

Belabed, Christian Alexander; Theobald, Thomas

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Why the Chinese recovery will slow: Some lessons from sectoral data

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Christian Alexander Belabed and Thomas Theobald

Why the Chinese recovery will slow – some lessons from sectoral data



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Bank of Finland
BOFIT – Institute for Economies in Transition

PO Box 160
FIN-00101 Helsinki

Phone: +358 9 183 2268

Email: bofit@bof.fi
Website: www.bofit.fi/en

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Christian Alexander Belabed and Thomas Theobald¹

Why the Chinese recovery will slow – some lessons from sectoral data

Abstract

The outlook for economic growth in China remains highly uncertain and dependent on factors such as domestic economic policy and recovery in external demand. We attempt to assess China's short-term growth outlook with readily available monthly sectoral data of supply-side and demand-side indicators. We also discuss well-known issues surrounding Chinese data and potential pitfalls to medium-to-long-term growth. We conclude that China may well deliver a V-shaped recovery over the very short-term, while long-term growth is likely to be significantly lower than previously anticipated.

Keywords: Chinese economy, growth outlook, fixed asset investment, sectoral analysis, economic policy.

¹ Christian Alexander Belabed (Foreign Research Division, Oesterreichische Nationalbank) and Thomas Theobald (Macroeconomic Policy Institute Duesseldorf).

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The world economy is tanking at the fastest rate seen since the 1930s. In its most recent forecast, the IMF predicts that the global economy will shrink by 4.9% in 2020, mainly driven by the comparatively weak outlook for industrialized economies (IMF, 2020). Notwithstanding new outbreaks such as the one in Beijing in mid-June, overall developments suggest that China successfully contained the initial large-scale outbreak of the virus after implementing unprecedented containment measures in January.

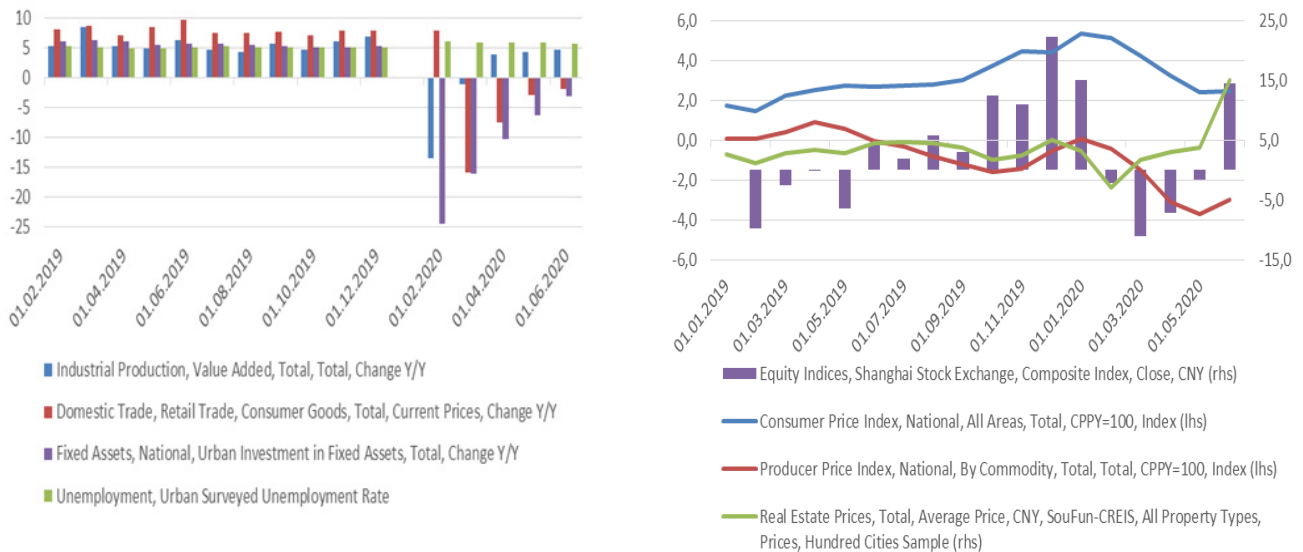
China's GDP declined by 6.8 % year-on-year in the first quarter of 2020 according to official releases, the first decline since the start of the transformation process in 1978. Second-quarter growth was up by 3.2 % y-o-y.² While consumption expenditures contributed negatively to growth with -2.4 percentage points, investment and net exports supported recovery (adding 5.0 pp and 0.5 pp, respectively).

After two months of full lockdown in the region of Hubei and partial lockdowns in the rest of the country, China started reopening its economy in March. The end of the lockdown allowed a supply-side recovery led by the resurgence of industrial production (Figure 1, left). Since April, trade figures have also been buoyed by international demand for medical equipment.

In contrast, the recovery in private consumption has been quite gradual. June figures reveal an ongoing lack of on-year growth in retail sales and still-rising unemployment rate measured by the only available proxy series on a monthly base (see Figure 1, left). Clearly, Chinese consumers are not entirely insulated from all repercussions from the pandemic. Their realized income losses and uncertainty about the future dampen demand. Nevertheless, after decomposing industrial production and retail trade by the category of goods, indications of persistent weakness are seen for only a few groups, most notably luxury goods and petroleum due to reduced travel activity. There are also hints of reluctance to dining out or engage in certain entertainment activities, especially going to the cinema (Huang, 2020).

² See Annex for the discussion about the data quality of China's GDP figures.

Figure 1. Monthly indicators by May 2020



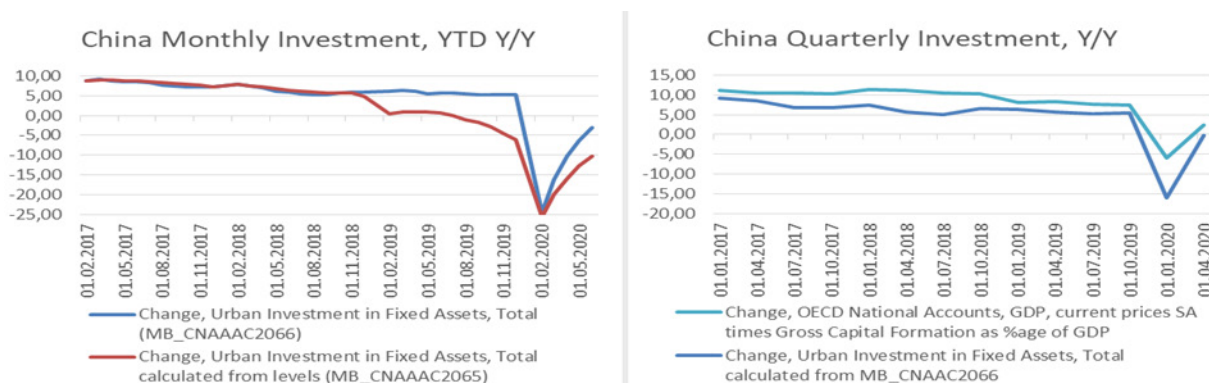
Sources: Macrobond, NBS.

The tepid recovery in consumption is not the sole reason China cannot be counted on to be the growth engine for the global economy as it was in 2008. China's fiscal stimulus, currently estimated at 4.1 % of GDP, is less than a third of the 2008 stimulus (13 % of GDP). Moreover, China's current strengths in foreign trade are likely to diminish. The spread of the coronavirus to the rest of the world implies lower Chinese exports over the longer term, and more specifically a subsidence in demand for medical equipment, the eventual loss of temporarily gained market share, and exacerbation of trade disputes with the US and Europe over such matters as Hong Kong's loss of autonomy. These trends could more than offset any positive effect from a recovery in foreign demand. Gross fixed capital formation is also unlikely to return to pre-pandemic growth rates.

When looking at the monthly indicators, the investment outlook is not as bright as recent growth contributions based on quarterly frequency suggest. Such an indication comes from urban investment in fixed assets, which in June were still about 3 % below the level of June 2019 (Figure 1, left). It is worth mentioning that the consistency of these time series with the macroeconomic data is not 1:1 (Figure 2). This is particularly true because discrepancies of recent investment observations are already apparent within the time series provided by the National Bureau of Statistics (NBS) as shown in Figure 2 on the left-hand side. However, if on-year growth rates are calculated from year-to-date data, the dynamics are reasonably consistent with data from the national accounts (Figure 2, right-hand side).

China's economy depends on a fixed investment share of about 40 % of GDP, which is very high by international standards. As made clear in Figure 3, however, on-year investment growth for almost all sectors of the economy in June was well below the average value of 2019. The difference is striking, amounting to double-digit percentage points for most sectors. There is high investment, however, in publicly dominated sectors. In any case, pre-pandemic growth seems a fast-fading aspiration. As the pandemic shock hit the investment trajectory amidst a structural slowdown, it is doubtful whether the consistently high growth rates of the past will ever be achieved again.

Figure 2. Data comparison including different series for urban investment



Sources: Macrobond, NBS.

Figure 3. Urban investment in fixed assets by sector

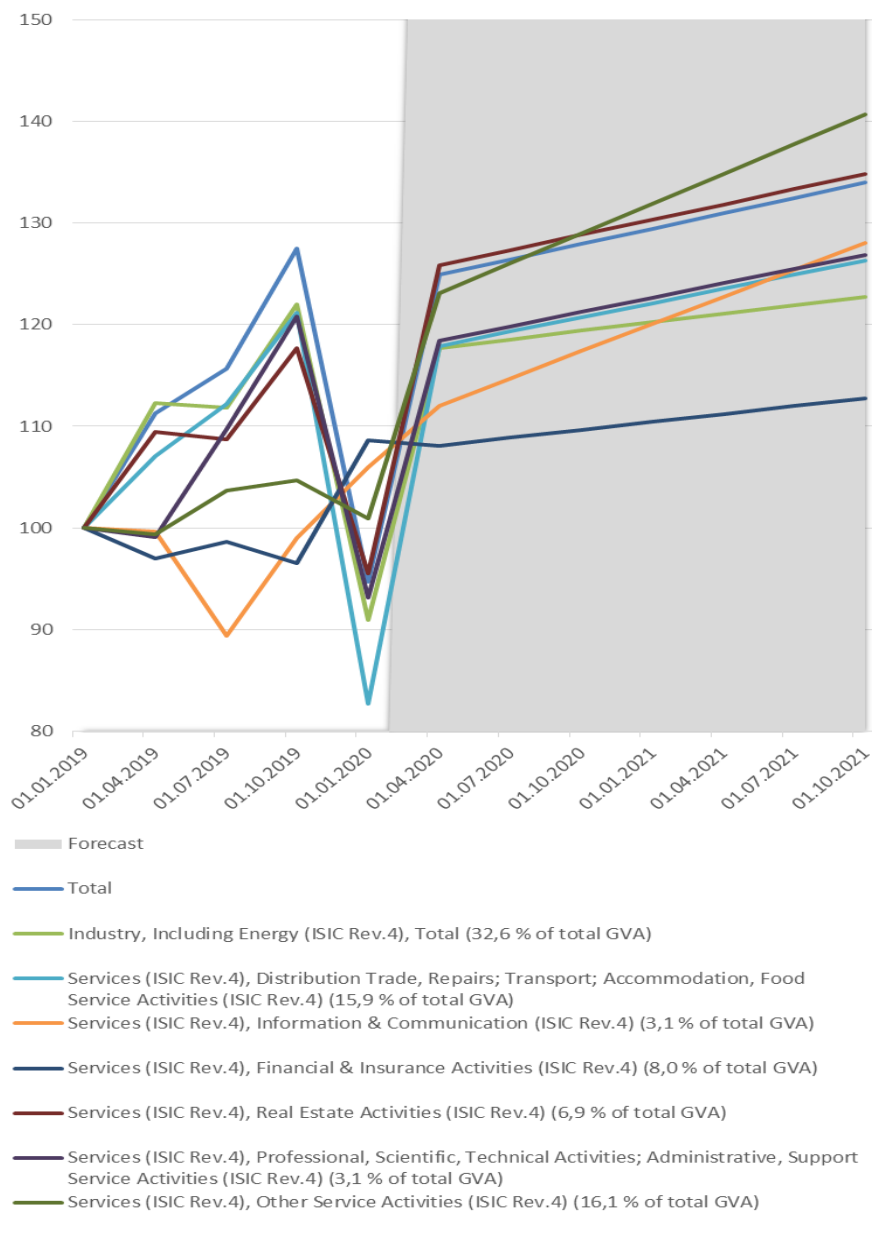
China, Urban Investment in Fixed Assets, Change Year on Year (YTD): (Share of To		avg 2019	01.02.2020	01.03.2020	01.04.2020	01.05.2020	01.06.2020 act - average
Sector Total, Total	100,0%	5,7	-24,5	-16,1	-10,3	-6,3	-3,1 -8,8
By Sector, Agriculture, Forestry, Animal Husbandry & Fishery	A (3,9 %)	-0,4	-24,7	-12,1	-3,9	1,8	5,5 5,9
By Sector, Mining, Total	B (1,5 %)	25,9	-3,8	-3,2	-9,2	-8,7	-3,9 -29,8
By Sector, Manufacturing, Total	C (32,5 %)	3,2	-31,5	-25,2	-18,8	-14,8	-11,7 -14,9
By Sector, Electricity, Heat, Gas & Water Supply, Total	D (4,0 %)	1,0	-6,4	2,0	7,6	13,8	18,2 17,2
By Sector, Management of Water Conservancy, Environment & Fac.,	E (12,5 %)	2,0	-30,1	-18,5	-11,2	-6,5	-4,9 -6,9
By Sector, Construction	F (0,4 %)	-20,3	-82,4	-64,0	-53,9	-45,0	-34,0 -13,7
By Sector, Wholesale & Retail Trade	G (1,8 %)	-19,8	-41,8	-42,1	-38,7	-35,9	-30,7 -10,9
By Sector, Transportation, Storage & Post, Total	H (9,3 %)	5,2	-30,1	-20,7	-12,1	-6,1	-1,2 -6,4
By Sector, Hotel & Catering Service	I (0,8 %)	-6,3	-32,0	-19,3	-15,1	-12,6	-9,6 -3,3
By Sector, Information Transmission, Computer Service & Software, T	J (1,1 %)	9,3	-32,8	-21,2	-9,5	-2,2	13,5 4,2
By Sector, Financial Services	K (0,2 %)	10,6	-40,5	-33,4	-30,9	-27,3	-21,4 -32,0
By Sector, Real Estate	L (23,8 %)	10,4	-18,1	-9,3	-4,5	-1,8	0,6 -9,8
By Sector, Scientific Research, Technical Service, & Geological Prosp.	M (1,0 %)	11,7	-10,3	7,6	9,8	6,1	8,8 -2,9
By Sector, Leasing & Business Service	N (2,4 %)	10,7	-18,6	-9,3	-6,2	-5,5	-1,4 -12,1
By Sector, Public Management & Social Organization	O (1,0 %)	2,0	-30,1	-18,5	-11,2	-6,5	-4,9 -6,9
By Sector, Education	P (1,9 %)	17,2	-21,8	-4,0	2,9	10,4	10,8 -6,4
By Sector, Health, Social Security, & Social Welfare, Total	Q (1,2 %)	3,3	-12,8	-1,3	4,0	8,9	14,0 10,7
By Sector, Culture, Sports & Entertainment, Total	R (1,6 %)	17,4	-23,1	-19,7	-14,8	-8,2	-6,9 -24,3
By Sector, Household Services, Repair & Other Services	S (0,3 %)	-9,6	-46,2	-36,5	-34,0	-25,2	-16,1 -6,5
Data in %, based on current prices, CNY						share < 0	84%

Sources: Macrobond, NBS.

In contrast to consumer prices, which have been heavily influenced by high pork prices due to the African swine fever virus and are now at the lower end of the target corridor, producer prices have declined significantly since the beginning of the year (Figure 1, right). Lower sale prices limit the use of retained profits for internal financing of investments. Reduced profits are a particular issue for small and medium-sized enterprises (SMEs). Such corporates benefit less from the monetary policy measures taken by the People's Bank of China if their creditor is a shadow bank that demands higher risk premia than large banks and despite reductions in primary financing rates.

In this context, a recent surge in property and stock market prices triggered by increased central bank liquidity is ambiguous (Figure 1, right). Even with the latest growth figures and official cheerleading from authorities and the media (Kynge, 2020), the fundamentals do not reflect these dynamics. Moreover, even assuming vibrant growth continues in the second half of the year, industrial profits are unlikely to match 2019 levels. A bull market without the support of robust industrial profits can end abruptly. We saw such market frailty in 2015 with a bursting stock price bubble that threatened investors with a hard-landing for the Chinese economy. While the current equity price boom helps companies raise capital, it also increases risk to financial market stability, which, given that the corporate sector's debt-to-GDP ratio already around 150 %, likely explains the government's reticence with respect to larger fiscal stimulus measures.

Figure 4. Sectoral projections



Sources: OEC, authors' calculations.

In its latest response to the pandemic shock, the Chinese government provided a USD 500 billion (4.1 % of GDP) package of discretionary fiscal measures. The package includes higher health expenditures, extensions of unemployment insurance, tax relief, waiving of social security contributions, cuts in electricity prices, and increased public investment. However, the amount of additional public investment expenditure is significantly lower than in the 2008 global recession. Data compiled by Elgin et al. (2020) suggest that of non-fiscal stimulus measures are more than double the size of the fiscal package in China. Gilhooly et al. (2020), using a financial conditions index compiled by Fu et al. (2019), report that financial conditions provide significant short-term stimulus, in particular the subcomponent “money and credit.” COVID-19-related measures could lead to an easing of financial conditions similar to those last seen in 2016. Macro-financial measures include encouraging lending to SMEs and raising lending targets of banks to medium-sized enterprises from 30 % to 40 %, a grace period on loan payments, lowering coverage requirements for non-performing

loans (NPLs), or fiscal support for credit guarantees (see IMF, 2020a for details). All these measures center around the corporate sector, particularly SMEs.

Rapidly rising household indebtedness represents another emerging risk to China's financial stability. The household debt-to-GDP ratio rose from 11 % in 2006 to 55 % in mid-2019, a level unknown to other emerging market economies. Higher-than-official unemployment rates (Feng et al. 2015, Bailliu et al. 2019), coupled with income reductions or payment delays, could lead to belated mortgage payments or even defaults by households. Undoubtedly, macro-financial measures will support the banking system, but China's social safety net and system of transfers to households remains quite rudimentary. Admittedly, Chinese households are in a league of their own when it comes to saving money (more than 20 % of GDP), but these savings are unequally distributed and often earmarked to compensate for the lack of access to public goods such as the education or health system due to tight regulation (e.g. the *hukou* household registration system, which complicates internal migration). Hence, it seems likely that households would need to be supported via the general budget which currently is geared to investment in growth industries such as telecommunications and environmental infrastructure.

With infrastructure largely modernized, decarbonization and digitalization are the most promising prospects for public investment. Although China has implemented its initial measures to achieve its contribution to keeping the average rise in the global temperature to below 2°C by 2015 (Chen and Li, 2019), the government seems reluctant to accelerate structural change through faster decarbonization, and instead is expanding coal plant capacity (Hale and Hook, 2020). Therefore, only digitalization remains, which China is pursuing in an ambitious program this year. Mostly, the country's information and communication sector will benefit (Figure 4). China is expanding its 5G infrastructure investment expenditures by constructing 600,000 5G base stations until the end of the year (Zhang, 2020). These investments are part of a broader digital infrastructure investment plan with 5G-related investments amounting to USD 60 billion in 2020. Over the next five years, planned 5G-related expenditures amount to about USD 200 billion.

Nevertheless, China's growth is likely to slow in the second half of this year on weaker external demand and anemic investment expenditures. While external demand as a whole is expected to recover in the second half, trade tensions pose the risk that previously gained market shares by China are only temporary as supply chains are restored around the world. Naturally, further empirical research on the consistency of investment data and the growth effects of structural change towards a lower capital intensity of the Chinese production is needed. Weaker growth of fixed asset investment is at least partly corroborated by monthly changes of industrial production disaggregated by goods category (Figure 5).

Figure 5. Industrial production by goods category

China, Industrial Production, Change Year on Year	ISIC	avg 2018-19	01.02.2020	01.03.2020	01.04.2020	01.05.2020	01.06.2020	act - avg
Sector Total, Total	B - E	6,0	-13,5	-1,1	3,9	4,4	4,8	-1,2
Sector Total, Mining & Quarrying	B	3,4	-6,5	4,2	0,3	1,1	1,7	-1,7
Manufacture of Foods	C10	6,1	4,6	5,7	7,5	6,3	1,3	-4,8
Manufacture of Beverages	C11	6,6	7,9	-2,3	-1,5	0,6	1,3	-5,3
Manufacture of Tobacco	C12	0,9	6,9	16,1	-1,3	-3,7	1,9	1,0
Manufacture of Textile	C13	1,0	0,2	-5,5	2	4,3	3,2	2,2
Manufacture of Textile Wearing Apparel	C14	2,3	0	-8,4	-4,2	-5	-9,9	-12,2
Manufacture of Leather, Fur, Feather	C15	3,1	-1,5	-10,6	-10,6	-11,4	-11,4	-14,5
Manufacture of Wood, Bamboo, Rattan, Palm	C16	2,2	3,2	0,3	0,7	1,4	-1,8	-4,0
Manufacture of Paper & Paper Products	C17	2,6	5,2	0,8	7,9	1,4	2,2	-0,4
Printing, Reproduction of Recording Media	C18	4,6	1,3	-4,1	5,8	2	-3,1	-7,7
Processing of Petroleum, Coking, Nucleus Fuel	C19	5,4	7,3	-8,9	-0,4	7,8	7,1	1,7
Manufacture of Chemicals Chemical Products	C20	4,1	7,7	0,7	3,2	3,9	4	-0,1
Manufacture of Medicines	C21	8,1	5,3	10,4	4,8	2	3,9	-4,2
Manufacture of Rubber & Plastic	C22	4,2	3,7	-5,5	5,2	3,5	2,7	-1,5
Manufacture of Non-Metallic Mineral Products	C23	6,6	8,4	-4,5	4,2	5,5	4,8	-1,8
Manufacture & Processing of Ferrous Metals	C241	8,6	10,7	4,1	4,6	6,1	6,3	-2,3
Manufacture & Processing of Non-Ferrous Metals	C242	8,6	5	2,8	6,9	4	2,8	-5,8
Manufacture of Metal Products	C25	4,4	6,3	-1,6	8,9	3,6	2,6	-1,8
Manufacture of Communication Equipment, Computer & Other Eq	C26	11,3	11,6	9,9	11,8	10,8	12,6	1,3
Manufacture of Electrical Machinery & Equipment	C27	8,9	12,4	-0,4	9	6,8	8,7	-0,2
Manufacture of General Purpose Machinery	C281	5,6	4,9	-5,4	7,5	7,3	7,4	1,8
Manufacture of Special Purpose Machinery	C282	8,8	6,5	-2,2	14,3	16,4	9,6	0,8
Manufacture of Automobiles	C29	3,3	10,4	-22,4	5,8	12,2	13,4	10,1
Manufacture of Railways, Ships, Aircrafts & Other Transportation	C30	6,0	-6,8	0,5	5,7	2,5	-1,2	-7,2
Manufacture of Furniture	C31	3,9	4,3	-8,1	-7	-8,6	-7,9	-11,8
Manufacture of Articles for Culture, Education & Sport Activity	C323	4,4	-1,4	-10,7	-10,6	-9,8	-8,3	-12,7
Manufacture of Measuring Instruments & Cultural Activity & Office	C325	8,0	3,4	-4,9	11,1	8,4	6,6	-1,4
Manufacture of Artwork & Other Manufacture	C329	2,6	-3,9	-12,9	-4,8	-5,4	-7,1	-9,7
Repair of Metal Products, Machinery & Equipment	C33	9,8	25,1	-10,1	-5	-0,7	-5,7	-15,5
Production & Supply of Electric Power & Heat Power	C35	7,6	7	-1,7	-0,2	4	6,3	-1,3
Production & Supply of Water	E36	7,4	8,4	1,3	1,7	3,5	5,3	-2,1
Recycling & Disposal of Waste	E38	8,0	38	8,5	16,3	3,5	-3,5	-11,5
Data in %, based on current prices, CNY						share < 0		78%

Source: Macrobond/NBS.

Deviations from average growth rates of goods-level industrial production are still large in several categories, while some production of other goods (e.g. manufacturing of automobiles, special purpose machinery, or textiles in general) have already recovered. Even so, some industries are still mired by impeded growth. Given the lack of domestic and external demand, scepticism is warranted as to whether fixed asset investment growth can reach pre-corona growth in the second half of 2020 or thereafter. At the moment, it seems likely that investment growth will have to adapt to the strange, downsized “90 % economy” discussed in an April issue of *The Economist* (Economist, 2020).

After the huge pandemic shock, annual average growth, which the forecast consensus now predicts to be 2 % this year and 8.5 % next year, does not comprehensively reflect the underlying dynamics of the business cycle. Relative to the pre-crisis levels of around 6 %, real on-year medium-term growth is likely to stay in the range of 4.5 % to 5 %. This projection is consistent with the sectoral forecasts shown in Figure 4, implying a structural slowdown in growth, with the exceptions of the information and communications sector and the public sector.

Annex

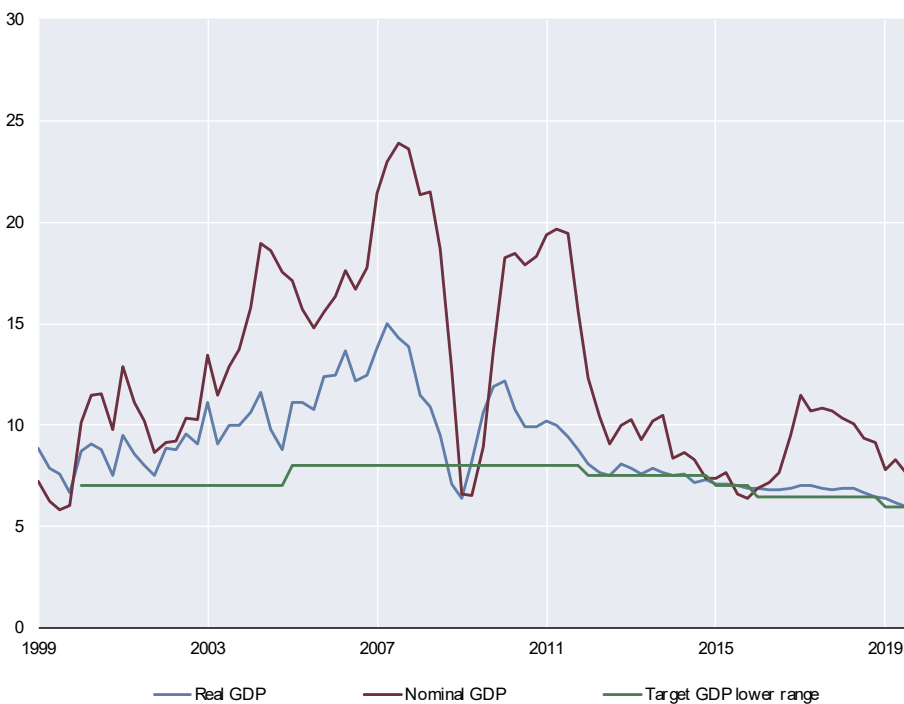
How reliable are Chinese GDP data?

Since China started releases of data on GDP and its components, there have been doubts surrounding the accuracy and reliability of the data. These doubts have been fueled by reporting official GDP growth rates that always hit the target. In an interesting contribution, Kerola (2019) reports a number of oddities in Chinese GDP data. First, aggregating provincial-level GDP yields significantly higher national GDP levels. This may be due to incentives for officials to report growth figures in accordance with mandated targets. Second, as Figure 6 shows, nominal GDP growth is much more volatile than real GDP growth. Kerola suggests that a reason for this obvious difference in volatility could be China’s official goal of doubling real GDP between 2010 and 2020. We consider this a rather convincing argument, even if the current pandemic has most likely taken the possibility of achieving that goal off the table. Hence, scrapping the growth target is consistent with China’s inability to report the successful hitting of the GDP growth milestone.

Figure 6. Nominal and GDP growth & China’s official GDP growth target

China: Real and nominal GDP and GDP growth target

%change to year ago



Sources: NBS and IMF (originally Fig. 1 in Kerola, 2019).

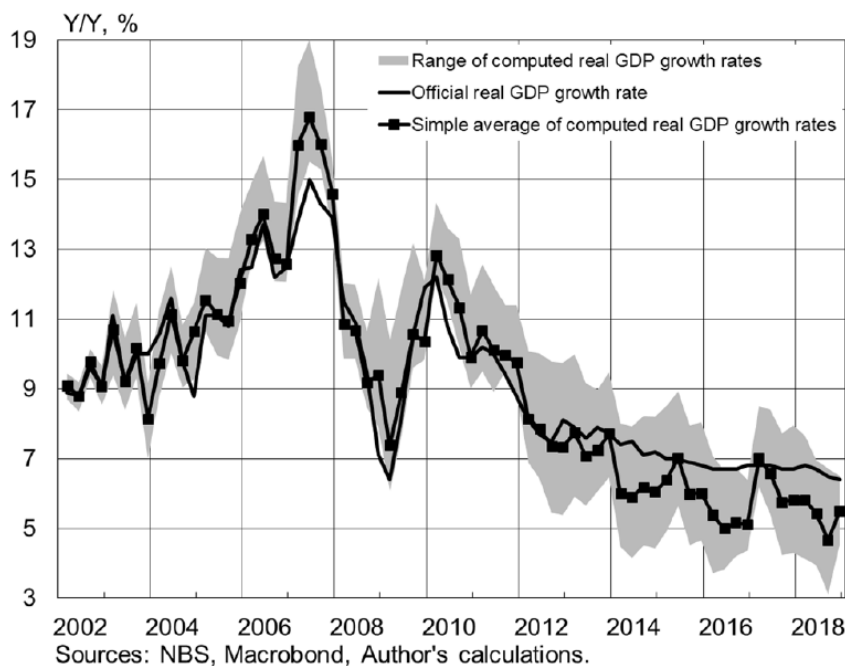
Kerola’s main contribution is the computation of alternative deflators to derive real GDP data. She finds that a simple average of all alternative measures also indicates that the official growth rate may overestimate the actual growth rate by a significant margin, especially since 2014.

Researchers at the Federal Reserve Bank of San Francisco (Fernald et al., 2019) largely corroborate Kerola’s findings. They construct a “China Cyclical Activity Tracker (C-CAT)” as a

weighted average of eight indicators using a similar method as Kerola (2019) with different underlying data (e.g. consumer sentiment, electricity production, and newly constructed floorspace). The authors compare their results with official GDP growth rates and the import growth of China's trade partners (i.e. figures unlikely to be affected by data releases of Chinese authorities). Fernald et al. (2019) find that C-CAT and import growth series deviate significantly from official GDP, particularly since 2014. The alternative data show a downturn around 2015, an upturn in 2016–2017, and lower growth thereafter.

In contrast, Clark et al. (2017) using information from the widely cited Li Keqiang Index and data on satellite-recorded nighttime lights, basically changing relative weights of the three indicators used in the Li Keqiang Index to estimate nighttime lights for real GDP growth computation, conclude that China's official GDP underestimates actual GDP growth. This result represents an outlier at the upper end of the range of estimates. In summary, there is tentative evidence that China's official GDP releases *overestimate* real economic activity, at least starting from 2017 (Figure 7). Our rather pessimistic outlook for the trend in Chinese gross fixed capital formation may be corroborated if the government's decision to abandon its GDP growth target leads to less biased GDP data releases in China.

Figure 7. Range and average of computed real GDP growth rates (originally Fig. 5 in Kerola, 2019).



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