

# BRI CONNECT: AN INITIATIVE IN NUMBERS

5TH EDITION

Fighting COVID-19 with infrastructure

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# SUMMARY

- All in all, Refinitiv is tracking \$4.2 trillion worth of BRI and Chinese Involvement projects
- The number of BRI projects awarded in the first half of 2020 remained at elevated levels, registering the highest count since 2018. However, in terms of value, it was a weak first half
- The transportation sector was the biggest focus for BRI project funding in the first half, followed by the Power & Water and Real Estate sectors
- Russia was the most prominent investment destination, in terms of both the number and value of projects
- On the M&A front, while Chinese outbound acquisitions in the first half shrunk, investment in BRI nations grew, according to Refinitiv data
- Healthcare was the top BRI M&A sector in the first half, accounting for 26% of the total value – a considerable increase from the same period last year when it accounted for only 0.4%
- The Health Silk Road initiative got an unexpected boost as China rushed medical teams and shared its experience in containment, diagnostics and therapeutics with the BRI partner countries to reinforce their fight against the coronavirus
- The role of tech in COVID-19 recovery and China's thrust on digital infrastructure has put the spotlight on the Digital Silk Road, another integral but overlooked part of the BRI



# WILL COVID DISRUPT BRI MOMENTUM?

While project awards remained at elevated levels in the first half of 2020, project values dipped

China was the first country to feel the shockwaves from COVID-19. Under strict lockdown, businesses large and small were severely affected as foreign and domestic travel was halted and investments delayed. Grand plans for the future were put on hold while the country tried to regain control of the present.

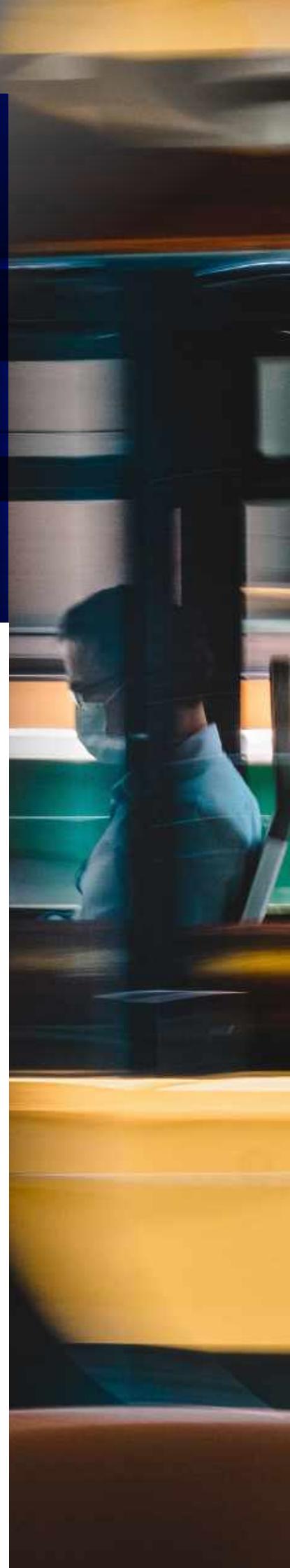
The entire world soon followed the same path. In the grip of a pandemic, optimistic growth forecasts about 2020 are unlikely, as survival and recovery take priority. In this economic environment, large-scale projects across the world have slowed or been forced to wind down due to manpower issues and financing.

The Belt and Road Initiative (BRI), a sprawling global program that aims to connect various countries with infrastructure, energy and transportation projects, also saw headwinds.

China's gross domestic product contracted [6.8%](#) in the first quarter, as Beijing shut down parts of the economy to combat the coronavirus. As the virus spread across the world, most countries paused these mammoth projects as they focused their energies on fighting the virus and enforcing social distancing, and channeled funds towards healthcare services, businesses and struggling citizens.

In June, a Chinese foreign ministry official said that about [20% of BRI projects](#) have been "seriously affected" by the coronavirus pandemic.

Against this backdrop, the first half of 2020 saw a total of 392 BRI projects added, with a total value of \$248 billion, according to Refinitiv's BRI database.



Under Refinitiv's BRI methodology, projects characterized as BRI projects are those that require a signed memorandum of understanding or a joint statement of cooperation between China and the host country. The projects must be disclosed on an official Chinese site, and if country-level agreements do not exist, by an officially recognized source in the host country.

The number of projects awarded remained at elevated levels, registering the highest count since 2018. However, in terms of value, it was a weak first half, in comparison.

## BELT AND ROAD: COMPARING HALF-YEARLY DATA

DATE	NUMBER OF BRI PROJECTS	NUMBER OF ALL PROJECTS*	VALUE OF BRI PROJECTS (U.S.\$BLN)	VALUE OF ALL PROJECTS (U.S.\$BLN)
<2018	236	292	212	367
H1 2018	162	439	295	583
H2 2018	369	1,386	645	1,677
H1 2019	330	477	474	634
H2 2019	332	399	402	619
<b>H1 2020</b>	<b>392</b>	<b>419</b>	<b>248</b>	<b>288</b>

\* BRI projects + Chinese Involvement projects.

Source: Refinitiv BRI database

A quarterly breakdown shows that the value of projects had begun to weaken in the first quarter, falling to \$187 billion, across 180 BRI projects. The second quarter saw 212 projects being announced, valued at \$61 billion, the lowest value since the first quarter of 2018.

## BELT AND ROAD: QUARTER TO QUARTER DATA

DATE	NUMBER OF BRI PROJECTS	NUMBER OF ALL PROJECTS*	VALUE OF BRI PROJECTS (U.S.\$BLN)	VALUE OF ALL PROJECTS (U.S.\$BLN)
<2018	236	292	212	367
1Q'18	20	24	8	9
2Q'18	142	415	287	574
3Q'18	201	559	336	665
4Q'18	168	827	309	1,012
1Q'19	89	220	260	388
2Q'19	241	257	214	246
3Q'19	200	216	194	226
4Q'19	132	183	208	393
1Q'20	180	194	187	203
2Q'20	212	225	61	85

\* BRI projects + Chinese Involvement projects.

Source: Refinitiv BRI database

## DELAYS DUE TO COVID-19

While larger projects took a back seat, existing developments also slowed down.

In Pakistan, which is home to the \$50 billion China-Pakistan Economic Corridor, or CPEC, work came to a grinding halt on various projects. In Cambodia, [Reuters](#) reported that the offices of Chinese senior managers stood empty at the Cambodia Sihanoukville Special Economic Zone, which is home to more than 160 businesses and over 20,000 workers.

Bangladesh also announced delays to infrastructure projects, including the commissioning of the Payra coal power plant.

China's Ministry of Commerce acknowledged that work on Sri Lanka's Port City Colombo project had slowed, as Chinese workers had not been able to return to work due to travel restrictions. Similarly, workers on the Jakarta-Bandung High-Speed Railway project were unable to return to Indonesia after the Lunar New Year holiday.

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**“We expect infrastructure projects to be delayed due to weaker financial sentiment and supply chain disruptions, but strong demand and a pipeline of projects continue to point to a post-crisis rebound.”**

**Dr. Jang Ping Thia**

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However, China believes that while BRI projects may experience short-term delays due to the COVID-19 pandemic, the program's long-term momentum will be sustained, “and even strengthened, with multi-billion-dollar projects from Latin America to South Asia underway,” according to a statement by the country's [Ministry of Commerce](#).

“We expect infrastructure projects to be delayed due to weaker financial sentiment and supply chain disruptions, but strong demand and a pipeline of projects continue to point to a post-crisis rebound,” added Dr. Jang Ping Thia, manager of the Economics Unit at the Asian Infrastructure Investment Bank.

It's clear that COVID-19 has strained the finances of many countries who may now be seeking some relief from China. In June, China said it had [suspended debt repayments](#) for 77 developing countries under the Debt Service Suspension Initiative introduced by the G20 in April.

With the global COVID-19 outbreak showing no signs of abating, governments will continue to accord top priority to pandemic control.

“While BRI projects may not be shelved, they will most certainly be plagued by delays. China is already facing requests for debt relief. In South Asia, the Maldives has sought to renegotiate its debt to China, while Bangladesh has requested China to consider deferring payments,” write Deep Pal and Rahul Bhatia, in a paper for the [Carnegie Endowment for International Peace](#). “The coming months are likely to see a falling appetite for new loans, casting uncertainty on planned projects.”

In September, [Malaysia's government](#) said it would seek to reroute a \$10.6 billion rail project under BRI and, as a result, will reassess the costs and schedule.

In an echo of Sri Lanka's 2018 Hambantota port predicament, [Laos'](#) state-owned Electricite du Laos (EDL) agreed to cede majority control of the new Electricite du Laos Transmission Company Limited (EDLT) to China Southern Power Grid Co as the Southeast Asian nation struggles to stave off a potential debt default.

On the other hand, the Chinese government has also rolled out [wide-ranging aid packages](#) to several BRI host countries, providing health equipment and medical supplies.

One positive outcome of the pandemic is that Digital Silk Road projects are accelerating, given the renewed global focus on remote working and virtual commerce.

But the challenges are also formidable. The BRI is massively dependent on the international transfer of Chinese workers and managers to its projects, a major point of criticism in the pre-virus world, wrote [Peter J Buckley](#), in the Journal of International Business Policy.

“It has limited the direct employment of local personnel and the spill-over gains to the host country. During the peak COVID-19 crisis period, and in the aftermath of the virus, it is untenable. The ability of the BRI to switch to digital versus personal contact in the implementation of its projects will be a major challenge, and construction is notoriously difficult to de-personalize.”

## NEW PROJECTS

Among the important projects added in the first half (in the month of June) was the \$311 million Kyaukse Clinker Cement Production Line and related projects in Myanmar. The integrated cement and power project, located in the Mandalay region, is a joint venture owned 30% by local firm Young Investment Group Industry Company (YIGICL), and 70% by China Gezhouba Group Cement (CGGC) and China Gezhouba Group Overseas Investment (CGGOI).

Other major projects announced in the first half included:



**Colombo Radial Tire Factory Project:** Shandong Haohua Tire Co. has been contracted to develop the \$450 million project, located in Colombo, Sri Lanka. The first phase, which is slated to be completed in 18 months, is expected to produce 3 million truck and bus tires and 17 million passenger car tires.



**Ghana Steel Project:** The \$380 million, 500,000 tons-per-year steel project (also known as Almigo Steel) is located in Oppon Manso, Ghana, and is being developed by local firm Supercare Group. Beijing Metallurgical Equipment Research Design Institute Co was the feasibility study design consultant.



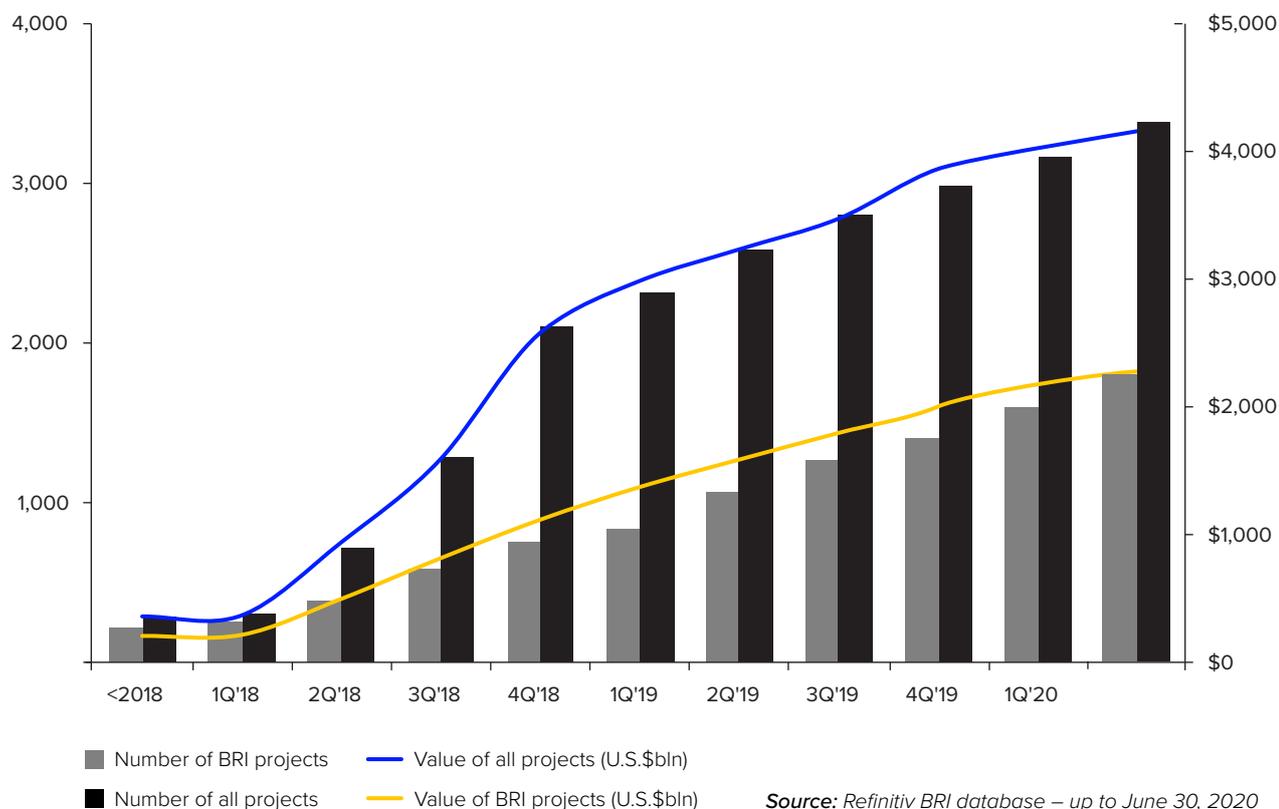
**Karsa 1,500 tons/day Waste Power Station Project:** The 40MW waste energy project is located in Kiev, Ukraine. The engineering, procurement and construction (EPC) and design contracts, worth \$238 million, were awarded to China Energy Engineering Corp and China Energy Engineering Group Guangdong Electric Power Design Institute Co, respectively.



**Longonjo Rare Earths Project:** The estimated \$131 million project, located in Longonjo, Angola, is billed as the first major rare earths mine to be brought online in over a decade. The project's concessionaire, Australia-based Pensana Rare Earths, has entered into "heads of agreement" with China Great Wall Industry Corporation to pave the way for an engineering, procurement, construction and financing deal to develop the mine.

## KEY UPDATES

### PROJECT ACCUMULATIONS (by created date)



For all its challenges, the BRI program remains massive, with projects worth \$2.3 trillion in various stages of the project life cycle. If the BRI program were a country, it would be ranked as the world's eighth-largest economy, eclipsing Italy, Brazil, Canada and Russia.

According to data from the Refinitiv BRI database, by the end of the second quarter of 2020, some 1,821 BRI projects had been announced, with a total value of \$2.3 trillion. BRI projects worth \$288.50 billion, or 12.67% of the total, were already completed, while projects valued at \$48 billion, or 2.10%, were on hold or delayed.

CLASSIFICATION	TOTAL NUMBER OF PROJECTS (Q2 2020)	VALUE IN U.S.\$BLN (Q2 2020)	NUMBER OF PROJECTS (Q1 2020)	VALUE IN U.S.\$BLN (Q1 2020)
BRI	1,821	2,276.26	1,574	\$63.53
Chinese Involvement	1,591	1,892.13	1,590	\$16.50
<b>TOTAL</b>	<b>3,412</b>	<b>4168.39</b>	<b>3,164</b>	<b>\$47.03</b>

Source: Refinitiv BRI database – up to June 30, 2020

Moving to the third quarter, the total number of BRI projects planned or underway at the end of August 2020 stood at 1,887, with a total value of \$2.3 trillion.

**Note:** Chinese Involvement projects are not officially disclosed as BRI projects but have direct Chinese participation as either the owner, consultant, contractor or financier.

## SECTORAL PERFORMANCE

The transportation sector retains the biggest focus for BRI project funding, which is not surprising, given that the program is primarily about connecting China to places as far away as Europe, Africa and Australasia.

Transportation projects accounted for \$1.04 trillion, or 45.81%, of the total project value at the end of the second quarter of 2020, followed by Power & Water and Real Estate. The tables compare BRI project values and project counts for the second and first quarters.

### BELT AND ROAD SECTORS: QUARTER TO QUARTER DATA (BY VALUE)

BRI PROJECT SECTOR	Q2 2020		Q1 2020	
	PROJECT VALUE (U.S.\$BLN)	% OF TOTAL VALUE	PROJECT VALUE (U.S.\$BLN)	% OF TOTAL VALUE
Transportation	\$1,042.73	45.81%	\$948.44	44.98%
Power & Water	\$430.10	18.89%	\$390.61	18.53%
Real Estate	\$354.20	15.56%	\$303.78	14.41%
Oil & Gas	\$225.62	9.91%	\$213.31	10.12%
Manufacturing	\$174.13	7.65%	\$186.37	8.84%
Mining	\$48.96	2.15%	\$65.52	3.11%
Communication	\$0.52	0.02%	\$0.29	0.01%
<b>Grand Total</b>	<b>\$2,276.26</b>	<b>100.00%</b>	<b>\$2,108.32</b>	<b>100.00%</b>

Source: Refinitiv BRI database – up to June 30, 2020

### BELT AND ROAD SECTORS: QUARTER TO QUARTER DATA (BY COUNT)

BRI PROJECT SECTOR	Q2 2020		Q1 2020	
	NUMBER OF PROJECTS	% OF TOTAL VALUE	NUMBER OF PROJECTS	% OF TOTAL VALUE
Transportation	660	36%	594	38%
Power & Water	441	24%	356	23%
Real Estate	99	6%	86	5%
Oil & Gas	400	22%	346	22%
Manufacturing	159	9%	138	9%
Mining	44	2%	40	2%
Communication	18	1%	14	1%
<b>Grand Total</b>	<b>1,821</b>	<b>100.00%</b>	<b>1,574</b>	<b>100.00%</b>

Source: Refinitiv BRI database – up to June 30, 2020

Moving into the third quarter; by the end of August 2020, both the Transportation sector and Power & Water kept their top spots, with 44.74% and 19.23% share of the total value, respectively. The Oil & Gas sector overtook Real Estate for third spot, with 15.14% of the total value.



As global COVID-19 recovery plans focus more and more on “green” and sustainable strategies, the renewable energy sector (solar, wind, and nuclear) is expected to play a more prominent role within BRI. At the end of the second quarter of 2020, there were a total of 101 active projects across solar, wind, nuclear and biothermal energy segments, with a combined value of \$129 billion. The UK topped the charts in terms of value at \$53 billion, followed by Turkey (\$25 billion), while Russia led the projects count with 16 projects.

### MAP VIEW OF BRI RENEWABLE ENERGY PROJECTS



Source: Refinitiv BRI Connect app

## TOP 10 BRI RENEWABLE ENERGY PROJECTS

PROJECT	COUNTRY	VALUE (U.S.\$bln)
 3,260MW Hinkley Point C Nuclear Power Station Project	United Kingdom	29.07
 5,000MW Igneada Nuclear Power Plant Project	Turkey	25.00
 Sizewell C Nuclear Power Station Project	United Kingdom	24.08
 Mohammed Bin Rashid Al Maktoum Solar Park Project	UAE	13.61
 Two 720MW Cernavoda Nuclear Power Plant Units 3&4 Project	Romania	9.71
 1,000 MW Kenya Nuclear Power Plant Project	Kenya	7.46
 Egypt's 2,000MW Integrated Photovoltaic Power Project	Egypt	3.50
 750MW Zophia II and Zophia III Wind Farms Project	Ukraine	1.09
 102MW Pedro Avelino Wind Farm	Brazil	0.9
 347.65MW Helios Project	Argentina	0.8

Source: Refinitiv BRI database – up to June 30, 2020

## COUNTRY FOCUS

Overall, Russia remains the most prominent investment destination for BRI, in terms of both the number and value of projects, according to the Refinitiv BRI database. At the end of the second quarter of 2020, 113 BRI projects valued at \$258 billion were underway in Russia. These include the \$55 billion Power of Siberia Gas Pipeline, the \$32.4 billion Eurasia High-Speed Railway Project connecting Moscow to Kazan, and the \$25.5 billion Arctic LNG 2 Project. In terms of value, Malaysia took the second position with \$128 billion, followed by Turkey (\$114 billion), Indonesia (\$102 billion), and Thailand (\$91 billion). In the first quarter of 2020, the value lineup comprised Russia, Malaysia, Turkey, Indonesia and Pakistan, in that order.

### LIST VIEW OF TOP 10 BRI PROJECTS IN RUSSIA

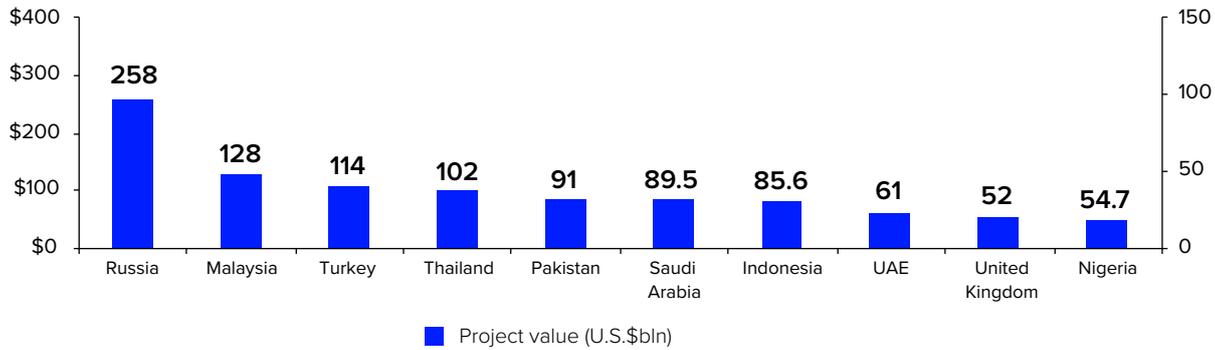
#### PROJECTS BY VALUE (U.S.\$BLN)



Source: Refinitiv BRI Connect app

### TOP 10 PROJECT NATIONS (ALL PROJECTS)

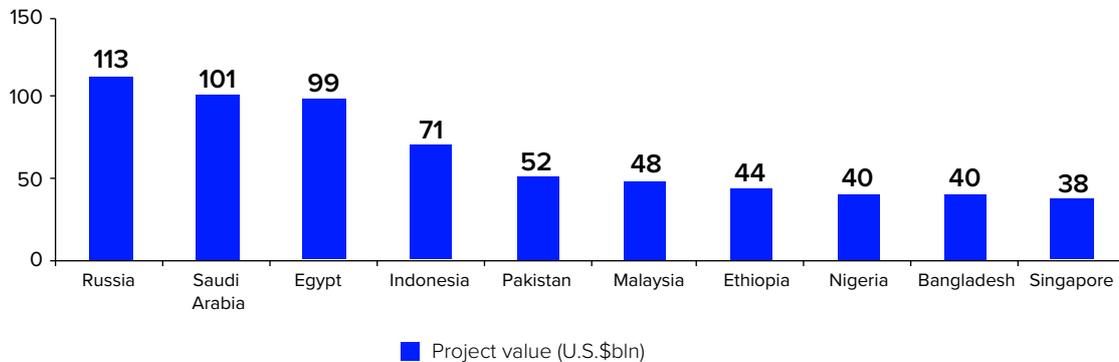
(Based on project value – U.S.\$bln)



Source: Refinitiv BRI database – up to June 30, 2020

### TOP 10 PROJECT NATIONS (BRI PROJECTS)

(Based on number of projects)



Source: Refinitiv BRI database – up to June 30, 2020

In terms of the number of BRI projects, at the end of the second quarter, Saudi Arabia was second with 101 projects, followed by Egypt (99), Indonesia (71) and Pakistan (52), according to the Refinitiv BRI database. Stepping into the third quarter, at the end of August 2020, the project nations had retained their second quarter positions in terms of both values and number of projects.

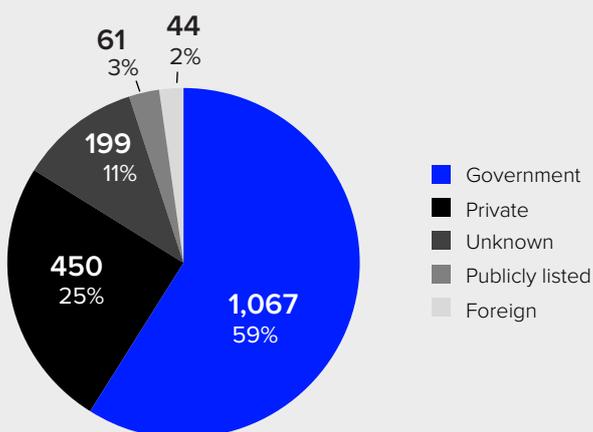
China has been keen to address key criticism that Chinese state-owned enterprises and other private Chinese companies dominate the BRI. At the end of the second quarter, Chinese companies accounted for just under 40% of all projects (Chinese Involvement and BRI), according to the Refinitiv BRI database. In the first quarter of 2020, the percentage for Chinese companies was 40.59%.

TOP 10 COUNTRIES	NUMBER OF COMPANIES	% OF TOTAL COUNTS
China	1,455	39.79%
UAE	175	4.79%
Saudi Arabia	110	3.01%
India	81	2.21%
Pakistan	71	1.94%
Russia	70	1.91%
Indonesia	69	1.89%
United States	66	1.80%
Oman	66	1.80%
United Kingdom	65	1.78%

Source: Refinitiv BRI database – up to June 30, 2020

Private sector participation in BRI projects remained steady in the first half. The sector's share was 26.14% (\$595.09 billion) at the end of the second quarter of 2020, compared to 26.15% (\$551.41 billion) in the first quarter, according to Refinitiv data. Ownership, in terms of number of projects, is showcased in the pie chart below.

### PROJECT STATUS (BRI projects – based on number of projects)



Source: Refinitiv BRI database – up to June 30, 2020

Moving into the third quarter, at the end of August 2020, private sector accounted for 27.27% of all BRI projects worth \$637.92 billion.

## LOOKING BEYOND COVID

The International Monetary Fund has said that China would be among the few countries posting growth in 2020 – of 1.9% – against a global output contraction of -4.4% due to the negative impact of the COVID-19 pandemic.

In August, Reuters reported that the world's second-largest economy has been getting back on its feet faster than expected, as [domestic demand](#) ensured that factory activity for the month of July expanded at the fastest pace in almost a decade, despite weak export orders and employment numbers.

China is expected to focus more effort on the domestic economy in 2020, rather than external programs like the BRI, as it seeks to mitigate the negative impact of COVID-19 that resulted in a [record contraction](#) in the first quarter. The Chinese Politburo also stated that in the second half, the government would focus on [expanding effective investment](#) and final consumption to boost domestic demand.

China's ongoing efforts to rein in its debt, and reduce the strain imposed by [COVID stimulus measures](#) on domestic banks, could also see Beijing accord lower priority to BRI in the medium term.

On the other hand, the inward focus could also benefit programs like the Greater Bay Area (GBA), often touted as a mini-BRI. Comprising nine cities in Guangdong province and the Special Administrative Regions of Hong Kong and Macau, the area has a combined population of about 70 million – more than the population of the United Kingdom. The region makes up less than one percent of China's land area, but contributed 11% to its GDP in 2018, adding \$1.6 trillion to the Chinese economy.

Last year, the Chinese government outlined a development plan for the GBA that aims to leverage the region's industrial, manufacturing and financial prowess.

At the same time, it's unclear whether the recent unrest in Hong Kong and the new security laws imposed from Beijing will create obstacles for BRI projects. Many Western nations have imposed restrictions on Hong Kong, damaging its status as one of the world's global financial hubs, and these sanctions could impact financing for BRI projects that involve Chinese companies.

"Hong Kong manages over 70% of the international trade volume in Chinese currency – which makes it the cornerstone for any plan to elevate the yuan to true hard-currency/reserve-currency status, competitive with the dollar or the euro," said George Calhoun, Founder & Director of the Quantitative Finance Program and Hanlon Financial Systems Center at the Stevens Institute of Technology (New Jersey) and Advisory Board Member at Hanlon Investment Management. "China cannot succeed at either the geopolitical or the economic game without eventually establishing a strong currency. It is a strategic imperative."

China's relationship with a number of key trading partners, including the United States, United Kingdom, Australia and Canada, is also tense on a number of fronts.

"A new and uncertain additional factor is the extent of the post-crisis backlash against China, motivated by geopolitical rivalry, trade tensions, intellectual property disputes, and assertions of non-transparency in the disclosure of the origin and spread of the virus," according to [Peter J Buckley](#).

This includes the Japanese government extending loans to Japanese companies to relocate their operation in China. American companies are also under domestic political pressure to take a tougher stance on China.

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**George Calhoun**

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"Coronavirus has disrupted supply chains and, to reduce risks, shorter and purely intra-regional or domestic value chains will be preferred. In addition, host countries, including EU countries, are likely to protect themselves from Chinese takeovers of key firms by buying shares or introducing "golden shares" held by state bodies," Buckley added. "Again, we should beware of blanket conclusions – viable supply chains excluding China may be difficult and costly to build, and the impact by sector will vary."

However, other analysts believe that ultimately, China will be able to strike a balance, so that Hong Kong remains a financial services hub.

"I think China's BRI is a long-term project and will continue to get finance... maybe less in second half 2020 and first half 2021... and China may need to reconsider how much it lends to certain low-income countries, given calls for a debt moratorium by the G20," said Charles Robertson, analyst at Renaissance Capital. "But countries at low risk of debt distress are still likely to attract plenty of financing."

# FEEDING THE DRAGON

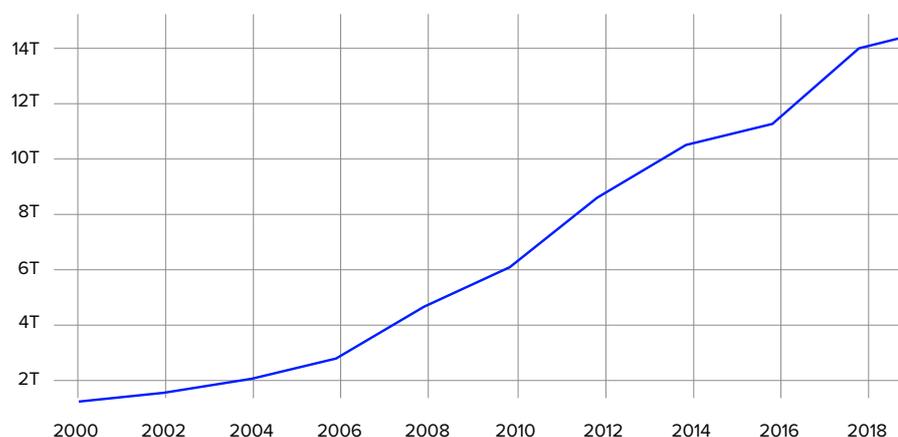
A study of China's hydrocarbon needs and Belt and Road investments in Oil & Gas

In the year 2000, China's Gross Domestic Product (GDP) was around \$1.2 trillion. Last year, it was \$14 trillion – an increase of more than 1,000 percent in less than two decades.

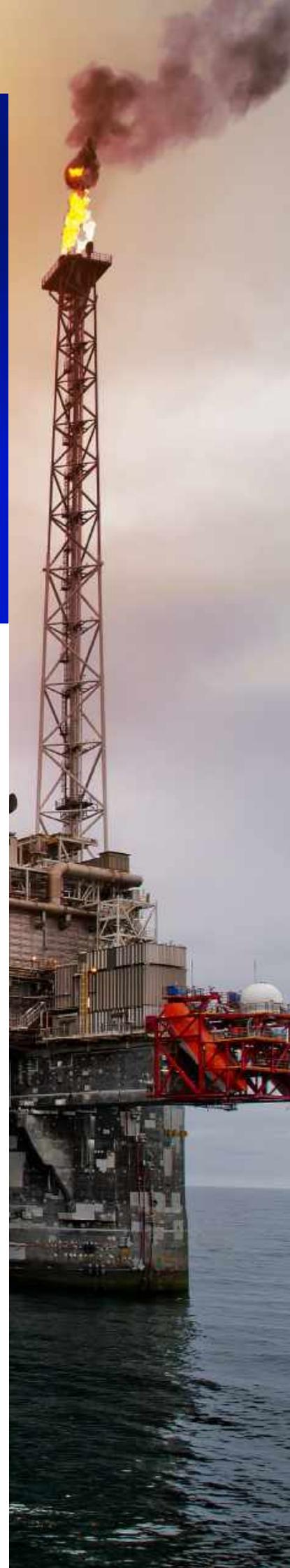
The sheer scale of the rapid growth means the Asian giant must future-proof its energy requirements and find more fuel for the dragon's fire, but is it using its flagship global BRI to ensure those needs are met?

China, the second largest economy in the world, has obvious and rapidly burgeoning energy needs. The sharp growth in GDP over the last two decades has also coincided with the country's rise in global geopolitics and trade, transforming the Asian giant into the world's largest crude oil and gas importer. According to BP's Statistical Review of World Energy 2020 report, China was by far the biggest individual driver of [primary energy growth](#) in 2019, accounting for more than three-quarters of net global growth.

## CHINA-GDP (U.S.\$ TRILLION – CURRENT TERMS)



Source: World Bank

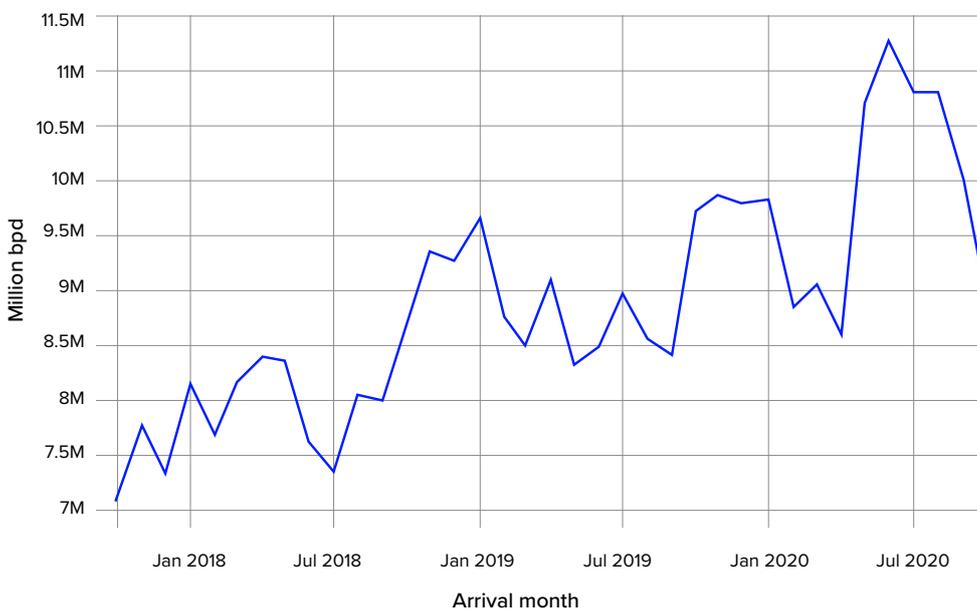


## DRIVING THE ECONOMIC ENGINE

Oil plays an integral role in driving economic growth globally. With rising demand and falling domestic production, imports have climbed. Our chart on seaborne imports of crude oil shows a steadily climbing curve. Imports, which were at 7 million barrels per day in 2017, increased several-fold to a high of 11.3 million barrels per day in June 2020. This has also coincided with a rise in refining capacity in China over the last two years.

In 2019, about [72.5%](#) of China's total consumption of crude oil was imported, according to a February report by news website Global Times.

### CHINA SEABORNE IMPORTS OF CRUDE OIL-MILLION BPD



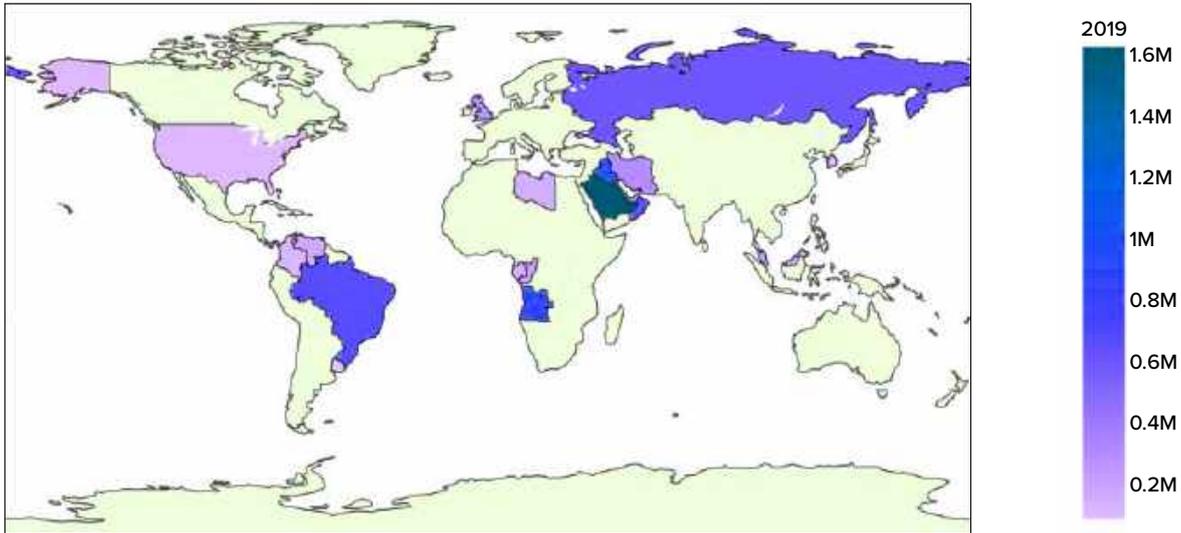
Source: Refinitiv Oil Research/Refinitiv Eikon

Apart from pipeline imports from Russia, China imports crude oil from almost all major oil-producing countries. The Top 20 charts show the global nature of sourcing by Chinese refiners. In some of these key destinations, China has also invested significant capital either through standalone investments or as part of the BRI, possibly in a bid to ensure continuous and reliable access to oil.

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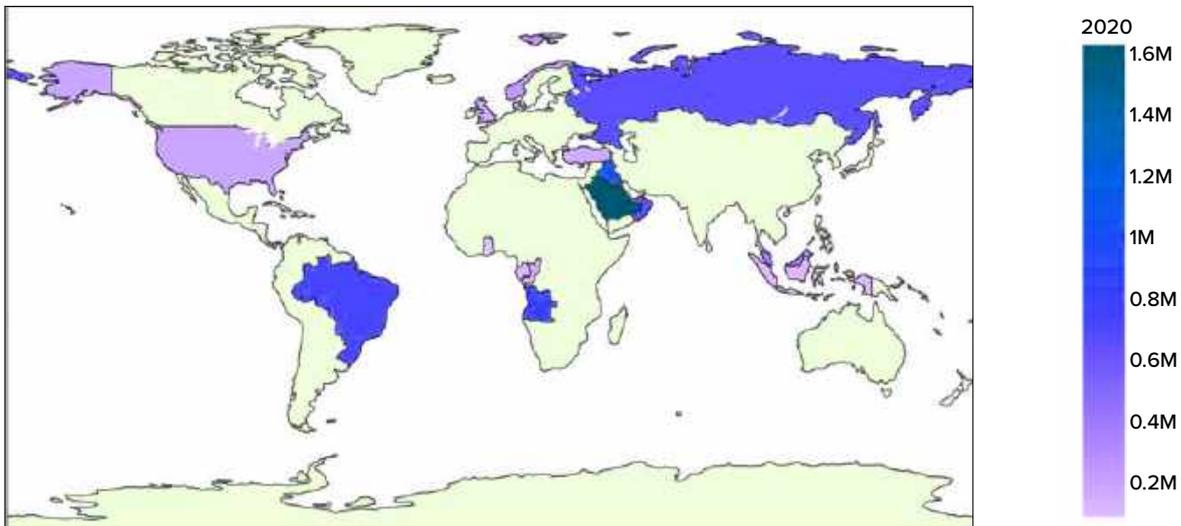


### TOP 20 EXPORTERS OF CRUDE OIL – 2019 – bpd



Source: Refinitiv Oil Research/Refinitiv Eikon

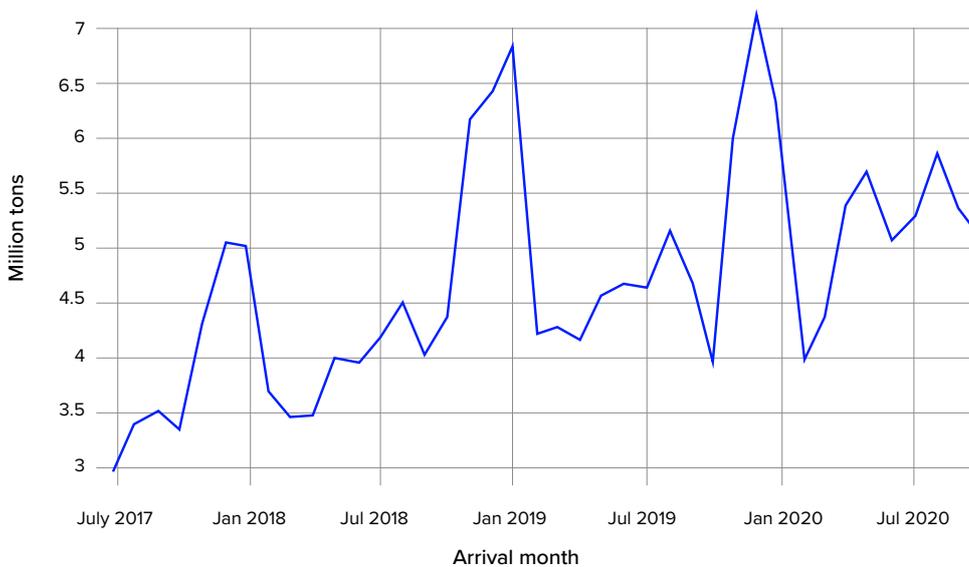
### TOP 20 EXPORTERS OF CRUDE OIL – 2020 – bpd



Source: Refinitiv Oil Research/Refinitiv Eikon

## SEEKING CLEANER ENERGY

### CHINESE IMPORTS OF LNG – MILLION TONS



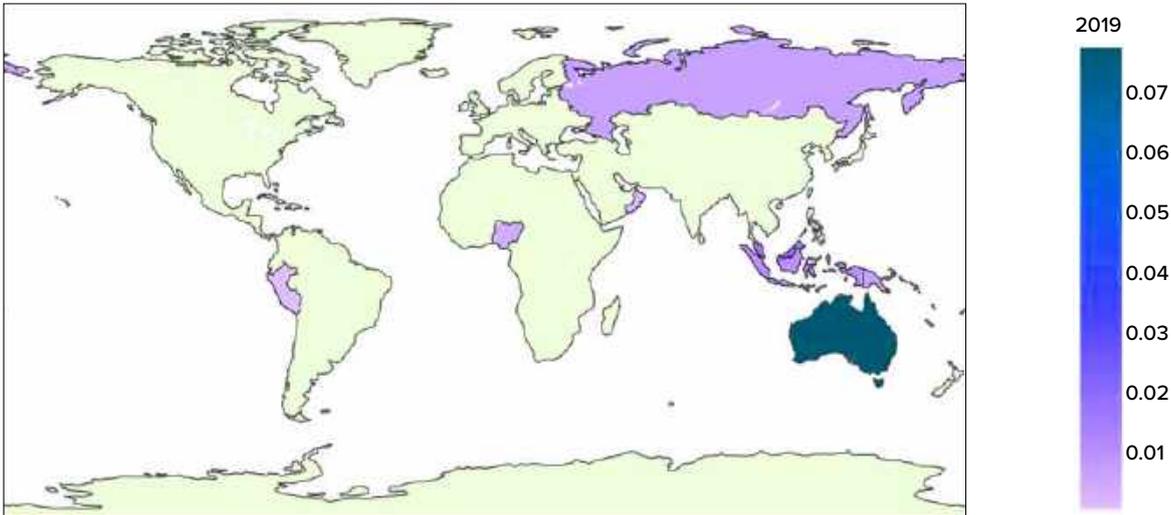
With rapid economic growth, policymakers in China have also had to come to terms with rising levels of pollution and the need to move towards cleaner-burning fuels. The government wants natural gas to comprise 15% of China's energy mix by 2030, up from 7.8% in 2018, to improve air quality and combat climate change. In September, Chinese President Xi Jinping told the United Nations General Assembly that China aims to be carbon neutral by 2060 and achieve a peak in emissions prior to 2030.

While the growing share of renewable energy sources is undeniable, a byproduct of the policy shift has been the increasing importance of liquefied natural gas (LNG). Monthly imports of LNG into China have gone up from around 3 million tons in 2017 to about 5 million tons at present. Winter demand (December to February period) went up from 5 million tons in 2017 to around 7 million tons in 2019. Including LNG, China imports up to 45% of its natural gas requirements.

Unlike oil, where transport is relatively straightforward, LNG requires significant investments on the transport front. Globally, investments into LNG have gained pace in the last five years, bringing new exporters into the market and allowing for some level of diversification of supply. Between 2019 and 2020, the U.S. has become one of the top suppliers of LNG to China, with the Sino-U.S. trade deal providing a boost. Reuters reported that China more than trebled its [LNG import volumes](#) from the U.S. in the first half of 2020.

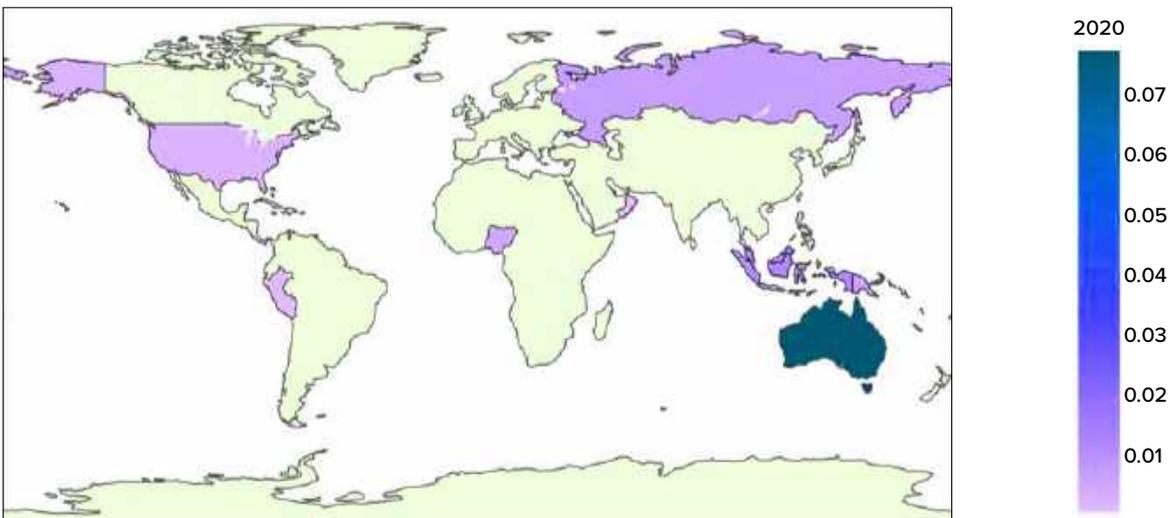


TOP 20 EXPORTERS OF LNG – 2019 – TONS PER DAY



Source: Refinitiv Gas LNG Research/Refinitiv Eikon

TOP 20 EXPORTERS OF LNG – 2020 – TONS PER DAY



Source: Refinitiv Gas LNG Research/Refinitiv Eikon

## OIL & GAS PROJECTS IN THE BRI

According to Refinitiv's BRI database, active BRI projects in the Oil & Gas space add up to about \$270 billion spread out across different subsectors. Analysis of the project value split between oil and gas highlights China's growing focus on gas. A more in-depth analysis of the subsectors also underscores the difference in investment requirements between oil and gas. Since gas is not easy to transport, of the \$152.4 billion invested in gas projects, nearly 81.3% was accounted for by gas processing and transportation projects. Exploration and production (E&P) accounted for only 16.9% of the total investment.

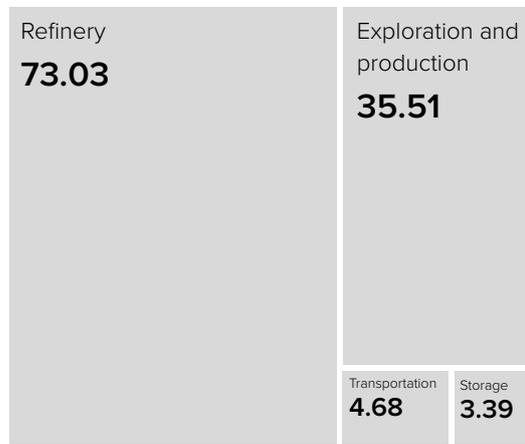
In contrast, the majority of the \$116.6 billion worth of investments into oil have been into refining (63%) and E&P (30%). Storage, transportation and field support projects accounted for a marginal 7% (\$8.1 billion).

### PROJECTS BY CATEGORY – U.S.\$ BILLION

#### Gas



#### Oil



Source: Refinitiv BRI database



## TOP 10 ACTIVE OIL PROJECTS

PROJECT NAME	PROJECT VALUE (U.S.\$BLN)	SUBSECTOR	COUNTRY
Al Zour Refinery Project	19	Refinery	Kuwait
Hengyi – Pulau Muara Besar refinery and petrochemical plant project	15.4	Refinery	Brunei
Dangote Refinery and Petrochemical Complex Project	14	Refinery	Nigeria
Marjan Oil Field Expansion Project	12	Exploration and production	Saudi Arabia
Marjan Oil Field Expansion Project – Onshore Expansion	7	Exploration and production	Saudi Arabia
150 kbd Missan Refinery & Power Generation Project	6	Refinery	Iraq
Duqm Refinery & Petrochemical Complex Project	5.65	Refinery	Oman
Marjan Oil Field Expansion Project – Offshore Expansion	5	Exploration and production	Saudi Arabia
Ethiopia – Djibouti Oil & Gas Project	4.2	Exploration and production	Ethiopia

Source: Refinitiv BRI database

## TOP 10 ACTIVE GAS PROJECTS

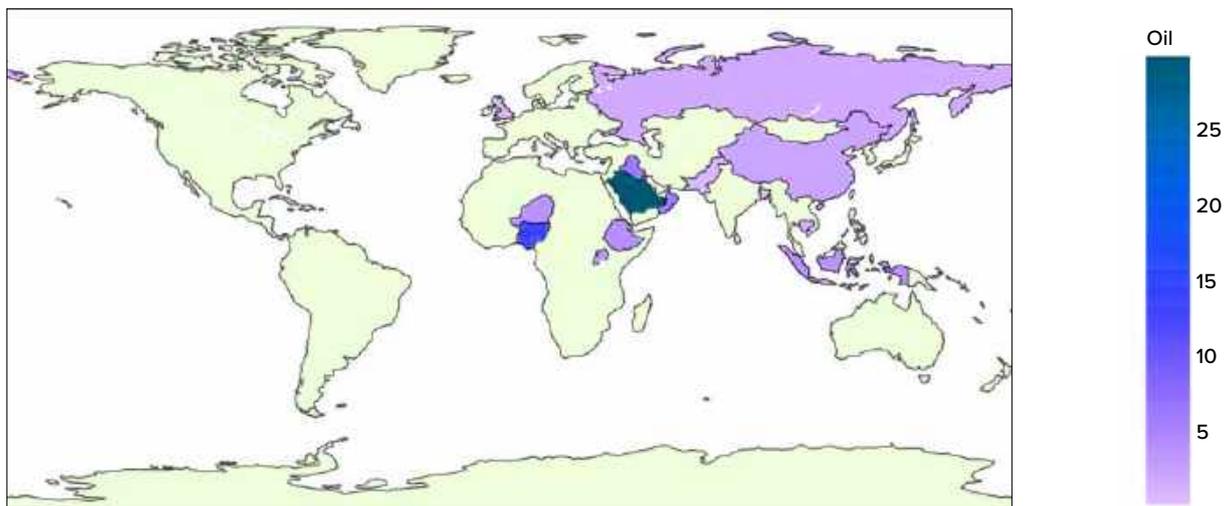
PROJECT NAME	PROJECT VALUE (U.S.\$BLN)	SUBSECTOR	COUNTRY
Power of Siberia Gas Pipeline Project	55	Transportation	Russia
Rovuma Liquefied Natural Gas Project	33	Refinery	Mozambique
Arctic LNG 2 Project	25.5	Exploration and production	Russia
Power of Siberia Gas Pipeline Project – Amur Gas Processing Plant	14.46	Refinery	Russia
Central Asia-China Gas Pipeline Line D Project	6.7	Transportation	Turkmenistan
Ratchaburi Gas Pipeline Project	5	Transportation	Thailand
Ministry of Natural Gas Ethiopia – Ethiopia-Djibouti gas project – Djibouti LNG Terminal	3	Transportation	Djibouti
Ajaokuta-Kaduna-Kano Gas Pipeline Project	2.8	Transportation	Nigeria
Tuz Golu Underground Gas Storage Expansion Project	2.74	Storage	Turkey
Hong Kong Offshore LNG Terminal Project	1.54	Transportation	Hong Kong

Source: Refinitiv BRI database

The top countries charts show the geographic footprint of Oil & Gas projects within the BRI. On careful observation, it may be seen that some of the countries where the projects have been planned are also countries where a significant amount of sourcing of crude oil and LNG takes place or is expected to take place. For example, investments in the Rovuma LNG project in Mozambique could be construed as a step towards ensuring a presence in the Southern African nation, where significant gas finds in the last decade have created hopes of a new player in the LNG space. Similarly, Iraq, Saudi Arabia and Oman are all countries that export oil to China.

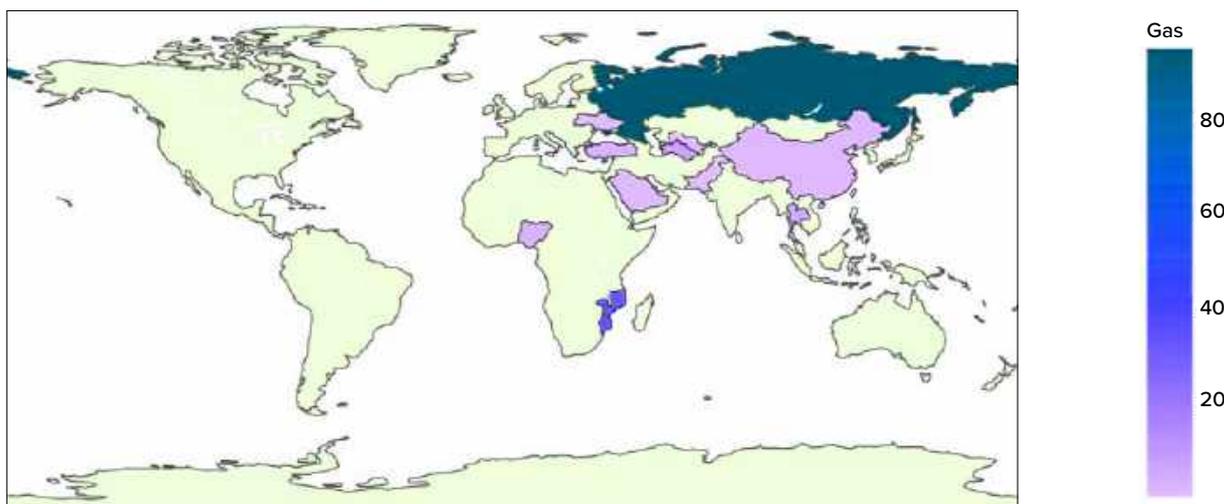
While not all investments aim towards securing an equity share in production, presence in these key exporter countries likely increases preference in exports. This, coupled with sovereign loans extended to producer countries and equity participation in projects, increases the reliability and security of energy supply needed to keep the dragon roaring.

### TOP COUNTRIES – BRI OIL PROJECTS (U.S.\$BLN)



Source: Refinitiv BRI database

### TOP COUNTRIES – BRI GAS PROJECTS (U.S.\$BLN)



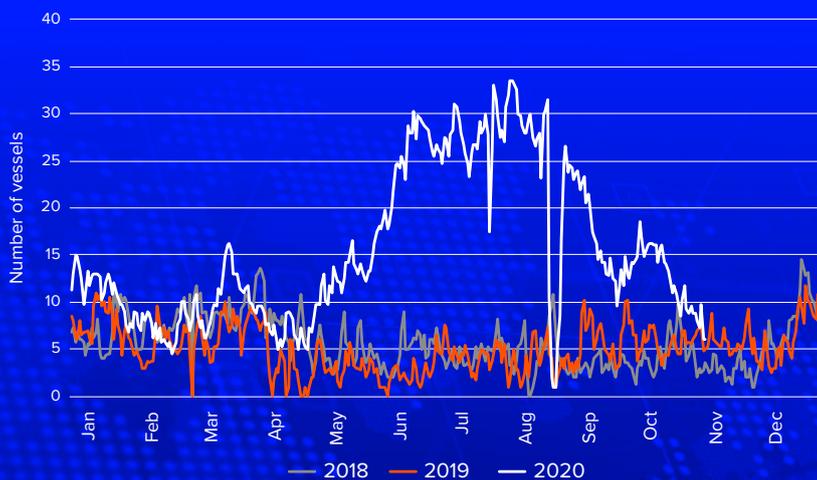
Source: Refinitiv BRI database

## BRI'S OIL STORAGE OPPORTUNITY

When oil prices crashed, China was one of the earliest countries to capitalize on the cheap oil available in the market. In a market structure called contango, where the future prices of a commodity are significantly higher than the spot market prices, traders can effectively store the commodity and sell it in the future. During the process, they incur storage and financing costs but are compensated due to the higher selling price. Contango in the market is short-lived as more traders make use of it and are effective only when using inland storage, where costs to store are lower. In extreme cases, such as the one earlier this year, the contango could be large enough to allow the storing of oil in tankers.

The chart on oil imports into China highlights that the cheaper crude bought by China in the second quarter made its way into the country through the late second quarter and third quarter 2020, creating record high imports. With the inland storages getting close to their capacity, several tankers had to wait outside Chinese ports for nearly months before getting to discharge the volume. The Port Congestion chart shows the congestion outside the port of Qingdao, reaching reached multi-year highs in the same period when imports started to go up to record highs.

### PORT CONGESTION – QINGDAO



Source: Refinitiv Shipping Research

Anticipating the opportunity, China has embarked on increasing inland storage capacity. Chinese refiners have undertaken the construction of storage tanks to increase holding capacity. One of the largest non-state refiners, Hengli Petrochemical Corp, doubled its storage capacity as prices crashed. The company started construction in March, and by early-July, 3.6 million cubic meters of storage were added. By the end of 2020, China is slated to add more than 15 million cubic meters of storage. The government has also announced a comprehensive storage vision plan that comprises not just energy but also agriculture and other commodities to ensure stockpiling at competitive prices and ensuring availability round the year. Currently, there aren't many BRI projects related to oil storage, but this could change in the future, with China opting to use part of the oil storage capacity, both as a strategic reserve and for enjoying the benefits of the market structure.

## POST-PANDEMIC DEMAND

The slowing of economic activity due to the COVID-19 pandemic has caused changes in global energy demand and supply patterns in 2020. In China's case, though, a rebounding economy in the second quarter, coupled with cheap crude oil bought for storage, helped drive up demand, with crude rallying to 90% of pre-COVID levels. Reuters reported that oil demand is forecasted to grow 2.3% to 13.6 million barrels per day in the second half, compared to the same period last year, while natural gas demand is expected to grow at 4.2%. With China expected to be among the handful of economies posting growth in 2020, recovery of the global oil market will be in the hands of the Chinese, at least in the short to medium term.

# CHINA'S OUTBOUND M&A SPEND IN BRI NATIONS NOT SLOWED BY COVID-19

Acquisitions along Belt and Road nations accounted for nearly one-fifth total Chinese outbound acquisitions in the first half of 2020

China spent \$3 billion on mergers and acquisitions in BRI-aligned nations in the first six months of the year.

Headwinds from stalled economic activity due to the coronavirus pandemic, geopolitical tensions, protectionist sentiment and regulatory hurdles have all served to impact outbound investments from China in the first half of 2020.

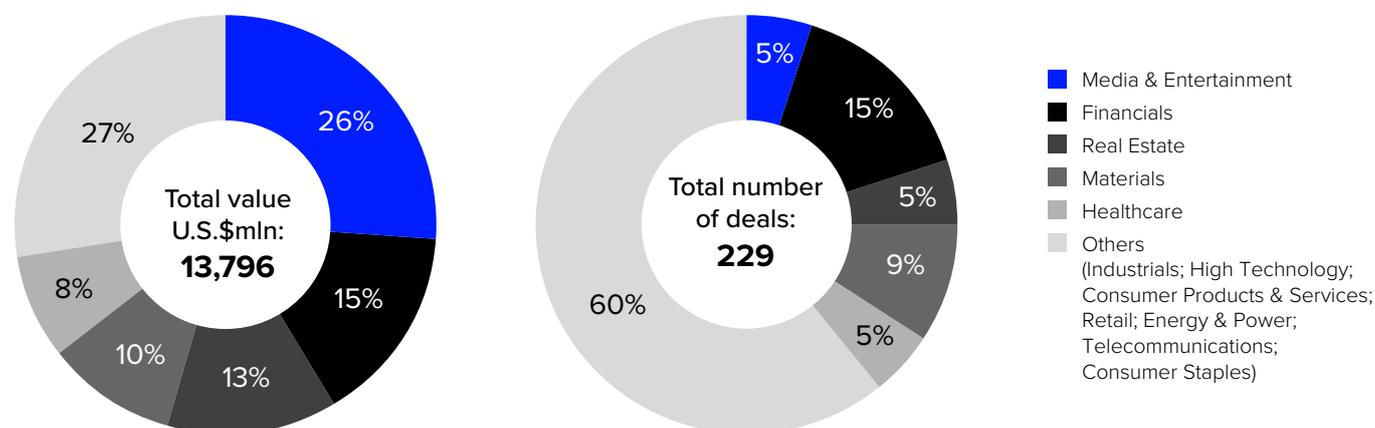
While Chinese outbound acquisitions in the first half shrunk, investment in BRI nations grew by double digits.

Outbound acquisitions (including BRI) in the first half totaled \$14 billion, down 35% compared to the first half of 2019, making it the lowest first-half period since 2007, when it was sitting at \$7.4 billion. However, on a quarterly basis, second-quarter outbound acquisitions increased by 50% to \$8.4 billion versus the first quarter and 31% against 2019.

Media & Entertainment was the most active sector in the first half, accounting for 25.7% of the total outbound value, followed by Financials (15%) and Real Estate (13%).



## CHINA OUTBOUND M&A – MACRO INDUSTRY



Source: Refinitiv Deals database

## CHINA OUTBOUND M&A – TOP 10 TRANSACTIONS

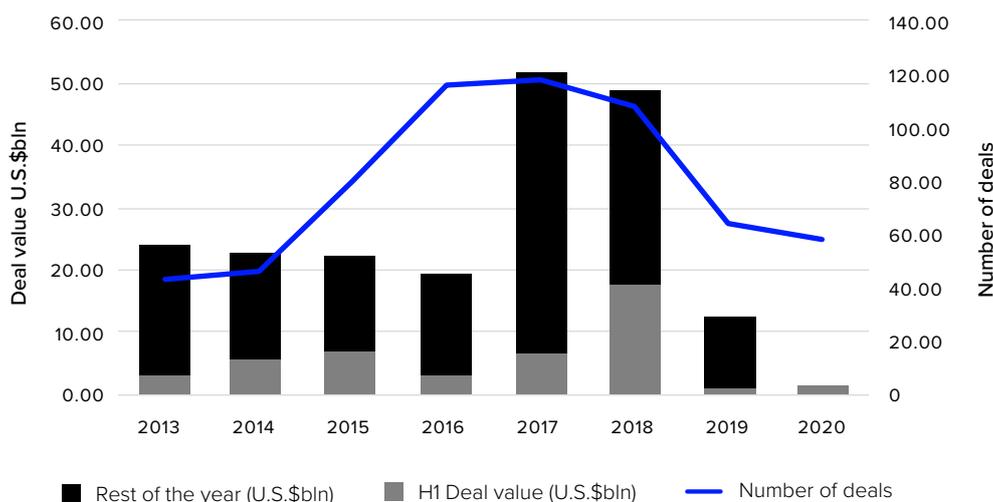
DATE	TARGET NAME	TARGET REGION	TARGET MACRO INDUSTRY	VALUE U.S.\$MLN	ACQUIROR NAME
03/31/2020	Universal Music Group	U.S.	Media & Entertainment	3,300.00	Investor Group (Tencent)
04/29/2020	Vivid Synergy	Hong Kong	Real Estate	3,300.00	Fuyue Investment Management Ltd
04/07/2020	Galileo Financial Technologies	U.S.	Financials	1,200.00	Social Finance Inc
06/10/2020	LG Chem Polarizer Division	South Korea	Healthcare	770.41	Ningbo Shanshan Co Ltd
06/22/2020	Star Readers Pte	Singapore	Consumer Products & Services	515.39	Maple Leaf CIS Holdings Pte Ltd
06/18/2020	Cardinal Resources	Australia	Materials	404.53	Shandong Gold Mining (Hong Kong) Co Ltd
06/10/2020	National Electric Vehicle Sweden	Sweden	Industrials	379.50	Mini Minor Ltd
04/15/2020	Ansaldo Energia	Italy	Energy & Power	349.13	Shanghai Electric (Group) Corp
03/05/2020	Fast Food Holdings	Hong Kong	Retail	336.59	CCHL Fast Food Holdings Ltd
06/29/2020	Gainpro Resources	Sri Lanka	Financials	268.00	Fujian Transportation Maritime Silk Road Investment & Management Co Ltd

Source: Refinitiv BRI database

## BELT AND ROAD

Chinese acquisitions along Belt and Road nations saw 58 deals worth \$3 billion in the first half, up 11% from a year ago. Overall, BRI deals accounted for 19.8% of the total Chinese outbound acquisitions in the first half, versus 12.4% the previous year.

### CHINESE ACQUISITIONS IN BRI NATIONS

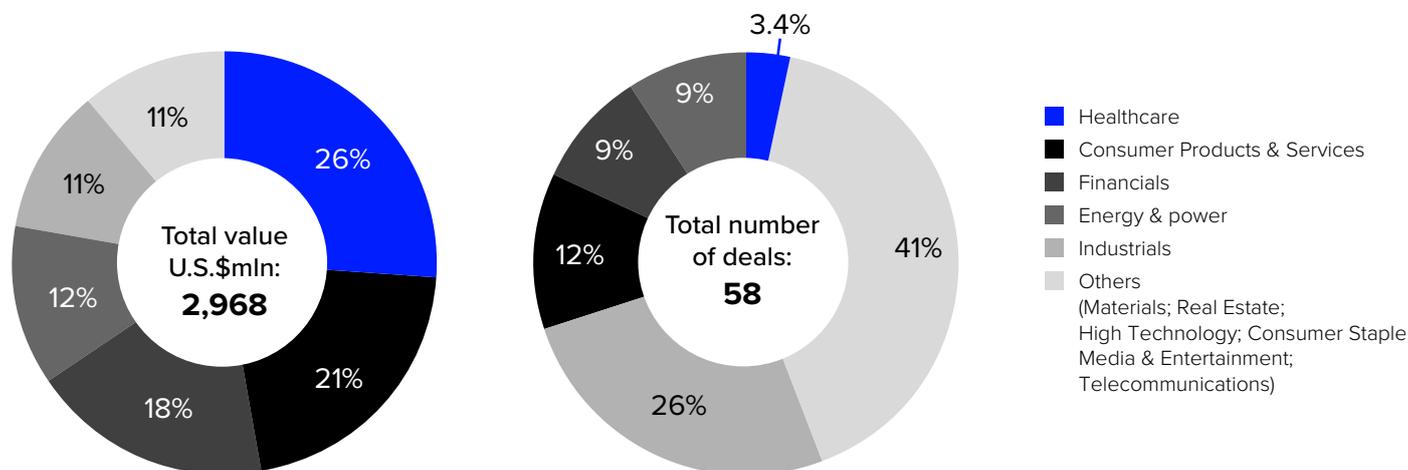


Healthcare was the top BRI M&A sector in the first half, accounting for 26% of the total value – a considerable increase from the same period last year, when it accounted for only 0.4% of the BRI M&A total value of \$2.7 billion.

The COVID-19 pandemic no doubt boosted the healthcare sector's rise in the first half of the year, as governments worldwide focused on getting a grip on the pandemic.

But in terms of volumes, Healthcare and Telecommunications shared the last spot in the first half, with two deals. Overall, Healthcare accounted for 8.6% of the total outbound value in the first half of 2020 with 13 deals, placing it in the fourth spot in terms of value and volume.

### CHINA OUTBOUND M&A H1 2020 – BELT AND ROAD INITIATIVE



Source: Refinitiv Deals database

With 15 deals, Industrials topped the volumes table in the second half, followed by Consumer Products & Services with seven deals. The third spot was shared by Materials and Consumer Staples with six deals each.

The largest outbound M&A for BRI in the first half of 2020 was in the healthcare sector, represented by Ningbo Shanshan's acquisition of LG Chem's polarizer business.

In comparison, in the first half of 2019, High Technology accounted for a whopping 55% of the outbound M&A, followed by Materials (19.6%) and Consumer Staples (17%). The total number of deals was 64.

## TOP 10 CHINA ANNOUNCED OUTBOUND M&A TRANSACTIONS – BRI

DATE	TARGET NAME	TARGET REGION	TARGET MACRO INDUSTRY	VALUE U.S.\$MLN	ACQUIROR NAME
06/10/20	LG Chem Polarizer Division	South Korea	Healthcare	770.412	Ningbo Shanshan Co
06/22/20	Star Readers	Singapore	Consumer Products & Services	515.390	Maple Leaf CIS Hldg Pte Ltd
04/15/20	Ansaldo Energia	Italy	Energy & Power	349.132	Shanghai Electric (Group) Corp
06/29/20	Gainpro Resources	Sri Lanka	Financials	268.000	Fujian Transportation Maritime Silk Road Investment & Management Co Ltd
05/26/20	Ruice Ever Explorer Victorious Sail	Singapore	Financials	263.122	Investor Group
04/03/20	Lekki Port LFTZ Enterprise	Nigeria	Industrials	233.707	China Harbour Engineering Co
05/29/20	Suntrust Home Developers	Philippines	Real Estate	144.411	Fortune Noble
01/03/20	SCHWENK Namibia	Namibia	Materials	104.411	West China Cement
02/18/20	Makati City Subway	Philippines	Industrials	72.000	Hong Kong Binjiang Industrial
01/29/20	Kingsley Edugroup	Malaysia	Consumer Products & Services	66.948	Maple Leaf Educ Asia Pac Ltd

In the first half of 2020, Singapore was the top BRI target country in terms of volume and value, with 13 deals worth \$857.5 million.

Last year, in the first half, Singapore took the top spot in terms of value with deals worth \$1.7 billion, while Italy topped the volume table with nine transactions.

Outbound M&A accounted for 7.5% of the total volume of Chinese M&A investments in the first half of 2020, compared to 10% in 2019.

# VIRTUAL BRI: DSR GOES MAINSTREAM AMID COVID-19

DSR is in the spotlight, thanks to digital connectivity's stellar role in ensuring economic and social continuity amid the coronavirus pandemic

As China emerges from the COVID-19 pandemic, the government is pushing digital infrastructure initiatives alongside traditional infrastructure projects to drive economic growth and future markets.

The thrust on digital infrastructure development within China is also expected to benefit the DSR, an integral but overlooked part of the broader BRI, which is in the spotlight thanks to digital infrastructure's vital role in ensuring business continuity amid pandemic-related lockdowns and restrictions.

While the roads, ports and railways of the BRI serve to connect the world to China physically, DSR infrastructure like submarine cables, satellites, 5G base stations and data centers are expected to do the same in the digital realm.

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**“The DSR is very important for China and is a central component of the BRI. The expansion of Chinese digital tech is likely to intensify in a post-COVID-19 world.”**

Tin Hinane El Kadi

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Tin Hinane El Kadi, Associate Fellow at Chatham House, pointed out that the digital economy is “a rare pole of growth” in today’s global economy and one in which China has built a comparative advantage.

Tin, who is also a Political Economy Researcher at London School of Economics (LSE), said: “The DSR is very important for China and is a central component of the BRI. The expansion of Chinese digital tech is likely to intensify in a post-COVID-19 world.”



In fact, the pandemic didn't affect the flow of announcements highlighting the government's digital infrastructure plans, even as economic growth faltered during the COVID-19 crisis.

In February, amid a surge in cases, China Mobile, China Telecom and China Unicom, alongside Huawei, released a [5G network industry](#) paper. In fact, Chinese firms have played a significant role in setting global technology standards for 5G within multilateral bodies like the International Telecommunication Union.

Dale Aluf, Director of Research & Strategy, Sino-Israel Global Network & Academic Leadership (SIGNAL), an Israeli policy organization which is also a member of China's Silk Road Think Tank Association (SRTA), pointed out that even in April, while dealing with enormous social, economic and political challenges caused by the coronavirus, China simultaneously launched the world's biggest blockchain ecosystem and digital currency.

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**“The quest to lead the world in advanced technologies is a key feature of the geopolitical competition with the U.S. This might explain why China continues to promote the development of these technologies amid the crisis.”**

**Dale Aluf**

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In the previous month, President Xi Jinping had called for the acceleration of construction of digital infrastructure such as 5G networks and data centers, during an inspection tour of Zhejiang province. Responding to the call, China's largest telecommunications companies announced a plan to build over [50,000 5G base](#) stations in 300 Chinese cities by the end of 2020.

“Then Premier Li Keqiang, in May, further declared that China would develop next-generation information networks and expand 5G applications across the BRI countries,” Research Analyst Chan Jia Hao, formerly associated with the Institute of South Asian Studies (ISAS), added.

United States-based [Center for Strategic and International Studies](#) explained in a recent report that, unlike the BRI's signature transportation and energy projects, digital infrastructure projects are “generally lower cost, easier to deliver and easier to monetize.” According to the report, Chinese tech companies also get an opportunity to pitch their products as part of responding to the current outbreak and preventing future pandemics.

“The quest to lead the world in advanced technologies is a key feature of the geopolitical competition with the U.S. This might explain why China continues to promote the development of these technologies amid the crisis,” said Aluf.

For example, China is poised to release [China Standards 2035](#) this year, an ambitious 15-year blueprint that will lay out Beijing's plans to set the global standards for the next generation of technologies.

## GLOBAL LEADER

The pandemic is already strengthening China's position as a global digital infrastructure provider, as many developing countries with limited resources respond positively to Chinese investments under the DSR program.

“Given that China has signed up more than 150 deals with 125 countries, and several international organizations, the world has definitely taken note of China's ambitious Digital Silk Road plans,” said Saurabh Verma, Director – ICT Practice for the Middle East at global research and consulting firm Frost & Sullivan.

Moreover, DSR gives partner countries an excellent opportunity to leapfrog into next-generation digital technologies at affordable prices.

“Many aspects of China's ‘going out’ policies pursued by Chinese tech companies fill unmet needs for digital connectivity in developing countries,” said Tin.

She pointed out that Huawei's ICT equipment generally sells 5 to 15% cheaper than its main international competitors, Ericsson and Nokia. ZTE has, in the past, offered equipment up to 30 to 40% cheaper.

“The price competitiveness of Chinese tech firms, and their access to funding from Chinese financial institutions such as the China Exim Bank and the China Development Bank, has helped many developing countries catch up in terms of digital infrastructure over the past 20 years,” said Tin.

Hao, who has closely tracked the progress of DSR, said that over 6,000 Chinese Internet enterprises and 10,000 technological products have spread across overseas markets to date.

“Broadly, they include Chinese enterprise-led 5G telecommunication and fiber optic infrastructure, BeiDou satellite services, smart city projects, and data centers across Asia, Africa and Europe,” he said.

## INVESTMENT OPPORTUNITIES

Frost & Sullivan expects DSR to offer several opportunities to partner countries around construction, fiber optic cables, cellular networks, data centers and Internet exchanges in the initial phase.

“The second phase would be more focused on developing technologies for the domestic markets, which ultimately will help the partner countries on driving innovation and driving long-term sustainable growth,” said Verma.

Domestically, Hao said, the BATH quatuorvirate – Baidu, Alibaba, Tencent and Huawei – have been involved in the areas of 5G, e-commerce, artificial intelligence, cloud computing, blockchain, microchips, and smart cities. For example, Baidu topped the table in terms of the number of [AI-related patent](#) applications in China.

But, for BRI partner countries and companies, the opportunities can be very different from what’s offered in China’s domestic market, he noted.

“External factors like differing multi-vendor approaches in technology auctions, government policies, and market demands across BRI countries, can result in varied opportunities,” explained Hao.

## COVID-19 EFFECTS

As one would expect, infrastructure and construction projects, as part of the BRI, have been halted or delayed by the COVID-19 pandemic.

Tin points out that disruptions to global value chains, lockdowns and travel restrictions on foreign workers, especially Chinese workers generally employed on BRI projects, have caused suspensions and slowdowns.

Yet, she said, one must not forget the BRI’s geo-economic dimension. China has overcapacity in ICT manufacturing (surplus in fiber optic production), and international markets are very profitable for Chinese tech giants. “Hence, it is likely that Chinese digital capital will resume its global expansion despite an initial slowdown caused by the pandemic,” she said..

Despite the hurdles created by the pandemic, Hao said Chinese policymakers and enterprises continue to collaborate on expanding key areas such as 5G.

“Chinese technological dominance in Asia and Africa is not likely to recede after COVID-19,” he predicted.



## CONCERNS

Like BRI, DSR has been subject to criticism related to data security, censorship and surveillance, with the U.S. and other western countries upping the ante on Chinese tech firms.

For instance, 5G infrastructure, which is a part of China's post-COVID technological thrust, has already emerged as a flashpoint between America and China.

"One might go as far as to say that 5G has become a sort of poster child for U.S.-China competition. Think of America's global campaign to pressure allies not to roll out Huawei 5G," said Aluf.

However, according to tech consultancy [Gartner](#), China currently leads the world in 5G investment and is expected to contribute 49.4% of 5G investment globally this year.

By the end of July, the [total number of 5G users](#) in China had surpassed 88 million, accounting for over 80% of the global 5G userbase, according to Ecns.cn, the English-language website of China News Service.

Experts also anticipate China's new blockchain ecosystem – [Digital Currency Electronic Payment \(DCEP\)](#) – to face similar resistance.

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**Dale Aluf**

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As this understanding (of critical and core) evolves, Aluf said it seems reasonable to suggest, given the current climate, that other technologies like quantum computing may also suffer fates similar to that of 5G in the future.

Hao said the international community has been increasingly uncomfortable with the growing internationalizing of the Chinese ecosystem "as the tech products and services are perceived to [be] bundled with the imposition of Chinese standards and rules."

Tin added that the West feels threatened by China's technological ascendancy and "will leverage all the tools it has to weaken the rise of China's tech firms."

"This discourse of Western digital firms "protecting privacy" versus Chinese firms "not caring about privacy" is likely to be further used to isolate Chinese firms, as evident from the recent UK decision to forbid British telecom operators from using Huawei equipment," she said.

In the foreseeable future, Tin expects Chinese tech firms may continue to expand more in developing countries, many of which have signed memorandums of agreement to join the BRI.

As the CSIS report noted, "Nearly half the world still lacks access to the Internet, and Chinese firms have a [track record](#) of bringing connectivity to overlooked markets."

While it is difficult to predict right now, the ongoing trade war between the U.S.-led West and China is unlikely to subside anytime soon, said Frost & Sullivan's Verma.

As of now, it appears that the partner countries are not too worried about the Western posture, but, he said, that doesn't mean that it can't change in the future. "On the other hand, China will eventually have to find a way to address these issues around data security, debt trap, technology transfer, etc."

In September, China announced an [eight-point initiative](#) to establish global standards on data security, which aims to allay some of the criticisms leveled against Chinese tech giants on the protection and use of data.

With China's IT/telecom companies making rapid penetration into newer markets, including African and other developing countries, experts say this will have significant economic, political and strategic implications for the world.

"China's emergence and dominance in the telecom and tech space is phenomenal. The speed at which China has excelled in the telecom and tech space is exemplary, and there are very few countries in the world [that can] even match that speed, forget about outpacing China," said Verma.

China's growth and emergence as the second-largest economy (especially at this pace) have already had a significant impact on the geopolitical world, and he expects "it is only going to be more complex and intertwined in the future."



## DSR VS. BRI

On the perception front, the fact that ICT projects are comparatively easier to execute with lesser investment and lower visibility, compared to BRI's massive energy and transportation projects, could help DSR weather criticisms better than its big brother.

Like the BRI, the DSR has both domestic and foreign policy objectives. Aluf elaborated: "For one, China plans to position itself to reap the benefits of the increasingly digitized global economy. Rolling out digital infrastructure, therefore, promotes corporate China's global expansion. Like the BRI, the DSR can also help China mitigate its industrial overcapacity."

On the geopolitical front, he said China understands that control of digital infrastructure technologies gives power. "As China lays down digital infrastructure, it gains access to the flow of data across its networks. This data can also be used to fuel China's AI machines. Training facial recognition software, for example, requires tons of data, the more data they can input, the more effective the technology becomes."

Digital financial technologies like Cross-Border Interbank Payment System and the "digital yuan" also hold potential to rejig the international financial system and facilitate the renminbi's internationalization.

Giving the example of the digital yuan, Aluf said China could encourage its trading partners in Africa and elsewhere to adopt the digital currency by offering incentives such as lower tariffs, discounts on infrastructure projects and other economic benefits, to promote its use.

"If it takes hold and becomes more widely adopted, it could reshape the architecture of the global financial system. Additionally, the more digital infrastructure China controls, the more influence they have in shaping digital governance," he concluded.

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**"As China lays down digital infrastructure, it gains access to the flow of data across its networks. This data can also be used to fuel China's AI machines. Training facial recognition software, for example, requires tons of data, the more data they can input, the more effective the technology becomes."**

**Dale Aluf**

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# UN PILOT SCHEME TIES SUSTAINABLE DEVELOPMENT GOALS TO CHINA PROJECTS, FUNDING

The “taxonomy” will ensure projects “do no harm” and “leave nobody behind”

A new system of metrics for assessing development and funding in China, to ensure they align with 17 globally recognized Sustainable Development Goals (SDGs), will impact those seeking financing for BRI projects.

In September 2015, the 193 member states of the United Nations (UN) reached a consensus on the 2030 Agenda for sustainable development, which identified 17 SDGs in social, economic and environmental fields.

The listed SDGs include ending poverty, zero hunger, health and well-being for all, quality education, gender equality, clean water, affordable clean energy and climate change action.

UN Secretary-General Antonio Guterres emphasized that implementing the 2030 Agenda for sustainable development is facing severe challenges and risks, and the implementation of the SDGs is behind schedule and needs greater financial support.

The Sustainable Development Goals Finance Taxonomy (China) (2020) is the first project classification system with impact assessment and reporting criteria that allows investors and project developers to identify SDG-enabling projects.

The United Nations Development Program (UNDP) worked closely with the Chinese government and global sustainability experts to produce the guide, now piloted across China. It has a special focus on closing the gap of access to socioeconomic empowerment and advancing vulnerable groups, beyond climate change mitigation, adaptation and environmental protection.



While the Taxonomy is developed specifically for China's context, it is adaptable internationally, according to a UNDP report.

"The SDGs are a global pledge to end poverty, reduce inequality and protect the planet for future generations, by the year 2030. This is already changing "business as usual" by putting the SDGs at the center of how business is done. To support this, the SDG Finance Taxonomy (China) offers a classification system, with impact assessment and reporting criteria for finance and investment activities that can make a substantial contribution to at least one SDG, while avoiding significant harm to the others."

Achieving the SDGs requires closing an estimated \$2.5 trillion to \$3 trillion funding gap per year in developing countries alone. Therefore, financing these goals is one of the biggest challenges in meeting them. This includes difficulties in mobilizing finance and helping to steer finance into projects contributing to sustainable development, the report added.

On the consumer front, business opportunities for brands that make sustainability credentials clear are estimated to be worth €966 billion, according to the report.

Zhang Yi, Deputy Director-General of the China International Center for Economic and Technical Exchanges, at the Ministry of Commerce, said: "As the executing agency of UNDP's project in China authorized by the Chinese government, CICETE has accumulated 36 years of professional experience in the field of international development cooperation. It has cooperated with UNDP for a long time to promote the development of microfinance and inclusive finance in China and made positive contributions to poverty eradication in China.

"We believe that our new cooperation on integrating the financial system with the Sustainable Development Agenda will play its due role in promoting the realization of the SDGs and the two Centenary Goals of China, and the practice of new development concepts and the building of a community with a shared future for mankind."



Beate Trankmann, the United Nations Resident Representative in China, said: “The 17 Sustainable Development Goals covered by the 2030 Agenda aim to end poverty, reduce inequality and protect the planet.

“This Taxonomy is an important step in this direction, offering an ambitious initiative for moving towards a more integrated approach to defining eligible SDG-enabling finance projects and assessing their development impact. It is also the first Taxonomy with a special focus on equal economic opportunities and access to social services for vulnerable groups, over and beyond climate change adaptation and environmental protection criteria that other international and national taxonomies are already championing.

China is shifting towards growth that promotes high-quality development, accelerating the SDGs and making significant progress in innovation, as well as fighting poverty and pollution. China has one of the largest shares of SDG business opportunities and markets, and plays an increasingly influential role in the global arena. Consequently, we are testing this Taxonomy in China first.”

Last year, China launched the International Coalition for Green Development on the BRI, to facilitate the implementation of the SDG agenda through a green construction of the Belt and Road.

Dr Christoph Nedopil Wang, Director of the Green Belt and Road Initiative Center, and a co-author of the UNDP report, said: “The SDG Finance Taxonomy is expanding China’s green finance to address sustainability more holistically. It is the first taxonomy of its kind with over 100 projects and appropriate indicators to measure SDG contribution.”

Wang, who is also coordinating a new Green Light System (GLS) for BRI projects to ensure that they are environmentally friendly, said the metrics used in the two systems, directly linked to BRI, will not be the same.

“They will mostly be quite different, in the end. The SDG finance taxonomy is concerned with all 17 SDGs, particularly with the social aspects. Therefore, impact indicators all have a social element in them. In comparison, the Green Light System is more concerned with environmental metrics. It will therefore be more concerned with pollution, biodiversity and emissions.”

In September, while addressing the UN General Assembly, President Xi Jinping announced that China would achieve a [peak in carbon dioxide](#) emissions before 2030 and carbon neutrality before 2060. Reuters columnist Clyde Russell has argued that for [China’s carbon emissions to peak](#) prior to 2030, a radical shift in energy investments will have to take place.

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**Dr Christoph Nedopil Wang**

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Wang added that the GLS, not yet operational, would hopefully address all project phases, provide an exclusion list for environmentally harmful projects, implement higher environmental impact assessment standards, link environmentally preferable projects to favorable loan conditions and establish a grievance mechanism for all BRI projects.

He said the next phase of the GLS is scheduled to start “soon,” potentially with a series of pilot schemes.



# CLIMATE CHANGE IS RESHAPING THE BELT AND ROAD

China is taking the lead in adopting environmental, social and governance (ESG) standards in the BRI

Some of the world's largest pension funds, sovereign wealth funds and asset managers are now looking to invest in companies and projects that are mindful of their environmental footprint.

Companies committed to social responsibility towards all stakeholders and communities, ensuring transparent, ethical and inclusive workplaces that embrace diversity, will prosper under the new requirements.

Last year, the [International Monetary Fund \(IMF\)](#) announced that ESG issues – if ignored – could materially impact corporate performance and financial stability, via exposure of the banks and insurers. Climate change is forcing investors and companies globally to adapt their own business models to the new ESG reality.

Indeed, companies exposed to resources such as coal and oil in hard-to-access areas or complex geologies may find themselves at a disadvantage in the near future. The recent write-off of billions of dollars by Royal Dutch Shell (\$22 billion) and BP (\$17.5 billion) underscores the changing outlook for products and commodities with large carbon footprints.

The majority of the ESG developments so far have focused on the environment, with the S and G remaining largely silent – for now, although that's starting to change, as evidenced by protests surrounding race relations in the U.S., to cite just one example of the changing workplace. For now, environmental considerations remain the dominant theme among investors.

## BRI AND ESG

Against this backdrop, China's BRI aims to straddle the emerging climate-conscious world and the more conventional working methods still focused on sourcing the cheapest energy available.

The sprawling multitrillion-dollar program linking Asia, the Middle East, Europe, Africa and Australasia has had its fair share of criticism in recent years for focusing on large, carbon-intensive projects that have upset the ecology of sensitive areas.

"The Chinese model of infrastructure development has been widely criticized for [ignoring ESG impacts](#), although it has certain merits of being pragmatic, fast and cost-effective," Sun Xi and Herta Monica Montesino Cucos wrote in the Korean Times, in May 2019.

But that perception could gradually change. For example, the top three power projects in Refinitiv's BRI database are nuclear energy projects, deemed low-carbon sources of electricity (the database has classified nuclear energy projects as renewable energy).

The \$29.07 billion Hinkley Point C Nuclear Power Station Project in the UK is the largest energy project under the BRI. It is followed by the \$25 billion Ignada Nuclear Power Plant Project

in Turkey, and the \$24 billion Sizewell C Nuclear Power Station Project, also in the UK.

Renewable energy projects, comprising solar, wind, nuclear and geothermal, currently account for almost 40% of \$332 billion worth of active BRI power generation projects in the database.

The report, [Decarbonizing the Belt and Road](#): A Green Finance Roadmap, issued by UK-based Vivid Economics last year, noted: "The nature of infrastructure and other construction projects means that carbon is locked in at the design and investment stage for the entire lifespan – therefore green financing and policy action are required today to ensure BRI projects are green and low-carbon."

Indeed, ESG is coming into sharp focus in Beijing. Last year, Chinese President Xi Jinping stated categorically that BRI infrastructure projects should be green and sustainable.

"We need to pursue open, green and clean cooperation," the [President](#) said in April 2019, at the Second Belt and Road Forum for International Cooperation. "The Belt and Road is not an exclusive club. We may launch green infrastructure projects, make green investment and provide green financing."



## BUILDING DOMESTIC CAPABILITY

Chinese regulators are upgrading their environmental rules and forcing companies to look at adopting ESG principles and standards.

“This awareness of the need to take an ESG approach is certainly gaining traction. Chinese construction companies have realized they cannot do transactions now without meeting these standards,” said Rajeev Kannan of Sumitomo Mitsui Banking Corporation, in a report by [Baker McKenzie](#).

Domestic capacity building is also coming to the fore, as Chinese ESG-aligned investors would then promote the concept in other BRI countries as well, according to an article authored by Yi-Chen Shi and team from the Yangtze River Delta Green Investment Institute.

They have argued that Chinese investors should “strengthen their awareness of ESG, improve their ability to identify environmental and social risks, disclose ESG information in a timely manner, issue ESG reports regularly, and eventually establish a ‘Chinese ESG standard.’”

China’s stock exchanges are also looking to burnish their ESG credentials by introducing new requirements for companies to disclose their ESG practices. Later this year, Shanghai and Shenzhen exchanges are likely to follow the Hong Kong bourse in seeking ESG disclosures.

Other regulators are also raising the country’s environmental profile, which will ultimately trickle down to BRI projects, due to heavy involvement of Chinese companies in the value chain.

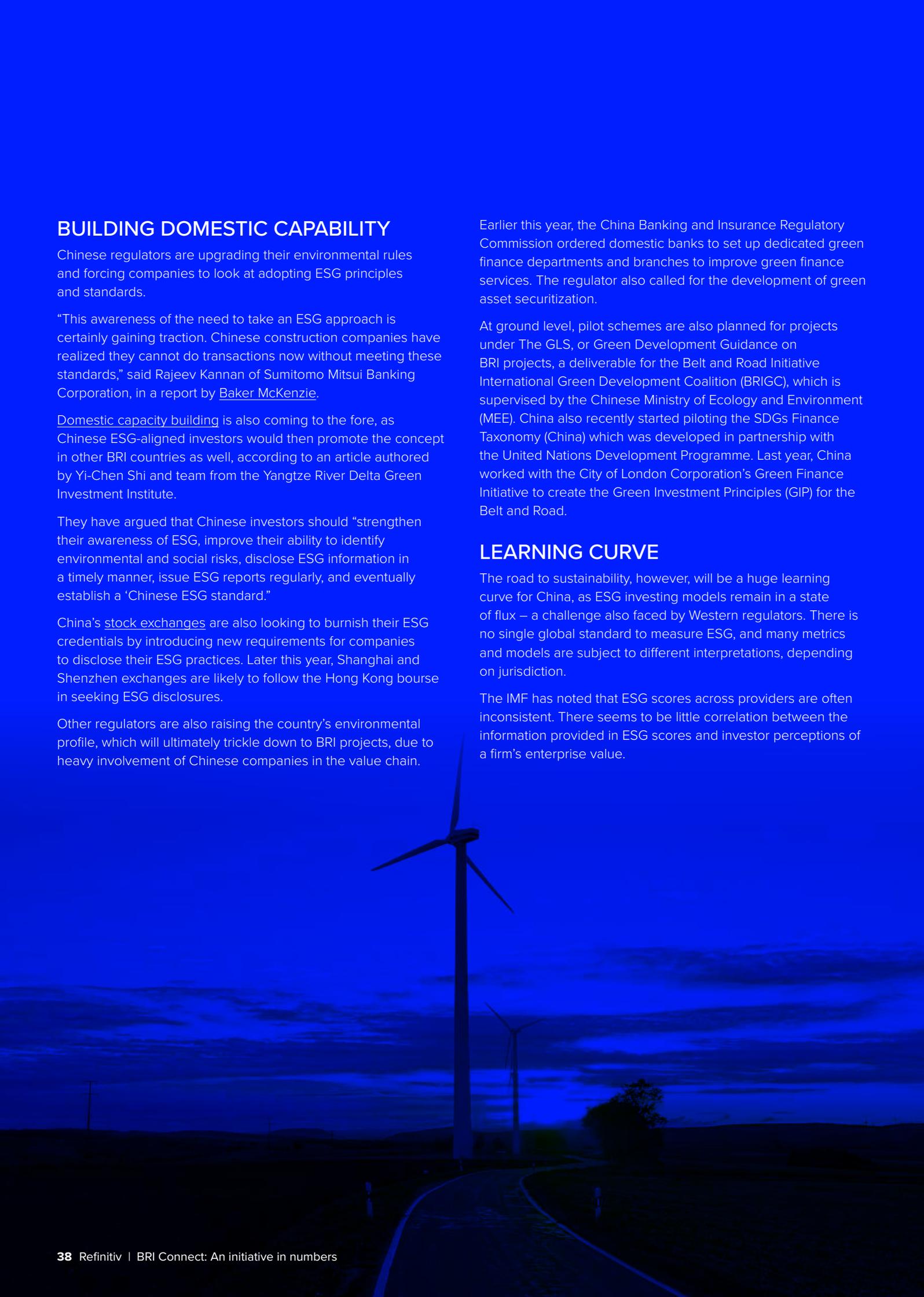
Earlier this year, the China Banking and Insurance Regulatory Commission ordered domestic banks to set up dedicated green finance departments and branches to improve green finance services. The regulator also called for the development of green asset securitization.

At ground level, pilot schemes are also planned for projects under The GLS, or Green Development Guidance on BRI projects, a deliverable for the Belt and Road Initiative International Green Development Coalition (BRIGC), which is supervised by the Chinese Ministry of Ecology and Environment (MEE). China also recently started piloting the SDGs Finance Taxonomy (China) which was developed in partnership with the United Nations Development Programme. Last year, China worked with the City of London Corporation’s Green Finance Initiative to create the Green Investment Principles (GIP) for the Belt and Road.

## LEARNING CURVE

The road to sustainability, however, will be a huge learning curve for China, as ESG investing models remain in a state of flux – a challenge also faced by Western regulators. There is no single global standard to measure ESG, and many metrics and models are subject to different interpretations, depending on jurisdiction.

The IMF has noted that ESG scores across providers are often inconsistent. There seems to be little correlation between the information provided in ESG scores and investor perceptions of a firm’s enterprise value.



However, China's emergence as one of the [world's largest issuers](#) of green bonds is a positive factor where ESG adoption is concerned. In 2019, the total amount of Chinese green bonds issued in domestic and overseas markets reached \$55.8 billion, representing a 33% increase from the \$42 billion recorded in 2018, according to a report by Climate Bonds Initiative (CBI) and CCDC Research.

China was also the largest source of labeled green bonds (aligned with CBI green definitions) with \$55.8 billion bonds issued.

China embarked on the green finance path with Green Credit Guidelines in 2012 and Guidelines for Establishing the Green Financial System in 2016, issued by the erstwhile China Banking Regulatory Commission and the People's Bank of China.

[Green credits](#), such as loans to projects offering energy savings or emission reductions, now make up approximately 10% of the portfolios of China's top 21 banks, the World Bank recorded, largely thanks to mandatory Green Credit Guidelines.

Further boosting China's environmental leadership is the Asian Infrastructure Investment Bank, the Beijing-based development finance body modeled on the World Bank. Last year, AIIB launched a \$500 million green bond to address the under-development of the climate bond market among AIIB members.

"It (Asia Climate Bond Portfolio) expects to mobilize another \$500 million from climate change-focused institutional investors. The project also seeks to allocate a portion of the investment proceeds for market education, engagement and issuer support," [AIIB](#) said.

AIIB has collaborated with Amundi to launch the Climate Change Investment Framework, to assess an issuer's level of alignment with climate change mitigation, adaptation and low-carbon transition objectives.

In September, AIIB president Jin Liqun announced at the Climate Bonds Annual conference that the bank has decided to stop all future thermal coal and related financing.

Prior to that, in June, the People's Bank of China, the China Securities & Regulatory Commission (CSRC) and the National Development & Reform Commission (NDRC) said they would exclude coal from their [green bonds taxonomy](#). That same month, [six](#) Chinese government institutions recommended that provinces should "eliminate outdated coal-fired power units" and "strictly implement the relevant requirements of safety, environmental protection, energy consumption, quality, land use, industrial policy and capacity replacement," among other measures. These measures assume significance in the context of coal accounting for [58% of China's total energy consumption](#) and 66% of its electricity generation.

## BRI MEMBERS SEEK ESG

China will also feel pressure from BRI members across Europe, Africa and Asia who want the next wave of BRI projects to be more sustainable. In March 2020, Bangladesh decided to scrap the 350MW [Gazaria coal-fired power plant](#) project due to opposition from the local community. Last year, Kenya stopped construction of the [Lamu coal-fired plant](#) due to environmental concerns. Tanzania also canceled the massive Bagamoyo port project due to unfavorable contract conditions, while [Pakistan](#) shelved a 1,320MW CPEC coal power project on the grounds that it was financially unsustainable.

The report [Decarbonizing the Belt and Road](#) has suggested that China's existing domestically-focused green finance and investment policies should also be extended to the country's external investments, including those in the Belt and Road region.

According to investment company [Invesco](#), the outbreak of COVID-19 has highlighted the importance of a safe, clean and sustainable environment to reduce systemic health risks.

It said: "We believe ESG factors will be critical to the long-term economic development of emerging market countries, where the level of socio-economic development, degree of political stability and entrenchment of the rule of law can vary significantly.

"Over the last three years, the sovereign bonds of countries rated more highly from an ESG perspective have outperformed lower ESG-rated peers. We believe China's emphasis on ESG factors would be a positive catalyst for the overall development of the Belt and Road universe."

In the interim, though, the ripple effect of post-COVID-19 stimulus measures is likely to slow down China's progress toward an energy mix less reliant on fossil fuels, according to S&P Global Ratings. Reliance on debt-financed infrastructure investment in roads, rail and airports means higher consumption of steel, cement and bulk commodities which, in turn, means more energy use, especially from fossil fuels, the rating agency said in a recent report.

"Warning signs abound that the energy transition has stalled in the country (China), but this must be considered alongside its new commitment to achieve carbon neutrality by 2060. We will learn more when the 14th five-year plan is released in March 2021," the report noted. ■



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BRI Connect, a part of Refinitiv's Global Infrastructure Initiative, is a suite of evolving tools that provides access to comprehensive information, including macroeconomic, market, financing, geopolitical, country and operational risk data on BRI-related countries, organizations, deals and projects.

**Available exclusively through Eikon, BRI Connect helps financial professionals to:**

- Monitor a database of BRI-related projects, updated in real time
- Access unparalleled coverage of financing deals and primary capital markets
- Better understand where to invest in BRI opportunities
- Secure accurate, up-to-date country risk ratings
- Find details on over 3,500 BRI-related organizations

## BRI METHODOLOGY

**Our methodology for identifying projects related to BRI is as follows.**

BRI Connect includes projects: that have been identified as such by the Chinese government or Chinese state departments; where project contractors have signed agreements with the government departments of the relevant country along BRI corridors and have obtained the relevant regulators' approvals required for Belt and Road initiatives; or which are published on the BRI official website: [yidaiyilu.gov.cn/](http://yidaiyilu.gov.cn/); or projects that have direct Chinese participation at a consultant, owner, contractor and financier level, or are of strategic interest located along a BRI economic corridor.

### About Refinitiv

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