenditure increased from 4.6 percent of GDP in 2000 to 6.4 percent in 2017, though it remains below the OECD average of 8.8 percent (Figure 17). In the past decade, growth in health spending per capita, at 15.8 percent per year, was also higher than growth in GDP per capita at 11.4 percent per year (Figure 18).

Figure 17: Total health expenditure

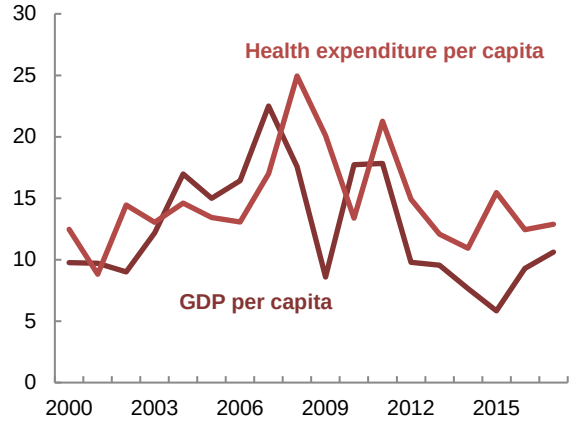
(percent of GDP)



Source: OECD Health Statistics (2018), World Bank staff calculations.

Figure 18: Growth in health spending per capita

(percent per year)

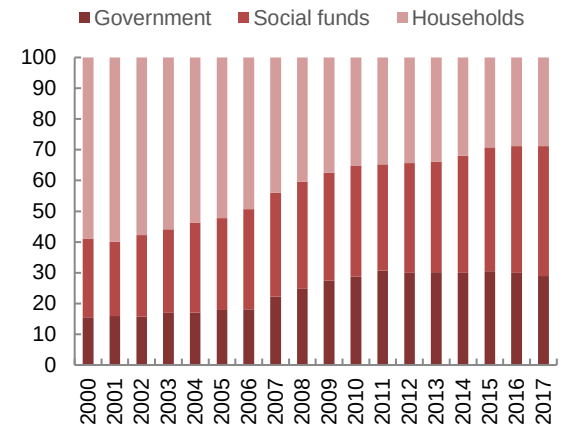


Source: China Health Statistical Yearbook (2018), World Bank staff calculations.

The Government has made significant efforts to finance the rapid growth in health costs, thus lightening the burden on households (Figure 19). The share of health expenditure financed by the central and local governments doubled between 2000 and 2011, reaching 30 percent. The proportion paid by households out of pocket declined from 59 percent in 2000 to 29 percent in 2017, a significant achievement. Nevertheless, general government spending on health still accounts for less than 2 percent of GDP, compared to an average of 6.5 percent in the OECD (see Section B.1).

Figure 19: Composition of health financing

(percent of total health expenditure)



Source: China Health Statistical Yearbook (2018).

The trend of fast growth in health costs is likely to continue in the coming decades. As in many other countries, population aging, growing prevalence of non-communicable diseases (NCDs), and the introduction and expanded use of new drugs, procedures, and other medical technology are all putting upward pressure on health costs. Expenditure pressures will also come from addressing coverage gaps and disparities in the health system. Expanding coverage may require substantial increases in spending. Additionally, extending financial protection and reducing rural-urban and regional disparities are important policy objectives, but doing so will come at significant fiscal costs. In a business-as-usual scenario, health spending will increase by 8.4 percent per year between 2015-2035, exceeding 9 percent of GDP in 2035 (World Bank et al., 2016).

Life expectancy at birth has increased significantly in the past decades, driven by greater longevity among the elderly. In 2017, there were over 228 million people aged 60 or older, accounting for 16.2 percent of the total population. This number is expected to reach a quarter by 2030 and grow to more than a third of the population by 2050 (United Nations, 2017). According to World Health Organization data, in 2016 the healthy life expectancy[13] at age 60 was 15.8 years, 4.1 years lower than the total life expectancy at age 60. China's aging population places new demands on the health system, not only in terms of the service delivery but also cost escalation. In 2017, 37.7 percent of all discharged patients were aged 60 or older and people aged 60 or older had significantly higher prevalence rates of some major diseases such as ischemic stroke and cancer.

NCDs can have disastrous outcomes for individuals and society. If not effectively managed, diabetes, hypertension and other conditions tend to result in complications, which in turn may lead to disability, suffering or premature death. The NCD epidemic is projected to continue to grow. By some estimates, the number of NCD cases among Chinese people over age 40 is predicted to double or even triple over the next two decades: diabetes will be the most prevalent disease, while lung cancer cases are likely to increase fivefold (Langenbrunner et al., 2011). Direct medical costs associated with treatment and economic costs associated with lost productivity, caregiving, and loss of healthy life can be staggering. Taking into account the impact of NCDs on labor supply and capital accumulation, the total economic impact of the five major NCDs (cardiovascular diseases, cancer, respiratory diseases, diabetes, and mental health conditions) is estimated at US$16 trillion in real terms in 2012–2030, with direct treatment cost contributing about 64 percent. NCDs also pose a threat to the financial health of households, because they are expensive to treat and require care over an extended period (Bloom et al., 2018). In 2017, the average health spending per

[13] Healthy life expectancy is defined as average number of years that a person can expect to live in "full health", taking into account years lived in less than full health due to disease or injury.

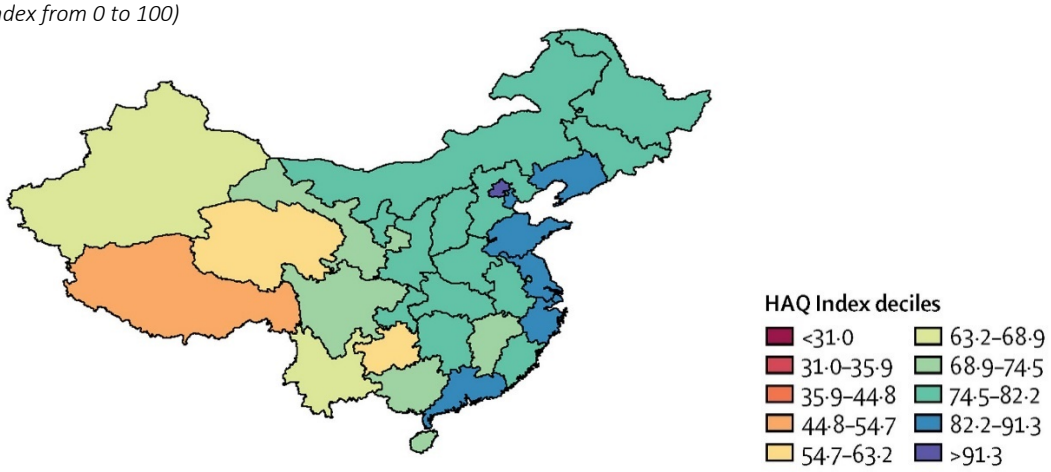
hospital admission due to diabetes was RMB 7,921, equivalent to 22 and 59 percent of the annual disposable income of an urban and rural resident, respectively.

The introduction of expensive patent-protected drugs and medical technology also pushes up health costs. China recently included 17 life-saving cancer drugs in its social health insurance coverage after negotiations drastically cut their prices. Despite lowering prices by 57 percent on average, these drugs are still very expensive. For instance, the price of a daily dose of Osimertinib was reduced to RMB 510 after the negotiations. While insurance coverage makes these drugs affordable for more patients and improves treatment, it puts upward pressure on health spending. Similarly, medical technology contributes to high health costs: for example, the number of CTs per million people increased from 7.8 in 2013 to 14.3 today. The same increasing trend applies to MRIs: 59 percent of MRIs in operation were installed in past five years (China Medical Equipment Association, 2018).

Since 2000, China has improved markedly healthcare access and quality, but subnational disparities persist. The Healthcare Access and Quality (HAQ) index in China increased from 53.3 in 2000 to 77.9 in 2016 (Figure 20), compared to an increase from 42.2 to 54.4 globally (GBD 2016 Healthcare Access and Quality Collaborators, 2018). However, in 2016 eight out of China's eleven Eastern provinces were in the top two deciles globally, but none of the Western and Central provinces. These disparities stem from many factors, including large variations in access to health facilities, health system infrastructure and scale-up of medical technologies, and the provision of effective services across the continuum of care. Fiscal support from the government is essential to narrow these regional gaps.

Figure 20: Healthcare Access and Quality Index, 2016

(index from 0 to 100)



Source: GBD 2016 Healthcare Access and Quality Collaborators (2018).

b. There is room to increase the efficiency of health spending

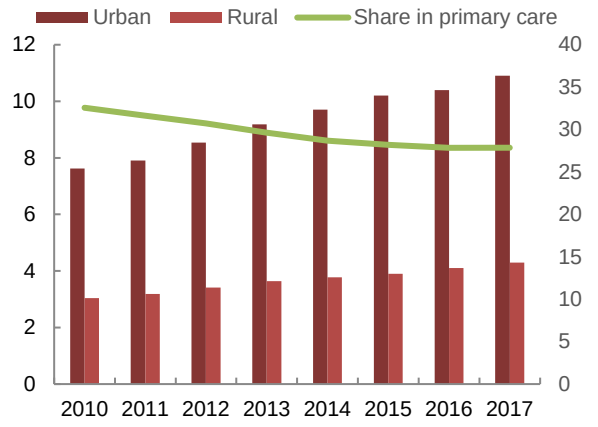
Given the fast rise in costs, achieving greater efficiency of spending has become a priority. A recent study decomposed the growth of health expenditure over 1993-2012 into disease prevalence rate, population growth, aging, excess health price inflation, and real expenditure per prevalent case and found that the latter accounted for 72.6 percent of total growth (Zhai et al., 2017). Due to data limitations, this study could not disaggregate the effect of social and economic factors, such as income growth, advances in medical technology, health insurance expansion, etc., from the impact of expenditure per prevalent case. Both social and economic development and health system inefficiencies may have contributed to the large impact of expenditure per prevalent case on growth in total health expenditure. Health system inefficiencies in China include weaknesses in primary care, a hospital-centric delivery system, poor quality

of care, particularly in terms of NCD management, and a fragmented provider payment system also contribute to cost escalation.

China has significant potential to strengthen primary health care. Strong primary care systems can improve health outcomes and respond efficiently to the needs of aging populations and the growing burden of NCDs. Currently, the core functions of the primary care system in prevention, case detection and management, gate keeping, referral, and care coordination do not meet basic standard. One of the most significant challenges lies in the shortage of qualified health professionals working at the primary care level. The government has made efforts to strengthen human resources in health care in the past 10 years. It has focused on improving the primary care workforce through various general practitioner training programs and incentives for health professionals to work in primary care institutions. Health professionals per 1000 people increased from 7.6 in 2010 to 10.9 in 2017 in cities and from 3.0 to 4.3 in rural areas. Nevertheless, the share of health professionals working in primary care decreased by 5 percentage points between 2010 and 2017 (Figure 21). Low job satisfaction and high occupational burnout are widespread, resulting in a high prevalence of intention to quit, particularly among those who are younger or better educated and working in village clinics. The causes include insufficient remuneration, low job security, lack of social benefits, unclear career path, and lack of personal accomplishment (Li at al., 2017).

Figure 21: Number of health professionals

(number per 1000 people; share in percent, RHS)



Source: China Health Statistical Yearbook (2011-2018), World Bank staff calculations.

Despite the promotion of a tiered health service delivery system as a top priority by the central government, the dominance of hospital-based care has continued. The number of hospital beds increased 277 percent between 2000 and 2017 to 6.1 million. Albeit starting from a low base, China today has more hospital beds per 1000 population than 19 out of 35 OECD countries, including the UK, Canada, Denmark, US, Spain, Netherlands, and Australia. Most OECD countries significantly reduced the number of hospital beds over the last decade, in many cases by as much as 30 percent (Figure 22). There has also been a shift in capacity towards higher level facilities. Between 2002 and 2017, the number of secondary and tertiary hospitals[14] increased by 62 and 140 percent, respectively, while there was a small decline in the number of primary care providers (Figure 23).

In addition, tertiary hospitals are playing a much greater role in the provision of both inpatient and outpatient services. In 2010–2017, the share of inpatient services provided by tertiary hospitals increased from 21.8 to 34.4 percent, while the proportion for primary care facilities and secondary hospitals declined to 18.2 and 32.8 percent, respectively (Figure 24). Although primary care institutions still provide the largest volume of outpatient services, their share dropped from 61.9 percent in 2010 to 54.1 percent in 2017 (Figure 25). The share of secondary hospitals remained stable at around 15 percent. The share of services lost by primary care institutions was taken by tertiary hospitals.

[14] Secondary hospitals are usually highly differentiated by function. Tertiary hospitals, which are also highly differentiated by function, have highly specialized staff and technical equipment, could have teaching activities, and may have larger capacity.

Figure 22: Hospital beds

(number of beds per 1000 people)

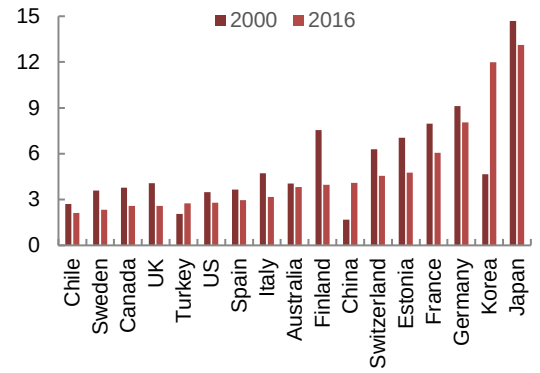


Figure 23: Increase in the number of facilities

(2002=100)

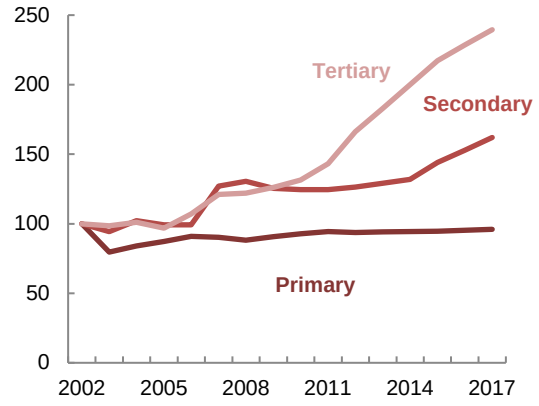


Figure 24: Inpatient services by type of facility

(share of services by type and hospitalization rate (RHS), percent)

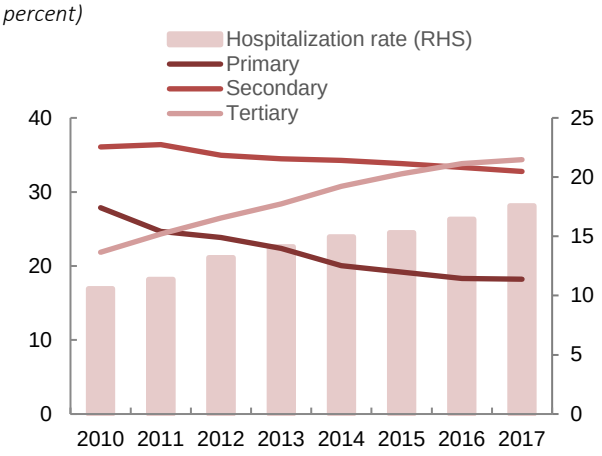
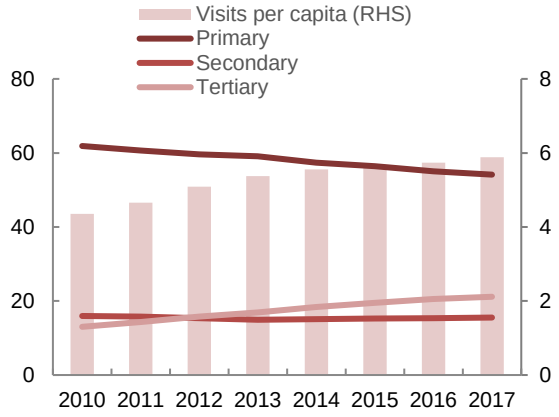


Figure 25: Outpatient services by type of facility

(share of services by type, percent; visits per capita (RHS))



Source: OECD Health Statistics (2018), China Health Statistical Yearbook (2011-2018), World Bank staff calculations.

The rapid expansion and upgrading of health care infrastructure has laid the foundation for delivering higher quality care, but attention needs to be directed to improving the process and outcomes of care. For example, there are substantial gaps in the management of hypertension and diabetes, which can lead to disabling or life-threatening complications. A community-based national screening project of 1.7 million participants aged 35-75 found that 45 of every 100 people had hypertension, of whom 20 were aware of their diagnosis, 13 took prescribed antihypertensive medications, and only 3 had achieved control (Figure 26) (Lu et al., 2017). China has marked deficiencies in the availability, cost, and prescription of antihypertensive medications at primary care institutions. High-value medications, defined as guideline-recommended and low-cost, are stocked at one-third of the primary care institutions and used in just 11 percent of all prescriptions (Figure 27) (Su et al., 2017). The findings were similar for people with diabetes. A national representative survey of 170,000 adults found that 11 of every 100 participants had diabetes, of whom 4 were aware of their diagnosis, fewer than 4 were treated, and only 2 had adequate glycemic control (Wang et al., 2017). These results were obtained despite the prioritization, since 2009, of hypertension and diabetes management in the National Basic Public Health Service Program, a fully funded government program with RMB55 per person in 2018 (up from RMB15 in 2009).

China needs to do more to correct the incentive system affecting both provider behavior and the nature and scope of health expenditure. It is generally acknowledged that health providers respond to financial

incentives by adjusting their clinical decisions in line with the way they are paid (OECD, 2016). China's current provider payment system is fragmented and does little to support new care models that improve care coordination or develop services for patients with complex health needs that span across levels of care (e.g., NCD patients or patients with multiple morbidities). Health service provision is mainly financed according to service types. For instance, health care providers receive a fee for each outpatient service (e.g., office visit, test, procedure, etc.), while for inpatient services providers are paid per case treated. Frequently, this results in fragmented care, with poor patient experience and poor health outcomes.

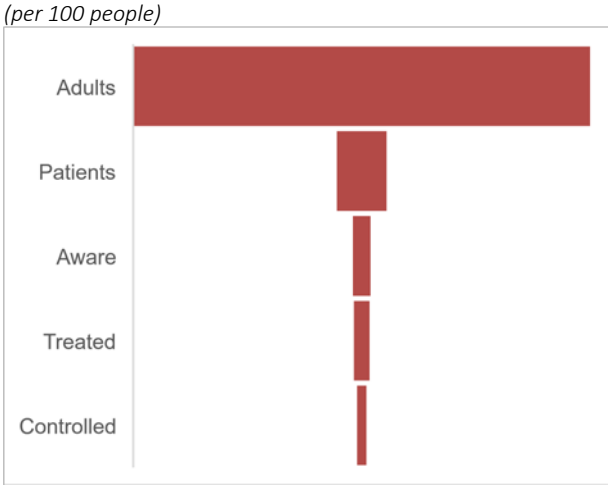
Figure 26: Hypertension cascade analysis

(per 100 people)

Source: Lu, et al. (2017).

Figure 27: Diabetes cascade analysis

(per 100 people)



Source: Wang, et al. (2017).

c. Policies to improve health outcomes at a lower cost

This article has identified several reform areas to achieve more value for money in health care, starting with a transition from a hospital-centric delivery system to a people-centered integrated care (PCIC). PCIC built on the foundation of a strong primary health care system has been advanced through the Government's Healthy China 2030 agenda. However, the road toward this goal is challenging and requires a systematic change in how primary care is staffed, resourced, and valued. For instance, to increase the recruitment, retention, and motivation of primary health care workers, general practice should be elevated to the status and compensation of other medical specialties. With PCIC, hospitals will continue to play an important role but over time will become less financially dominant and more focused on providing specialized services. As primary care is strengthened and PCIC is put in place, a wide range of care processes will be shifted out of hospitals into primary care facilities. Hospitals will become centers of excellence, training the workforce and conducting biomedical research.

Second, moving from passive purchasing to strategic purchasing of health services would also contribute to lower health costs with improved health outcomes. The establishment of the National Health Security Administration (NHSA) is a significant reform step. As the single purchaser of medical services and medicine in the country, NHSA is well positioned to become a strategic purchaser of health services, which would enhance equity in the distribution of resources, increase efficiency, manage expenditure growth, and promote quality in health service delivery.

Finally, to tackle the high cost–low return challenge, the health system could move from 'sick care', which focuses on treatment, to 'people's health', which emphasizes prevention. Forestalling the development of disease before symptoms or life-threatening events occur is the best solution to improving population health. Policies that enable people to live healthier lives include curtailing smoking and alcohol consumption and improving diet and exercise opportunities.

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