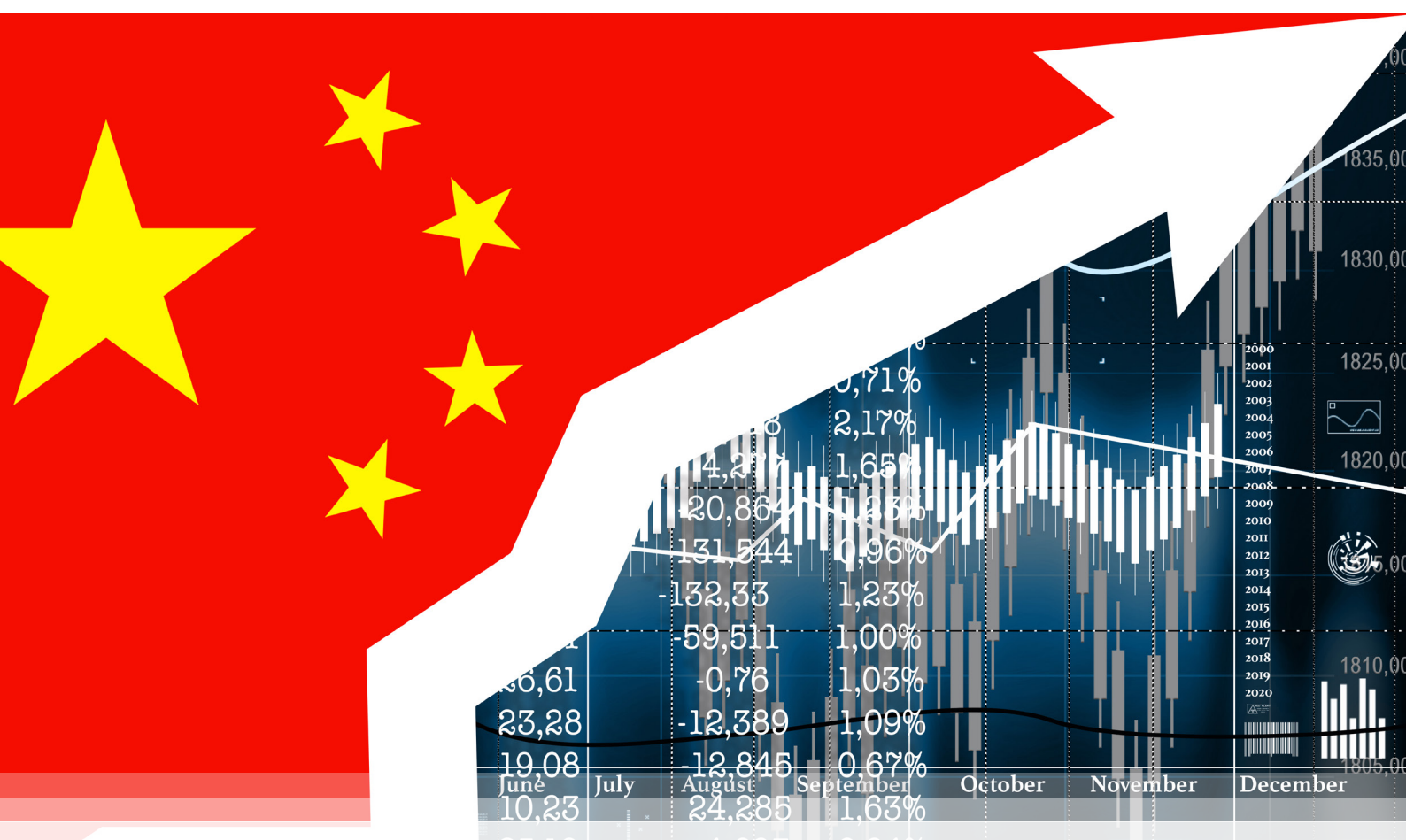


Pulse 3: recover, reform, restructure

China's outward investment appetite and
implications for developing countries

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Photo: China growth chart. Credit: rzoze19/Shutterstock.

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Acronyms

AfCFTA	African Continental Free Trade Agreement
AI	artificial intelligence
ASEAN	Association of Southeast Asian Nations
BOT	Build, Operate, Transfer
BRI	Belt and Road Initiative
CBIRC	China Banking and Insurance Regulatory Commission
CDB	China Development Bank
CEE	Central and Eastern European
CEEC	China-Central and Eastern European Countries
CEWC	Central Economic Work Conference of China
CF	Common Framework
China NBS	National Bureau of Statistics of China
CHINCA	China International Contractors Association
CIDCA	China International Development Cooperation Agency
CMFTA	China–Mauritius Free Trade Agreement
CNMC	China Nonferrous Minerals Corporation
CO₂	carbon dioxide
CPC	Communist Party of China
CPPCC	Chinese People’s Political Consultative Conference
DB	Design and Build
DRC	Democratic Republic of Congo
DSSI	Debt Service Suspension Initiative
EPC	Engineering, Procurement and Construction
EPC+F	Engineering, Procurement and Construction and Financing
EU	European Union
EUR	Euros
Eximbank	China Export-Import Bank
FDI	Foreign Direct Investment
FOCAC	Forum of China–Africa Cooperation
FTA	Free Trade Agreement

FYP	Five-Year Plan
GDP	gross domestic product
GME	Greenland Minerals and Energy
GWR	Government Work report
ICBC	Industrial and Commercial Bank of China
ICT	information and communications technology
IMF	International Monetary Fund
IP	intellectual property
ITU	International Telecommunication Union
LIBOR	London Interbank Offered Rate
M&A	mergers and acquisitions
MOFCOM	Ministry of Commerce of the People's Republic of China
MSME	micro, small and medium-sized enterprise
NESD	national, economic and social development
NFODI	non-financial overseas direct investment
NPC	National People's Congress
OECD	Organisation for Economic Co-operation and Development
PBoC	People's Bank of China
PEBC	Preferential Export Buyer's Credits
PMI	Purchasing Managers' Index
PPP	Public-private partnership
PV	photovoltaic
Q1, 2, 3, 4	First, second, third, fourth quarter
RCEP	Regional Comprehensive Economic Partnership
REE	Rare-earth element
RMB	Chinese yuan
SOE	state-owned enterprise
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
ZIL	zero-interest loan

Executive summary

China entered 2021 with cause for optimism as the country fared better than most during the pandemic and reported economic growth in 2020. However, to caveat, most of China's gross domestic product (GDP) growth in 2020 can be attributed to the country resorting to former engines of growth such as gross capital formation (i.e. public infrastructure investment), while other sources of growth such as private consumption took a back seat as firms and households reeled from pandemic-induced interruptions. Fortunately, there have been signs that household consumption may be recovering, and although coming from a low base of comparison, the record GDP growth in the first quarter of 2021 affirms China's recovery. With the economy recovering, the government will probably want to focus on supporting more sustainable drivers of growth. Interventions from monetary and fiscal policy will also be more targeted and direct, reining in risk at the same time.

With this, the country's more medium- and long-term planning is ready to take centre stage. March saw the culmination of the annual Two Sessions (Lianghui), which attracted widespread attention due to the release of the 14th Five-Year Plan (FYP), which included for only the second time since the 1990s a long-term vision to 2035. The Two Sessions highlighted issues such as increased environmental protection, securing food and energy security, boosting consumption, accelerating structural reform, innovation and digitalisation, rural revitalisation and more.

A focus on domestic reforms and economic restructuring does not signal a retreat from the world as some analysts have suggested, but investments overseas have been more subdued

due to the challenging economic environment. At the end of 2020, China's non-financial overseas direct investment (NFODI) totalled \$110.2 billion. This was 5.8% lower compared to the previous year. The more surprising finding was that year-to-date NFODI in 2020 for countries that are part of the Belt and Road Initiative (BRI) was just 4% higher than 2019, after months of seeing year-to-date NFODI in 2020 outpace 2019 by more than 20%. This demonstrates a more subdued overseas investment appetite. Early figures for NFODI in 2021 confirm this as NFODI does not show significant improvements despite the low base in 2020 against which to compare.

While overseas investments in BRI countries were more resilient compared to the aggregate, trade with the BRI 140 was still equally hit by the pandemic. These have since recovered, with China's exports to these countries exhibiting strong growth since July. China's imports from the BRI 140 have not been as resilient but had picked up by the end of 2020 for some regions. Regardless, the outlook for exports may face headwinds as demand for pandemic-related goods declines and exports face more competition as other countries slowly recover. Imports from the BRI may improve should domestic demand recover at a faster pace. Early trade data has already been promising. Supporting this outlook, deepening trade relationships and reducing barriers will be at the forefront of Chinese international policy. The outlook is similarly bright for trade in services, where sectors such as tourism and transport were affected the most. Pent-up demand and the steady pace of inoculation, in both China and its trade and investment partners, signal a promising outlook.

At the project level, overall economic activities rebounded in the last quarter of 2020, both in terms of the number of projects (both Foreign Direct Investment (FDI) and engineering contracts) and value. There was an increase in both investments and contracting work towards the end of the year, likely to meet corporate business targets. This follows trends in past years.

In terms of project modality, Chinese companies worked mostly as engineering contractors, pursuing ‘turnkey’ projects through Engineering, Procurement and Construction (EPC) or Design and Build (DB) contracts. Chinese engineering companies are recognising that this model is becoming increasingly financially unfeasible and have sought to climb up the engineering services sector’s value chain, driven also by the desire to establish a longer-term presence in partner countries, as opposed to the short-termism embedded in EPC and DB contracts. This translates into efforts to innovate business models, including pursuing public–private partnerships (PPPs), mergers and acquisitions to expand businesses into higher value-added areas, venturing into new fields and cooperating with advanced countries to learn from their experience. Notably, however, there are still many obstacles to a greater shift to PPP project modalities, and the development of PPP projects will probably proceed at different speeds in different geographies depending on the specific country context and challenges.

In terms of policy, China continues to pursue its regional engagements, including the China–Central and Eastern European Countries (CEEC) online summit, convening leaders of the ‘17+1’ mechanism, and visits to African states and the Middle East. The reception from the former was considered lukewarm. A New White Paper on development cooperation centres the BRI

in China’s international development strategy, pushes China’s global governance role and highlights its role in health and in fighting the pandemic. The document emphasises the BRI as a platform to increase foreign aid to developing countries, seeking to further reinforce Beijing’s framing of the BRI as a benign development assistance initiative. This includes health cooperation, which has been a more central component of China’s engagement with developing countries, and an area in which to expand medical and research cooperation.

In addition, China has continued prioritising cooperation on digital infrastructure in its bilateral and regional engagements, although the geopolitical implications of its growing digital clout are prompting some developed countries to reassess engaging China in digital infrastructure construction. Developing countries appear less inclined to follow suit.

Elsewhere, China’s ambitions for greener development, with its pledge of carbon neutrality by 2060, will likely have implications for Chinese overseas investments. Green finance is likely to be a priority over the next five years and there is potential for transfers and funding of new green technology from this domestic greening overseas to developing countries and partners. However, there is a risk of negative spillovers such as the ‘offshoring’ of older, dirtier industries. Stricter environmental standards have also had an impact on China’s production of rare-earth elements (REEs), as stricter production quotas and environmental standards have encouraged Chinese firms to look abroad for alternative sources of supply.

China has continued its debt negotiations with several countries, some of which have subscribed to the new ‘common framework’ (e.g. Chad,

Ethiopia and Zambia), although we have yet to see how this platform will resolve debt issues. More generally, debt negotiations and decision-making structures will vary by the type of loan and the creditor involved. To date, China's bilateral loan forgiveness has largely only applied to zero-interest loans (ZILs), while negotiation processes for debt restructure differ between China Export-Import Bank (Eximbank) and commercial banks, as well as China Development Bank (CDB).

Ultimately, these developments will shape the way China moves forward in the post-pandemic world, especially with an uncertain external environment and as new challenges are expected to emerge. The team notes the following as key areas to which developing countries should pay attention:

- In the short term, as the country continues to recover, key areas to watch include the outlook for trade with the BRI 140, the release of pent-up tourism demand and the implementation of the common framework for countries including Chad, Ethiopia and Zambia.
- In the long term, as the country reforms and restructures, developing countries may want to pay attention to the following key areas: the evolution of Chinese domestic demand, moving up the value chain for Chinese engineering contractors, China's partnerships with Africa, the continued expansion of international REE investments by Chinese firms, particularly in extraction, the potential of trade in services with increased digitisation, investments in digital infrastructure, a refocus on food security and the implementation of the 14th FYP and Vision 2035.

The Economic Pulse series

ODI's Economic Pulse series collects and analyses information on Chinese economic activity relevant to developing countries, identifying emerging policy signals and trade and investment trends fundamental to the socio-economic development planning of low- and middle-income countries. This analysis is set against the backdrop of the Covid-19 pandemic. While China is starting to see signs of a recovery, the relatively weak external environment and the potential resurgence of the virus will continue to shape how China acts, both domestically and internationally.

Data on China's economic and investment activities abroad is often hard to obtain and lacking in availability, transparency, comparability and accessibility, making it difficult to get a clear picture of Chinese overseas activity. **ODI's Economic Pulse reports aim to address this gap by taking a multifaceted approach, looking at macroeconomic indicators, project-level trends and policy announcements to paint a more cohesive picture of outward activity.** This analysis seeks to provide developing country partners with a comprehensive evidence base to

inform their strategic thinking on development needs in terms of current and future trends in Chinese aid, trade and investment.

When we discuss China's international economic response, we refer to economic activities taking place outside China. This includes outward direct investment, labour dispatched abroad, credit to other countries, foreign aid, exports and imports to and from other countries and cases of debt relief. This analysis would not be complete without a thorough understanding of the domestic situation in China. As China responds to Covid-19, trade, investment and fiscal repercussions, internal political and economic priorities, both existing and nascent, will shape its engagement in developing economies.

While our interpretation of overseas development focuses on relevance to low- and middle-income countries, we also provide information on developed economies, where appropriate, for comparative purposes and to highlight trends that will be of interest to a wide range of China-watchers.

1 Introduction

The first Economic Pulse report, *Pulse 1: Covid-19 and economic crisis – China’s recovery and international response*, was released on 27 November 2020. The paper reviewed the pre-pandemic baseline, the severe repercussions of the pandemic, the immediate government response, and the sudden shift in China’s political and economic priorities and how this impacted investment activity abroad.

The second report, *Pulse 2: China navigates its Covid-19 recovery – outward investment appetite and implications for developing countries*, was released on 2 February 2021. This noted that China’s recovery will probably continue to prop up global growth, although perhaps to a lesser extent than during the 2007–2008 Global Financial Crisis given the nature of the pandemic-induced recession and the structural unevenness of China’s own recovery. It found that overseas non-financial direct investment (NFODI) was generally still subdued, save for investments announced for the Belt and Road Initiative (BRI). A closer look at the trade data showed that engagements with the BRI were not as resilient as NFODI, with trade badly hit by the pandemic. However, Pulse 2 showed some regions were more resilient, with trade with South-east Asia recovering better than most. This is as China signed the Regional Comprehensive Economic Partnership (RCEP) Agreement, a regional free trade agreement covering the 10 Association of Southeast Asian Nations (ASEAN) countries and five of their Free Trade Agreement (FTA) partners including China.

At the project level, Pulse 2 took a closer look at investments in the BRI and found differing trends per region, mega projects declining and some running into trouble. Generally, most

Chinese investments and engineering services were concentrated in ASEAN and sub-Saharan Africa, with a focus on energy and transportation. Trends differed per region, and the largest transactions were in the energy sector in Latin America and the Caribbean and sub-Saharan Africa. The Middle East and North Africa and South-east and East Asia regions saw the most investments (by value) in the transport sector, whereas investments in Europe were concentrated in the mining sector. In terms of size, there was a notable decline in mega-size projects, which in 2020 were at their lowest levels since 2014. Most projects Chinese companies were involved in (either through investing or providing services) were small (less than \$100 million). The report also noted that some projects ran into trouble in 2020, with delays due to the pandemic, and others facing financial problems or political risks. Other projects benefited from the increasing prominence of digital technology in terms of infrastructure/investments, where Chinese firms announced several new digital projects.

Among other emerging trends, the Pulse 2 report noted China’s intention to prioritise dual circulation, creating a strong domestic market with supply-side reforms. China was also expected to start prioritising building technological self-reliance and upgrading industrial supply chains.

This report, *Pulse 3: recover, reform and restructure*, covers economic and policy developments through March 2021, with data for the full year of 2020 available, as well as some early indicators for January to March. It takes a forward-looking approach to assess the short- and long-term outlook for China and its appetite for outward investment and trade given how events are unfolding. Given its coverage,

macroeconomic and project-level data will start to reflect a full year's worth of change and a new and low steady base from which to begin. While policy priorities may have shifted along the way, the near- to long-term outlook is guided by the need to reform and restructure the economy to adapt to the post-pandemic geopolitical and economic landscape. It is important that developing economies understand these changes in China's economy as these shifts inform how China engages, invests and finances activity in other countries.

A full year since the start of the pandemic, uncertainty is still clouding the outlook, including small-scale outbreaks in China resulting in partial lockdowns and restricted movement over the Chinese New Year holiday. A large-scale vaccination programme has started in China and other mostly developed economies, providing hope to policy-makers and citizens alike that the return to normality is within reach. These hopes have, however, been dampened somewhat as the pace of inoculation has been pitted against the speed of transmission of new variants. The global economic outlook, as well as China's, is dominated by uncertainty, but there are reasons for guarded optimism. It is against this backdrop that the annual Two Sessions (Lianghui) meeting of the country's top political advisory body (the Chinese People's Political Consultative Conference (CPPCC)) and the top legislative body (the National People's Congress (NPC)) took place, with the government outlining its targets for 2021 and the next five years, as well as its vision for 2035.

These domestic economic conditions and short-, mid- and long-term political strategies invariably drive and influence China's international response, so what does that look like in practice? Pulse 3 also tracks macroeconomic indicators to gauge China's outward investment appetite, alongside a closer look at trade flows to the 140 economies of the BRI, and trade in services. This is followed by a discussion of project-level announcements for a more nuanced analysis of investment trends.

A section on policy updates provides a context for emerging Chinese political and economic priorities. This covers regional engagements, and how China is engaging the international community through health cooperation and environmental issues. A section on debt negotiations provides updates on China's role as a creditor to debt-distressed economies. The report also includes a special focus on Chinese investment in REEs, digital projects and the recently signed China–Mauritius Free Trade Agreement (CMFTA). The final chapter outlines key emerging topics and trends to watch.

As a caveat, some sections of our review of China's overseas economic activity will provide only an aggregate overview due to the nature of the macroeconomic data, but project-level data and a policy review allow us to examine how this activity affects developing countries in greater detail. As noted, macroeconomic and project-level data covers the period January 2020–March 2021, where data is available. Developments after March were not included in this report.

2 China's domestic economy

This chapter discusses the ongoing recovery of the Chinese economy and how policy-makers have responded to emerging risks and approached key priorities, particularly with their medium- to long-term planning for the economy. In general, it is important for developing economies to keep abreast of domestic economic developments, as these inform how China chooses to engage with partner countries. As economies liberalise trade, domestic developments can spill over, affecting partner countries. For example, on the supply side, the industrial upgrading of value chains in China will have repercussions for many developing countries that are part of value chains with China. On the demand side, China's role as a consumer is important; collapsing domestic demand feeds into imports, and countries that rely on exports to China would be adversely affected.

Using information and data gathered between the end of December and March plus macroeconomic data for 2020, as well as some early indicators up to March 2021, we aim to shed light on China's year-long recovery and response to one of the most significant shocks to its economy and health sector, and the subsequent impact on its engagement with the rest of the world.

Developments in the domestic economy after a full year (2020)

There are reasons for optimism as China reports economic growth in 2020 while other economies report full-year contractions.

Fourth-quarter GDP data posted annual growth of 6.5% and affirmed China's strong economic recovery (Table 1). Following the deep contraction

in the first quarter and slow recovery in the second and third quarters, full-year growth for the economy registered at 2.35% year-on-year (China NBS). Although this is considered the worst outcome since the 1970s, China's economic growth in 2020 is still expected to outpace everyone else's.

Supporting this, indicators in Table 1 show improvements. For example, by the end of 2020 and the first quarter of 2021, the unemployment rate was at pre-pandemic levels, the IHS Markit Ltd Purchasing Managers' Index (PMI) has shown steady expansionary figures, and consumer confidence has ticked up.

To caveat, most of the GDP growth in 2020 can be attributed to gross capital formation (particularly investments in public infrastructure). Full-year data for 2020 shows that, of the 2.35% growth registered, gross capital formation contributed 2.16 percentage points, final consumption expenditure subtracted 0.51 percentage points, and net exports added 0.64 percentage points (China NBS). This shows the unevenness of the recovery and the need to find a more structurally inclusive growth path for the Chinese economy. In the 1st Economic Pulse report, we noted a strong push towards addressing the pandemic and fuelling a recovery using traditional sources of growth such as public-sector investments (fixed assets and capital investment) and investments in infrastructure. Although a default position in times of economic uncertainty, this investment-led growth is contrary to the consumption-led growth path Beijing had hoped would already be well under way before the pandemic.

Table 1 Heat map for China's economic health

Indicators	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
% year change, unless otherwise specified																		
GDP growth	5.8			-6.8			3.2			4.9			6.5			18.3		
Unemployment rate (%)	5.1	5.1	5.2	5.3	6.2	5.9	6.0	5.9	5.7	5.7	5.6	5.4	5.3	5.2	5.2	5.4	5.5	5.3
Consumer price index (100 = year before)	103.8	104.5	104.5	105.4	105.2	104.3	103.3	102.4	102.5	102.7	102.4	101.7	100.5	99.5	100.2	99.7	99.8	100.4
Government revenue (year to date)	3.8	3.8	3.8		-9.9	-14.3	-14.5	-13.6	-10.8	-8.7	-7.5	-6.4	-5.5	-5.3	-3.9		18.7	24.2
Government expenditure (year to date)	8.7	7.7	8.1		-2.9	-5.7	-2.7	-2.9	-5.8	-3.2	-2.1	-1.9	-0.6	0.7	2.8		10.5	6.2
Merchandise exports	-2.0	-2.7	7.7	-2.7	-40.5	-6.8	3.5	-3.3	0.3	7.3	9.5	9.9	11.4	21.1	18.3	24.8	154.9	30.2
Merchandise imports	-6.8	0.4	16.4	-12.1	8.7	-0.5	-13.8	-16.4	3.3	-0.9	-2.0	13.6	5.2	5.0	6.6	26.6	17.2	37.6
IHS markit PMI	51.7	51.8	51.5	51.1	40.3	50.1	49.4	50.7	51.2	52.8	53.1	53.0	53.6	54.9	53.0	51.5	50.9	50.6
Consumer confidence (index)	124.3	124.6	126.6	126.4	118.9	122.2	116.4	115.8	112.6	117.2	116.4	120.5	121.7	124.0	122.1	122.8	127.0	122.2
New total social financing in level terms	868.0	1993.7	2201.3	5053.5	873.7	5183.8	3102.7	3186.6	3468.1	1692.8	3585.3	3469.3	1392.9	2135.5	1719.2	5175.8	1723.9	3366.5

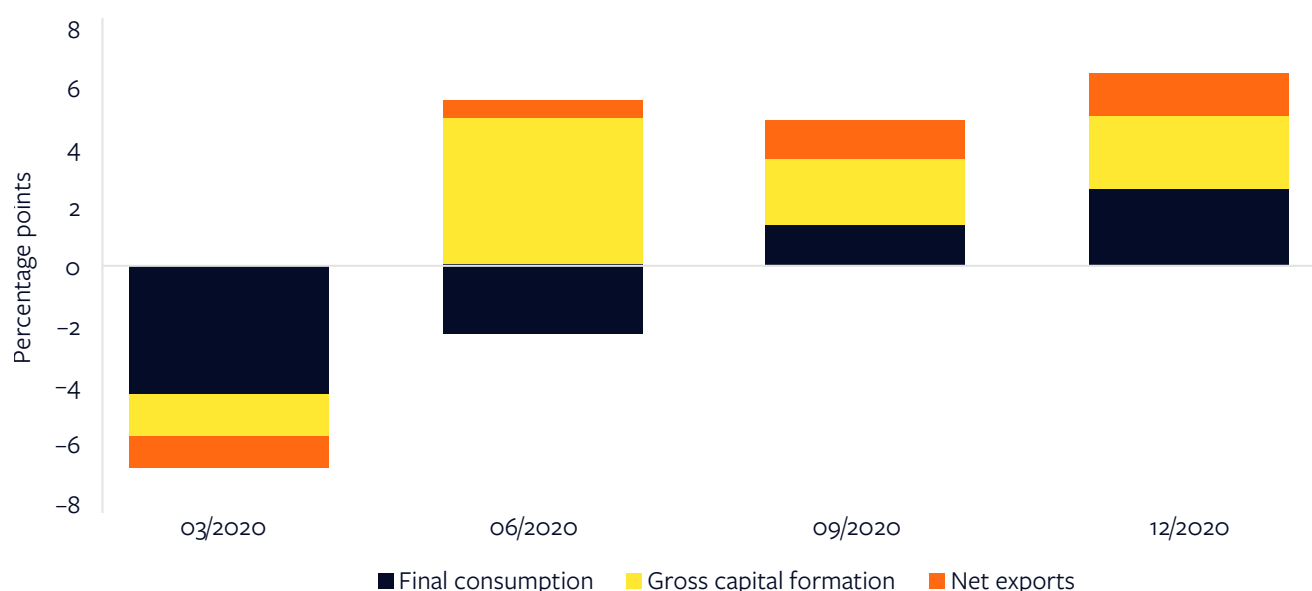
Note: Grey-shaded boxes indicate no available data.

Source: CEIC, National Bureau of Statistics of China

However, it is worth noting that contributions to growth for the fourth quarter were more evenly distributed between consumption and investment compared to earlier in the year, signalling a potential opening to shift back to structural reforms. Of the 6.5% growth in the fourth quarter of 2020, final consumption expenditure contributed 2.57 percentage points, gross capital formation contributed 2.49 percentage points, and net exports of goods and

services contributed 1.44 percentage points. In contrast, gross capital formation contributed 4.95 percentage points to growth in the second quarter, offsetting the 2.35 percentage points subtracted from growth due to lacklustre final consumption (See Figure 1). With contributions to growth becoming more evenly distributed, the government can potentially focus on resuming structural reforms¹ and abandon the bid to stimulate growth through excessive capital formation.

Figure 1 Contribution to GDP growth (percentage points)



Source: CEIC, National Bureau of Statistics of China

Interpreting early indicators for 2021

It is important to note that, a full year after the onset of pandemic, the next wave of data will be distorted to the upside given the low base against which annual growth will be compared. For example, merchandise trade export data for

January and February recorded astounding year-on-year increases of 24.78% and 154.85% respectively (See Table 1) (General Administration of Customs, 2021). This is, however, mostly due to base effects reflecting the 40.55% contraction in February the year before. Merchandise trade figures for March similarly benefited from a

¹ Some examples include reforms to rebalance the economy towards more consumption- and service sector-driven growth, opening up the financial sector, strengthening bank transparency and governance, developing capital markets and reforming state-owned enterprises (SOEs).

low base, with growth in merchandise exports increasing 30.2% on the year and imports rising 37.6% annually. As a new year begins, the upcoming releases of data, particularly when interpreted in annual growth terms, will be distorted to the upside due to level increases compared to a relatively low base from the previous year. The nuances of interpreting how well an economy is doing will be found in the details. For example, consumer prices are likely to trend higher in the coming months due to base effects, but this will not necessarily mark a recovery in household spending.

Record economic growth in the first quarter of 2021 exemplifies this positive distortion due to base effects. GDP increased 18.3% on an annual basis in the first quarter of 2021, the highest growth rate posted since quarterly national accounts were first recorded. However, this was largely due to the low base as the economy contracted 6.8% over the same period in 2020 due to the pandemic-induced lockdown. Growth in final consumption contributed 11.6 percentage points, but this was also the sector most affected by the pandemic in 2020. Regardless, this affirms China's recovery path and should signal that the target of above-6% growth for 2021 is well within reach.

To provide greater transparency, we have included level versions of the heatmaps in the Appendix. For example, year-to-date government revenue for March 2021 reported significant annual growth of 24.2% (Table 1). However, looking at Table A2 in the Appendix shows that this is only slightly higher than the values recorded over the same period in 2020, which declined on an annual basis during the pandemic. As another example, despite over 150% growth in merchandise exports in February, the level data shows the value was actually lower compared to previous months.

14th Five-Year Plan and Vision 2035: towards proactive medium- and long-term socio-economic planning

At the end of the year and into early 2021, there has been a refocusing from reactive policy measures towards risk management and proactive long-term planning. Ensuring internal stability has always been seen by the Communist Party of China (CPC) as a core pillar in maintaining its legitimacy, but against the backdrop of geopolitical and economic uncertainty and with 2021 being a symbolically important year (it is the centenary year of the CPC), medium- and long-term strategies to manage a range of potentially destabilising internal and external financial, (geo) political and social risks are now at the forefront of central and provincial policy-makers' agendas. For only the second time since the 1990s, China has also articulated planning beyond the traditional five years (short- to medium-term), with its 15-year outlook, Vision 2035.

Consistent with several important policy documents released recently (such as the Central Economic Work Conference of China (CEWC), held on December 2020, the 2020 Government Work report (2020 GWR), the 2021 Draft Plan for National, Economic and Social Development (2021 Draft Plan for NESD) and the 14th FYP announced at the Two Sessions of the NPC and CPPCC), Beijing has made it clear that realising China's new 'high quality' and innovation-driven development ambitions means ensuring 'stability on six key fronts': the *'financial sector, foreign trade, foreign investment, domestic investment, and expectations'*, while also maintaining 'security in six key areas': *'job security, basic living needs, operations of market entities, food and energy security, stable industrial and supply chains, and the normal functioning of primary-level*

governments' (National Development and Reform Commission, 2021).²

The government has been careful to set and manage expectations for growth. In the 2020 GWR, Premier Li Keqiang stated that the government would not set a GDP growth target (for the first time since 1990). This year's report saw a reinstatement of the GDP growth target of 'more than 6 percent', a 'modest goal' compared to previous years due to ongoing uncertainty, and allowing for flexibility and adjustment throughout 2021. The 14th FYP also considers GDP growth against a backdrop of uncertainty, targeting economic growth 'within a reasonable range' instead of setting an explicit target, unlike the 6.5% goal set in the 13th FYP.

The emphasis is now on reversion to structural reforms, the consolidation of supply-side reforms and pursuing demand-side reforms.³ In line with this, China is expected to start prioritising **building technological self-reliance and upgrading industrial supply chains**. This is expected to be consistent with the overarching theme of dual circulation, which emphasises developing the domestic economy (both supply and demand) while maximising opportunities presented by international markets. At the same time, Beijing has been at pains to emphasise that the dual circulation policy is not a retreat from the world, and it has affirmed this through participation in regional forums, including hosting the 3rd China International Import Expo, participating in the Debt Service Suspension Initiative (DSSI) and other regional forums discussed in Sub-section 3.3.1.

As outlined in the 2020 GWR, 2021 Draft Plan for NESD and 14th FYP, Beijing **also sees self-sufficiency in technology as a national security priority in order to realise its innovation-driven growth ambitions**. For the first time, a dedicated section on science and technology appears in the 14th FYP. Clearly, Beijing sees facilitating the growth of emerging industries such as semiconductors, 5G, artificial intelligence (AI), cloud computing and blockchain and biotech as key for achieving both domestic and geopolitical security objectives. Beijing's technological priorities have also translated into investment in digital infrastructure in a number of countries, not always without controversy (see Chapter 5). Perhaps to allay some of these concerns, Beijing reiterated its commitment to delivering the Digital Silk Road and Silk Road E-Commerce initiative to 'develop new partners in the digital sphere, and support and encourage international cooperation with regard to smart cities [and], e-commerce', and signalled its willingness to participate in the establishment of international norms such as 'taxation principles for data security, digital currencies, and the digital economy'.

Alongside a focus on Covid-19 prevention and control measures and improving the national public health emergency management system, China has also placed heavy emphasis on food and energy security. In recent years climate change has affected agricultural production, including via the increasing incidence of floods and droughts. Swine fever and pestilence have also affected prices. This, combined with trade tensions with major agricultural suppliers such

² The issue of local government debt continues to be of major concern to Beijing.

³ The term 'demand-side reform' was first used by officials during the Political Bureau meeting in December 2020. It is meant to complement the supply-side reforms called for by the government, addressing blockages and gaps in production, distribution and circulation, encouraging a more balanced cycle of demand and supply. It generally refers to boosts to consumer spending (Xinhua, 2020).

as the Australia and the United States (US), has made food and animal feed supply less secure, while the Covid-19 pandemic has dramatically interrupted direct and indirect agricultural supply chains worldwide, resulting in rising food prices, food supply insecurity and increased dependence on external food sources.

The 14th FYP sets two core targets: 1) overall grain production capacity to exceed 650 million tonnes (production in 2020 is reported at 670 million tonnes),⁴ and 2) a red-line guarantee of arable land area of 120 million hectares.⁵ China is also hoping that the digitisation of agriculture will support increased productivity and reduce waste.⁶ China's desire to foster enhanced food security via new and deeper external agricultural partnerships is explored in a forthcoming report that explores China's appetite for international agricultural investment.

As discussed in Sub-section 3.3.3 and ODI's green recovery report (Keane et al., forthcoming), energy sector reform is a consistent theme in the 14th FYP, though with contradictory messages with regard to climate change. Energy security has long been a driving force in climate-change discussions in China, with climate policy linked to energy policy since the 1990s (Sternfeld, 2017). Historically, China's economic growth has been fuelled by fossil-based energy, and access to energy has been critical for the country's development, poverty alleviation and raised living standards. Beijing knows that its energy transition is complex and trade-offs must be made, but ensuring job security, continuity of supply and

innovation-driven growth requires secure energy and mineral resources, including REEs (see Chapter 4) and other technology-critical minerals. There is a clear emphasis on building up 'strategic mineral resource reserves' and expanding exploration, as well as a commitment to taking part in global mineral resource governance.

As outlined in earlier Economic Pulse reports, the demise of the BRI was prematurely forecast by some observers. Recent announcements at the Two Sessions support our view of a 'recalibration'. The emphasis from Beijing is now on the 'high-quality development of the BRI'. The China–Pakistan Economic Corridor and the China–Mongolia–Russia economic corridor have been singled out for special mention in this regard. What this means in practice remains to be seen as infrastructure connectivity projects such as railways and ports remain a priority focus.

Early indications seem to point towards an even stronger focus on financial de-risking and the identification of environmental, social and governance risks, standards and norms. Perhaps less clear is what is meant in practice by Beijing's stated willingness to take 'proactive measures to prevent and respond to risks, and effectively protect the legitimate rights and interests of Chinese enterprises with regard to their outward investments and overseas operation'. Sanctions have been imposed against individuals and companies deemed to undermine the 'rights and interests of Chinese companies', but whether 'proactive measures' also refers to hard security interventions is unclear (Tanjungco et al., 2020).

4 <http://en.people.cn/n3/2021/0311/c90000-9827703.html>

5 www.globaltimes.cn/page/202103/1217749.shtml

6 <http://epaper.chinadaily.com.cn/a/202103/08/WS60456679a31099a23435477d.html>

2.1 Macro policy and domestic demand

Monetary and fiscal policy are both expected to adhere to the goal of developing domestic demand as a sustainable source of growth. The CEWC and the 2021 Report of the Work of the Government highlighted the goal of ‘continuity, stability and sustainability’ for its macro policies. We expect this to hold for monetary policy, which is expected to be prudent, and for fiscal policy, which is expected to be proactive.

2.1.1 Monetary policy

After cranking up liquidity support in response to the pandemic, monetary policy has been tilting towards neutrality, particularly after the economy started showing signs of a recovery. Unchanged from Economic Pulse 2, we do not expect the People’s Bank of China (PBoC) to raise interest rates in the near term. This is in line with the First Quarter PBoC Monetary Policy Committee meeting of 2021, which emphasised the need for monetary policy to remain ‘flexible, precise, reasonable and appropriate’, acknowledging the uncertainties regarding the pandemic and the external environment more generally (People’s Bank of China, 2021b). This was reiterated in the Report of the Work of the Government in March 2021, with the goal of ensuring that ‘money supply and aggregate financing are generally in step with economic growth in nominal terms, maintain a proper and adequate level of liquidity supply, and keep the macro leverage ratio generally stable’ (Government of China, 2021).

Monetary policy tools will be used to support the real economy, particularly in areas important to the government such as small businesses, technological innovation and green development. The first quarter 2021 monetary policy commune suggests that monetary policy will be used to provide support for increasing innovation, improving the quality of supply-side industries, boosting demand, supporting firms to contribute to the economy and using green finance to help reach the goal of carbon neutrality (People’s Bank of China, 2021b). Local banks will be given incentives to provide inclusive loans with deferred repayment periods to micro, small and medium-sized enterprises (MSMEs), and the inclusive credit loan support programme will be extended (MOFCOM, 2021a).

These measures would have implications for both the demand and supply sides of the economy. Improving domestic demand and the wider economy would benefit developing country exporters which cater to Chinese markets. On the other hand, upgrading supply-side industries can help China’s manufacturing industry move up the value chain as it produces products with higher added value. This upgrading of supply-side industries will allow the country to meet domestic demand for high-quality products and services. However, this could affect developing countries that already export such goods to China through import substitution.⁷

Much of the PBoC’s attention will probably be directed at containing financial risks, especially after a string of defaults from SOEs made lenders nervous. This includes Yongcheng Coal &

⁷ Import substitution refers to a good normally imported by a country being replaced by one produced domestically.

Electricity Holding Group Co., Huachen Automotive Group Holdings Co. and Tsinghua Unigroup Co. (Yu, 2020). The proliferation of triple-A-rated corporate bonds in China paints a confusing picture and does not necessarily reflect credit risk well (Ng, 2020). The risk of further defaults is expected as policies introduced during the pandemic that defer payments on loans expire in 2021 (People's Bank of China, 2021c). The PBoC moved in January 2021 to drain the market of excess liquidity, fearing excesses could be funneled to riskier assets (Horta e Costa et al., 2021). This expectation of excess liquidity may be due to the fact that fewer people were expected to travel home for the Chinese New Year given travel restrictions in response to local outbreaks, with fewer celebrations meaning less need for cash.

2.1.2. Fiscal policy

With the economy recovering as expected, fiscal stimulus will be highly targeted and more contained, as opposed to a large-scale package. Recent months saw the government provide additional support for MSMEs. More specifically, special-purpose bonds were used to shore up capital for small and medium-sized banks so they can better serve MSMEs (Jiang, 2021). In a state executive meeting on 20 January 2021, Premier Li noted that arbitrary charges on firms will be reduced (Wang, 2021). Most of these initiatives shy away from the direct fiscal support other governments have provided and have instead focused on incentives and other indirect support. The lack of direct fiscal support is more indicative of the government's desire to contain risks, which could mean limited help for more troubled firms.

There is likely to be less stimulus in 2021 compared to 2020, though fiscal policy will still be relatively supportive. Unlike in 2020,

there will be no issuance of special treasury bonds, which was an additional source of financing for the central government last year. The Government Work report of 2021 announced that the government's fiscal deficit target will be 3.2%, lower than the 3.6% in 2020. However, this is still a notch higher than the long-standing practice of posting a 3% ceiling on the budget deficit (Huang and Lardy, 2020), giving the government more leeway to support the economy. Moreover, while the special purpose bond quota was reduced from RMB 3.75 trillion to RMB 3.65 trillion, it is only slightly lower than 2020 and significantly higher than the RMB 2.15 trillion of 2019. The amount local governments are thus permitted to raise is potentially still expansionary.

This could have implications for the government's bid for more sustainable fiscal policy and sources of growth. In general, special bonds are used to encourage local governments to spend on infrastructure or other productive projects that would allow the debt to be paid back. However, there are concerns that these funds were not used on productive ventures in 2020 as local governments used them instead to counter the economic fallout of the pandemic. Having a relatively high quota increases the risk that these funds are not put to productive use. In addition, since these bonds are most often used for infrastructure, it puts in question the kind of growth dynamics China might expect for 2021, especially as it hopes for a more consumption-driven growth. Should growth continue to be subdued, it gives policy-makers the option to rely on old sources of growth such as investment.

The structure of growth China relies on will affect the kinds of spillovers other countries can expect. For example, a more consumption-driven growth path and developing consumer markets will benefit countries that have China

as an end-market. Should investments in infrastructure and more traditional drivers of growth dominate, commodity exporters and those who provide the raw materials for infrastructure investment activities will benefit more. This would also feed into the energy demands of the economy and how these are distributed among households and firms.

2.1.3 Other policies to stimulate internal circulation

Policies look as though they will shift from rescue and recovery mode to reviving and reforming the economy. The concept of dual circulation aims to fortify the domestic economy and, consequently, China's economic resilience. For this to happen, the country needs a business environment that would enable these structural changes. This includes making it easier to conduct business, expanding market access for consumers and providing incentives for private consumption.

Improving the business environment

The government is working to improve the business environment. For example, loans may be more accessible to smaller firms with the new unified national financing registration system, which allows for the use of moveable property and rights as pledges and provides credit information for MSMEs needing a loan (State Administration for Market Regulation, 2020a).⁸ China is seeking to implement reforms that would make it easier to do business, including facilitating business name registration (Ouyang, 2021), improving government services hotlines for businesses and individuals (Wang, 2020) and pushing to remove barriers in the business environment (MOFCOM,

2021b). Testing in several provinces found that reforms to facilitate starting and running a business, including reducing the number of permits required, has been positive for business owners (ibid.).

Managing digital services and technology

Anti-trust and other reforms are being considered to increase competition, with firms in the technology sectors disproportionately affected. This is in line with the CPC's 'anti-monopoly stance' and bid for an 'orderly expansion of capital' as it tries to increase competition. Breaking up monopolies is in line with the goal to stimulate the domestic economy, which would be supported by a more even spread of wealth. These tighter controls coincide with the meteoric rise of the technology industry. Technological advancements tend to disrupt old market practices and can change the way consumers participate in the market. This has overall implications regarding the technology industry and its governance, as the growing digital market will be key in China's future development. Developing economies can take note, as the digital revolution expands China's connection to the rest of the world, and could shape the way it does business (see Chapter 5).

In addition, the evolution of Fintech is moving into the domain of digital currency. For example, the Chengdu municipal government announced its first digital yuan trial in January 2021, with other local governments such as Suzhou, Beijing and Changsha. Incorporating digital currency in online platforms provides an opening for eventual widespread adoption. While ubiquity is still in the future, digital currencies have the potential to

⁸ These include production equipment, raw materials, semi-finished and finished products, accounts receivable, deposit slips, warehouse receipts and bills of lading, and financial lease pledges.

disrupt the way the central bank, people, firms and the financial system as a whole operate (Carstens, 2021).

Recently imposed regulations aim to improve access to technology and ensure that small companies and companies outside central hubs have a chance to compete with large companies. The draft of the Guidelines for Anti-monopoly in the Platform Economy was released in November 2020 (State Administration for Market Regulation, 2020b), with the final version published in February 2021 (State Administration for Market Regulation, 2021). The guidelines are expected to allow small players to compete in the growing digital market and prevent abuse of market dominance.

Similar moves from the PBoC to regulate new industries such as Fintech add another layer of consumer protection, in that the PBoC would have more oversight over a new industry that threatens to disrupt traditional financial services. Early in 2021, the ‘regulations on non-bank payment institutions’ were released for public comment (People’s Bank of China, 2021a). This affects non-bank payment services such as Ant Group’s Alipay and Tencent’s WeChat Pay, as the measures include anti-monopoly rules that work against firms with a dominant position and would allow the PBoC to break up firms if they affect the development of the payments market.

The China Banking and Insurance Regulatory Commission (CBIRC) has recently tightened online lending requirements (CBIRC, 2021a) and announced that internet platforms that want to

engage in finance must maintain the same levels of capital as financial institutions. This puts them under the same scrutiny (CBIRC, 2021b). In all, this should start to restrict the capacity of Fintech industries to expand further of their own volition.

Online retail sales surged during the pandemic.

The Ministry of Commerce reports that, in 2020, national online retail sales were 10.9% up on 2019, rising to RMB 11.76 trillion. Online retail sales of physical goods were equally robust, growing by 14.8% compared to 2019 and reaching RMB 9.76 trillion in sales (MOFCOM, 2021c). This comes as the crisis crippled ‘brick and mortar’ sales. Cross-border e-commerce also expanded, by 31.1%. This surge signals that, while the recovery of private consumption appears to have lagged, there are pockets of demand being met by online retail. Consumption is merely taking on a different form, and adapting to the pandemic.

Boosting private consumption and common prosperity

The government plans to implement measures to improve private consumption. Twelve departments issued a note entitled ‘Notice on Several Measures to Boost Bulk Consumption, Key Consumption and Promote the Release of Rural Consumption Potential’. The notice, which covers all regions and respective departments, focuses on five tasks: (1) stabilise and expand automobile consumption; (2) promote the consumption of home appliances, furniture and home decoration; (3) boost catering consumption; (4) make up for shortcomings in rural consumption; and (5) strengthen policy guarantees.⁹ Within each task,

⁹ This covers policies to increase financial support and measures to benefit enterprises. Examples include giving chain enterprises rent reductions and providing exemptions for SMEs, encouraging qualified regions to provide special subsidies to distribution companies affected by the pandemic, increasing the availability of unsecured and non-guaranteed credit loans, increasing credit support for residents to purchase new energy vehicles, energy-efficient home appliances, smart homes, water-saving appliances and other green smart products and encouraging institutions to provide risk protection for enterprises to carry out credit sales.

there are specified actions with the corresponding government department and regions responsible (MOFCOM, 2020d). These efforts aim to stimulate private consumption and capture the untapped consumer potential of rural consumption.¹⁰ For the latter to be sustainable, this will require efforts to close the gap between urban and rural incomes (Ren and Chao, 2018).

Inherent structural weaknesses still need to be addressed for China to broaden the consumer base and rebalance economic drivers towards consumption and services.

China has announced its successful elimination of extreme poverty (Aredy, 2020), but income inequality remains a pervasive issue, in both rural and urban regions (Zhao et al., 2017), alongside gaps in the social safety net and the need to shift income from businesses to households. There are signs that China is mindful of this, with the ‘New Development Concept’, an overarching framework for China’s economic and social development first introduced in 2015, pushing for ‘common prosperity’ (Xinhua, 2021a).

Common prosperity can be interpreted as reducing inequality and creating a more even distribution of wealth. However, how this will be achieved in practice is uncertain.

In all, this emphasis on the domestic economy has raised fears of a more inward-looking China and a retreat from the world economy.

These fears are unfounded. As discussed in the previous Economic Pulse reports, China’s goal to shift towards more sustainable growth drivers was long in the making even before the pandemic, and even before the term ‘dual circulation’ came into use. Developing economies can stand to benefit from the promotion of a larger consumer market, particularly those which export to China. They would also do well to pay attention to shifts in the country’s consumer demands, composition and means for consumption (e.g. lifestyle changes, technological advances). This would eventually inform how China engages with the international community, which will be discussed in the next chapter.

¹⁰ The jointly released No. 1 Document for 2021 on rural revitalisation from the Party Central Committee and the State Council pushes forward the rural reform agenda.

3 China's international economic response

Having analysed developments in China's domestic economy and the country's plans for the coming years, we now consider China's international economic response over a year since the start of the pandemic, providing insight into how China can be expected to engage with developing countries and the rest of the world moving forward.

How China manages its economic development will affect its strategic engagement with the international community, including developing economies. For example, domestic developments will influence the type of consumer base China will have in the future, and the kinds of industries it plans to develop. This will have implications for firms in countries that are closely integrated in Chinese value chains. Commodity exporters will also be affected by these internal developments.

This chapter focuses on China's international economic response as it moves from recovery to reform. We consider how China's 'international economic response' has been evolving, defined as outward direct investments, foreign dispatched labour, credit to other countries, foreign aid, exports and imports to and from other countries, and any debt relief.

The chapter comprises four parts:

- Macroeconomic indicators to gauge China's investment appetite.
- Project-level data to understand which sectors and countries Chinese investors are focusing on post-Covid-19.
- Analysis of recent policies to understand which sectors in which China is interested.
- Developments in China's debt negotiations.

While we note updates to indicators and policies we looked at in the first two Pulse reports, in this report we expand the BRI trade analysis to the full 140-country list. This provides a more comprehensive look at all the regions now involved with the BRI and is consistent with other BRI analyses. We also look at the services trade and Chinese overseas project modalities, and assess the outlook for infrastructure construction projects, among others, to supplement the analysis and add more depth.

3.1 Macroeconomic overview

3.1.1 Macroeconomic indicator heatmap

Non-financial overseas direct investments (NFODI) finished the year more subdued compared to 2019, while NFODI to the BRI was only slightly higher.

At the end of 2020, China's NFODI totalled \$110.2 billion. This was 5.8% lower compared to the previous year, continuing the trend observed over the last couple of months of subdued overseas investments. With travel restrictions still in place, dispatched persons abroad finished the year 38% lower than 2019 (Table 2). In terms of contracts, completed turnover of foreign engineering contracts finished 2020 9.8% lower than the previous year, and newly signed foreign engineering contracts decreased 1.8% over the same period (MOFCOM, 2021e). As noted in previous Economic Pulse reports (Tanjungco et al., 2020; 2021), declines in completed turnovers may be due to factors other than pandemic-related delays, such as issues with funding, technical challenges, political tensions and national security concerns.

Table 2 Heat map for China's investment appetite

Indicators	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
% year change, unless otherwise specified																		
Outward investment, non-financial, year to date	1.0	-5.5	-3.6	-9.5	-1.0	-3.9	-3.1	-5.3	-4.3	-5.5	-5.2	-2.6	-4.5	-3.7	-5.8	1.7	-0.9	2.4
Outward investment, non-financial (BRI), year to date	-3.7	-1.4	9.3	19.5	18.3	11.7	13.4	16.0	19.4	28.9	31.5	29.7	23.1	24.9	4.0	5.7	12.1	5.2
Dispatched persons abroad, year to date	0.3	-2.0	-0.9	-44.1	-42.6	-42.3	-46.4	-42.5	-43.4	-40.0	-43.7	-41.6	-41.2	-41.4	-38.3	47.4	17.9	15.6
Industry inputs – cement	-0.9	9.6	8.4			-17.7	4.7	9.6	9.0	3.8	7.0	7.2	10.3	8.2	7.0			33.3
Industry inputs – pig-iron	-3.2	1.6	6.1			1.2	3.1	7.1	9.3	14.4	10.4	12.6	16.1	11.2	10.7			11.6
Industry inputs – crude steel	-1.2	3.4	10.7			-1.7	0.0	3.6	4.6	9.5	8.7	11.8	13.1	9.2	8.3			19.1
Industry inputs – steel products	4.7	10.4	11.4			1.0	4.9	6.6	8.2	10.5	12.0	13.1	15.4	12.8	15.3			21.2
Industry inputs – aluminium alloy	19.7	20.3	30.0			5.5	19.1	14.3	14.2	-0.5	3.0	5.3	10.3	8.3	4.1			19.7

Note: Grey-shaded boxes indicate no available data.

Source: CEIC, National Bureau of Statistics of China

The more surprising finding is that year-to-date NFODI for countries that are part of the BRI at the end of 2020 was just 4% higher than 2019, after months of seeing NFODI in 2020 outpace 2019 by more than 20%. This can be explained by a large surge in investments in December 2019, which was not seen in December 2020. In all, NFODI to BRI countries in 2020 amounted to \$17.79 billion (Table 2; for level data, see Table A2 in the appendix.)¹¹

Proxy indicators such as industrial inputs

maintained their momentum. Steel production grew by 15.3% annually in December. Pig-iron, crude steel and aluminium alloy production grew by 10.7%, 8.3%, and 4.1% on an annual basis, respectively. Annual growth data for March shows that industrial production was particularly robust, with cement production up as much as 33%, and growth in crude steel, steel products and aluminium alloy production up around 20%. However, as mentioned earlier, this level of growth is largely due to the significant slowdown in 2020. Still, trends have been improving consistently, indicating a resurgent manufacturing sector and the resumption of operations in the construction industry. As discussed in reports, overproduction of industrial inputs may lead to spill-overs towards Chinese-financed infrastructure projects abroad, albeit with a lag. In addition, the production of construction materials in China has been linked to the availability of government finance for exports and foreign infrastructure projects, with the logic

that Chinese government financing facilitates the overproduction of industrial inputs to be sold to foreign buyers and used in infrastructure projects abroad.¹²

Early figures for 2021 for NFODI do not show significant improvements from 2020, despite the already low base given the declines seen in 2020. Year-to-date NFODI in February was \$15,360 million – 0.9% lower compared to 2020. By March it had not significantly improved, and was just 2.4% higher compared to 2020 (Table 2; for level data see Table A2 in the Appendix). Despite a slowly recovering economy, it appears the appetite to invest abroad has not yet increased at a similar pace. In contrast, NFODI to BRI countries has improved on an annual basis, with February 2021 year-to-date figures 12.1% higher compared to 2020, though by March this increase was around 5.2% (Table 2). Dispatched workers in March year-to-date saw a 15.6% improvement over 2020, with 74,000 people sent overseas. However, this is still lower than the 111,000 and 97,000 people sent overseas over the same period in 2019 and 2018, respectively.

3.1.2 Trade with the BRI 140

As noted in Economic Pulse 2, early texts and policy documents referred to 64 Belt and Road countries (plus China) when the initiative was first announced in 2013, with those 64 countries generally considered to have a special strategic

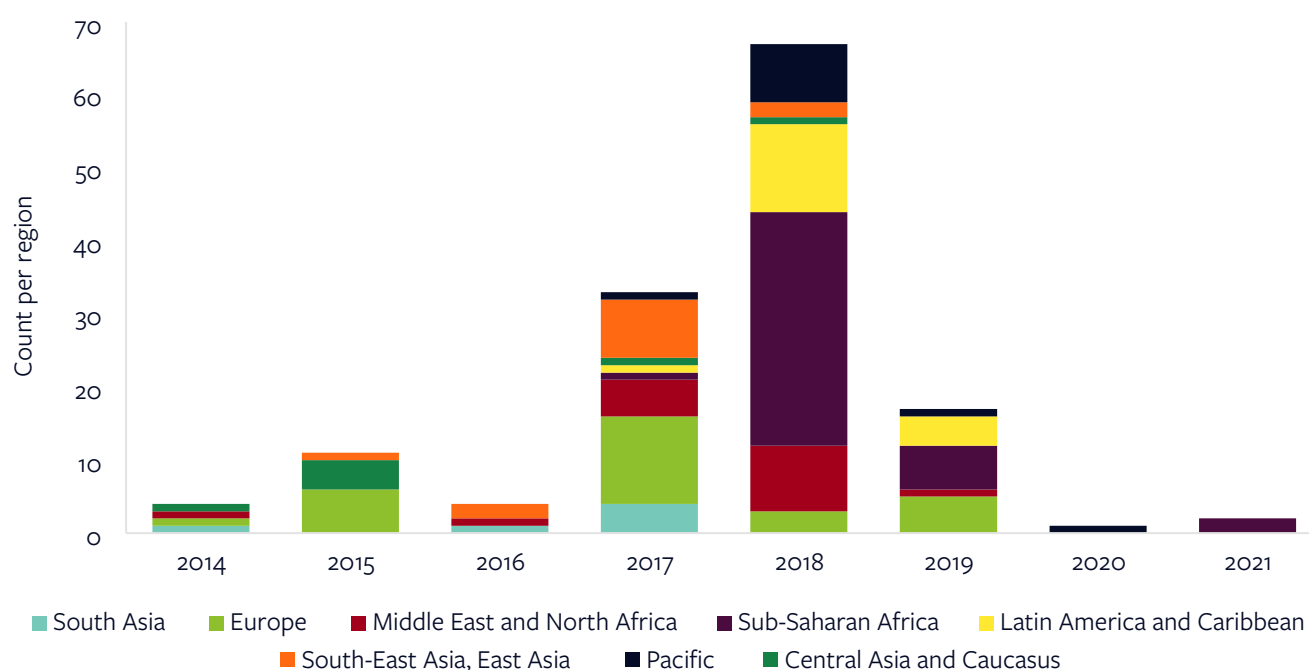
11 Year-to-date NFODI for December 2020 was \$110.2 billion, while year-to-date NFODI for BRI countries over the same period was \$17.79 billion. Government websites state that NFODI to the BRI increased by 18.3% while overall NFODI decreased by just 0.4% by December 2020. Upon consulting CEIC staff, this discrepancy is due to the fact that December 2019 data on the official website shows preliminary data values.

12 Dreher et al. (2017) link domestic industrial overproduction to Chinese government financing for foreign infrastructure projects. Dreher et al. (2019) intuit that the production of raw materials is linked to the availability of Chinese government financing of foreign projects. To address overproduction, China subsidises overseas infrastructure projects, often conditional on purchasing Chinese industrial inputs. Stimulating demand abroad can thus help reduce domestic overcapacity (Dreher et al., 2017; 2019).

status to Beijing. The group of countries that are part of the BRI has since grown to 140, with Botswana and the Democratic Republic of Congo (DRC) joining in 2021. The number of countries that have signed cooperation documents with China increased the most around 2018 when

most sub-Saharan African, Latin American and Caribbean countries were included (see Figure 2). These 140 countries, including China, account for roughly 37% of global GDP.¹³ Excluding China, the group accounts for 23.3%.

Figure 2 BRI cooperation documents by year

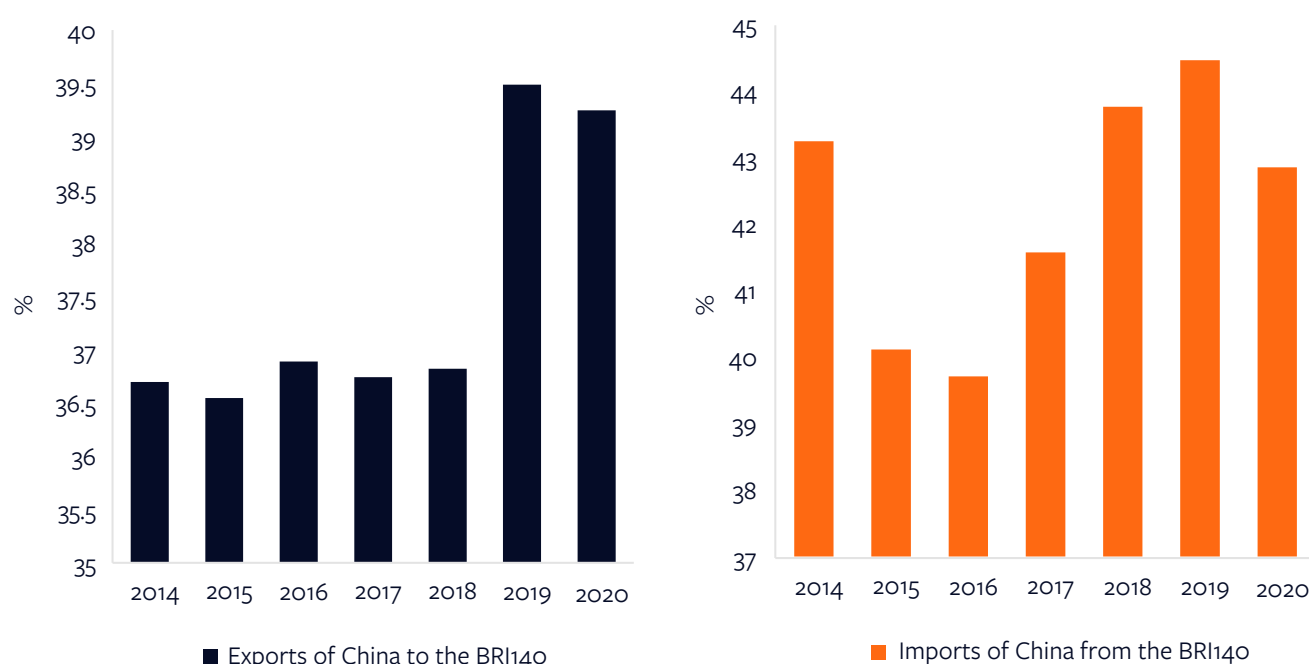


Source: Data collected by the authors from the Belt and Road portal (www.yidaiyilu.gov.cn/info/iList.jsp?tm_id=126&cat_id=10122&info_id=77298).

China's share of trade with the BRI, both merchandise exports and imports, has been improving over the past few years. The most notable increases were from 2018 to 2019, where China's share of exports to the BRI 140 increased from 36.8% to 39.5% of its total merchandise exports (see Figure 3). While the share declined

in 2020, it is still higher compared to earlier years (with the exception of 2014 imports). To the extent that BRI countries have closer diplomatic ties with China, a stronger relationship suggests new potential markets and sources of resources for the Chinese economy.

¹³ World Bank data was used to calculate GDP share. The team used GDP (constant 2010 US\$) in 2019. Data for some countries, such as the Cook Islands, Djibouti, Niue, Somalia, South Sudan and Venezuela, was unavailable for 2019, so 37% is a lower-bound estimate.

Figure 3 Share of China's total merchandise exports and imports to and from the BRI 140 by year

Source: Calculated from General Administration of Customs of the People's Republic of China merchandise trade data, CEIC

Trade between China and the BRI 140 was significantly affected by the pandemic, but China's exports to these countries have generally exhibited strong growth since July. As expected, exports and imports to and from China generally contracted early in 2020, with South Asia and Central Asia witnessing significant declines in May and March 2020 respectively (Figure 4). China's exports to the 140 BRI members were exceptionally strong in the second half of the year, in line with total merchandise exports over the same period.

The strong showing for exports faces some headwinds. The quick recovery of exports is largely attributed to exports of pandemic-related goods such as medical supplies and equipment, pharmaceutical supplies, textiles for face masks and products catering to remote working, such

as laptops and home appliances (Duan et al., 2020). This demand may fade in 2021 and firms could face stiffer competition from other countries as they start to recover. A strong yuan and higher commodity prices may also dampen China's export performance.

China's imports from the BRI 140 have not been as resilient but had picked up by the end of 2020 for some regions. Imports from sub-Saharan Africa, the Middle East, the Pacific and Latin America and the Caribbean are all still lower compared to 2019, with registered contractions of 20.8%, 23.0%, 8.2% and 4.9%, respectively. As noted in Economic Pulse 2, South-east and East Asia stood out in terms of recovery. China exported and imported more from these regions in 2020 compared to 2019, despite the pandemic. Elsewhere, import growth turned positive for

Europe, Latin America and South Asia towards the last quarter of the year (Figure 5).

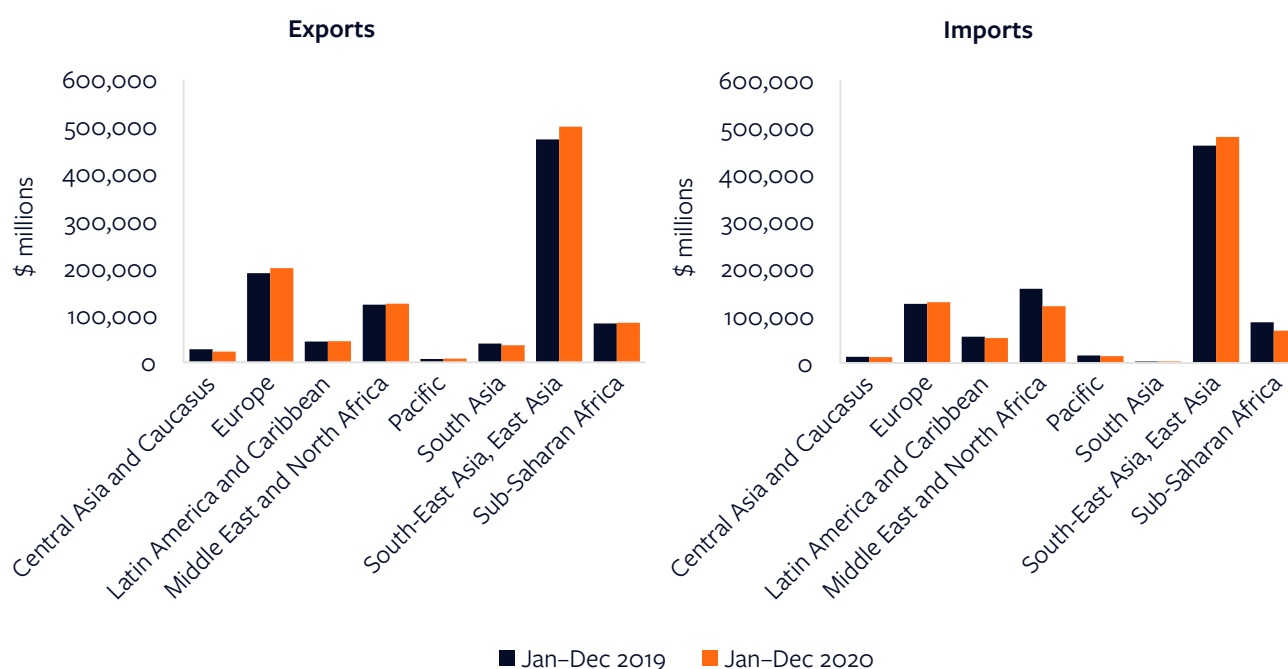
With household consumption recovering at a lag compared to other drivers of growth, the recovery in imports of consumer goods will

probably follow with a lag as well. Latest data (Q4 2020) from the national accounts shows final consumption figures improving, and imports of intermediate goods for exports should be supportive.

Figure 4 BRI merchandise trade growth (year-on-year)



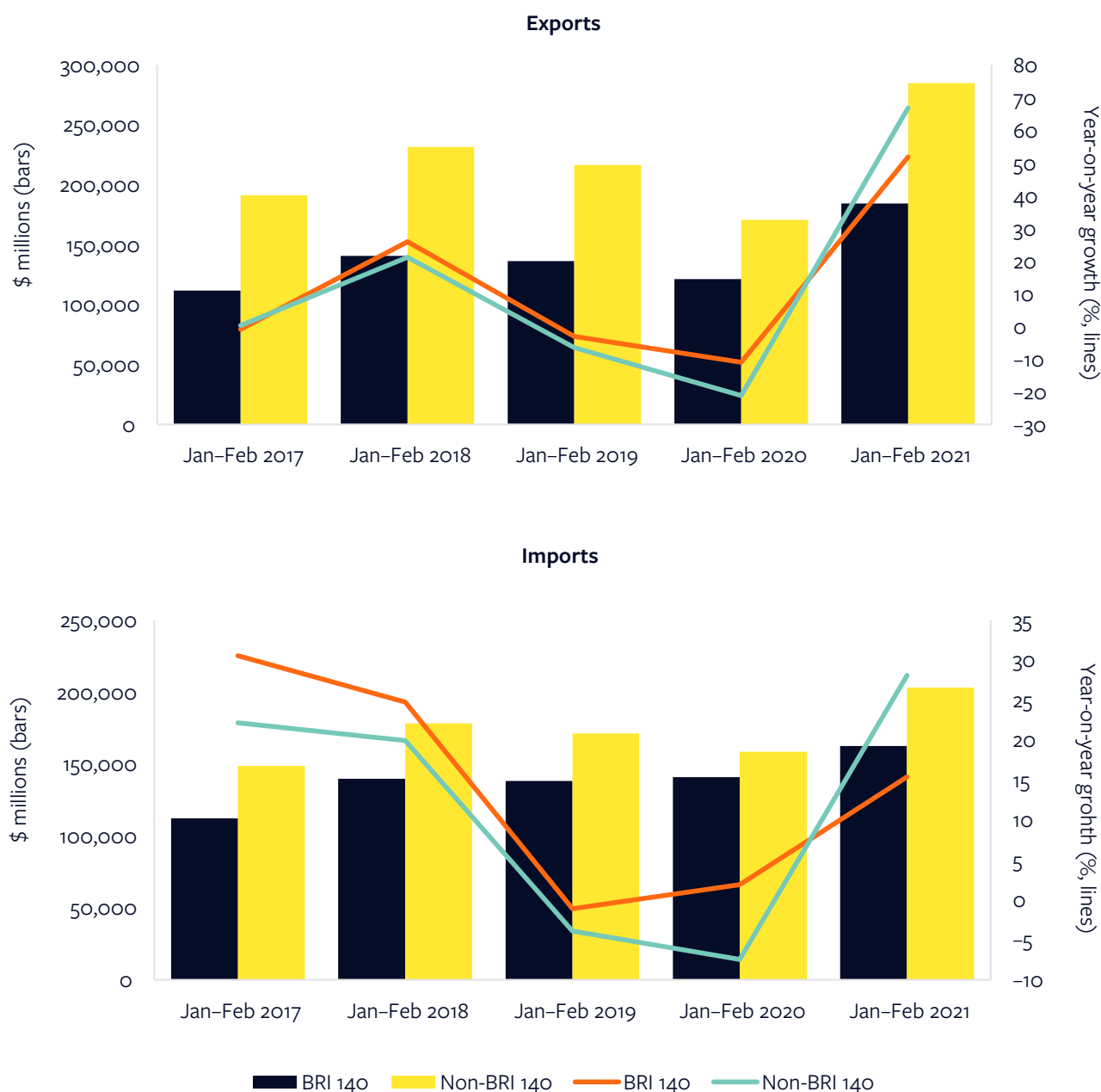
Source: General Administration of Customs; CEIC data

Figure 5 BRI merchandise trade value

Source: General Administration of Customs, CEIC data

Notably, some of the aggregate results were driven by certain countries. For the Middle East, the decline in China's imports was broad-based as the fall in commodity prices affected each country, while other regions saw some countries disproportionately weigh on aggregate growth/contraction. For example, imports into China from sub-Saharan Africa fell by 20.8%, but Angola and South Africa contributed 10.1 and 6.1 percentage points to this decline in growth. The fall in Central Asia was mostly driven by Uzbekistan, which contributed 5.34 percentage points to the 1.8% decline in imports. The large drop in Uzbekistan was only buoyed by the improvements in Armenia and Kazakhstan.

Despite potential external headwinds, early trade data for 2021 (January–February) has been promising. The low base from 2020, given contractions due to the pandemic, has distorted annual growth figures, but despite this, in terms of value, merchandise trade is still higher compared to more 'normal' years. This holds for exports and imports for countries in the BRI 140 and those that are not (see Figure 6). The robust import print indicates strong domestic demand, while the strength in exports can be attributed to the strong demand for pandemic-related goods, such as medical equipment and home office supplies.

Figure 6 Exports and imports to and from BRI 140 and non-BRI 140 for January and February, 2017–2021

Source: General Administration of Customs, CEIC data

Note: January and February data is often combined due to data distortions from the Chinese New Year.

Looking ahead, deepening trade relationships and reducing barriers will be at the forefront of Chinese international policy. The 2021 government work report highlighted trade, wherein China is expected to continue to promote the high-quality development of the BRI; pursue the implementation of the RCEP Agreement

(see Economic Pulse 2 for a discussion (Tanjangco et al., 2021)); ratify the China-EU Comprehensive Agreement on Investment; and accelerate negotiations on free trade deals with Japan and South Korea. Participation in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership will also be considered.

3.1.3 Trade in services

This report defines trade in services as service activities supplied by one entity in one country to another entity in a different country. To

provide a clear definition: trade in services takes place when a service is supplied from one economy to another. A citizen of one country travelling to another and using hotel services, crossing the border to have something repaired, procuring translation services overseas, or buying airline tickets from the national carrier of another country are all examples of trade in services.

The services trade was one of the channels most directly exposed to the pandemic,

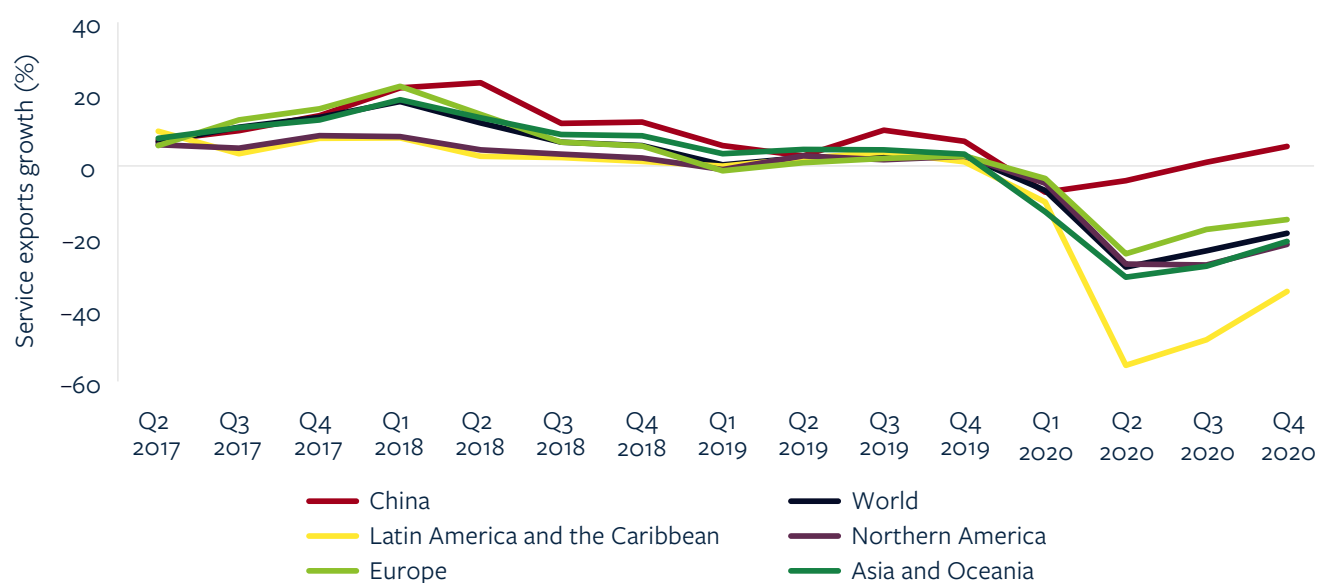
particularly through transportation and tourism, which were directly affected by travel bans and the closure of retail and hospitality establishments catering to the sector (WTO, 2020). Data from the World Trade Organization shows that the second quarter of 2020 saw a 30% and 81% year-on-year contraction for transport and travel respectively. Third and fourth quarter 2020 figures saw smaller contractions of 23% and 14% for transport and 68% and 69% for travel year-on-year (WTO, 2021). Some services might be able to benefit from shifts brought on by the pandemic,

particularly information technology services, which have gained importance as people are working from home from home across many industries and sectors.

Services exports for China declined, but not as steeply as the rest of the world. According to United Nations Conference on Trade and Development (UNCTAD) data, China saw services exports decline 7% in the first quarter of 2020 and 4% in the second, compared to falls of 7% and 28% in world services exports in these quarters, respectively (Figure 7). Services exports picked up in the third and fourth quarters, growing by 1% and 5.5% respectively, while world services exports fell by 23.6% and 18.8% over the same period (Figure 7). Broken down by sector, the steepest declines were in goods-related services, travel and construction,¹⁴ with deep contractions of 19%, 34% and 47% in the first quarter 2020, respectively. Falls continued in the second and third quarters. In the fourth quarter, exports of construction services finally recorded growth, but exports of goods-related services and travel were still on an annual decline at the end of the year. Growth in transport services slowed to 2% in the first quarter of 2020.¹⁵ The contraction in construction services is likely to be linked to the decline in dispatched foreign labour and stalled projects overseas.

14 Goods-related services are manufacturing services on physical inputs owned by others and maintenance and repair services not included elsewhere. Travel covers goods and services acquired by non-residents during visits to that economy (credit) and goods and services acquired from other economies by residents of the reporting economy during visits to these other economies (debit). The most common are lodging, food and beverages, entertainment and transport (within the economy visited), gifts and souvenirs. Construction covers the creation, renovation, repair or extension of fixed assets in the form of buildings, land improvements of an engineering nature and other similar engineering construction such as roads, bridges and dams (WTO, 2016).

15 Transport services include related supporting and auxiliary services.

Figure 7 Services exports growth, year-on-year

Note: Data for Africa as an aggregate was unavailable. Last data update 31 March 2021.

Source: UNCTAD

China's imports of services, which fell as Chinese tourists faced travel restrictions, are more relevant to developing countries. When a tourist from China spends money on hotels, restaurants, transport or other services in a foreign country, that counts as a service import into China. China's outbound travel market is significant for developing countries where Chinese visitor arrivals make up a large share of the total. For example, for Cambodia and Thailand, Chinese tourists accounted for roughly 36% and 28% of all tourist arrivals in 2019. Tourism is a key

source of income for many developing countries, but travel restrictions and the need to quarantine have suppressed demand. China's import of travel services saw the largest declines among its services imports. Growth contracted 29.7%, 60.6%, 52.6%, and 48.9% year-on-year in each quarter of 2020, respectively (UNCTAD, 2021). This is dramatically exemplified by the collapse in visitor arrivals in developing country partners. Figure 8 shows how visitor arrivals have dropped in general in Cambodia, Indonesia, Thailand and Viet Nam. Tourist numbers from China also declined.

Figure 8 Visitor arrivals, total and from China

Source: CEIC, Thailand Ministry of Tourism and Sport, Cambodia Ministry of Tourism, Viet Nam General Statistics Office, Indonesia Central Bureau of Statistics

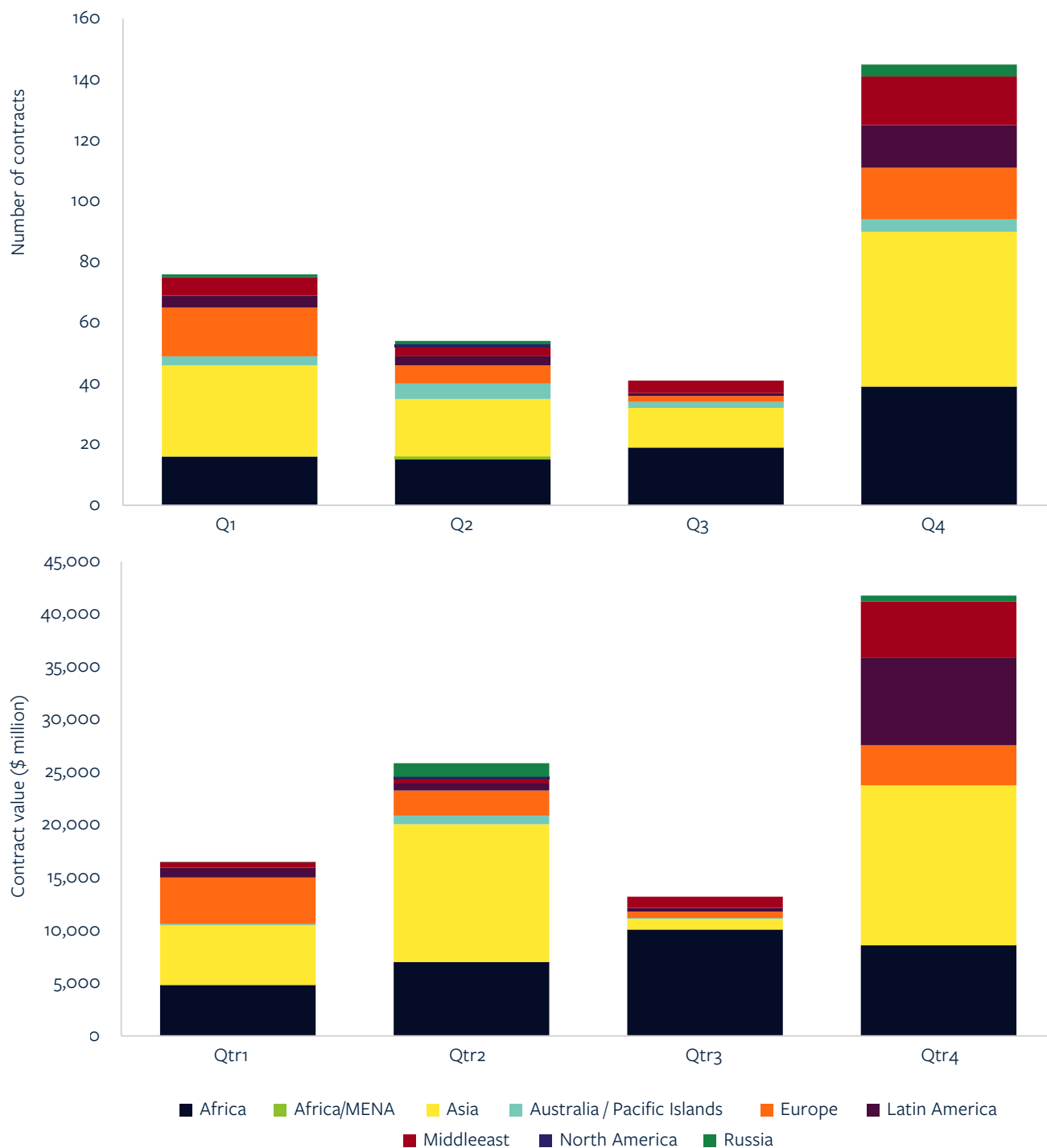
On a positive note, there are signs of travel demand recovering. As China contained the virus earlier than most countries, and with many countries still in lockdown, Chinese tourists have been more willing to travel domestically. The China Tourism Academy's *China domestic tourism development report 2020* found that, for the third quarter of 2020, tourists' willingness to travel reached 80%, reflecting a 90% increase over the previous year (Ministry of Culture and Tourism, 2020). With borders closed, many Chinese are switching to domestic travel. At the same time, in terms of international travel, Chinese seem more willing to travel abroad compared to other tourists. Chinese tourists accounted for half of visitor arrivals in Cambodia from April to November 2020, as opposed to the usual third of arrivals (Figure 8). When travel restrictions finally ease, there may be some pent-up demand in China for international travel. The introduction of digital international travel health certificates, akin to a 'vaccine passport', is a step towards normalising this.

3.2 Project-level trends

This section provides the detail necessary to understand changing trends and signals in China's overseas activities. It provides nuance to the aggregate statistics described in the previous section, while adding information in terms of *industries* and *countries* targeted by Chinese state-owned enterprises (SOEs) and private businesses operating overseas, providing a 'real-time' picture of these activities.¹⁶

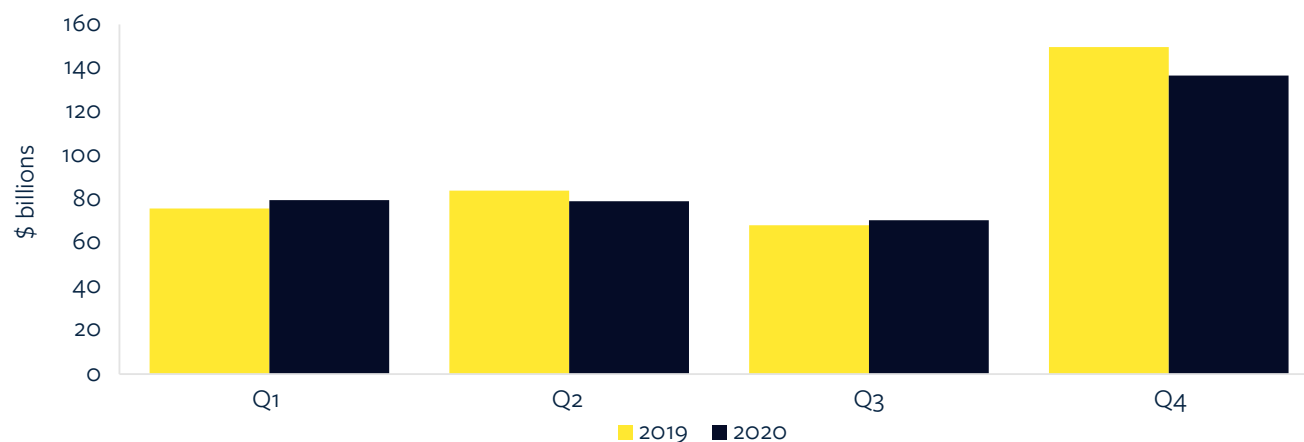
Overall economic activities rebounded in the fourth quarter (Figure 9), both in terms of the number of projects (both FDI and engineering contracts) and value of projects. This follows the trends of past years, which sees an increase in both investments and contracting work towards the end of the year, likely to meet corporate business targets (see Figure 10 for a comparison with 2019). The trend highlighted in Economic Pulse 1 – where activities have shifted from Europe and North America to Asia, Africa and BRI countries – has continued in the fourth quarter. Latin America notably has seen a jump in activities (both in number and value), driven by several contracts in the energy and transport sector, as well as a large utility acquisition in Chile (detailed in Economic Pulse 2).

¹⁶ As China does not publish official disaggregated data for overseas economic activities in real time, the analysis in this section utilises the RWR Advisory database of Chinese foreign direct and portfolio investments and engineering and construction contracts – we recommend consulting the Constraints and Limitations section in the Appendix to understand the limitations of the database.

Figure 9 Services exports growth, 2020

Note: Q1, 2, 3,4 = first, second, third and fourth quarters; MENA = Middle East and North Africa.

Source: RWR Advisory

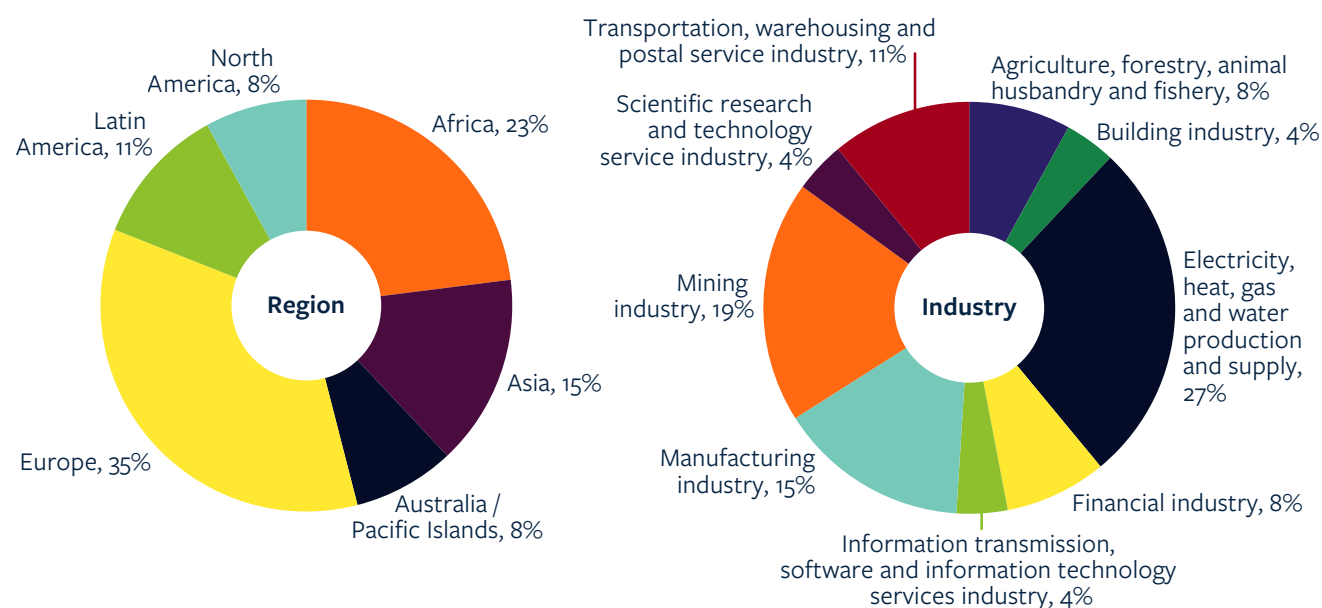
Figure 10 Chinese economic activities (investments and engineering contracts) 2019–2020 – official data

Source: Ministry of Commerce of the People's Republic of China

3.2.1 Chinese overseas mergers and acquisitions in 2020

Twenty-six acquisitions in 23 countries worth more than \$12.5 billion were announced in 2020 (half of which have been completed). Of these, 14 transactions were carried out in BRI countries. Acquisitions were concentrated in

Europe (35%), followed by Africa (23%), Asia (15%) and Latin America and the Caribbean (11%). In terms of sectoral focus, the largest were energy (27%), mining (19%) and manufacturing (15%) (Figure 11). In addition, we tracked 10 investment announcements in the data that could be acquisitions, but the related information was not clear enough for us to include them in the analysis here.

Figure 11 Chinese merger and acquisition transactions in 2020

Source: RWR Advisory

Data limitations mean this is likely to be an **underestimation** of the overall volume of Chinese mergers and acquisitions (M&As) in 2020. Official Chinese statistics show there were 467 M&As in 68 countries worth \$34.28 billion in 2019, a drop of 53.8% from 2018 (MOFCOM, 2021f). Even accounting for Covid-19 effects, it is likely that M&A transactions in 2020 were far higher than the 36 projects tracked by third-party RWR data given that the overall volume of Chinese FDI in 2020 stayed fairly similar to 2019 levels (shown in Table 2). However, the size of transactions has been notable, with four projects each worth over \$1 billion.

3.2.2 Chinese companies' public-private partnerships

In Economic Pulse 2 we explored how a recalibration of the BRI may be under way.

Despite a general lack of data, there are increasing examples of Chinese lending modalities shifting from the two traditional policy banks, China Development Bank and Export-Import Bank of China, to commercial banks and non-financial SOEs lending, financial lending to recipient countries' banks, and use of project and balance sheet finance to fund projects overseas. **Besides lending, a BRI recalibration would also affect the modalities of engineering projects Chinese companies are delivering overseas.**

In the past, Chinese companies worked mostly as engineering contractors, pursuing 'turnkey' projects through Engineering, Procurement and Construction (EPC) contracts or DB contracts. A small share of these contracts was tied to Chinese loans,¹⁷ often with a sovereign guarantee from the

recipient government, putting most risks, including project financing, operation, maintenance and service delivery, onto the public sector.

Chinese engineering companies recognise that this model has increasingly become unfeasible.

The Annual Report on China International Project Contracting 2019–2020, which is based on a survey of Chinese companies associated with the China International Contractors Association, highlights their perception of partner countries' risk of sovereign debt default, now worsened by the Covid-19 pandemic; partner countries' demand for project equity participation¹⁸ from international contractors; the tightening of lending from Chinese domestic institutions; and the drying up of 'framework projects' (government-to-government projects) as significant challenges to business as usual (CHINCA, 2020).

Responding to this changing landscape, in more recent years Chinese companies have sought to climb up the engineering services sector's value chain, driven also by the desire to establish a longer-term presence in partner countries as opposed to the short-termism embedded in EPC and BD contracts. This has translated into efforts to innovate business models, including (CHINCA, 2020):

1. The pursuit of PPPs, especially in the transport (railways and subways) and power generation sectors.
2. Mergers and acquisitions to expand into higher value-added areas such as engineering design consulting, operations and maintenance management.

¹⁷ For instance, 2016 peaked in the volume of overseas lending from China's two policy banks, at \$150 billion (Ray et al., n.d.), whereas the volume of overseas engineering contracts was \$602 billion (MOFCOM, n.d.). Even assuming all the loans were tied to Chinese engineering contracts, this would account only for 25% of all Chinese engineering projects abroad.

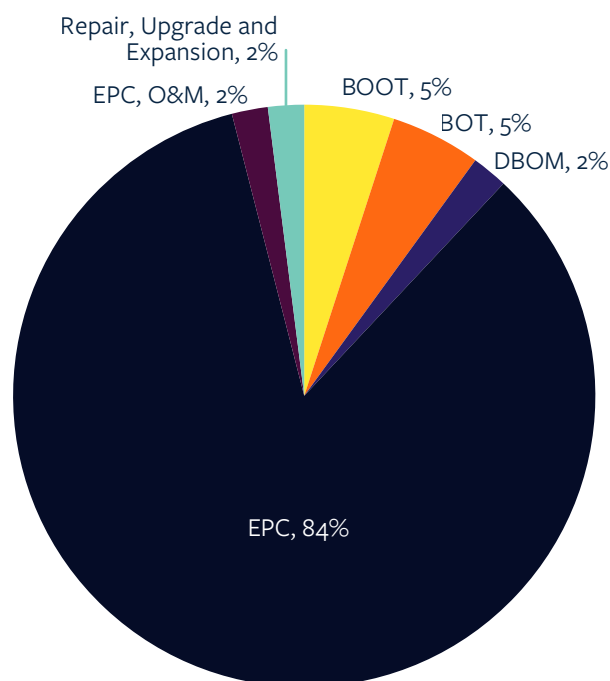
¹⁸ Engineering companies have to invest with an equity stake.

3. Venturing into new fields as project developers for real estate, integrated transport and land management, integrated agriculture infrastructure and food processing, etc.
4. Tripartite cooperation with developed countries' enterprises to learn from their experience in design and legal consulting services, joint venture bidding, project financing, corporate mergers and acquisitions.

That said, there are still many obstacles to a greater shift to PPP project modalities, including low acceptance of project financing and sub-sovereign guarantee models, high costs and limited options for corporate financing, mismatch in timeframes between domestic project approval processes and overseas investments' decision-making needs and a heavy tax burden and double taxation (CHINCA, 2020).

Challenges to a greater shift to PPP contracts seem also to be supported by the limited third-party data available on Chinese engineering contract modalities. Figure 12 shows that, in the energy sector (the only one where there is sufficient information for analysis), only 16% of overseas contracts signed in 2020 were PPP, whereas the majority (84%) were the standard EPC¹⁹ (this should be an overestimate of the average across all sectors given the higher attractiveness of energy PPPs created by guaranteed power offtake agreements with the government or state-owned entities).

Figure 12 Types of energy engineering contracts, 2020



Notes: BOT = Build, Operate, Transfer; BOOT = Build, Own, Operate, Transfer; DBOM = Design, Build, Operate, Maintain; EPC = Engineering, Procurement and Construction; O&M = Operate and Maintain.

Source: RWR Advisory

CHINCA (2020) has put forward several recommendations to expand the modalities of Chinese projects overseas:

1. Experiment with new and more flexible investment and financing guarantee models for easier funding access, including providing domestic guarantees on loans issued by foreign institutions (the opposite to current Chinese institutions' lending that receives foreign sovereign guarantees).

¹⁹ This is based on a sample of 44 energy engineering contracts, of a total of 87 tracked in the RWR Advisory database. For the remaining 43 contracts no modality information was available.

2. Increase Chinese financial institutions' risk tolerance for overseas investment project funding; improve methodologies and approaches to assess risks; better use of instruments to manage or transfer risks; improve performance indicators for project evaluation and assessment; and avoid one-size-fits-all processes. For instance, domestic banks and Sinosure should not only consider country risks but also risks to the sector and the project itself, as well as the experience and strengths of the Chinese companies involved.
3. Increase tripartite collaborations and financing syndicates with international financial institutions, especially European, US and Middle Eastern banks, to broaden funding options for projects. Institutions from advanced markets can raise funding at competitive rates through a broad array of flexible instruments, such as project finance, short-term revolving credit and securitisation.

It is likely that the development of PPP projects will proceed at different speeds in different geographies depending on the specific country context and challenges. For instance, although several countries in Africa have created frameworks to increase PPP infrastructure projects, including Kenya (2013),

Uganda (2015) and Ethiopia (2018), these have translated into a small number of signed PPP projects due to the high risks associated with investing in these countries (CHINCA, 2020). CHINCA members see the following opportunities in the engineering services market:

- Markets in South-east and South Asia have reached a saturation of EPC projects, and due to government requirements, PPP contracts will be the key modality in the future.
- Ambitions for regional connectivity and industrialisation in African markets will continue to create opportunities for engineering services; however, countries' high debt levels will be a challenge.
- Europe and the Middle East have advanced markets for PPPs. The former provides opportunities for partnership to Chinese enterprises to upgrade their business operation capabilities, while the latter will continue providing large contracts to Chinese firms.
- Chinese companies will pursue acquisitions to enter Latin American markets, as they do not yet have a competitive advantage in terms of local design, construction and material standards.

Table 3 provides a detailed summary of CHINCA members' mid-term outlook for different regions.

Table 3 CHINCA members' mid-term outlook by region

East Africa	<p>Current challenges</p> <p>The contracted engineering business of Chinese enterprises in East Africa is dominated by EPC and general contracting. It is difficult to implement project financing as the debts of these countries are generally high, project risks are significant and projects are slow to yield results. At the same time, Chinese companies are facing increasing competition for 'cash projects' (projects financed by national budgets, multilaterals or Chinese policy banks, usually delivered through EPC contracts) from other countries and local contracting companies. They are also slowly losing their cost advantage due to rising labour costs at home and RMB appreciation. This may mean that business growth in the short term may be difficult.</p> <p>Outlook and opportunities</p> <p>That said, while it is in a period of adjustment, the East African regional market has a promising future. East African countries attach great importance to infrastructure construction to drive development and economic transformation, and consequently improve people's livelihoods and expand business opportunities. Countries in the region have supportive local environments and policies to attract international capital and incentivise investments, including PPP models for local infrastructure. Overall, plans for regional interconnection and trade (e.g. the African Continental Free Trade Area) could substantially increase demand for cross-border infrastructure.</p>
Central and West Africa	<p>Current challenges</p> <p>The cooperation model of Chinese companies in this region is reliant on EPC and EPC+Financing models. However, there is little room for growth in such projects, due in part to weak governance systems in countries in the region. Projects also face political and security risks, including terrorist activities around Lake Chad on the borders of Cameroon, Nigeria, Chad, Niger and northern Mali, displacement and diseases such as malaria, typhoid fever, cholera and Ebola. Nigeria, the Democratic Republic of Congo (DRC), Guinea-Bissau, Mauritania and Senegal held elections in 2019, whereas Togo, Ghana, and Côte d'Ivoire held them in 2020; as these are new governments, there are uncertainties regarding the strategic intentions of the new leaders concerning development objectives, including those on infrastructure development.</p> <p>Outlook and opportunities</p> <p>In the Vision 2020 plan, the Economic Community of West African States (ECOWAS) prioritised the development of transport infrastructure, including roads, railways, ports and airports. In terms of energy, countries in the region have the lowest rate of energy access in the world and will experience population expansion, rapid urbanisation and economic development over the coming years, leading to rising energy demand. There is also a strong demand to diversify the economy in these countries, which are which is currently highly dependent on resources, and there will be industrial development and increased demand for industrial manufacturing engineering services. As such, there will be opportunities for international contractors given that local contractors are generally small, with limited management capabilities. However, Central and West African countries generally have heavy debt burdens and limited borrowing capacity; Congo (Brazzaville), Equatorial Guinea and Nigeria are in major arrears with construction payments, and in Nigeria projects under construction are seriously delayed, threatening future business development.</p>

Southern Africa Current challenges

Africa The progress of EPC and Financing (EPC+F) projects has slowed. Most countries in Southern Africa are heavily reliant on resources (e.g. oil and gas in Angola and copper mining in Zambia), and commodity price fluctuations in recent years have reduced countries' fiscal revenues. This has led to payment delays and delays in the construction of 'cash projects'.

Outlook and opportunities

The debt status of countries in the region has approached 'red lines' and their borrowing has tightened. Chinese domestic institutions have become more risk-averse, with 'framework projects' (government-to-government projects) drying up. Angola and Zambia have general elections in the near future, which means there will be short-term uncertainties around their future economic direction and development models. Moreover, political factors may influence the progress of current and future projects.

South-east Asia Outlook and opportunities

South-east Asia CHINCA members generally agree it could be more complex to develop business in South-east Asia. The market for traditional engineering contracting modalities (such as EPC and EPC+F) is almost saturated. Overall, the engineering markets in these countries have matured, involving high competition, relatively transparent costs and low profit margins, and most government projects are carried out through bidding. Future government projects in the region will be mostly implemented through Build, Operate, Transfer (BOT); for instance, more than 60% of projects in Indonesia's new five-year plan worth \$400 billion will have to be delivered through PPPs, independent power producers and other types of partnership modalities. Under these circumstances, it will become increasingly difficult to find market entry points, as Chinese companies have generally limited capacity to raise equity capital and seek guarantees, despite increased opportunities for equity participation in the region.

South Asia Outlook and opportunities

South Asia Countries in the region are focusing on improving outdated infrastructure. There are, however, funding gaps for projects due in large part to countries' external debt status, which has forced a reduction in project contracts. To address this, governments in the region have actively taken measures to increase government revenue, improve the investment environment and encourage the use of PPP to promote infrastructure construction. Going forward there are opportunities to participate in the development of industrial parks as governments prioritise livelihoods and industrial cooperation.

Middle East Outlook and opportunities

Middle East In the Middle East, government investment accounts for a large proportion of contracted engineering projects. These countries have incomplete legal systems for foreign investment, having only created basic framework types of laws and regulations, which are insufficient for many detailed investment issues. These markets generally offer many opportunities for projects that are large in size and scale in sectors such as petrochemicals, electric power, communications engineering, housing, transportation, water supply and sewage treatment. However, the qualification requirements for contractors are relatively strict. Foreign contractors must have industry or sectoral qualifications that match those of the host country before they can bid and construct, or must form consortiums or joint ventures with qualified local contractors to participate in projects. In specific industries or projects, their qualifications need to be recognised and approved by the recipient government.

Central Asia	Outlook and opportunities Kazakhstan and Uzbekistan are key markets for Chinese engineering companies in Central Asia. Ageing lifeline infrastructure in the region creates a robust demand for infrastructure services, supported by positive economic development in recent years. Governments have created policies to attract foreign investment, promoted privatisation and created a favourable investment environment for infrastructure construction. They have also stepped up infrastructure planning; for instance, the Kazakh government planned to develop the country into a trans-Eurasian logistics and transportation hub (with \$400 billion planned transportation project investments last year). This will create further opportunities in the medium term for Chinese companies. However, there are also many risks to consider, such as elite political change, exchange rate fluctuations, high debt, legal changes and social unrest. Chinese companies will have to strengthen country risk assessments and management to ensure the safety of personnel and assets.
Latin America	Outlook and opportunities Latin America and the Caribbean have become important markets for Chinese overseas contracted projects. Government investments in infrastructure development will be limited, as projects are usually developed and constructed through PPP models. There is increasing willingness to develop economic and trade ties with China, with the greatest growth potential in infrastructure investment and construction. Transport projects will be the main business for Chinese companies, to be carried out through BOT/PPP models. In the energy sector, Chinese companies do not have an advantage compared to European, American and Latin American companies, as they are unfamiliar with local design, construction and materials standards. Future development should start by focusing on the acquisition of local power plants and networks as a way to enter the market. Solar photovoltaic (PV) projects and telecommunications engineering also present growth markets.
Europe	Outlook and opportunities As Chinese engineering companies are in a critical transitional period in transforming their business models and upgrading their value chains, entering the high-end European market will help them improve their business operation capabilities, including overseas BOT, PPP and franchising, and other project models.
United States	Outlook and opportunities Chinese companies only account for 3.2% of the US engineering service market. Overall, there are no great prospects for future development.

Source: Authors' summary and translation from CHINCA (2020)

3.3 Policy signals

This section discusses recent policy developments that may signal which areas or sectors Chinese policy-makers are interested in and how China is engaging with other countries in light of the pandemic.

Policy developments help developing countries assess which areas are being supported by the government and which are likely to receive the most attention.

3.3.1 Regional relations: virtual diplomacy for the Belt and Road in Europe, visit diplomacy in Africa and the Middle East

On 9 February 2021 President Xi Jinping presided over the CEEC online summit, convening leaders of the '17+1' mechanism. The summit, a demonstration of China's ambitions for regional engagement in the European periphery, produced a substantial list of outcomes, both

cooperation and commercial deals (Xinhua, 2021b). The reception in the region, however, has been lukewarm.

Agricultural cooperation was a prominent focus. China has pledged to double its agricultural imports from Central and Eastern European (CEE) countries over the next five years, increasing bilateral agricultural trade by 50%, alongside exchange initiatives for young agricultural professionals. While agricultural cooperation has also been prominent in China's development cooperation in sub-Saharan Africa, the focus with CEE countries is primarily on trade. The list of outcomes also notes specific MoUs over the customs and administration for importing agricultural products, including Bulgarian tobacco, Albanian dairy products and Slovakian lamb (Xinhua, 2021b). Other cooperation agreements include memoranda of understanding (MoUs) in higher education and research cooperation.

The forum signals China's continued desire to expand its commercial cooperation and influence into Eastern and Central Europe, though '17+1' outreach has received a mixed reception. Several heads of state (particularly from the Baltic states) invited did not attend, which has been viewed as a diplomatic disappointment for China in light of the optimism generated by the China–EU investment agreement last year. This probably reflects geopolitical considerations on the part of Eastern European NATO member states, as well as broader disappointment with the 17+1 mechanism (Lau, 2021). Lithuania in particular has been vocal in its criticism, and opened a trade office with the island of Taiwan this year, presaging a potential break from the 17+1. If it

did leave it would be the first European country to do so.

Elsewhere, China's regional diplomacy seeks to maintain strategic relations with African states and deepen relations with the Middle East. In January 2021, Foreign Minister Wang Yi visited five African countries, Botswana, DRC, Nigeria, the Seychelles and Tanzania, maintaining the official tradition of every foreign minister over the last 30 years. The trip added two new signatories to the BRI in the DRC and Botswana, joining existing BRI partners Nigeria, the Seychelles and Tanzania. Such visits are an opportunity for China to reaffirm its strategic relationships in the region and demonstrate its identity as an economic partner to Africa. This follows the signing of China's first FTA with an Africa country with the launch of the China–Mauritius Free Trade Agreement (see Box 1).

Between 19 and 23 February, Yang Jiechi, Central Committee member and director of the Central Foreign Affairs Commission, visited Kuwait, Qatar, Uganda and Zambia. The Uganda visit was an opportunity to reaffirm mutual relations in the wake of President Yoweri Museveni's contentious re-election, and push for financing for a planned cross-border standard gauge rail link between Uganda and its regional neighbours. The project has stalled, and Chinese contractors and financiers have already sunk substantial sums into the Kenyan route, which has not generated the returns expected (Daily Monitor, 2021). The visit to Zambia was notable given last year's debt discussions between Chinese and private-sector creditors (as highlighted in the previous Economic Pulse), though the visit did not shed any light on the outcomes of these discussions.

Box 1 China's first African free trade agreement

1 January 2021 marked the start of two significant trade policy initiatives in Africa. The first is the paradigm-shifting African Continental Free Trade Agreement (AfCFTA). The other, less noticed, was the launch of the China–Mauritius Free Trade Agreement (CMFTA), China's inaugural FTA with an African nation. Mauritius, a small Indian Ocean island economy, is home to an ageing population of 1.2 million people, and is Africa's second-only high-income per capita nation (after the Seychelles). The CMFTA sets an important precedent for the future of China–Africa economic policy. It is hence important that African policy-makers and those interested in China's international economic agenda watch how the CMFTA evolves.

The CMFTA reduces trade barriers between the two countries in a swathe of sectors. It covers trade in goods, sanitary and phyto-sanitary measures, technical barriers to trade, competition, intellectual property, e-commerce, trade in services, investment, economic cooperation and beyond. Almost all goods traded between the two countries are now exempt from customs duties. Specifically, some 96.3% of goods categories made in Mauritius will be able to enter China duty-free, and some 94.2% of goods categories made in China will be able to enter Mauritius duty-free. The remaining items are subject to ongoing discussions over coming years.

The services-related elements of the FTA are worth exploring given the potential for Mauritius to become a regional service provider of disproportionate size, especially when compared to the country's relatively small goods trade (beyond re-exports). In particular, it has been agreed to open up more than 100 sectors to tourism, finance and law to economic operators. Mauritius is home to an important regional financial centre, and under the FTA the two sides have agreed to promote 'the development of a Renminbi clearing and settlement facility in the territory of Mauritius' and to share 'expertise in fintech to promote innovation in financial services'. As China evolves as the first major world economy to operate a digital currency, it may ultimately prove to be Mauritius that leads in the integration of this currency internationally and in Africa.

A notable element of the FTA is its focus on the ocean economy. The two parties have recognised that 'the Ocean Economy including the fisheries sector holds enormous potential for sustainable economic diversification, job creation, and wealth generation, and investment opportunities exist in various areas in the Ocean Economy Sector. The Parties agree to enhance cooperation through: (a) exploring to establish ocean economic demonstration zone and conducting research and cooperation on its planning with synergies in the field of ocean economy, including infrastructure, investment and financing, research and development, sea water desalination, ocean energy development, know-how and technology transfer'.

China itself is increasingly prioritising its national agenda to become a global maritime power. Shenzhen has been nominated to aim to become a global maritime city. It is intended that the hub of China's inbound and now outbound economic ascent will house scientific, engineering, economic and legal commercial and research expertise in maritime fields. Perhaps Mauritius, as China's first FTA partner in Africa and only Africa's second high-income economy and a blue-economy state by geography, can become its leading African blue economy partner as well.

Overall, from China's perspective, the launch of the CMFTA alongside the AfCFTA marks a symbolic step of partnership with Africa's trade-related development progress. That Mauritius is the first African nation with which China has an FTA is also consistent with Chinese regional trade policy precedents. For example, China's first FTA with an OECD nation, New Zealand, was agreed in 2008. Its first European FTA was agreed in 2013 with Iceland. China has since advanced many more economic agreements with countries in these regions.

Note: Written by Lauren Johnston

Sources: (http://fta.mofcom.gov.cn/mauritius/annex/mlqs_12_en.pdf); (www.lemauricien.com/le-mauricien/the-significance-of-the-china-mauritius-free-trade-agreement/397722).

These visits also signal a deepening of China's diplomatic engagement and its interests in the Middle East and affirm China's support for smaller states such as Qatar, particularly a recent resolution from its larger neighbours, Saudi Arabia, the United Arab Emirates (UAE) and Bahrain, which lifted the diplomatic and economic blockade on the country that had been active since 2017. The stabilisation of the Gulf region could facilitate the development and expansion of BRI cooperation, and raises the possibility of future free trade agreements between China and the Gulf Cooperation Council (GCC) states.

At the end of March, Foreign Minister Wang Yi visited Bahrain, Iran, Oman, Saudi Arabia, Turkey and the United Arab Emirates (UAE) (all BRI countries), stressing China's desire to reach an 'early conclusion of a free trade agreement with the Gulf Cooperation Council' and stating China's belief that, for the 'region to emerge from the chaos and enjoy stability, it must break free from

the shadows of big-power geopolitical rivalry and independently explore development paths suited to its regional realities' (Xinhua, 2021c). During the trip it was announced that the UAE would begin producing China's Sinopharm Covid-19 vaccine from April 2021. China's engagement serves to promote the BRI's expansion, as well as countering US dominance in the region. China has made successful overtures to both Saudi Arabia and Iran. Notably, China and Iran signed a 25-year comprehensive cooperation agreement, including direct investment in oil, as well as other economic infrastructure sectors, worth \$400 billion, bypassing current US sanctions (Liu Liu, 2021).

Relations with Asian neighbours have proved more delicate. Against the backdrop of protests in Myanmar after a military takeover and the imprisonment of Prime Minister Aung San Suu Kyi, Chinese SOEs and projects have been targeted by labour walkouts, and protests have taken an increasingly anti-China tone. China's ambassador

in Myanmar took to public announcements and interviews with the local press to urge a peaceful resolution to Myanmar's political crisis and to affirm 'friendly relations' with both Aung San Suu Kyi's National League for Democracy party and the army. These announcements also reveal the delicate situation China faces: desiring stability and maintenance of the status quo, while being unable to either support or condemn the power transition. While project development has continued, this presages longer-term difficulties in how China maintains support for its ongoing programme of infrastructure projects in the China–Myanmar Economic Corridor and projects discussed in Chapter 4, in the face of opposition from both societal groups and potentially the military government.

3.3.2 White Paper on development cooperation China's global governance role and health cooperation

In January 2021 China released the latest iteration of the White Paper on development cooperation, a long-awaited update to the 2014 document and the broadest in scope to date. The White Paper is notable for centring the BRI as part of China's development cooperation and also affirms a role for the China International Development Cooperation Agency (CIDCA), to service the BRI. The document emphasises the BRI as a platform to increase foreign aid to developing countries, giving the initiative a new, explicitly developmental, framing (Chen et al., 2021). Given the impacts of Covid-19 and risks to BRI projects that previous Economic Pulse reports have highlighted, at the policy level the document reinforces a political commitment to the BRI, to infrastructure development and connectivity as a channel for growth and development, and its continued centrality as a framework for China's engagement with developing countries.

China's contribution to global governance and the global public good is a constant refrain in the White Paper, as well as other policy documents. There is a continued emphasis on rhetoric of a 'greater good' and 'community of common destiny' in China's foreign policy statements, including the White Paper, tying into a broader desire for legitimacy as a global leader. The Covid-19 crisis has been a political opportunity to emphasise this narrative, and the White Paper reinforces China's positive contribution to global governance in this area.

Vaccines and health cooperation have become a prominent part of China's public discourse and diplomacy. Within a broader rhetoric concerning China's global role, China's vaccines have been labelled a global public good, and even a 'people's vaccine' (FMPRC, 2021b). This reflects China's broader conception of its global role. Vaccine cooperation has also become a prominent component of China's diplomatic outreach, both in their provision and in the outsourcing of vaccine production, as seen in Central Europe and the Middle East. Donations of vaccines, masks and hospital equipment have been a central part of China's regional diplomacy and its engagement with developing countries. Vaccine batches have been delivered to partners in Zimbabwe and Senegal – host of the 2021 Forum on China–Africa Cooperation (FOCAC) – and 22 developing countries out of a promised 53, as well as to United Nations peacekeeping forces (FMPRC, 2021b). Vaccines were also a feature of the China–CEEC Summit, with Hungary and Serbia receiving donations, and the latter a pledge of cooperation in vaccine development and production (FMPRC, 2021a). The distribution and production of China's Covid-19 vaccines is also an opportunity to pursue deeper cooperation in medical research with Europe and reflects a wider ambition to develop the competitiveness of its pharmaceutical industries.

3.3.3 Strengthening environmental regulation and achieving carbon neutrality – implications for China’s overseas activities

Climate cooperation has been a prominent dimension of China’s aspirations for global governance, but mobilisation towards this goal has been primarily at the domestic level. China’s pledge of carbon neutrality by 2060 has been followed by commitments in December 2020 to reduce carbon intensity, increase renewable capacity and expand forest cover. Internal policy signals demonstrate a continued commitment to ‘green’ and low-carbon growth that has been apparent since the 13th FYP, although China’s domestic recovery over the last year has not shown a strong emphasis on green targets (Keane et al., forthcoming), and the overseas impact of these long-term ambitions has yet to be seen.

Energy sector reform is a consistent theme of the 14th Five Year Plan, though messages on ecological goals have been mixed. The outline document affirms that carbon dioxide (CO₂) emissions should peak by 2030, though mentions of ‘ecological civilisation’ have been dropped. A central theme within the FYP’s stated objectives is establishing a ‘modern energy system’, including specific goals of reducing energy intensity (energy consumption per unit of GDP) by 13.5%, and cutting carbon intensity (CO₂ emissions/GDP) by 18% in order to reach peak carbon emissions. However, it does not give an exact emissions cap on CO₂, or a cap on coal consumption (Carbon Brief, 2021). These signals show support for broader climate goals, but tie primarily to energy security objectives and economic restructuring, through raising the quality and efficiency of China’s energy sector towards low-carbon, high-quality growth. However, they still imply a

continued dependence on coal power in China’s energy mix, and China faces a delicate balance in meeting green targets within an economic model that is still heavily driven by carbon-intensive infrastructure investment and fossil fuels.

Nevertheless, there have been signs of greater aspirations for a greener recovery in the medium to long run. The ‘Guiding Opinions’, published by the State Council, is notable as a comprehensive and far-reaching directive for how China’s leadership aims to integrate ‘green’ targets within every facet of the economy, and indicates that the political will and commitment for this exists at the very top. The document indicates how these top-level goals might trickle down, with pledges to green the manufacturing system, targeting traditionally polluting industries including steel, chemical, construction, textile, paper and leather industries (State Council, 2021). The document also pledges to shut down and ban polluting industries and ‘green’ the supply chain.

There is clear potential for transfers and funding of new green technology from this domestic greening overseas to developing countries and partners. It is clear, as Chapter 4 shows, that renewable energy will see a massive expansion, and clean technologies, such as new electric vehicles, may also see a significant boost in consumption following new policy incentives (Xia, 2021). China is keen to cooperate with Europe in clean energy sectors: one recent outcome of the China–CEEC summit was the launch of new solar photovoltaic (PV) plants in Poland funded by the China–CEE Fund (Caixin, 2021; CIDCA, 2021).

Climate objectives may also filter through into China’s overseas development finance. The PBoC recently announced that green finance will be a priority in the next five years, emphasising the

use of new ‘green’ financing instruments in loans, bonds, insurance and derivatives to meet carbon neutrality targets, and working with the EU to standardise a taxonomy of green finance (Brown, 2021; Regulation Asia, 2021). The integration of carbon and climate goals into China’s monetary policy also points to more stringent oversight of financial institutions in managing climate risks, and potentially shift overseas financing activities in line with domestic carbon neutrality goals. This could entail greater scrutiny of the climate risks and environmental impacts of BRI financing, and also paves the way for increased exports of clean technology and renewables in China’s economic cooperation with developing countries.

These are potentially positive developments, though the net effects for developing countries are yet to be seen.

There is also a risk that a green restructure within China towards carbon neutrality will generate negative spillovers abroad. Notably, the shutdown of many of these traditional energy-intensive and polluting industries in the past has contributed to ‘offshoring’, as older, dirtier industries relocate from China to South-east Asia or sub-Saharan Africa, where environmental regulations may be weaker (Sun and Tang, 2016). While this may create jobs and generate a ‘flying geese’ effect,²⁰ greater oversight is needed of China’s overseas investors to ensure that domestic greening does not lead to the export of China’s pollution and environmental problems.

3.4 Debt negotiation updates

This section summarises recent reports on negotiations on debt owed to China. It also provides insights on debt renegotiation structures and China’s likely approach to the G20 Common Framework for Debt Treatments beyond the DSSI (CF). Many countries have had to divert scarce funds to address the health and economic issues brought on by the pandemic, leaving them unable to fulfil their debt-service obligations. China is a large holder of debt and is holding many negotiations with distressed countries.

3.4.1 Updates on ongoing debt negotiations

China is negotiating terms of debt bilaterally or through multilateral initiatives such as the G20 Debt Service Suspension Initiative (DSSI) and the CF. The DSSI allows 73 eligible developing countries to apply for debt relief from official bilateral creditors. The debt suspension period has been extended, first to June 2021 and more recently to December 2021. Beyond this, the G20 and the Paris Club formed the CF. This is expected to guide coordinated efforts to treat and resolve debt, ensuring the burden is shared fairly among creditors. Table 4 lists debt negotiations and updates reported from January 2021 to early March 2021.

20 See https://academic.oup.com/jae/article/27/suppl_1/i29/5075680 for more information on the flying geese effect.

Table 4 Debt negotiation updates

Countries in default	
Zambia	On 5 February, the Ministry of Finance of Zambia announced that the country had officially requested debt treatment under the CF. This follows the conclusion of the Debt Sustainability Analysis prepared by the International Monetary Fund (IMF) and the World Bank, with discussions scheduled from 11 February to 3 March, 2021 (Republic of Zambia Ministry of Finance, 2021).
Countries eligible for and participating in DSSI	
Kenya	<p>On 11 January, the Cabinet Secretary for the National Treasury & Planning confirmed Kenya's application to the DSSI. Debt due between January and June 2021 worth KES 32.9 billion (\$306 million) in foreign debt repayments to 10 bilateral partners under the Paris Club will be suspended. The country also applied for debt service suspension within the DSSI worth KES 40.6 billion from non-Paris Club bilateral creditors (Republic of Kenya National Treasury & Planning, 2021).</p> <p>It was reported in mid-January, according to the Chinese embassy in Nairobi, that China and Kenya were in talks on a debt suspension deal (Herbling, 2021). The first instalment due to the Export-Import Bank (for a railway) was due towards the end of January (Nyabiage, 2021).</p> <p>At the end of January, China and Kenya agreed a six-month debt-repayment holiday worth \$245 million (KES 27 billion) (Obulutsa, 2021).</p> <p>In early March 2021, Kenya's credit rating was downgraded by S&P to 'B' citing fiscal and external pressures and slowing growth in 2020 (Okoth, 2021).</p>
Angola	In early January, Angola secured three years of debt-repayment relief from its Chinese creditors. The country has debts to the China Development Bank, the Export-Import Bank of China and Industrial and Commercial Bank of China (ICBC) (Arnold and Strohecker, 2021).
Chad	On 27 January, it was reported that Chad had become the first country to request debt restructuring under the CF. IMF officials have said discussions will be under way as the new framework is tested and whether China will participate as agreed. The country is regarded as suitable for the CF as it does not have any publicly traded external debt such as Eurobonds (Shalal and Strohecker, 2021).
Democratic Republic of Congo	On 6 January, the Congolese Foreign Ministry announced that China had granted the country debt relief on interest-free loans that matured at the end of 2020 (Bujakera, 2021). The debt forgiven was a reported \$28 million or RMB 180 million, which Foreign Minister Wang Yi offered to return to the DRC's coffers to help the country combat the pandemic (AFP, 2021a).
Tanzania	On 9 January it was reported that Tanzania was asking China for debt relief worth approximately \$167.7 million. The country signed a new railway deal worth \$1.32 billion during Wang's visit (see Sub-section 3.3.1) (Ng'Wanakilala and Kavanagh, 2021).
Ethiopia	The Financial Times reported on 2 February that Ethiopia has asked for debt relief under the CF, and the country is preparing for discussions with official creditors (Wheatley and Schipani, 2021). Ethiopia is hoping to restructure sovereign debt under the CF (Mohammed and Thomas, 2021).
Pakistan	Pakistan is reportedly planning to seek debt relief from China for payments related to power projects financed over the past eight years (Mangi, 2021). However, this has not been confirmed by China's Ministry of Foreign Affairs.
Burundi	On 25 January, China agreed to forego repayment of RMB 50 million (roughly \$7–8 million) in interest-free loans (Isenge, 2021).

Mozambique In March, China forgave debt worth 244.6 million Chinese yuan (\$37 million) in a bid to provide relief from the impacts of Covid-19. This represents around 2.2% of the debt owed by the Mozambique government to China (Macau Business, 2021).

Countries eligible for but not participating in DSSI

Liberia It was reported on 12 February that Liberia is in negotiations with China regarding debt relief, though details have not been released (Toweh, 2021).

Rwanda China cancelled \$6 million of Rwandan debt. China and Rwanda have agreed grants worth \$60 million, which is expected to relieve the country of some of the financial pressure brought on by the pandemic (Kuteesa, 2021).

Countries not eligible for DSSI

Sri Lanka Falls in Sri Lanka's foreign reserves have prompted the government to seek \$2.2 billion from Chinese banks to meet foreign currency needs. This includes a \$1.5 billion swap facility with China's central bank as well as a \$700 million loan from the China Development Bank (AFP, 2021b). As of early March, the \$1.5 billion swap facility was approved (Karunatilake and Pal, 2021).

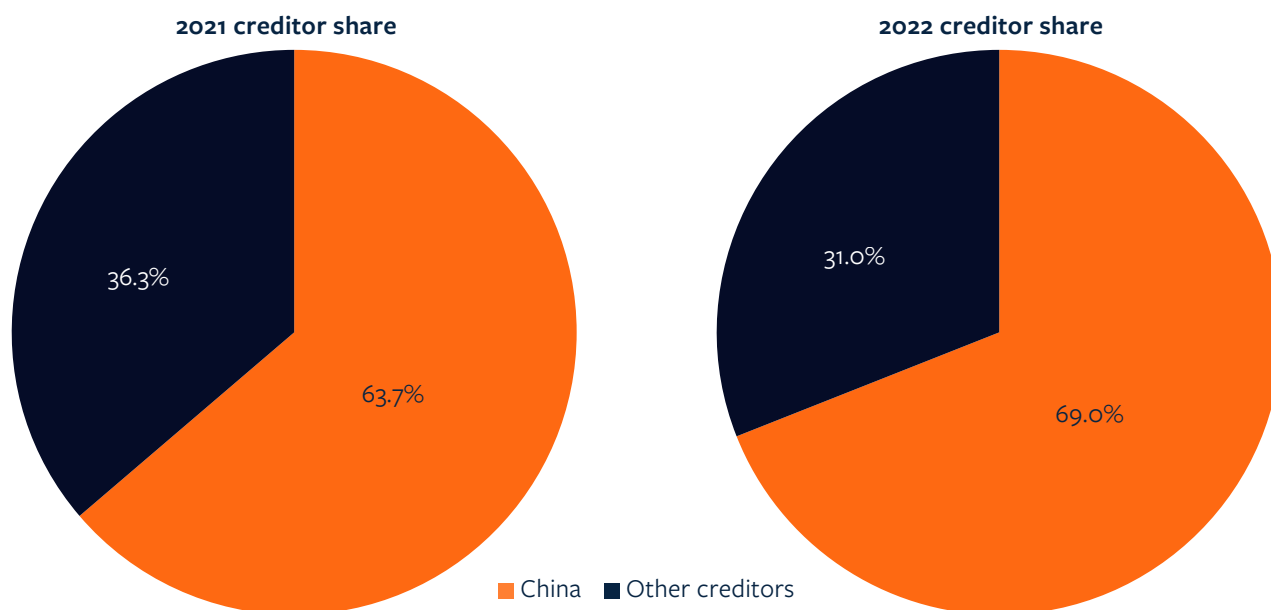
Source: The breakdown of participants in the DSSI is based on the DSSI official list (www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative).

3.4.2 Debt service on external public debt – 2021 and 2022

China bears the majority of debt eligible for suspension in the DSSI. Looking at data from

the DSSI on public and publicly guaranteed debt stock and debt services due by creditor country, China accounts for roughly two-thirds of the debt owed to creditors in 2021 and 2022 (Figure 13).

Figure 13 DSSI creditor share of debt service for 2021 and 2022

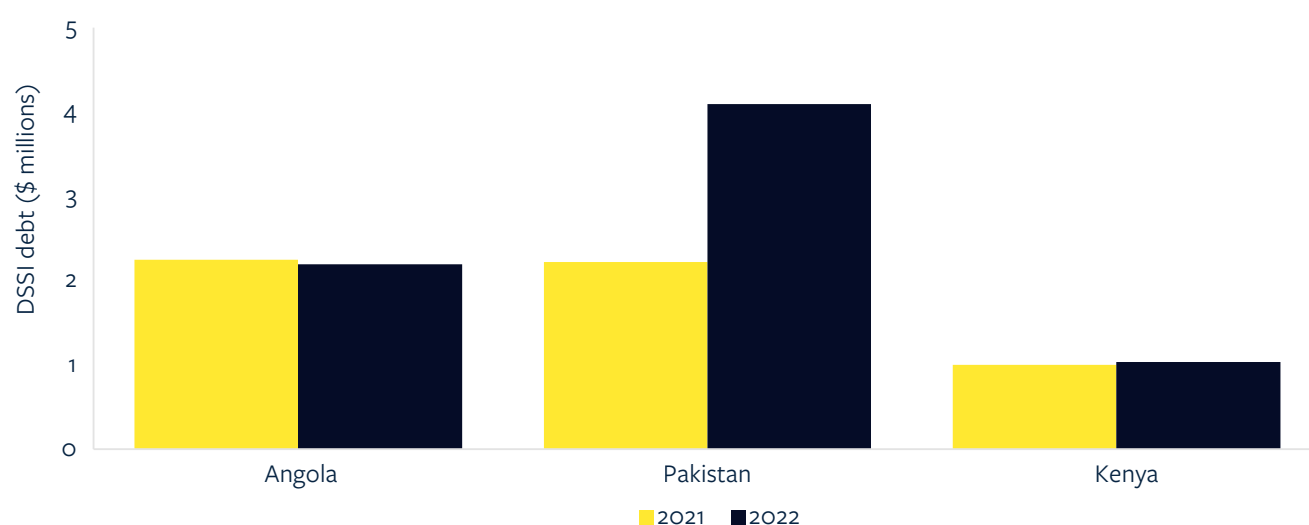


Source: World Bank DSSI, accessed January 2021

More than half of the debt owed to China eligible under the DSSI can be attributed to just three countries: Angola, Kenya and Pakistan. These three countries account for 51.5% and 58.6% of DSSI-eligible debt owed to China in 2021 and 2022 (Figures 14 and 15). The China Africa Research Initiative notes that around 23 countries have benefited from debt relief from

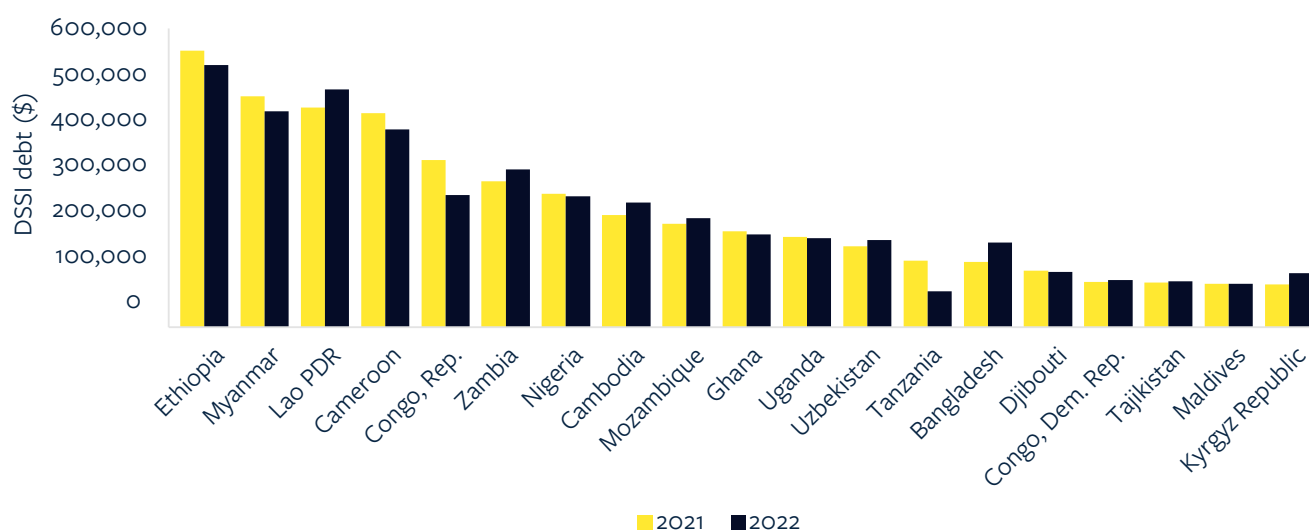
Chinese bilateral creditors under the DSSI. Of these, only three, the Maldives, Zambia and Kenya, have shared the particulars of their agreements, with amounts of \$25 million, \$110 million and \$378 million respectively. Angola has also received debt relief from the DSSI, but how much is not known (Acker et al., 2021).

Figure 14 DSSI debt owed to China (top three on a larger scale)



Source: World Bank DSSI, accessed January 2021

Figure 15 DSSI debt owed to China (other countries excluding Angola, Pakistan and Kenya, on a smaller scale)



Source: World Bank DSSI, accessed January 2021

3.4.3 Debt negotiations and decision-making structures

Debt negotiations and decision-making structures will vary by the type of loan and the creditor involved. In general, ZILs are easily written off; to date, China's bilateral loan forgiveness has largely only applied to ZILs. Since ZILs come from the foreign aid budget, decisions can be made at the ministerial level, through a collective decision-making process between the Ministry of Foreign Affairs, Ministry of Commerce of the People's Republic of China (MOFCOM) and CIDCA (as the implementing agency for foreign aid). For debt renegotiations regarding Eximbank and CDB loans, requests for debt relief are considered on a case-by-case basis and evaluated by a coordinating committee led by the Ministry of Finance, and including MOFCOM, CIDCA, Eximbank and CDB. There does not appear to be any structural mechanism for debt renegotiation above this level, nor does there seem to be evidence for the existence of a Leading Group on this issue. The final decision as to whether or not China participates in the DSSI and CF is taken by the top leadership (the State Council or the Central Foreign Affairs Commission).

Negotiation processes differ between Eximbank, CDB and the commercial banks. As a pure policy bank, Eximbank loan restructuring requires a government-to-government agreement, while CDB and commercial banks do not. Since many infrastructure project loans have both concessional and commercial components, both credit facilities have parallel processes for negotiation, which means they may be more

cumbersome for borrowing governments (Key Informant Interviews, 10 March 2021).

For CDB and commercial banks, such as the Industrial and Commercial Bank of China (ICBC) and Bank of China, decisions regarding loan term amendments and debt restructuring are taken within the bank. The process may vary in terms of the tiers of decision-making involved. For example, CDB has regional branches, which may have greater autonomy in dealing with small defaults or technical defaults. If repayment issues extend to the loan principal, or involve restructuring, negotiations are likely to be escalated to the central office. In the case of ICBC, the lack of regional offices means any negotiations over loans are automatically directed to the central office in Beijing. This centralisation of expertise and decision-making means any renegotiation with ICBC may be more efficient.

For commercial loans, the credit committee within the bank plays an instrumental role in loan renegotiations. Any request for changes in the loan agreement will first be referred to the bank's credit committee, which may approve repayment deferrals. Refusals of deferrals appear rare, though the credit committee may impose additional conditions for loan security. Finally, negotiations can be referred to the Board, which has the final say over any changes to loan agreement terms. Where restructurings have occurred, this has generally been for recipients with strong diplomatic or strategic relationships with China (e.g. Angola, Cuba and Venezuela), and has probably involved political pressure from the top leadership.

Table 5 Stylised facts on China's overseas loans and renegotiation outcomes

Type	Lending instrument	Lending institution	Renegotiation process	Likely outcomes
Foreign aid loans	Zero-interest loans (ZILs) RMB-denominated, typically 0% interest rate, 20-year maturity and 10-year grace period	CIDCA/MOFCOM	Collective decision between the Ministry of Foreign Affairs, MOFCOM and CIDCA	Loan forgiveness/write-off
	Concessional Loans (CL) RMB-denominated, typical interest rate of 2–3%, 15–20-year maturity and five-year grace period	Eximbank	Government-to-government agreement	Rescheduling, maturity extension
	Export Buyer's Credits; Preferential Export Buyer's Credits (PEBC) USD-denominated, loan terms vary. PEBCS have a slightly subsidised interest rate, with maturity typically 15 years	Eximbank	Government-to-government agreement	Rescheduling, maturity extension, haircuts to interest rate in rare cases
Other official loans	Medium- and long-term project loans USD- or EUR- denominated, floating rate set to the London Interbank Offered Rate (LIBOR) at typical rate of 4.5–6%, varying maturity and grace periods	CDB	Internal to CDB, may be subject to political pressure	Rescheduling, rare cases of maturity extension
Commercial loans	Medium- and long-term project loans USD- or EUR- denominated, floating rate set to LIBOR at typical rate of 4.5–6%, varying maturity and grace periods	ICBC, Bank of China, China Construction Bank, Agricultural Bank of China	Internal to bank	Rare cases of rescheduling (ICBC in Angola)

Note: Refer to Acronyms list for expansions.

Source: Rudyak and Chen (2021)

3.4.4 China's approach to the Common Framework

Uptake of the CF has been slow. The transaction costs for coordinating creditors under the CF lies primarily with borrowing governments, and many are also deterred from participation in the CF for fear of risking their access to private capital markets. These structural constraints mean that borrowing governments are not incentivised to participate unless they are 'truly desperate', in conjunction with an International Monetary Fund (IMF) programme, or operating under extreme

short-term horizons, e.g. in the case of Zambia (Key Informant Interview, 12 March 2021). The CF is therefore unlikely to have a wide-scale impact. Instead, **the projected expansion of IMF Special Drawing Rights, an instrument which China has strongly supported, will help increase liquidity to developing countries.** This may also reduce the necessity and salience of the CF, and ease pressure on countries to pursue costly debt restructuring.

The CF is not a game changer for China's approach to debt restructuring. While both the CF and the DSSI are notable as the first major

multilateral initiatives for debt restructuring that China has joined, China's participation in the CF is still limited. China's approach can be described as 'multi-bilateralism'. In 2020, China expressed support for the multilateral DSSI, but emphasised maintaining communication with affected countries through bilateral channels, and this practice is likely to continue with the CF. In November 2020, the MOF announced that it would communicate and coordinate with other parties on the issue of debt vulnerability through the G20 channels and handle debt issues on a case-by-case basis.

The incentives to participate in a broader programme of restructuring within the CF are still unclear, with bilateral negotiations still seen as a more precise instrument. Chinese leaders and creditors are mindful of the need to maintain a positive global public image, which has encouraged a collaborative approach in working with borrowers. However, this must be balanced with maintaining fiscal responsibility, and it would be imprudent to impose financial losses on commercial banks if it can be avoided. As the most government-adjacent creditor, Eximbank is the only bank where the CF formally applies, while CDB and commercial banks have been encouraged by the Chinese government to participate on a 'voluntary' basis. Outside Eximbank, only CDB has conducted debt restructuring, with two DSSI signatories (Angola and Zambia) on a discretionary basis. For the big four commercial

banks, dynamics of inter-bank competition and regulation from the CBIRC and PBoC mean that, given the potential impacts for bank balance sheets, **we are unlikely to see any voluntary participation from commercial banks.**

China remains sceptical and critical of the lack of World Bank participation in the CF.

The CF and debt suspension initiatives are seen to be an incomplete solution that will not lead to additional financing, which will be necessary for economic recovery in developing countries (Key Informant Interview, 11 March 2021). **However, the involvement of the IMF is likely to have a critical function.** China views the IMF as a trusted arbiter and platform in crowding in creditors and allocating costs of debt relief; past precedent also shows that China's debt relief actions have often coincided with or have taken place as part of a broader IMF programme (Bon and Cheng, 2020).

China's overseas official lending is likely to continue at a slower pace in future.

Broader trends in the last five years have seen a deleveraging in the Chinese economy pushed by the PBoC after 2017. Both Eximbank and CDB have seen major audits from 2017–2019 (Key Informant Interviews, 10 March 2021), which have accounted for the huge decline in overseas lending from these institutions (Boston University Global Development Policy Center, n.d.). However, commercial banks are increasingly encouraged to participate in the BRI.

4 Special focus: Chinese outbound investment in rare-earth elements

Over the past several decades, the rapid growth of China's manufacturing sector has turned the country into far and away the world's largest importer of raw metals and minerals. Per World Bank data, the country's \$132 billion of minerals imports in 2017 equalled just under half of all global minerals imports worldwide, up from less than 5% in the early 1990s.²¹ These imports consisted primarily of ores containing metals with long-established functions in manufacturing like iron, copper, aluminium and manganese.

The growth of high-tech industries with specialised manufacturing needs has increased global attention to a group of metals known as REEs. This group consists of 17 elements that, though relatively abundant within the Earth's crust, are rarely found in economically minable concentrations. REE extraction requires extensive (and often environmentally damaging) processing to isolate them from the minerals in which they naturally occur. They have a wide range of applications in high-tech manufacturing, from glass polishing and advanced ceramics to battery manufacturing and consumer electronics (Castilloux, 2019). The most valuable of these are a subset of 'magnet REEs' – including dysprosium, neodymium, terbium and praseodymium – used in permanent magnets for batteries and other electronics manufacturing. These elements

comprise around 35% of production by volume but account for 91% of all REE economic value, according to sector consultancy Adamas Intelligence (Castilloux, 2019). Readily available public data on national REE production and reserves (see Table 6) is reported only in aggregated form; actual investment trends for each country reflect the economic value of the specific REEs available in the country's deposits, a feature that is not captured by aggregate REE totals.

China plays a dominant role within the REE market, a small but significant component in advanced manufacturing value chains. At around \$8 billion in 2018, the global REE market accounts for a fairly small share of the global metals and minerals trade (Summers, 2019). But its importance for high-tech manufacturing – and especially in low-carbon industries like electric vehicles and renewable energy – makes REE extraction and processing a strategically significant sector in advanced manufacturing value chains. Within this sector, moreover, China plays a dominant role. It has the world's largest share of REE reserves, at 36.7%, and its national production quota of 140,000 tons equalled around 58% of global production in 2020 as estimated by the US Geological Survey, well above the next two largest producers in the US (15.8%) and Myanmar (12.5%) (Gambogi, 2021). It

21 Data is taken from the World Integrated Trade Solution database. Chinese mineral imports are first reported in this database in 1992. The Minerals category covers all products under HS codes 25 (salt; sulphur; earths, stone; plastering materials, lime and cement) and 26 (ores, slag and ash), including key metal ores like copper, nickel, aluminium and zinc (https://wits.worldbank.org/CountryProfile/en/Country/BY-COUNTRY/StartYear/1988/EndYear/2017/TradeFlow/Import/Indicator/MPRT-TRD-VL/Partner/WLD/Product/25-26_Minerals#).

also produces the majority of the world's 'heavy' REEs, a subset of more scarce REEs that comprise around 10% of global production volume and include several magnet REEs (Van Gosen et al., 2014; Castilloux, 2019). Further downstream, China is home to at least 85% of the world's processing capacity for REE ores, meaning that significant volumes of REEs extracted outside

China still flow into China for processing (Reuters, 2019). The 14th FTP outline reaffirms China's long-term interest in REE manufacturing inputs, listing 'high-end rare-earth functional materials' within 'high-end new materials', one of seven manufacturing sector areas in which policy-makers seek to 'raise core competitiveness' (Xinhua, 2021d).

Table 6 National rare-earth-oxide production and reserves in 2020

Country	Production	Reserves	Significant Chinese investment in REE extraction projects (actively producing or under development)
China	140,000	44,000,000	*
United states	38,000	1,500,000	*
Myanmar	30,000	NA	*
Australia	17,000	4,100,000	*
Madagascar	8,000	NA	*
India	3,000	6,900,000	
Russia	2,700	2,700	
Thailand	2,000	NA	
Viet Nam	1,000	22,000,000	
Brazil	1,000	21,000,000	
Burundi	500	NA	
Greenland	–	1,500,000	*
World total	240,000	120,000,000	

Notes: Data reported in metric tons of rare-earth-oxide equivalent content. Production and reserves are taken from the United States Geological Survey 2021. Countries flagged as having Chinese investment are those identified by ODI review as having significant Chinese investment in mine-based extraction projects; recycling projects are not considered.

Source: Gambogi (2021)

China's dominance in the global REE market reflects decades of purposeful industrial policy as well as a high tolerance for the intensive water and soil pollution associated with REE extraction. China's entry into the REE sector began with upstream extraction in the 1970s and 1980s, before moving into downstream processing

from the 2000s (Shen et al., 2020). The growth of China's extractive industry was accompanied by severe water and soil pollution that has in some regions muddled the overall benefits of the industry for extraction hubs. Official clean-up cost estimates for southern Jiangxi Province reached up to \$5.5 billion; one local official told

Yale Environment 360 that ‘because the prices of rare earths have been so low for a long period of time, the profits from selling these resources are nothing compared to the amount needed to repair the damage’. Other officials expressed concerns that remediation could take 50–100 years and called for remediation burden-sharing from manufacturers that rely upon REEs as an input (Standaert, 2019). Studies of Bayan Obo, a major production hub in Northern China, have identified high levels of radioactive thorium and other pollutants in tailings waste ponds as well as an elevated prevalence of cancers, respiratory illnesses and other afflictions in surrounding villages; one village near the tailings pond, for instance, saw 61 deaths from brain or lung cancer between 1999 and 2006 (Huang et al., 2016).

More recently, stricter production quotas and environmental standards have encouraged Chinese firms to look abroad for alternative sources of supply. The 13th FYP for Rare Earth Minerals captures this shift in listing ‘strengthening resource and ecological protection, advancing sustainable development’ as its first ‘major task’ for the period. Official priorities under this umbrella included driving out unlicensed production (estimated at 30% of total production in the mid-2000s), ‘strictly enforcing’ soil pollution standards and strengthening supply-chain management of specific strategic REEs (National Development and Reform Commission, 2017; Merriman, 2021). This policy transition, which has unfolded fitfully over the past two decades, has encouraged REE miners and processors to look abroad for new sources of supply to meet rising demand (Shen et al., 2020; Merriman, 2021).²² By

2018, according to Adamas, China had become a net importer of rare earth oxides and oxide equivalents – the output of REE extraction – for at least seven REEs (Adamas Intelligence, 2019a). In July 2020 China raised domestic six-month production quotas, and did so more dramatically in February 2021, to 27% above prior record levels (Zhang and Daly, 2020; Daly, 2021).

Chinese REE investors have been important participants in the global expansion of REE extraction in the past 5–10 years. This expansion partly reflects efforts by advanced industrial economies (in particular, Australia and the United States) to reduce their dependence on Chinese supply (Reuters, 2019; Bagshaw, 2020). But Chinese miners and processors have also been active in the internationalisation of REE extraction by investing in Australian and US producers (Hui, 2021), but also by working to develop a major new production hotspot in Myanmar. An influx of migrants from the REE extraction hub of Jiangxi Province in south-central China has fostered an industry that accounted for up to a third of global production in certain key magnet REEs in 2018, according to Adamas estimates (Adamas Intelligence, 2019b; Roskill, 2019). Tensions regarding the environmental impacts of Chinese REE extraction in Myanmar, as well as Chinese concerns about re-exports of unlicensed domestic production via Myanmar, prompted off-and-on border closures in 2019 that drove major price spikes of valuable magnet REEs (SMM, 2019; Merriman, 2021). Supply disruptions remain a long-term concern given political unrest in Myanmar and the concentration of production around conflict zones in Kachin State near the Chinese

22 These efforts regarding unlicensed production and environmental controls have proved quite challenging, as described in <https://link.springer.com/article/10.1007/s13563-019-00214-2>, and there are also price-control motivations associated with these production quotas – see www.ft.com/content/b13a3c4e-e80b-4a5c-aa6f-0c6cc87df638.

border. After the February 2021 coup, Chinese media reported supply shortages in mid-March (Zhang and Li, 2021). The announcement of record-high domestic production quotas noted above came weeks after the coup.

Outside Myanmar, Chinese REE firms have taken on important roles in controversial proposed REE extraction projects in Greenland and Madagascar. The Australian firm Greenland Minerals Ltd (GME) has engaged with Chinese partners since 2012 on developing the Kuannersuit (Kvanefjeld)²³ mine, a promising site with 11.1 million tons of rare earth oxide reserves and exposure to the four major magnet REEs (Greenland Minerals Ltd., 2020). GME's largest investor is Shenghe Resources, the most active Chinese international investor in the REE sector; Shenghe is a publicly listed SOE with close ties to Chinalco, one of the six state-owned firms that control China's REE production quotas, and is also a minority shareholder in the sole major US producer of REEs.²⁴ The company is heavily involved in providing technical input for the project and signed a non-binding MoU in 2018 with GME for up to 100% offtake rights, though reports from *Arctic Today* suggest Europe is now a more likely destination (Black, 2018; Breum, 2020). In Madagascar, a subsidiary of central SOE China Nonferrous Minerals Corporation (CNMC) signed a non-binding MoU in 2019 with Singapore firm ISR Capital to provide EPC services for developing the Tantalus mine (Ruidao Rare Earth Information, 2019). The agreement involved a

potential acquisition by CNMC of 3,000 tons per year in REE offtake rights from the mine, whose 562,000 tons of rare-earth oxide reserves include three magnet REEs (Reenova Investment Holding Ltd., 2019). Both the Kuannersuit and Tantalus mine projects have attracted significant scrutiny for potential environmental impacts. Kuannersuit's environmental impact assessment was rejected three times before finally meeting authorities' criteria for public review in 2020. Fierce public debate over the project exposed splits within Greenland's ruling coalition that culminated in the victory in April 2021 elections of a left-wing party opposed to the project (Carver, 2017; McGwin, 2020; 2021a; 2021b; Meichtry and Hinshaw, 2021).

As noted above, even as production begins to diversify outside China, China remains, for now, the world's dominant processor of REEs.

Recent projects in developing countries such as the Gakara Rare Earth Project in Burundi – Africa's only active rare-earth mine, currently producing under trial stage – export their output to China (Rainbow Rare Earths, n.d.). China's dominance in this sector is likely to erode in the near term amid efforts by the US and European Union (EU) to expand their own processing capacity and reduce their REE reliance on China, which has tightened export regulations amid rising geopolitical tensions (Tabeta, 2021). In the meantime, though, Shenghe has begun efforts to expand processing assets outside China, including several in South-east Asia. Shenghe acquired a 90% stake in an idle Vietnamese REE processor in 2016, after an

23 The project is known by both names – the former is an indigenous name for the project.

24 Shenghe's controlling shareholder is a unit of the Chinese Geological Survey. Shenghe is one of several investors in Chinalco Sichuan Rare Earths, which receives quota allocations directly from Chinalco. Several senior figures at Chinalco Sichuan Rare Earth sit on Shenghe's Board, as do several Shenghe officials. In 2015, Chinese stock analysts at Southwest Securities reported that Chinalco was 'involved in Shenghe's production, operation, and strategic decision-making' (Shenghe Resources Holding Co., Ltd, 2019; ArgusMedia, 2020; Hui, 2021); https://aiqicha.baidu.com/company_detail_45819919061116; https://pdf.dfcfw.com/pdf/H3_AP201501160008150418_1.pdf?1421861874000.pdf.

aborted acquisition of a Vietnamese producer/processor in 2014, and is working to formally acquire a Chinese processing line developer in Thailand in which its CEO is a leading investor (SMM, 2014; Li, 2016; China Rare Earth Industry Association, 2019; Shenghe Resources Holding Co., Ltd, 2019; Shenghe Resources, 2020). Shenhe's planned joint venture with Australian REE company RareX, announced in February, will focus on sourcing REEs outside China but may also involve developing international refinery assets (RareX Limited, 2021).

As China continues to internationalise its REE sector, developing countries face difficult decisions about balancing the economic

opportunities of REE mining and the environmental risks that accompany it. On the one hand, several decades of experience in REE extraction make Chinese firms a natural source of expertise for developing countries looking to capitalise on stocks of these very valuable minerals. On the other hand, the remediation bills faced by REE production hubs like Jiangxi Province underscore the need for careful environmental impact assessments and clear safeguards as part of new REE projects in developing countries, whether or not they are sponsored by Chinese investors. A cautious approach is crucial for ensuring that new REE projects do not bring long-term pollution costs that overwhelm the economic returns of extraction.

5 Special focus: China's investment in digital infrastructure

Access to digital infrastructure is increasingly a necessity in economic development, and with many developing countries still struggling to provide universal access, China's digital BRI is proving attractive notwithstanding some emerging risks.²⁵ Despite the growing importance

of the digital economy, over 4 billion people, mostly in developing countries, have no internet access (Strusani and Hounghonon, 2020). By 2035 5G-enabled connectivity will help create \$3.6 trillion of economic output and 22.3 million jobs, adding \$13.2 trillion in economic value (World Economic Forum, 2020). In agriculture, digital transformation offers opportunities to improve marketing, logistics and quality control of goods, helping farmers reach new export markets.

Digitalisation also offers opportunities to improve health services through transforming administrative reporting systems, telemedicine, electronic medical records and patient portals. Other opportunities exist in building smart cities and e-governance, among many others. Digital services such as FinTech have also lowered the costs of connecting women and low-income groups to the formal financial system.

Yet improving digital infrastructure access will be costly. In Africa alone, providing universal internet access will cost around \$100 billion, with around 80% of that investment going towards laying

and maintaining broadband networks and 20% towards skills improvement (ITU and UNESCO, 2019). With Chinese companies involved in various aspects of digital infrastructure – from introducing broadband networks to integrating blockchain in agriculture supply chains to building smart cities – opportunities exist for partner countries to close infrastructure gaps and access cutting-edge technologies. Understanding how Chinese activities can align with national development priorities and country needs, as well as assessing any associated risks, will be crucial to maximising these opportunities.

China has prioritised innovation-driven development and digital infrastructure construction for several years. The importance of building digital infrastructure was recognised as early as 2006 with the release of the National Informatisation Development Strategy 2006–2020²⁶ by the General Office of the Central Committee of the Communist Party of China and the State Council. For 2015–2020, the 13th FYP set targets for expanding household broadband coverage from 40% to 70% (National Development and Reform Commission, 2016). Recent data shows that internet services have become more accessible, and China was set to reach the targets set in the 13th FYP (Figure 16). Beyond internet access, China also published a host of industrial and sectoral policies to fulfil the

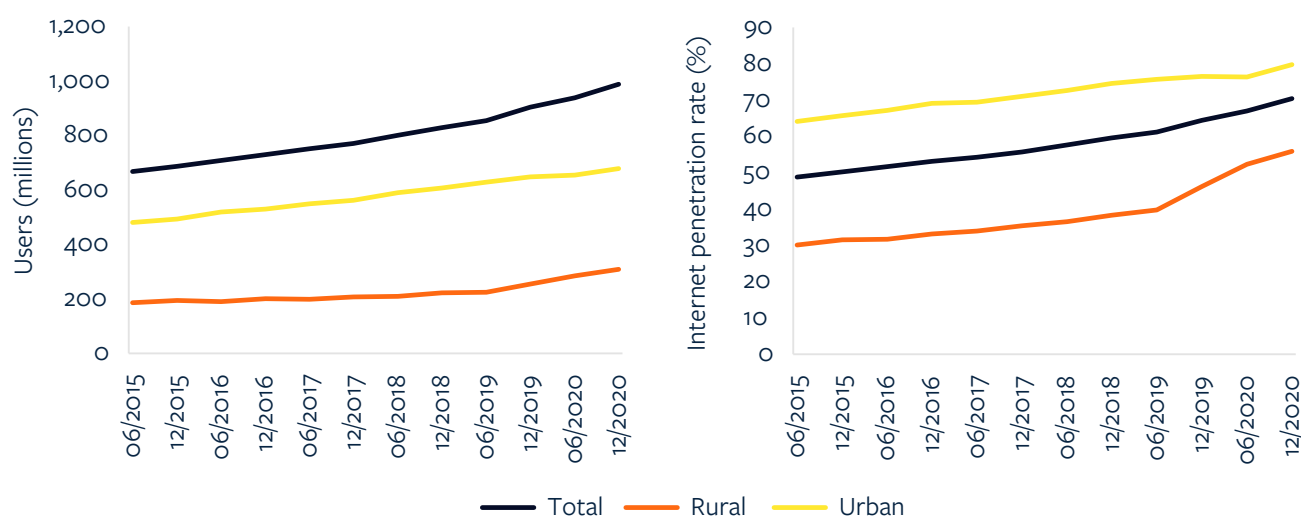
²⁵ We use a broad definition of 'digital infrastructure' to include network equipment, cables, 5G, data and research centres, large e-commerce, mobile payment deals and smart-city projects.

²⁶ The strategy recognised information technology (IT) as a force for development with impacts on the global division of industrial labour that will 'trigger profound changes in today's world, shaping a new pattern of political, economic, social, cultural and military development' (Government of China, 2006). The strategy set targets for the integration of IT across sectors and areas, from e-governance to the service sector.

13th FYP. The ‘Made in China 2025’ industrial policy aimed to address gaps in the country’s innovation capacity and upgrade the manufacturing sector so that the country can consolidate its major manufacturing country status and establish

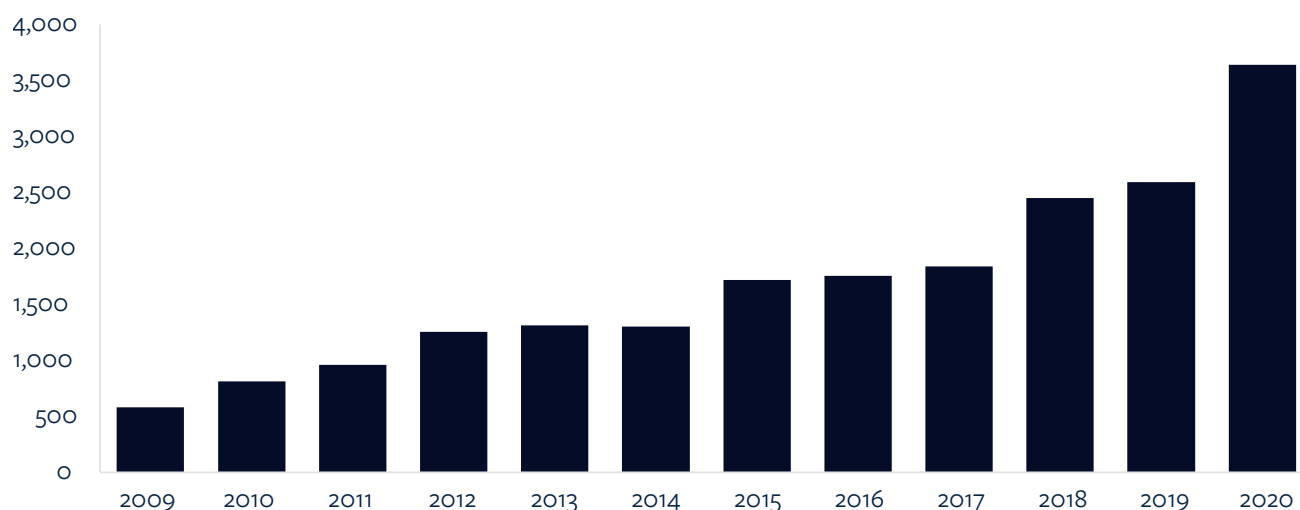
world-leading technology and industrial sectors (Government of China, 2015).²⁷ A recent jump in certified patent applications speaks to the push for greater innovation (see Figure 17).

Figure 16 Internet service users and penetration rate



Source: China Internet Network Information Center, Half-Yearly Statistics, CEIC

Figure 17 Certified patent applications



Source: National Bureau of Statistics of China, CEIC

²⁷ For a list of relevant sectoral plans, see [www.uscc.gov/sites/default/files/Research/The%2013th%20Five-Year%20Plan_Final_2.14.17_Updated%20\(002\).pdf](http://www.uscc.gov/sites/default/files/Research/The%2013th%20Five-Year%20Plan_Final_2.14.17_Updated%20(002).pdf).

Digitalisation is a prominent theme in the 14th FYP. The Plan sets out a multisectoral and comprehensive approach to mainstreaming digital technologies at individual household and community levels in the delivery of government, health and education services and across economic sectors. Cloud computing, big data, industrial internet, blockchain, AI and virtual and augmented reality are identified as key industries of the digital economy. In the energy sector, digital technologies will be used to identify opportunities to improve energy efficiency, regulate energy demand, and upgrade coal mines and oil and gas fields. In agriculture, technology will be applied to improve performance across crop growth stages. At the community level, digital technologies will help with introducing smart early-warning systems, emergency rescue and elderly care. To support digitalisation, China will upgrade the existing network and increase 5G user penetration rates to 56%. The sharing and platform economy will be promoted, and companies will be encouraged to open up e-commerce and data sharing (Xinhua, 2021d).

The 14th FYP reiterates that China will sustain efforts ‘to promote the construction of a community with a shared future in cyberspace’ which entails advancing the formulation of international rules and standards for data security, digital currency and taxes, under the United Nations framework. China will seek to establish ‘a multilateral, democratic, and transparent global Internet governance system’ and a ‘fairer and reasonable network infrastructure and resource governance mechanism’. Continued lobbying of developing countries for support for the recently proposed Global Initiative on Data Security, and activism at the International Telecommunication Union (ITU)

and other relevant international bodies, will likely be central to these efforts. This will create further unease among countries already concerned about China’s attempts to shape global data governance and its implications for privacy and human rights. China will also continue providing developing countries with technology, equipment and services ‘so that all countries can share the dividends of the digital age’.

While many countries, including China, are now focusing on upgrading their networks to 5G, China will invest in a ‘forward-looking layout of 6G network technology reserves’. In November 2019 China announced that it would invest in 6G research and development (Guo, 2019), though rising geopolitical tensions will likely add urgency to developing next-generation technologies. In May 2020, ZTE and China Unicom signed a strategic partnership to collaborate on 6G innovation and standards (ZTE Corporation, 2020). Industry experts anticipate stronger competition for 6G technology, with Japan, European countries, South Korea and the United States countries all starting research into 6G (Zhao et al., 2020). This geopolitical competition is likely to spill over to developing countries as leading technology companies compete to launch the next generation of technologies.

Despite economic challenges associated with the Covid-19 pandemic, the Chinese government has continued to prioritise cooperation on digital infrastructure in its bilateral and regional engagements, and Chinese companies have cooperated on digital infrastructure projects in partner countries (Tanjangco et al., 2020; 2021). Mapping the scale of China’s involvement in digital infrastructure is, however, challenging. As shown in Economic Pulse

2, between January and November 2020 Chinese companies announced 17 new digital projects in 13 countries and one cross-border regional initiative for a total value of around \$1.4 million.²⁸

Both SOEs like CRBC and private companies such as Huawei are playing a role in digital projects overseas. These are geographically diverse and in countries with different income levels. A new project announcement by Huawei in France indicates that security concerns about Huawei raised by the US in relation to the company are not necessarily shared by other developed countries, and that a common security policy towards Chinese investment in digital infrastructure is unlikely. Projects have also been announced in Thailand, where Huawei will build a third data centre to develop a regional hub for digital technology and jointly build a first optical transport network, to serve multinationals and government agencies, with CAT Telecom Public Company. Chinese companies have reportedly exported smart city technologies to over 100 countries in 398 instances (Atha et al., 2020).

As noted in Economic Pulse 2, it will be important to monitor the impact of the RCEP,

a free trade agreement signed between China and ASEAN in November 2020 that contains provisions for e-commerce, to see whether policy announcements will translate into investments. If so, Huawei will likely lead investment and cooperation in research and development (the company established a presence in the region in the late 1990s). In Cambodia, China's key strategic ally in ASEAN, the company is

leading the introduction of 5G and won the bid for construction of a Malaysia–Cambodia–Thailand undersea cable system, worth around \$70 million (Xinhua, 2015). As of 2016, Huawei communication networks covered around 70% of Cambodian consumers and around 1,000 people were being trained in information and communication technologies (ICT) (Xinhua, 2016). Huawei is also negotiating the introduction of 5G with Malaysia and the Philippines. Other areas of cooperation between China and ASEAN include big data and smart cities.

Growing concerns about technology dependence are prompting some wealthier developed countries to reassess engagement with China in digital infrastructure construction, but poorer developing countries appear reluctant to follow suit.

In 2019 the US Department of Commerce's Bureau of Industry and Security added Huawei to the Entity List that, for all intents and purposes, barred the company from the country's communications networks. In an effort to limit Huawei's use of US technologies, the Bureau also restricted exports of US technologies to the company (US Department of Commerce, 2020).²⁹ The company was also banned from bidding on government contracts and/or building 5G networks in other developed countries including Australia, Japan, New Zealand and the UK. Developing countries, however, are resisting the push to exclude the company from their networks. In response to US pressure, the Malaysian government has stated that its security standards will be applied in selecting 5G partners and has not explicitly ruled out using Huawei or

²⁸ The total value of projects is a lower-bound estimate as some did not report monetary values. Most projects were also flagged as research and development endeavours rather than actual infrastructure investments, with the latter often costing more.

²⁹ Huawei, Hangzhou Hikvision Digital Technology and China Mobile Communications Group were among those sanctioned by OFAC on account of alleged links to the Chinese military (US Department of the Treasury, 2020)

other Chinese companies (Sipalan and Das, 2020). Despite criticism of Huawei, as well as pressure and offers of alternative financing for 5G from the US, Brazil did not exclude Huawei from its 5G auctions (Reuters, 2021; Boadle and Shalal, 2020). Early indications suggest that the Biden administration will maintain the prohibition on sales to Huawei and other Chinese companies, but it is still unclear whether it will take any steps, such as offering financial incentives to its allies, to discourage the uptake of Chinese digital infrastructure.

Despite having no formal ban on Huawei, India will reportedly move to phase out Huawei equipment from its 5G networks following the escalation of border clashes with China (Kazmin and Findlay, 2020). Kyrgyzstan scrapped plans for two smart cities that were to be built by Huawei. Although technical disagreements were cited, it is unclear if security concerns played a role in the decision. Huawei, along with Nokia and Ericsson, are among the companies contracted to build 5G networks, equipment globally with Samsung and Qualcomm also looking to gain greater market share (Reuters, 2020). In terms of revenue share of the telecoms market, Huawei leads with 28% while ZTE had an 8% share (Pongrantz, 2020). In 2020, the two Chinese companies also reportedly accounted for 50–60% of wireless equipment sales in Africa and the Middle East (Woo, 2020). It remains to be seen whether more countries will exclude Chinese companies from their 5G networks.

China's growing participation in international regulatory and standard-setting bodies such as ITU, which oversees the development of standards and regulations for information and communication technology (ICT), is a source of growing concern on similar grounds.

ITU Secretary Zhao Houlin has made favourable comments regarding the BRI and defended Huawei against US allegations regarding security concerns. Chinese companies are well-represented at ITU, with Huawei, Alibaba and ZTE all members.³⁰ Huawei put forward 2,000 standard proposals to ITU study groups, which may become official standards to be accepted across Africa, the Middle East and Asia, where countries often lack the capacity to set their own standards. Concerns about the proposed standards have been raised on human rights, consumer protection and data privacy grounds (Gross et al., 2019).

While many governments would like to introduce tighter internet regulations, a proposal for a new internet intellectual property (IP), put forward by Huawei, China Mobile, China Unicom and China's Ministry of Industry and Information Technology, caused significant concern on the grounds that it would potentially radically alter the nature of the internet, placing greater control in the hands of national governments, including ones that may limit civil liberties (Gross and Murgia, 2020). Huawei, along with ZTE and China Unicom, are also represented at the ITU Telecommunication Development Sector, which provides technical assistance on the development of ICT to developing countries. Chinese companies, both private and state-owned, are thus well positioned to deliver and shape ICT standards in the future.

It is unclear to what extent concerns about security and data privacy are shared by developing countries, and if so whether this will deter them from cooperating with China, particularly in the absence of competitive alternatives. Even prior to introducing the 5G network, Huawei had expanded its market share in developing countries thanks to loans to

30 For a full list of ITU sector members, see www.itu.int/online/mm/scripts/genselh1.

governments and telecommunications companies from China's Development Bank, Exim Bank and the Bank of China for upgrading telecoms networks (Hart and Link, 2020). In terms of 5G, competitors such as Samsung are reportedly unable to match Huawei in some of the more price-sensitive markets, likely including many

developing countries (White, 2020). Nevertheless, Nokia and Ericsson are entering the 5G market in Africa, with Ericsson selected as a 5G network modernisation provider in South Africa and Nokia in Togo, the latter set to be the first 5G network in West Africa (Ericsson, 2019; Nokia, 2020).

6 What to watch

This chapter highlights emerging themes and trends or future developments that are worth noting, flagging both short-term (during 2021) and long-term (beyond 2021) trends.

6.1 Short-term trends (in 2021)

- **The outlook for trade with the BRI.** Although the ASEAN region was the quickest to recover in terms of trade with China, China's imports from other regions, such as Europe, Latin America and the Caribbean and South Asia, finally saw growth in the last quarter of 2020. China's imports, from BRI countries and in the aggregate, have been slower to recover in general, but as the domestic economy bounces back and household consumption regains strength (contributing more to GDP growth with each succeeding quarter in 2020), domestic demand should prop up import growth from partner countries. Figures in January–February 2021 are already promising. China's exports may face headwinds as demand for pandemic-related equipment potentially slows in 2021, and as firms face competition as other countries start to recover.
- **Pent-up tourism demand.** Tourism was one of the sectors hardest hit by the pandemic due to travel restrictions and measures to contain the virus. There are signs that there is some pent-up demand ready to be released as soon as these restrictions are removed, especially as vaccines become more readily available. The introduction of 'vaccine passports' might provide the impetus needed to start normalising international travel. Should travel become easier, developing countries that rely on services exports to China, mainly tourism demand from China, can expect a rebound. However, this may not reach pre-

pandemic levels just yet, as the resurgence of demand will largely be a function of successful vaccine distribution and virus containment. Clarification will also be needed regarding privacy concerns and the treatment of different vaccines in any 'vaccine passport'.

- **Implementation of the Common Framework and its implications.** At the time of writing, Chad and Ethiopia and Zambia are looking to restructure debt under the Common Framework. Research from Gelpern et al. (2021) on Chinese loan contracts shows clauses that are more akin to commercial than official creditors, but there is as yet no evidence or precedent to show whether these legal factors will meaningfully affect debt renegotiations. The upcoming FOCAC forum in Senegal later in 2021 may be an event to watch as previous FOCAC forums have coincided with debt-restructuring agreements (e.g. Ethiopia). This may present a political opportunity for leaders to engage in bilateral discussions about debt. There are some risks involved when joining the CF, including the risk of a credit downgrade. Credit-rating agency Fitch downgraded Ethiopia's Long-Term Foreign-Currency Issuer Default Rating to 'CCC' from 'B', while S&P downgraded Ethiopia to 'B-' from 'B'. Both firms cite the move to join the CF as reasons for an increased chance of default. Private-sector creditors would be at risk if debt restructuring affects obligations to the private sector (FitchRatings, 2021; Singh, 2021). This could have implications for a country's access to private creditors in the future.
- **There is likely to be less stimulus in 2021 compared to 2020, though fiscal policy will still be relatively supportive.** Unlike in 2020, there will be no issuance of special treasury bonds, which was an additional source of

financing for the central government. The government work report of 2021 announced that the government's fiscal deficit target will be 3.2%, lower than the 3.6% in 2020. However, this is still a notch higher than the long-standing practice of posting a 3% ceiling on the budget deficit (Huang and Lardy, 2020), giving the government more leeway to support the economy. Moreover, while the special purpose bond quota was reduced from 3.75 trillion Chinese yuan (RMB) to RMB 3.65 trillion, it is only slightly lower than 2020 and significantly higher than the RMB 2.15 trillion of 2019. The amount local governments are thus permitted to raise is potentially still expansionary.

This could have implications for the government's bid for more sustainable fiscal policy and sources of growth. In general, special bonds are used to encourage local governments to spend on infrastructure or other productive projects that would allow repayment. However, there are concerns that these funds were not used on productive ventures in 2020 as local governments used them instead to counter the economic fallout of the pandemic. Having a relatively high quota increases the risk that these funds are not put to productive use. In addition, since these bonds are most often used for infrastructure, it puts into question the kind of growth dynamics China might adopt in 2021, especially as it hopes for a more consumption-driven growth. Should growth continue to be subdued, it gives policy-makers the option to rely on old sources of growth such as investment. This is important as the **structure of growth China relies on will affect the kinds of spillovers other countries can expect.** For example, a more consumption-driven growth path and developing consumer markets will benefit countries that have China as an end-market. Should investments in infrastructure and more traditional drivers of

growth dominate, commodity exporters and others which provide the raw materials for infrastructure investment activities will benefit more. This would also feed into the energy demands of the economy and how these are distributed among households and firms.

6.2 Long-term trends (beyond 2021)

• Evolution of Chinese domestic demand.

Developing countries would benefit from understanding changes in Chinese domestic demand. This would affect product exporters that see China as a destination market, commodity exporters and importers where price fluctuations would be swayed by demand from one of the world's largest consumer markets, and/or investors both in and outside China where a firm's supply-side decisions could affect supply chains around the world. Developments in the domestic economy are also likely to inform engagement abroad, particularly as the model of dual circulation focuses on bolstering the domestic economy by leveraging relations with international markets. To illustrate, announcements that China is planning to go carbon neutral could mean greater demand for electronic vehicles, energy-efficient appliances or products to reduce a household or firm's carbon footprint. Suppliers in other countries can leverage this information.

Beyond serving the domestic consumer market, countries should take note of the industries China is hoping to expand. For example, announcements of import tariff cuts on products for the aviation industry (CII, 2021) could signal support for that sector and a desire to expand strategically. Countries can seize the opportunity to feed into these new value chains or adapt their development strategies to complement these changes.

In sum, developing economies with a more advanced industrial sector can take advantage of shifts in consumption and investment trends in China, be it through changing tastes to meet new goods and services demands arising from the new ‘work from home’ economy, updates to industrial policy, the shift to more online retail consumption or even changes relating to technology and the sharing economy.

- **Partnerships with Africa.** China’s inaugural partnership with Africa through the launch of the CMFTA marks a symbolic step towards participation in Africa’s trade development. China may continue to engage with the continent, as this would be consistent with regional policy precedents where the first agreement with one country in a given region sets off a trend of economic agreements with countries in the same group (New Zealand in 2008 as the first Organisation for Economic Co-operation and Development (OECD) country, and Iceland in 2013 as the first European FTA with China).
- **Continued expansion of international REE investments by Chinese firms, particularly in extraction.** Efforts by the US and the EU to reduce their reliance on China for REE have the potential to intensify global competition for access to these resources. At the same time, Beijing knows that its innovation-driven growth requires secure energy and mineral resources, including rare earths and other technological critical minerals. Expect to see even more emphasis on building up ‘strategic mineral resource reserves’ and expanding exploration, as well as a commitment to taking part in ‘global mineral resource governance’. As global demand grows, lower-income countries and territories with REE resources, such as Burundi, Greenland and Madagascar, must weigh the short-term economic opportunities of REE extraction with mitigating its environmental harm.
- **Moving up the value chain for Chinese engineering contractors.** New guidance from the Ministry of Commerce emphasises greater competitiveness of Chinese contractors in design consulting, and a new phase in China’s ‘going out’ (MOFCOM, 2021g). Given increased competition in international engineering markets and bottlenecks in the traditional model of foreign contracts, there is an impetus to improve and upgrade the standards of foreign contracted projects and to strengthen guidance and assessment of SOEs. This reflects a wider recognition of the need to better manage risk and improve assessments of BRI and other overseas projects. It also reflects a desire to upgrade the technical capacity and expertise of Chinese contractors, to move up the value chain and to compete in higher-value markets for design and consulting – sectors where European firms have traditionally been more dominant. In the next few years, key markets for PPPs will (continue to) be the Middle East, Latin America and the Caribbean and Europe. PPPs may increase in Asia, but will face a harder time in African markets.
- **Potential of trade in services.** Improvements in technology have made it easier to trade services across borders – technology has reduced the cost of trade in services (WTO, 2019). Measures to facilitate digital services trade (e-signatures, online payments) increased in 2020 as companies responded to the pandemic (OECD, 2021). As China seeks to restructure its economy towards one that is services- and consumption-based, there is the potential to export and import more services. However, services trade can face several non-tariff barriers that limit such opportunities (i.e. regulations and licensing restrictions, standards, digital infrastructure) (OECD, 2021).
- **Under the 14th FYP, Beijing also sees self-sufficiency in technology as a national**

security priority if its innovation-driven

growth ambitions are to be realised. For the first time, a dedicated section on science and technology appears in the 14th FYP. Clearly, Beijing sees facilitating the growth of emerging industries such as semiconductors, 5G, AI, cloud computing and blockchain and biotech as key to achieving both domestic and geopolitical security objectives, so expect to see further increases in **investments in digital infrastructure.** Rising geopolitical tensions and increasing concerns and reassessments by some developed countries regarding their own use of Chinese digital infrastructure are to influence how developing countries decide to engage with China over similar matters. However, unlike many developed countries, the need to establish much-needed digital infrastructure may outweigh concerns about security, data privacy and other political considerations. With the pandemic accelerating the adoption of technology and its incorporation in the day-to-day functioning of the economy (e.g. contact tracing, digital payments,

e-commerce), the decision to engage with China on digital infrastructure may become an economic one. This does not eliminate the risks, including privacy concerns and dependence on one supplier.

- **Refocus on food security.** There is growing concern in China about food security. In recent years climate change has affected agricultural production, including via the increasing incidence of floods and droughts. Swine fever and pestilence have also affected prices. This, combined with trade tensions with major agricultural suppliers, such as Australia and the United States, has increased uncertainty of food and animal feed supply. More recently, the Covid-19 pandemic has dramatically interrupted direct and indirect agricultural supply chains worldwide, in China resulting in rising food prices, food supply insecurity and dependence on external food sources. There is a potential desire in Beijing to foster enhanced food security through new and deeper external agricultural partnerships.

References

- Acker, K., Brautigam, D. and Wang, Y.** (2021) *Global Debt Relief Dashboard: tracking Chinese debt relief in the COVID-19 era version 1.0*. China Africa Research Initiative (www.sais-cari.org/debt-relief).
- Adamas Intelligence** (2019a) 'Reuters: China becomes world's biggest importer of rare earths'. Reuters, 13 March (www.reuters.com/article/us-china-rareearths-idUSKBN1QU1RO).
- Adamas Intelligence** (2019b) 'China rare earth imports from Myanmar total 9,217 tonnes in 2019 H1'. Adamas Intelligence, 18 July (<https://web.archive.org/web/20210201035853/https://www.adamasintel.com/china-rare-earth-imports-myanmar-2019h1/>).
- AFP – Agence France-Presse** (2021a) 'China cancels \$28m of DR Congo debt to help virus fight'. The East African, 8 January (www.theeastafrican.co.ke/tea/rest-of-africa/china-cancels-dr-congo-debt-to-help-virus-fight-3250836).
- AFP** (2021b) 'Sri Lanka seeks US\$2.2 billion from China as reserves shrink'. Channel News Asia, 25 February (<https://news.yahoo.com/sri-lanka-seeks-2-2-105100083.html>).
- Areddy, J.T.** (2020) 'China says it has met its deadline of eliminating poverty'. Wall Street Journal, 23 November (www.wsj.com/articles/china-says-it-has-met-its-deadline-of-eliminating-poverty-11606164540).
- Argus Media** (2020) 'China's Sichuan allocates 1H rare earths quotas'. Argus Media, 7 May (www.argusmedia.com/en/news/2103199-chinas-sichuan-allocates-1h-rare-earths-quotas).
- Arnold, T. and Strohecker, K.** (2021) 'Angola gets breathing space from Chinese creditors, says finance minister'. Reuters, 11 January (www.reuters.com/article/us-angola-economy-idUSKBN29G18X).
- Atha, K., Callaghan, J., Chen, J. et al.** (2020) *China's smart cities development*. Research report. US–China Economic and Security Review Commission. (www.uscc.gov/sites/default/files/2020-04/China_Smart_Cities_Development.pdf).
- Bagshaw, E.** (2020) 'Australia's race against China's rare earths weapon'. Sydney Morning Herald, 13 September (www.smh.com.au/world/asia/australia-s-race-against-china-s-rare-earths-weapon-20200825-p55p8s.html).
- Berwick, A.** (2018) 'How ZTE helps Venezuela create China-style social control'. Reuters, 14 November (www.reuters.com/investigates/special-report/venezuela-zte/).
- Black, H.** (2018) 'Shenghe poised for 100% of Kvanefjeld offtake'. MiningNews.net, 21 August (www.miningnews.net/energy-minerals-news/news/1344981/shenghe-poised-for-100-of-kvanefjeld-offtake).
- Boadle, A. and Shalal, A.** (2020) 'U.S. offers Brazil telecoms financing to buy 5G equipment from Huawei rivals'. Reuters, 20 October (www.reuters.com/article/us-usa-brazil-trade/u-s-offers-brazil-telecoms-financing-to-buy-5g-equipment-from-huawei-rivals-idUSKBN2751TA).
- Bon, G. and Cheng, G.** (2020) *China's debt relief actions overseas: patterns, interactions with other creditors and macroeconomic implications*. Working Paper 27. Paris: University of Paris Nanterre.

- Boston University Global Development Policy Center** (n.d.) 'BU: China's overseas development finance'. Online dataset (www.bu.edu/gdp/chinas-overseas-development-finance/).
- Breum, M.** (2020) 'Public hearings on a controversial Greenland mine get underway'. ArcticToday, 18 December (www.arctictoday.com/public-hearings-on-a-controversial-greenland-mine-get-underway/).
- Brown, M.** (2021) 'China's central bank governor outlines green finance priorities'. Lexology, 25 March (www.lexology.com/library/detail.aspx?g=29538399-a5db-443c-83ba-7b33c061093e).
- Bujakera, S.** (2021) 'Democratic Republic of Congo says China has granted pandemic-linked debt relief'. Reuters, 6 January (www.reuters.com/article/uk-congo-china-debt-idUSKBN29B1VK).
- Caixin** (2021) 'China-Central and Eastern Europe Fund invests in the first batch of photovoltaic power plants in Poland for grid-connected power generation'. Caixin, 9 February (www.caixin.com/2021-02-09/101662485.html).
- Carbon Brief** (2021) 'Q&A: what does China's 14th "five year plan" mean for climate change?'. Carbon Brief, 12 March (www.carbonbrief.org/qa-what-does-chinas-14th-five-year-plan-mean-for-climate-change).
- Carstens, A.** (2021) 'Digital currencies and the future of the monetary system'. Hoover Institution policy seminar, Basel, 27 January (www.bis.org/speeches/sp210127.pdf).
- Carver, E.** (2017) 'Another blow to troubled Madagascar rare earth mine'. Mongabay Environmental News, 22 November (<https://news.mongabay.com/2017/11/another-blow-to-troubled-madagascar-rare-earth-mine/>).
- Castilloux, R.** (2019) *Rare earth elements: small market, big necessity*. Adamas Intelligence (www.adamasintel.com/wp-content/uploads/2019/06/Adamas-Intelligence-Rare-Earths-Small-Market-Big-Necessity-Q2-2019.pdf).
- CBIRC – China Banking and Insurance Regulatory Commission** (2021a) 'Notice of the General Office of the China Banking and Insurance Regulatory Commission on further regulating the internet loan business of commercial banks China Banking and Insurance Regulatory Commission'. Beijing: CBIRC (www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=967445&itemId=928&mc_cid=1deb66350a&mc_eid=a5e02b1944).
- CBIRC** (2021b) 'Q&A Record of the Press Conference of the State Council Office of the China Banking Regulatory Commission'. Beijing: CBIRC (www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=968693&itemId=915&generaltype=0&mc_cid=681ea62be2&mc_eid=a5e02b1944).
- Chen, Y., Calabrese, L. and Willitts-King, B.** (2021) 'How China's new white paper defines a decade of development cooperation'. ODI Insight, 20 January (<https://odi.org/en/insights/how-chinas-new-white-paper-defines-a-decade-of-development-cooperation/>).
- China Rare Earth Industry Association** (2019) 'Jiangxi Provincial Development and Reform Commission: Approval of Jiangxi Chenguang Investment Co., Ltd.'s capital increase Xinyuan Rare Earth (Thailand) Co., Ltd. project filing notice' (www.cnmn.com.cn/ShowNews1.aspx?id=412986).
- CHINCA – China International Contractors Association** (2020) *Annual report on China project contracting 2019–2020*. CHINCA, Ministry of Commerce.
- CIDCA – China International Development Cooperation Agency** (2021) 'Li Keqiang attends high-level video dialogue with European entrepreneurs'. CIDCA, 7 February (www.cidca.gov.cn/2021-02/07/c_1211016655.htm).

- CIIE – China International Import Expo** (2021) ‘In 2021, the import tariffs on these goods will be reduced—China International Import Expo’. China International Import Expo, 7 February (www.ciie.org/zbh/cn/19news/dynamics/policies/20210207/25543.html).
- Daily Monitor** (2021) ‘China gives Uganda 300,000 doses of Covid-19 vaccine’. Daily Monitor, 23 February (www.monitor.co.ug/uganda/news/national/china-gives-uganda-300-000-doses-of-covid-19-vaccine--3300994).
- Daly, T.** (2021) ‘China hikes half-year rare earth output quotas to record level’. Reuters, 19 February (www.reuters.com/article/us-china-rareearth-idUSKBN2AJ18O).
- Dreher, A., Fuchs, A., Parks, B. et al.** (2017) *Aid, China, and growth: evidence from a new global development finance dataset*. AidData Working Paper 46. Williamsburg VA: William & Mary’s Global Research Institute (www.aiddata.org/publications/aid-china-and-growth-evidence-from-a-new-global-development-finance-dataset).
- Dreher, A., Fuchs, A., Hodler, R. et al.** (2019) *Is favouritism a threat to Chinese Aid effectiveness? A subnational analysis of Chinese development projects*. AidData Working Paper 83. Williamsburg VA: William & Mary’s Global Research Institute (www.aiddata.org/publications/is-favoritism-a-threat-to-chinese-aid-effectiveness-a-subnational-analysis-of-chinese-development-projects).
- Duan, W., Zhu, S. and Lai, M.** (2020) ‘The impact of COVID-19 on China’s trade and outward FDI and related countermeasures’ *Journal of Chinese Economic and Business Studies* 18(4): 355–364 (<https://doi.org/10.1080/14765284.2020.1855395>).
- Ericsson** (2019) ‘Press release: MTN South Africa selects Ericsson for commercial 5G core and radio’. Ericsson, 14 November (www.ericsson.com/en/press-releases/2019/11/mtn-south-africa-selects-ericsson-for-commercial-5g-core-and-radio).
- FitchRatings** (2021) ‘Common Framework access could lead to sovereign debt default’. Fitch Ratings, 16 February (www.fitchratings.com/research/sovereigns/common-framework-access-could-lead-to-sovereign-debt-default-16-02-2021).
- FMPRC – Ministry of Foreign Affairs of the People’s Republic of China** (2021a) ‘2021 China–CEEC Cooperation Beijing Activity Plan’. Beijing: FMPRC (www.fmprc.gov.cn/web/zyxw/t1853007.shtml).
- FMPRC** (2021b) ‘Wang Yi attends the UN Security Council ministerial open meeting on the New Crown vaccine issue’. FMPRC, 18 February (www.cidca.gov.cn/2021-02/18/c_1211029643.htm).
- Gambogi, J.** (2021) ‘Rare earths – mineral commodity summaries’. Reston VA: US Geological Survey (<https://pubs.usgs.gov/periodicals/mcs2021/mcs2021-rare-earth.pdf>).
- Gelpern, A., Horn, S., Morris, S. et al.** (2021) *How China lends: a rare look into 100 debt contracts with foreign governments*. Washington DC: Center for Global Development (www.cgdev.org/sites/default/files/how-china-lends-rare-look-100-debt-contracts-foreign-governments.pdf).
- General Administration of Customs** (2021) ‘前2个月我国进出口增长32.2%’. People’s Republic of China (www.customs.gov.cn/customs/xwfb34/302425/3564703/index.html).
- Government of China** (2006) ‘中共中央办公厅 国务院办公厅 关于印发《2006—2020年国家 信息化发展战略》的通知’. Government of China (www.gov.cn/gongbao/content/2006/content_315999.htm).
- Government of China** (2015) ‘国务院关于印发《中国制造2025》的通知’. Government of China (www.gov.cn/zhengce/content/2015-05/19/content_9784.htm).

- Government of China** (2021) *Report of the work of the Government. Government of China* ([https://static.europeanchamber.com.cn/upload/medianews/attachments/Government_Report_English\[93\].pdf](https://static.europeanchamber.com.cn/upload/medianews/attachments/Government_Report_English[93].pdf)).
- Greenland Minerals Ltd** (2020) 'Positioning Greenland to be a major international rare earth supplier'. Presentation, 31 July (https://govmin.gl/wp-content/uploads/2020/03/1.8_Greenland-Minerals-John-Mair.pdf).
- Gross, A. and Murgia, M.** (2020) 'China and Huawei propose reinvention of the internet'. Financial Times, 27 March (www.ft.com/content/c78be2cf-a1a1-40b1-8ab7-904d7095e0f2).
- Gross, A., Murgia, M. and Yang, Y.** (2019) 'Chinese tech groups shaping UN facial recognition standards'. Financial Times, 1 December (www.ft.com/content/c3555a3c-0d3e-11ea-b2d6-9bf4d1957a67).
- Guo, M.** (2019) 'China launches research and development of 6G technology'. China Global Television Network, 6 November (<https://news.cgtn.com/news/2019-11-06/China-launches-research-and-development-of-6G-technology-LpdwokAYec/index.html>).
- Hart, M. and Link, J.** (2020) *There is a solution to the Huawei challenge*. Center for American Progress, 14 October (www.americanprogress.org/issues/security/reports/2020/10/14/491476/solution-huawei-challenge/).
- Herbling, D.** (2021) 'China in talks with Kenya for debt relief after Paris Club deal'. Bloomberg, 18 January (www.bloomberg.com/news/articles/2021-01-18/china-in-talks-with-kenya-for-debt-relief-after-paris-club-deal).
- Hillman, J. and McCalpin, M.** (2019) 'Watching Huawei's "Safe Cities"'. Washington DC: CSIS (https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/191030_HillmanMcCalpin_HuaweiSafeCity_layout_v4.pdf).
- Huang, T. and Lardy, N.R.** (2020) 'China's fiscal stimulus is good news, but will it be enough?' Peterson Institute for International Economics, 26 May (www.piie.com/blogs/china-economic-watch/chinas-fiscal-stimulus-good-news-will-it-be-enough).
- Huang, X., Zhang, G., Pan, A. et al.** (2016) 'Protecting the environment and public health from rare earth mining' Future 4 (<https://doi.org/10.1002/2016EF000424>).
- Hui, M.** (2021) 'A Chinese rare earths giant is building international alliances worldwide'. Quartz, 19 February (<https://qz.com/1971108/chinese-rare-earths-giant-shenghe-is-building-global-alliances/>).
- Isenge, B.** (2021) 'Signature du protocole d'accord de don entre le Gouvernement de la République du Burundi et le Gouvernement de la République Populaire de Chine relatif à l'exemption partielle de paiement de dettes.' MFBPE, 26 January. (<http://finances.gov.bi/index.php/2021/01/26/signature-du-protocole-daccord-de-don-entre-le-gouvernement-de-la-republique-du-burundi-et-le-gouvernement-de-la-republique-populaire-de-chine-relatif-a-lexemption-partielle-de-paiem/>).
- ITU UNESCO – International Telecommunication Union and United Nations Educational, Scientific and Cultural Organization** (2019) *Connecting Africa through broadband: a strategy for doubling connectivity by 2021 and reaching universal access by 2030*. ITU and UNESCO: Broadband Commission for Sustainable Development (www.broadbandcommission.org/Documents/working-groups/DigitalMoonshotforAfrica_Report.pdf).

- Jiang, X.** (2021) 'Special bonds to augment capital needs of small, medium-sized banks'. China Daily, 13 January (http://english.www.gov.cn/news/topnews/202101/13/content_WS5ffe45bdc6dof72576943bfc.html).
- Karunatilake, W. and Pal, A.** (2021) 'China approves \$1.5 billion currency swap with Sri Lanka'. Reuters, 10 March (www.reuters.com/article/us-sri-lanka-economy-china-idUSKBN2B21UL).
- Kazmin, A. and Findlay, S.** (2020) 'India moves to cut Huawei gear from telecoms network'. Financial Times, 24 August (www.ft.com/content/55642551-f6e8-4f9d-b5ba-a12d2fc26ef9).
- Keane, J., Cao, Y., Tanjangco, B. et al.** (forthcoming) *Rhetoric or reality – can China drive a green recovery in developing countries? Barriers and opportunities*. ODI report. London: ODI.
- Kuteesa, H.** (2021) 'China cancels \$6 million debt to Rwanda, offers extra grants'. The New Times, 19 February (www.newtimes.co.rw/news/china-cancels-6-million-debt-rwanda-offers-extra-grants).
- Lau, S.** (2021) 'China's Eastern Europe strategy gets the cold shoulder'. Politico, 9 February (www.politico.eu/article/china-xi-jinping-eastern-europe-trade-agriculture-strategy-gets-the-cold-shoulder/).
- Li, X.** (2016) 'Shenghe Resources cross-border acquisition of 90% equity in Vietnam Rare Earth Co., Ltd'. Securities Times, 30 June (<https://finance.sina.com.cn/roll/2016-06-30/doc-ixtrwtu9478376.shtml>).
- Liu Liu** (2021) 下午察：王毅中东行——不只是“敌人的敌人”才是朋友 ('Afternoon observation: Wang Yi's trip to the Middle East – not just "enemy of the enemy" is a friend'). Weixin Official Accounts Platform (http://mp.weixin.qq.com/s?__biz=MzUzODY3MzU1Ng==&mid=2247491362&idx=1&sn=c9bob4daaf26e25d2216ac32870cef6&chksm=fad577d9cda2fecf6fa6f78148b249252a4e30d7fdab2793bcd2eeedd9641a24c28b68aea1bc#rd). 19 April 2021).
- Macau Business** (2021) 'Mozambique: China debt forgiveness "shows interest in keeping influence" – NKC'. Macau Business, 31 March (www.macaubusiness.com/mozambique-china-debt-forgiveness-shows-interest-in-keeping-influence-nkc/). 6 April 2021).
- Mangi, F.** (2021) 'Pakistan to seek debt relief from China Belt and Road loan'. Bloomberg, 9 February (www.bloomberg.com/news/articles/2021-02-09/pakistan-to-seek-debt-relief-from-china-belt-and-road-loan).
- McGwin, K.** (2020) 'A controversial Greenland mine passes a key regulatory hurdle, and heads for public comment'. ArcticToday, 24 September (www.arctictoday.com/a-controversial-greenland-mining-project-has-passed-a-key-regulatory-hurdle-and-heads-for-public-comment/).
- McGwin, K.** (2021a) 'Greenland's parliament calls an early election'. ArcticToday, 17 February (www.arctictoday.com/greenland-will-hold-an-early-election/).
- McGwin, K.** (2021b) 'Greenland's premier loses majority ahead of new legislative session'. ArcticToday, 8 February (www.arctictoday.com/greenlands-premier-loses-majority-ahead-of-new-legislative-session/).
- Meichtry, S. and Hinshaw, D.** (2021) 'China's Greenland ambitions run into local politics, US influence'. The Wall Street Journal, 8 April (www.wsj.com/articles/chinas-rare-earths-quest-upends-greenlands-government-11617807839).
- Merriman, D.** (2021) 'Rare earths: Myanmar coup d'état creates more uncertainty for heavy rare earth supply'. Roskill, 2 February (<https://roskill.com/news/rare-earths-myanmar-coup-detat-creates-more-uncertainty-for-heavy-rare-earth-supply/>).

- Ministry of Culture and Tourism** (2020) 'China Tourism Academy released the "China Domestic Tourism Development Report 2020": tourists' willingness to travel in the third quarter exceeded 80%'. 15 September (www.mct.gov.cn/whzx/zsdw/zggyjy/202009/t20200915_875094.htm).
- Ministry of Foreign Affairs of the People's Republic of China** (2021) '王毅：将推出协助海外同胞接种疫苗的“春苗行动”'. (www.fmprc.gov.cn/web/wjbzhd/t1859071.shtml).
- MOFCOM – Ministry of Commerce of the People's Republic of China** (n.d.) 'Non-financial outward foreign direct investments data'. Online dataset (<http://data.mofcom.gov.cn/tzhz/fordirinvest.shtml>).
- MOFCOM** (2021a) 'China to extend direct-benefit monetary policy tools to anchor market expectations'. MOFCOM, 4 January (<http://gb2.mofcom.gov.cn/article/chinanews/202101/20210103028363.shtml>).
- MOFCOM** (2021b) 'China to remove barriers in implementing regulation on improving business environment'. MOFCOM, 27 January (<http://gb2.mofcom.gov.cn/article/chinanews/202101/20210103034606.shtml>).
- MOFCOM** (2021c) 'MOFCOM Department of Electronic Commerce and Informatization on the development of the online retail market in 2020'. MOFCOM, 24 January (<http://english.mofcom.gov.cn/article/newsrelease/policyreleasing/202101/20210103034679.shtml>).
- MOFCOM** (2021d) '商务部等12部门印发《关于提振大宗消费重点消费促进释放农村消费潜力若干措施的通知》'. (www.mofcom.gov.cn/article/b/d/202101/20210103028612.shtml).
- MOFCOM** (2021e) 'Statistics of foreign contracted projects'. Online dataset. MOFCOM (<http://data.mofcom.gov.cn/tzhz/forengineerstac.shtml>).
- MOFCOM** (2021f) *Report on development of China's outward investment and economic cooperation 2020*. Beijing: MOFCOM.
- MOFCOM** (2021g) 'Notice of 19 departments including the Ministry of Commerce on promoting the high-quality development of external design consulting'. MOFCOM, 6 January (www.mofcom.gov.cn/article/b/bf/202101/20210103028820.shtml).
- Mohammed, O. and Thomas, L.** (2021) 'Exclusive: Ethiopia to seek debt relief under G20 debt framework - ministry'. Reuters, 29 January (www.reuters.com/article/ethiopia-debt-exclusive-int-idUSKBN29Y2M3).
- National Development and Reform Commission** (2016) *13th Five Year Plan for economic and social development of the People's Republic of China, 2016–2020*. Beijing: National Development and Reform Commission (https://en.ndrc.gov.cn/newsrelease_8232/201612/P020191101481868235378.pdf).
- National Development and Reform Commission** (2017) *Rare Earth Industry development plan (2016–2020)*. Beijing: National Development and Reform Commission, Development Planning Division. (www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/201706/t20170621_1196819.html).
- National Development and Reform Commission** (2021) *Report on the implementation of the 2020 plan for national economic and social development and on the 2021 draft plan for national economic and social development*. Beijing: National Development and Reform Commission (www.xinhuanet.com/english/2021-03/13/c_139807950.htm).
- Ng, S.** (2020) 'In China, not all triple-a-rated bonds are created equal'. Wall Street Journal, 22 October (www.wsj.com/articles/more-corporate-bonds-are-rated-triple-a-in-china-despite-coronavirus-pandemic-11603272614). 3 March 2021).

- Ng’Wanakilala, F. and Kavanagh, M.** (2021) ‘Tanzania asks China for debt write-off, approves rail deal’. Bloomberg, 8 January (www.bloomberg.com/news/articles/2021-01-08/tanzania-asks-china-for-debt-write-off-approves-new-rail-deal).
- Nokia** (2020) ‘Press release: Nokia and Togocom deploy first 5G network in West Africa’. Nokia, 30 November (www.nokia.com/about-us/news/releases/2020/11/30/nokia-and-togocom-deploy-first-5g-network-in-west-africa/).
- Nyabiage, J.** (2021) ‘Kenya seeks debt relief from China as railway loan deadline looms’. South China Morning Post, 20 January (www.scmp.com/news/china/diplomacy/article/3118379/kenya-seeks-debt-relief-china-railway-loan-deadline-looms).
- Obulutsa, G.** (2021) ‘Kenya to save 27 billion shilling from China debt service suspension deal’. Reuters, 20 January (www.reuters.com/article/uk-kenya-debt-china-idUSKBN29P1A3). 16 February 2021).
- OECD – Organisation for Economic Co-operation and Development** (2021) *OECD Services Trade Restrictiveness Index: policy trends up to 2021*. Paris: OECD (<https://s3.amazonaws.com/document.issuu.com/210208122459-f2a5b9f5de5d14f96c68b7d838977d66/original.file?AWSAccessKeyId=AKIA TDDRE5J7Y5KLTLMM&Expires=1614592173&Signature=Fprlb5SEmcM4hhrn1GxZmdkXbtM%3D>).
- Okoth, J.** (2021) ‘S&P downgrades Kenya’s credit rating to “B”’. African Markets, 8 March (www.african-markets.com/en/news/east-africa/kenya/s-p-downgrades-kenya-s-credit-rating-to-b).
- Ouyang, S.** (2021) ‘Enterprise reforms to get more impetus’. China Daily, 22 January (http://english.www.gov.cn/news/pressbriefings/202101/22/content_WS600a2c42c6dof725769444e7.html).
- People’s Bank of China** (2021a) ‘Notice of the People’s Bank of China on public consultation on the “regulations on non-bank payment institutions (draft for comment)”’. People’s Bank of China, 20 January (www.pbc.gov.cn/tiaofasi/144941/144979/3941920/4166486/index.html).
- People’s Bank of China** (2021b) ‘The Monetary Policy Committee of the People’s Bank of China convenes the regular meeting of the first quarter of 2021’. Beijing: People’s Bank of China (www.pbc.gov.cn/zhengcehuobisi/125207/3870933/3870936/4214362/index.html).
- People’s Bank of China** (2021c) ‘Transcript of the 2020 financial statistics press conference’. Beijing: People’s Bank of China (www.pbc.gov.cn/rmyh/3963412/3963426/4163190/index.html). 16 February 2021).
- Pongrantz, S.** (2020) ‘The telecom equipment market 2019’. Dell’Oro Group, 2 March (www.delloro.com/the-telecom-equipment-market-2019/).
- Rainbow Rare Earths** (n.d.) ‘Rainbow Rare Earths’. Website (<https://rainbowrareearths.com/>).
- RareX Limited** (2021) ‘RareX executes landmark MoU with global rare earths producer Shenghe Resources’. RareX, 4 February (https://b61c7e0b-ed43-4605-8a65-97f4facfef40.usrfiles.com/ugd/b61c7e_820c7db2926e416a9bfcd928d2494d9a.pdf).
- Ray, R. et al.** (n.d.) ‘Geolocated dataset of Chinese overseas development finance’. Online dataset (www.bu.edu/gdp/chinas-overseas-development-finance/).
- Reenova Investment Holding Ltd.** (2019) *Reenova Investment Holding Ltd. annual report*. Reenova Investment Holding Ltd.
- Regulation Asia** (2021) ‘PBOC to step up efforts to advance China’s green finance agenda’. ESG Investor, 11 February (www.esginvestor.net/pboc-to-step-up-efforts-to-advance-chinas-green-finance-agenda/).

- Ren, B. and Chao, X.** (2018) 'How does the urban–rural income gap affect the quality of China's economic growth?' *China Political Economy* 1(1): 136–148 (<http://doi.org/10.1108/CPE-09-2018-005>).
- Republic of Kenya National Treasury & Planning** (2021) 'Kenya's successful application for the Debt Service Suspension Initiative (DSSI) from the Paris Club'. Nairobi: Republic of Kenya National Treasury & Planning.
- Republic of Zambia Ministry of Finance** (2021) 'Zambia applies for debt treatment under G20 common framework'. Lusaka: Republic of Zambia Ministry of Finance (www.mof.gov.zm/?wpfb_dl=338).
- Reuters** (2019) 'US dependence on China's rare earth: trade war vulnerability'. Reuters, 27 June (www.reuters.com/article/us-usa-trade-china-rareearth-explainer-idUSKCN1TS3AQ).
- Reuters** (2020) 'Factbox: Deals by major suppliers in the race for 5G'. Reuters, 17 June (www.reuters.com/article/us-telecoms-5g-orders-factbox-idUSKBN23O2G4).
- Reuters** (2021) 'Brazil regulator approves 5G spectrum auction rules, no Huawei ban'. Reuters, 26 February (www.reuters.com/article/brazil-telecoms-idUSL1N2KV39X).
- Roskill** (2019) 'Rare earths: China closes Tengchong Yunnan/Myanmar port and bans imports of rare earth from Myanmar'. Roskill, 24 May (<https://roskill.com/news/rare-earth-china-closes-tengchong-yunnan-myanmar-port-and-bans-imports-of-rare-earth-from-myanmar/>).
- Rudyak, M. and Chen, Y.** (2021) *China's lending landscape, approach to debt and the Common Framework*. Unpublished paper.
- Ruidao Rare Earth Information** (2019) 'China's overseas rare earth projects are accelerating'. Ruidao Rare Earth Information, 22 July (www.sohu.com/a/328534312_99900030).
- Schwarzenberg, A.B.** (2020) *Tracking China's global economic activities: data challenges and issues for Congress*. Washington DC: Congressional Research Service (<https://fas.org/sgp/crs/row/R46302.pdf>).
- Shalal, A. and Strohecker, K.** (2021) 'Chad becomes first country to ask for debt overhaul under G20 common framework'. Reuters, 27 January (www.reuters.com/article/us-chad-debt-idUKKBN29W2MC).
- Shen, Y., Moomy, R. and Eggert, R.G.** (2020) 'China's public policies toward rare earths, 1975–2018' *Mineral Economics* 33(1–2): 127–151 (<https://doi.org/10.1007/s13563-019-00214-2>).
- Shenghe Resources** (2020) 'Company management adjusts Mr. Huang Ping as general manager of the company'. Press release, 2 April (<https://finance.sina.com.cn/stock/relnews/cn/2020-04-02/doc-iimxxsth3211202.shtml>).
- Shenghe Resources Holding Co., Ltd** (2019) *Shenghe Resources 2019 annual report*. Shenghe Resources Holding Co., Ltd.
- Sipalan, J. and Das, K.N.** (2020) 'Malaysia to choose 5G partners based on own security standards'. Reuters, 17 February (www.reuters.com/article/us-telecoms-5g-malaysia-huawei/malaysia-to-choose-5g-partners-based-on-own-security-standards-idINKBN20BoTV).
- Singh, K.** (2021) 'S&P joins Fitch in downgrade of Ethiopia on potential debt restructuring'. Reuters, 13 February (www.reuters.com/article/us-ethiopia-ratings-s-p-idUSKBN2ADo6W).

- SMM – Shanghai Metals Market** (2014) ‘Rare earth producer Shenghe Resources suspends foreign investment on Sino-Vietnam dispute’. News article, 24 June (<https://news.metal.com/newscontent/100061813/rare-earth-producer-shenghe-resources-suspends-foreign-investment-on-sino-vietnam-dispute>).
- SMM** (2019) ‘Myanmar banned rare earth exports to China’. News article, 16 December (<https://news.metal.com/newscontent/101005696/myanmar-has-banned-rare-earth-exports-to-china/>).
- Horta e Costa, S., Lv, W. and Zhao, J.** (2021) ‘China crushes leveraged traders with liquidity withdrawals’. Bloomberg, 28 January (www.bloomberg.com/news/articles/2021-01-28/china-crushes-a-highly-lucrative-bond-trade-in-just-30-days). 16 February 2021).
- Standaert, M.** (2019) ‘China wrestles with the toxic aftermath of rare earth mining’. Yale Environment 360, 2 July (<https://e360.yale.edu/features/china-wrestles-with-the-toxic-aftermath-of-rare-earth-mining>).
- State Administration for Market Regulation** (2020a) ‘Announcement of the People’s Bank of China State Administration for Market Regulation’. 31 December (http://gkml.samr.gov.cn/nsjg/wjs/202012/t20201231_324880.html).
- State Administration for Market Regulation** (2020b) ‘Announcement of the State Administration for Market Regulation on Public Consultation on the “Guidelines for anti-monopoly in the field of platform economy (draft for comment)”’. 10 November (www.samr.gov.cn/hd/zjdc/202011/t20201109_323234.html).
- State Administration for Market Regulation** (2021) ‘The anti-monopoly guidelines of the Anti-monopoly Commission of the State Council on the platform economy’. 7 February (http://gkml.samr.gov.cn/nsjg/fldj/202102/t20210207_325967.html).
- State Council** (2021) *The State Council’s regarding accelerating guiding opinions on green and low-carbon circular development of economic system*. State Development (2021) Report No. 4 (www.gov.cn/zhengce/content/2021-02/22/content_5588274.htm).
- Sternfeld, E.** (ed.) (2017) *Routledge Handbook of Environmental Policy in China*. London: Taylor & Francis (www.taylorfrancis.com/books/edit/10.4324/9781315736761/routledge-handbook-environmental-policy-china-eva-sternfeld?refId=408ba0f5-e47e-493d-8024-3e3980cd8596).
- Strusani, D. and Hounghonon, G.V.** (2020) ‘Accelerating digital connectivity through infrastructure sharing’. Note 79. Washington DC: International Finance Corporation (www.ifc.org/wps/wcm/connect/2d3c4eff-12a8-4bob-b55d-9113a950ed33/EMCompass-Note-79-Digital-Infrastructure-Sharing.pdf?MOD=AJPERES&CVID=n2dwWtn).
- Summers, M.** (2019) ‘Rare earth markets and imbedded demand’. Powerpoint deck. US Department of Energy, 10 April (www.netl.doe.gov/sites/default/files/2019-05/2019_Annual_Reports/Wednesday/REE/12%20-%20REE%20Review%20Presentation_Summers%2020190408.pdf).
- Sun, I.Y. and Tang, X.** (2016) ‘Social responsibility or development responsibility – what is the environmental impact of Chinese investments in Africa: what are its drivers, and what are the possibilities for action’ *Cornell International Law Journal* 49(1): 3 (<https://scholarship.law.cornell.edu/cilj/vol49/iss1/3/>).
- Tabeta, S.** (2021) ‘China tightens rare-earth regulations, policing entire supply chain’. Nikkei Asia, 16 January (<https://asia.nikkei.com/Business/Markets/Commodities/China-tightens-rare-earth-regulations-policing-entire-supply-chain>).

- Tanjangco, B., Cao, Y., Nadin, R. et al.** (2020) *Pulse 1: Covid-19 and economic crisis – China’s recovery and international response*. Research report. London: ODI (<https://odi.org/en/publications/economic-pulse-1-covid-19-and-economic-crisis-chinas-recovery-and-international-response/>).
- Tanjangco, B., Cao, Y., Nadin, R. et al.** (2021) *Pulse 2: China navigates its Covid-19 recovery – outward investment appetite and implications for developing countries*. Research report. London: ODI (<https://odi.org/en/publications/economic-pulse-2-china-navigates-its-covid-19-recovery-outward-investment-appetite-and-implications-for-developing-countries/>).
- Toweh, A.** (2021) ‘Liberia will bounce back from COVID-19 crisis with 3.2% growth, says finance minister’. Reuters, 12 February (www.reuters.com/article/uk-liberia-finance-idUSKBN2ACoNM).
- UNCTAD – United Nations Conference on Trade and Development** (2021) ‘Beyond 20/20 WDS – Services (BPM6): trade and growth by main service-category, quarterly’. Online dataset (<https://unctadstat.unctad.org/wds/TableView/tableView.aspx?ReportId=17241>).
- US Department of Commerce** (2020) ‘Commerce addresses Huawei’s efforts to undermine entity list, restricts products designed and produced with US technologies’. US Department of Commerce (www.commerce.gov/news/press-releases/2020/05/commerce-addresses-huaweis-efforts-undermine-entity-list-restricts).
- US Department of the Treasury** (2020) ‘Chinese military companies sanctions’. Webpage (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/chinese-military-companies-sanctions>).
- Van Gosen, B.S., Verplanck, P.L., Long, K.R. et al.** (2014) *The rare-earth elements—vital to modern technologies and lifestyles*. USGS Mineral Resources Program (<https://pubs.usgs.gov/fs/2014/3078/pdf/fs2014-3078.pdf>).
- Wang, K.** (2020) ‘China to deepen reform of government functions and raise service capacity for business and public’. Government of China, 15 December (http://english.www.gov.cn/premier/news/202012/15/content_WS5fd8c8bdc6dof72576941f4f.html).
- Wang, K.** (2021) ‘China to take resolute measures to curb arbitrary charges on enterprises’. Government of China, 21 January (http://english.www.gov.cn/premier/news/202101/21/content_WS60o9933oc6dof725769444bc.html).
- Wheatley, J. and Schipani, A.** (2021) ‘Ethiopia asks for debt relief as Covid takes toll’. Financial Times, 1 February (www.ft.com/content/4992e00e-557a-4c06-858b-e7e15bbf10ac).
- White, E.** (2020) ‘Samsung mounts 5G offensive as countries review Huawei networks’. Financial Times, 4 October (www.ft.com/content/4ef1d31f-ebfe-475e-97fb-3c7993b11202).
- Woo, S.** (2020) ‘US to offer loans to lure developing countries away from Chinese telecom gear’. Wall Street Journal, 18 October (www.wsj.com/articles/u-s-to-offer-loans-to-lure-developing-countries-away-from-chinese-telecom-gear-11603036800).
- World Bank** (2021) *Global Economic Prospects, January 2021*. Washington DC: World Bank (<https://openknowledge.worldbank.org/handle/10986/34710>).
- World Economic Forum** (2020) *The impact of 5G: creating new value across industries and society*. Geneva: World Economic Forum.
- WTO – World Trade Organization** (2016) ‘Composition, definitions & methodology’. World Trade Statistical Review. Geneva: WTO (www.wto.org/english/res_e/statis_e/wts2016_e/WTO_Chapter_o8_e.pdf).

- WTO** (2019) *World Trade Report 2019 – the future of services trade*. Geneva: WTO (www.wto.org/english/res_e/booksp_e/o1_wtr19_o_e.pdf).
- WTO** (2020) ‘2020 press releases - trade set to plunge as COVID-19 pandemic upends global economy’. Geneva: WTO (www.wto.org/english/news_e/pres20_e/pr855_e.htm).
- WTO** (2021) *Fourth quarter 2020 trade in services*. Geneva: WTO (www.wto.org/english/res_e/statis_e/daily_update_e/serv_latest.pdf).
- Xia, X.** (2021) ‘Ministry of Commerce: no new car purchase restrictions shall be introduced in all places, and the restricted areas shall orderly cancel the administrative restrictions on purchase’. 21st Century Business Herald, 9 February (<https://m.21jingji.com/article/20210209/herald/a562e3919dac196ef61552f4ba8e2f6d.html>).
- Xinhua** (2015) ‘Huawei wins bid to build Malaysia-Cambodia-Thailand undersea cable’. China Daily, 26 May (www.chinadaily.com.cn/business/tech/2015-05/26/content_20818774.htm).
- Xinhua** (2016) ‘China’s Huawei helps Cambodia enhance ICT development’. China Daily, 13 December (www.chinadaily.com.cn/business/2016-12/13/content_27651685.htm).
- Xinhua** (2019) ‘China’s Huawei to build 5G network in Cambodia: Cambodian senior official’. Xinhua, 25 April (www.xinhuanet.com/english/2019-04/25/c_138009211.htm).
- Xinhua** (2020) ‘中共中央政治局召开会议 习近平主持--时政--人民网’. (<http://politics.people.com.cn/n1/2020/1211/c1024-31963888.html>).
- Xinhua** (2021a) ‘Xi focus: Xi stresses implementation of new development philosophy in next five years’. Xinhua, 29 January (www.xinhuanet.com/english/2021-01/29/c_139707255.htm).
- Xinhua** (2021b) ‘List of outcomes of China-CEEC summit’. Xinhua, 9 February (www.xinhuanet.com/world/2021-02/09/c_1127087493.htm).
- Xinhua** (2021c) ‘World insights: Chinese FM proposes initiative for Middle East stability, expects enhanced cooperation’. Xinhua, 27 March (www.xinhuanet.com/english/2021-03/27/c_139840274.htm).
- Xinhua** (2021d) ‘中华人民共和国国民经济和社会发展第十四个五年规划和2035年远景目标纲要’. Xinhua, 13 March (www.gov.cn/xinwen/2021-03/13/content_5592681.htm).
- Yu, X.** (2020) ‘Bond upsets rattle Chinese credit market’. Wall Street Journal, 16 November (www.wsj.com/articles/bond-upsets-rattle-chinese-credit-market-11605531198).
- Zhang, M. and Daly, T.** (2020) ‘China raises annual rare earth mining quota to record high in 2020’. Reuters, 16 July (www.reuters.com/article/us-china-rareearths-idUSKCN24H1J8).
- Zhang, H. and Li, X.** (2021) ‘Myanmar rare earths heading toward China encounter shipment obstacles amid upheaval’ Global Times, 21 March (www.globaltimes.cn/page/202103/1218983.shtml).
- Zhao, D., Wu, T. and He, Q.** (2017) ‘Consumption inequality and its evolution in urban China’ China Economic Review 46: 208–228 (<https://doi.org/10.1016/j.chieco.2017.09.015>).
- Zhao, S., Moritz, S. and Seal, T.** (2020) ‘Forget 5G, the US and China are already fighting for 6G dominance’. Bloomberg, 8 February (www.bloomberg.com/news/features/2021-02-08/forget-5g-the-u-s-and-china-are-already-fighting-for-6g-dominance).
- ZTE Corporation** (2020) ‘ZTE and China Unicom sign a strategic cooperation agreement on 6G’. Press release, 20 May (www.zte.com.cn/global/about/news/20200520e1.html).

Appendix

Table A1 China's economic health (level data)

Indicators	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
level, unless otherwise specified									
Unemployment rate (%)	5.1	5.1	5.2	5.3	6.2	5.9	6.0	5.9	5.7
Consumer price index (100 = year before)	103.8	104.5	104.5	105.4	105.2	104.3	103.3	102.4	102.5
Government revenue (year to date)	16770.4	17896.7	19039.0		3523.2	4598.4	6213.3	7767.2	9617.6
Government expenditure (year to date)	19058.7	20646.3	23885.8		3235.0	5528.4	7359.6	9028.1	11641.1
Merchandise exports	212916.1	221337.4	238267.6	211590.9	80380.3	185146.3	200233.6	206812.8	213574.2
Merchandise imports	169898.1	183411.0	191057.2	156901.1	142499.6	165213.1	154900.6	143886.7	167153.0
IHS markit PMI	51.7	51.8	51.5	51.1	40.3	50.1	49.4	50.7	51.2
Consumer confidence (index)	124.3	124.6	126.6	126.4	118.9	122.2	116.4	115.8	112.6
New total social financing	868.0	1993.7	2201.3	5053.5	873.7	5183.8	3102.7	3186.6	3468.1

Indicators	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
level, unless otherwise specified									
Unemployment rate (%)	5.7	5.6	5.4	5.3	5.2	5.2	5.4	5.5	5.3
Consumer price index (100 = year before)	102.7	102.4	101.7	100.5	99.5	100.2	99.7	99.8	100.4
Government revenue (year to date)	11472.5	12676.8	14100.2	15853.3	16948.9	18289.5		4180.5	5711.5
Government expenditure (year to date)	13349.9	14992.5	17518.5	18943.9	20784.6	24558.8		3573.3	5870.3
Merchandise exports	237631.3	235259.2	239757.7	237182.6	268074.1	281927.7	264018.8	204855.2	241134.2
Merchandise imports	175301.9	176333.8	202759.0	178739.4	192673.1	203754.0	198640.2	166975.3	227336.2
IHS markit PMI	52.8	53.1	53.0	53.6	54.9	53.0	51.5	50.9	50.6
Consumer confidence (index)	117.2	116.4	120.5	121.7	124.0	122.1	122.8	127.0	122.2
New total social financing	1692.8	3585.3	3469.3	1392.9	2135.5	1719.2	5175.8	1723.9	3366.5

Notes: Grey-shaded boxes indicate no available data. Real GDP for level data was not included due to the change in base period. The base period is replaced every five years, with constant values from 2016 to 2020 using the base period of 2015. 2021 now uses the base period of 2020.

Source: CEIC, National Bureau of Statistics of China

Table A2 China's economic health (level data)

Indicators	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
level, unless otherwise specified									
Outward investment, non-financial, year to date	90,460.0	98,780.0	116,958.3	8,320.0	15,500.0	24,220.0	33,570.0	42,200.0	51,500.0
Outward investment, non-financial (BRI), year to date	11,460.0	12,780.0	17,100.0	1,590.0	2,720.0	4,200.0	5,230.0	6,530.0	8,120.0
Dispatched persons abroad, year to date	393.0	435.0	487.5	19.0	39.0	64.0	82.0	111.0	133.0
Industry inputs – cement	218.5	224.9	199.4			147.8	223.5	248.7	228.6
Industry inputs – pig-iron	65,582.0	64,771.0	67,063.0			66,972.0	72,021.0	77,315.0	6,635.0
Industry inputs – crude steel	81,521.0	80,287.0	84,265.0			8,975.0	85,033.0	92,267.0	91,579.0
Industry inputs – steel products	102,636.0	104,016.0	104,329.0			98,880.0	107,012.0	114,527.0	115,851.0
Industry inputs – aluminium alloy	813.0	866.0	906.0			727.0	823.0	816.0	822.0

Indicators	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
level, unless otherwise specified									
Outward investment, non-financial, year to date	60,280.0	68,480.0	78,880.0	86,380.0	95,080.0	110,150.0	8,460.0	15,360.0	24,800.0
Outward investment, non-financial (BRI), year to date	10,270.0	11,800.0	13,020.0	14,110.0	5,960.0	17,790.0	1,680.0	3,050.0	4,420.0
Dispatched persons abroad, year to date	159.0	183.0	208.0	231.0	255.0	301.0	28.0	46.0	74.0
Industry inputs – cement	217.9	224.9	233.4	241.0	243.3	213.3			197.0
Industry inputs – pig-iron	78,183.0	78,546.0	75,783.0	76,171.0	72,005.0	74,215.0			74,745.0
Industry inputs – crude steel	93,359.0	94,845.0	92,555.0	92,202.0	87,660.0	91,252.0			94,021.0
Industry inputs – steel products	116,885.0	119,133.0	118,063.0	118,483.0	117,344.0	120,338.0			119,872.0
Industry inputs – aluminium alloy	816.0	812.0	872.0	897.0	938.0	943.0			870.0

Notes: Grey-shaded boxes indicate no available data.

Source: CEIC, National Bureau of Statistics of China

Table A3 140 Belt and Road countries classified by region

Region	Country
Central Asia and Caucasus	Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan
Europe	Albania, Austria, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Moldova, Montenegro, North Macedonia, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, Ukraine
Latin America & Caribbean	Antigua & Barbuda, Barbados, Bolivia, Chile, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Grenada, Guyana, Jamaica, Panama, Peru, Suriname, Trinidad & Tobago, Uruguay, Venezuela
Middle East & North Africa	Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Kuwait, Lebanon, Libyan, Malta, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates, Yemen
Pacific	Cook Islands, Fiji, Kiribati, Micronesia, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu
South Asia	Afghanistan, Bangladesh, Maldives, Nepal, Pakistan, Sri Lanka
South-East Asia, East Asia	Brunei, Cambodia, East Timor, Indonesia, Lao, PDR, Malaysia, Mongolia, Myanmar, Philippines, Singapore, South Korea, Thailand, Viet Nam
Sub-Saharan Africa	Angola, Benin, Botswana, Burundi, Cabo Verde, Cameroon, Chad, Comoros, Democratic Republic of Congo, Republic of Congo, Cote d'Ivoire, Eq. Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe

Source: Grouped by authors

Constraints and limitations

1. Alternative data sources explored

- a. Project-level data from multiple sources were initially explored but there were some inconsistencies with self-reporting. The team would need more time to conduct manual checks to ensure accuracy in the data.
- b. Chinese outward direct investment data from official sources only disaggregate at the country and industry level on an annual basis. There are no monthly indicators for this level of detail and the latest reported data is for 2019, before the pandemic.
- c. Other databases such as the Partnership for Investment and Growth in Africa were consulted but the difference in scope of the data collected prevented the team from using them.

d. Loan, trade, and investment data from reputable sources were often aggregated at an annual level and available only until a certain year. For example, data from the China Africa Research Initiative of John Hopkins School of Advanced International Studies is reported on an annual basis and available from 2000–2018.

e. Other official sources such as the OECD International Direct Investment Statistics Yearbook, ITC Investment Map, IMF Coordinated Direct Investment Survey, UNCTAD Foreign Direct Investment online database, had certain drawbacks. Data is often collected on an annual basis, not broken down sufficiently (inward and outward flows are collected at the aggregate level and not separated by country), limited in terms of country coverage, or published with a considerable lag (only up to 2018 or 2019).

2. Caveat on the RWR Belt and Road Monitor database

a. The research team consulted several databases tracking Chinese overseas economic activities, weighing the strengths, weaknesses, and limitations of each.³¹ The RWR Advisory Belt and Road Monitor database was selected due to the frequency of updates (biweekly), which provides the necessary detail to probe changing trends in China's overseas activities. Similar to other databases of its kind, the RWR collects this information mainly through media reports, company press releases, and other relevant online sources, with a light-touch effort to verify the accuracy and consistency of such information. As explained extensively in the literature on Chinese overseas economic activities, many of these announcements never materialise in actual investments or disbursement of funds, the amounts may change, or may miss some projects. Thus, while useful to indicate investment appetite and 'real-time trends' of Chinese companies' overseas activities, the monetary value of the investments and contracts in the database should be treated with caution. Moreover, the aggregate value of projects also does not add up to the official outward investment and engineering contract data released by China's Ministry of Commerce for obvious reasons. Furthermore, not all activities reported in the database feature contract values; this is especially the case for activities in education, health, culture, sports, and entertainment sectors, where activities are reported as 'collaboration or cooperation', which makes it difficult to discern whether it is FDI, portfolio investment, a service contract, or a grant. Thus, these activities are likely underreported in the aggregate estimates we present in this tracker.

31 See Schwarzenberg, A.B. (2020) for an in-depth explanation.

Data source appendix

Table A4 Macroeconomic indicators sources

Indicator	Source	Notes	Link
GDP growth	NBS and CEIC	The data were cross-checked with the NBS to ensure they are the same and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Unemployment rate (%)	NBS and CEIC	The data were cross-checked with the NBS to ensure they are the same and pulled from the CEIC database. We use the Urban Surveyed Unemployment Rate (%) of the NBS.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Consumer prices (Index, 100 = year before)	NBS and CEIC	The data were cross-checked with the NBS to ensure they are the same and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Government revenue year-to-date	NBS and CEIC	The data were cross-checked with the NBS to ensure they are the same and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Government expenditure year-to-date	NBS and CEIC	The data were cross-checked with the NBS to ensure they are the same and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Merchandise exports	General Administration of Customs and CEIC	The data were cross-checked with the General Administration of Customs to ensure they are the same and pulled from the CEIC database.	http://data.mofcom.gov.cn/hwmy/imexComType.shtml
Merchandise imports	General Administration of Customs and CEIC	The data were cross-checked with the General Administration of Customs to ensure they are the same and pulled from the CEIC database. We use The Urban Surveyed Unemployment Rate (%) of the NBS.	http://data.mofcom.gov.cn/hwmy/imexComType.shtml
Consumer confidence (Index)	CEIC	The team use the Consumer Confidence Index from the NBS and pulled from the CEIC database. The index is drawn from a survey conducted by the China Economic Monitoring & Analysis Center of the National Bureau of Statistics. The index ranges between '0' and '200', where '0' is extremely pessimistic and '200' is extremely optimistic. '100' is the critical value between both.	www.ceicdata.com/en/china/consumer-survey-national-bureau-of-statistics/consumer-confidence-index
Outward investment: non-financial year-to-date	Ministry of Commerce and CEIC	The data was cross-checked with the Ministry of Commerce and pulled from the CEIC database.	http://data.mofcom.gov.cn/tzhz/fordirinvest.shtml

Indicator	Source	Notes	Link
Outward investment: non-financial (BRI) year-to-date	Ministry of Commerce and CEIC	The data was cross-checked with the Ministry of Commerce and pulled from the CEIC database.	http://fec.mofcom.gov.cn/article/fwtydy/tjsj/
Dispatched persons abroad year-to-date	Ministry of Commerce and CEIC	The data was cross-checked with the Ministry of Commerce and pulled from the CEIC database.	http://data.mofcom.gov.cn/tzhz/fordirinvest.shtml
Industry inputs – cement	NBS and CEIC	The data was cross-checked with the NBS and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Industry inputs – pig-iron	NBS and CEIC	The data was cross-checked with the NBS and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Industry inputs – crude steel	NBS and CEIC	The data was cross-checked with the NBS and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Industry inputs – steel products	NBS and CEIC	The data was cross-checked with the NBS and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
Industry inputs – aluminum alloy	NBS and CEIC	The data was cross-checked with the NBS and pulled from the CEIC database.	https://data.stats.gov.cn/english/easyquery.htm?cn=A01
IHS Caixin Purchasing Manager's Index (PMI)	IHS Caixin PMI and CEIC	PMI readings above 50 signify an expansion while readings below 50 signal a contraction. This means a reading significantly below 50 implies a large contraction.	www.markiteconomics.com/Public/Release/PressReleases