Chinese Overseas Investment Policy: Implications for Climate Change

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Abstract

President Xi Jinping launched the Belt and Road Initiative (BRI) in 2013. In total capital, China is now the largest investor in least-developed countries and in developing Asia, and the fifth-largest investor in Africa. Motivated by concerns about the climate change consequences of China's overseas investments, this paper identifies and evaluates Chinese policies governing China's overseas investments and analyzes how those policies influence environmental outcomes in recipient countries. Policies governing domestic investments are analyzed in order to clarify inconsistencies between domestic and overseas policies. Key findings are that the Chinese government's environmental policies governing domestic investments are more stringent than those governing overseas investments. Chinese environmental overseas investment policies are mostly voluntary in nature so long as firms comply with host country regulations. Disclosure and transparency of information about China's investments is opaque. Even if there is a failure to comply with host country regulations, there do not appear to be serious enforcement consequences. Finally, China encourages overseas investments in clean energy as well as exploration and development of higher carbon industries and fails to specifically restrict or prohibit investment in carbon-intensive and fossil fuel industries in its overseas investments, revealing a discrepancy between policy for domestic and overseas investment.

Policy implications

- Chinese policies governing the environmental dimensions of overseas investments are much weaker relative to their policies governing domestic investments.
- Chinese policies specifically aimed at limiting emissions of climate-altering greenhouse gases from China's overseas investment do not exist.
- China encourages overseas investments in clean energy as well as exploration and development of higher carbon industries and fails to specifically restrict or prohibit investment in carbon-intensive and fossil fuel industries in its overseas investments, revealing a discrepancy between policy for domestic and overseas investment.
- China's regulatory approach for overseas investments has shifted from *ex ante* review to management of the whole outbound investment process, inclusive of *interim* and *ex post* monitoring and supervision. The review process relies on selfdisclosure of information by Chinese firms.
- If the Chinese government's default position is that Chinese firms and banks must adhere to recipient country policies, then recipient countries must put in place sound environmental governance regimes if they wish to pursue a greener development pathway.

With the inception of the 'Going Out' policy in 1999, Chinese overseas foreign direct investment (FDI) began to grow dramatically. The trend gained further momentum when Chinese President Xi Jinping launched the Belt and Road Initiative (BRI) in 2013. In 2017, the BRI was enshrined in the Chinese Communist Party's Constitution, and China is now poised to become the largest source of foreign direct investment and overseas development assistance in the world.

This paper identifies and evaluates China's major policies for overseas investments since 1995. Methodologically, a complete inventory of Chinese policies for domestic and overseas investments was constructed and all of the policies referenced in this paper are provided in a database (Qi and Gallagher, 2020). These policy documents were mostly available in Chinese and they were then translated for the purpose of analyzing them. The original policy documents and available English language translations are cited in the database. This paper builds on Gallagher and Qi (2018)^{1.} to compare and contrast Chinese policies for domestic investments with those for overseas investments to identify trends, illuminate inconsistencies, and clarify key policy drivers for certain types of foreign investment. After creating the inventory of policy documents, we systematically analyzed all of these documents to determine if and specifically how the policies have evolved over time. We also analyzed how domestic and overseas finance policies differ with respect to their treatment of environmental risks, specifically those related to climate change. Finally, we sought to pinpoint which policies must be reformed to reduce the environmental risks, particularly for climate change, of China's overseas investments in order to foster green development in BRI countries.

260

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According to official Chinese government sources, China's BRI is motivated by China's desire to 'promote orderly and free flow of economic factors, highly efficient allocation of resources, and deep integration of markets by enhancing the connectivity of the Asian, European, and African continents and their adjacent seas' (Xinhua, 2015). Some Chinese scholars and government officials have acknowledged that one of the drivers of the BRI is to export surplus capacity, although the Chinese government has officially denied it (Su, 2015). Yet, during an inspection tour in Guangdong on 5 January 2015, Premier Li Kegiang stated that in order to absorb excess domestic production capacity, it was 'imperative to promote the going out of China's power equipment' (Wang, 2015). Nonetheless, the Chinese government always emphasizes the mutual benefits of transferring its competitive production capacity and manufacturing equipment to developing countries. This paper makes no assumptions about China's underlying strategic motivations. Instead, it is intended to identify and evaluate the current policies governing Chinese overseas investments.

China's overseas investment flows ranked second globally behind Japan at \$130 billion in 2018 (UNCTAD 2019) after peaking in 2016 at \$183 billion (UNCTAD, 2017). In terms of FDI stock, China is the largest investor in least-developed countries, the top investor in developing Asia, the fourth-largest investor in Russia, Eastern Europe, and Central Asia, and the fifth-largest investor in Africa (UNCTAD 2019).

Since the turn of the century, China's policy banks, specifically the China Development Bank (CDB) and the Export-Import Bank of China (CHEXIM), have invested \$251 billion in energy projects globally, and coal investments account for 21 per cent of the total (Gallagher, K.P. 2020). Coal is the most carbon-intensive fossil fuel and thus contributes the most greenhouse gas (GHG) emissions of any fossil fuel. Eighty per cent of China's overseas energy investments are in fossil fuels compared with only 3 per cent in solar and wind, and 17 per cent in hydro (ibid). Of the total, 33 per cent is in exploration and production, 44 per cent is in power generation, and 14 per cent in transmission and distribution (Gallagher, K.P. 2020). Coal therefore accounts for a higher share of electric power (Li et al. 2020).

Although there are undoubtedly economic and development benefits to China's foreign direct investment in developing countries, controversy is growing about their significant social and environmental impacts. Protests from local communities have sometimes derailed multi-billion-dollar contracts, as shown in the case of the Myitsone hydropower project on the Irawadddy in Myanmar (International Rivers, 2017) as well as numerous mining and hydropower projects in Latin America (Ray et al. 2017). While local communities have protested the localized environmental effects of certain investment projects, broader concerns about the GHG emissions resulting from new long-lived power plants, for example, are also emerging. In addition, concerns have emerged about debt sustainability as well as geopolitical and national security implications (e.g. the Sri Lankan Hambantota Port in the Straits of Malacca, which was financed

primarily by CHEXIM and then in 2017 leased by the Sri Lankans for 99 years to China).

In 2013, the World Bank limited its investments in coalfired power plants after determining that there were many other technologies available that could increase access to electricity and ameliorate poverty. Most multilateral development banks (MDBs) have since developed similar policies to limit financing for coal, but commercial banks largely do not have similar restrictions. In 2015, a new agreement among export credit agencies (ECAs) restricted the types of coalfired power plants that could be financed to those that could meet CO₂ performance requirements (OECD 2015). Most western OECD ECAs are now governed by this agreement. Japanese and Korean banks and agencies, however, continued to finance coal-fired power, particularly in Asia, through 2020 (Cadman, 2020) before each separately announcing that they intend to restrict overseas investments into coal (Pearl, 2020).

In the context of a 2015 US–China Joint Statement on Climate Change at the Presidential level, the Chinese government stated, 'China will strengthen green and low carbon policies and regulations with a view to strictly controlling public investment flowing into projects with high pollution and carbon emissions both domestically and internationally' (The White House, 2015). Yet, unlike the main MDBs and OECD ECAs, China's policy banks, specifically CDB and CHEXIM, and state owned commercial banks still finance coal fired power plants overseas. Of course, recipient countries could limit new coal power plant construction through their own domestic energy, air quality, water, and climate policies.

Between 2001 and 2016, Chinese financial institutions supported the construction of more than 50 coal fired power plants abroad (Gallagher, K.S. 2016). A majority of these power plants (58%) used subcritical coal technology, which is the most energy inefficient form of coal fired power plant, and therefore the type that is most carbon intensive, but more recently, the plants tend to be supercritical or ultra-supercritical (more efficient). Other estimates of Chinese financing for coal fired power plants are higher. According to one estimate, Chinese corporations have been involved in the construction of 240 projects and overall, China could be behind as much as 251–386 GW of planned coal power expansion worldwide depending on different sources (Feng, 2017; Tabuchi, 2017).

1. Key actors in China's overseas green finance policy landscape

Many government ministries and authorities are influential in China's policy landscape regarding domestic and overseas investments. The State Council is the highest executive authority in the administrative branch of China's government. Large overseas investments over \$2 billion must be approved by the State Council. Other important government entities include the People's Bank of China (PBoC), Ministry of Finance (MoF), National Development and Reform Commission (NDRC), Ministry of Commerce (MOFCOM), China

Banking Regulatory Commission (CBRC), and more (see Table A1 in the Appendix).

The environment ministry's (MEE) authority to influence the environmental impacts of China's overseas projects remains limited. In a press conference held in July 2017, officials asserted that the environment ministry had participated in the formulation and issuance of guidelines to green the BRI and had launched an ecological big data platform to facilitate the exchange of green technologies, yet has adhered to the arguably weak official position that Chinese investors are only required to observe environmental laws of the host country (State Council, 2017).

While the State Council has strong administrative authority, it is important to emphasize that the influence of the CCP in China's policy process is paramount. The CCP controls the appointments of top government officials and is explicitly embedded in every government ministry. Constitutionally, the National People's Congress (NPC) is the highest organ of state administration, and theoretically it supervises the work of the State Council and Supreme People's Court. The heads of these entities technically must be approved by the NPC. This constitutional arrangement belies the fact that the head of the NPC is actually ranked third in the Party hierarchy, after the President and Premier. Indeed, the preamble of the State Constitution states that the work of the Chinese people will take place 'under the leadership of the CCP' (Gallagher and Xuan, 2018).

2. China's regulatory structure for overseas investment

The approval process for outbound FDI by Chinese companies used to be slow, complicated, and opaque. Large stateowned enterprises have always benefited from preferential government treatment and financial support from state owned banks (Backaler, 2014). In line with the current Chinese leadership's pledge to simplify governance, China's outward investment regime was overhauled, beginning in 2013.

Prior to 2013, the Chinese government focused supervisory attention on ex ante verification and record-filing but neglected post-investment monitoring. Regulation was dispersed across agencies and their administrative capacity was limited. By 2017, a slew of policies had been introduced to better govern outbound investments overseen by the Central Leading Group for Deepening Overall Reform, a policy formulation and implementation body set up under the Politburo of the Communist Party of China (CPC). The Leading Group, headed by Xi Jinping, was set up in 2013 under the 18th CPC Central Committee to drive comprehensive reforms in six areas: sustainable development, democracy and the legal system, culture, social system, strengthening the Party, and discipline and inspection (Zhang, 2017).

Businesses in China seeking to make investments abroad are now subject to filing requirements with both the NDRC and MOFCOM, but pre-approval is no longer required. Once completing the required reporting procedures, investors also must register their foreign exchange for their outbound investments with banks that have already obtained relevant qualifications from the State Administration of Foreign Exchange (SAFE) so that they can handle the exchange of funds. Outbound investments by domestic financial institutions must be approved by PBoC and relevant financial regulatory agency, that is, CBRC, the China Securities Regulatory Commission (CSRC) or the China Insurance Regulatory Commission (CIRC). The State-owned Assets Supervision and Administration Commission of the State Council (SASAC) has authority over all national stateowned enterprises (SOEs) and it issues its own requirements and parallel regulations.

Table A2 in the Appendix summarizes the approval processes for different categories of overseas investments based on the nature and/or size of the proposed investment. Given that the majority of overseas investments made by Chinese enterprises do not involve sensitive countries/regions or industries, evidently 98 per cent of investments only needed to report to MOFCOM in advance of making the actual investment as of 2014. A list of sensitive industries is provided in Figure 1.

For investments that still require government approval, both NDRC and MOFCOM must take into consideration their potential impact on national security, economic interests, compliance with international treaties, and the sensitivity of the industry. The record-filing system is now the main means of tracking and managing outbound investment, but documentation required in the filing process may be continually adjusted to reflect regulatory needs. For instance, PBoC, NDRC, SAFE and MOFCOM issued a joint statement to authenticate outbound investments at the end of 2016, requiring a Statement of Guarantee on the Authenticity of Information Submitted (Xinhua, 2016).

In February 2017, NDRC officially launched the National Investment Project Online Approval and Supervision Platform. All domestic and outbound investments that require approval are listed in this platform (with links to provincial and municipality approval platforms). The platform aims at promoting the efficiency and transparency of the entire investment approval and supervision process. It also facilitates horizontal and vertical coordination between regulatory government agencies. In comparison, the National Overseas Investment Management and Service Network System also established by NDRC to supervise overseas investments has not been well maintained or updated. Its section for reporting noncompliant enterprises is still empty as of October 2020.

A parallel *interim* and *ex post* supervision mechanism was proposed by MOFCOM, PBoC and five other agencies in January 2018 and supplemented by a set of implementation rules formulated and released by MOFCOM in May 2019. The revised mode of *interim* and *ex post* supervision consists of paying close attention to major high-stakes outbound investments and carrying out random spot checks among the rest. MOFCOM has published the results of spot checks on outbound investments carried out by MOFCOM or provincial department of commerce and a bad credit list for

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Figure 1	 Comparison 	of Restrictions	on Domestic and	Outbound Investments
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Restricted or Prohibited Domestic Investment	 Heavy industry including steel and iron, electrolytic aluminum, cement, glass, boats and ships are not allowed to apply for new production capacity; In principle, no new coal mines, technological transformation for newly-added capacity nor projects to increase production capacity of existing mines can be approved over the next 3 years from 2016; In principle, no more manufacturers of traditional fuel vehicles will be approved. New energy vehicle enterprises cannot be established unless they have preliminarily grasped core technologies such as the power system as well as R&D capacity for manufacturing completed vehicles.
Prohibited Outbound Investment	 Investments that impair or may impair China's national interests or national security are prohibited (core military technologies and products, gambling, pornography).
Restricted Outbound Investment	 Investments in sensitive countries or regions (without diplomatic relations, experiencing war or strife, investment restricted by treaty, and other); Investments in sensitive industries (research, manufacture, and repair of weaponry; cross-border water resources development and utilization, news media, industries to be restricted from outbound investments according to laws, regulations, and related control policies). Sensitive industry directory to be published by NDRC; Real estate, hotels, film studios, the entertainment industry and sports clubs; Equity investment or other investment platforms without tangible industrial projects; Investments that use obsolete production equipment that does not meet the technical standard.

Sources: State Council (2016) The Catalogue of Investment Projects Subject to Government Ratification. People's Republic of China and NDRC, MOFCOM, PBoC and MFA (2017) Opinions on Further Guiding and Regulating the Directions of Overseas Investments. People's Republic of China. Both available in Qi and Gallagher (2020).

misbehavior in outbound investments (mainly related to labor disputes) on its Going Abroad Public Service Platform.

In summary, these regulatory policy developments indicate a shift of Chinese government attention and resources from *ex ante* review to management of the whole outbound investment process, inclusive of *interim* and *ex post* monitoring and supervision (MOFCOM, 2018). The sheer scale of the overseas investments means that it is not practically possible to pre-approve all new projects, nor is it pragmatically possible for the government to closely monitor and enforce compliance with policies for overseas investments. The government primarily relies on self-reporting by Chinese firms, and this information is monitored and reviewed by government authorities (and usually not publicly disclosed).

3. China's policies encouraging environmentally and socially responsible overseas investment

As of mid 2020, no binding environmental or climate-related policies had been issued related to China's overseas

investments other than the requirement that Chinese firms must comply with host country regulations. In most of the relevant policies, environmental protection is briefly mentioned as one of many obligations to be observed by Chinese firms operating abroad.

Mounting concerns about the environmental practices of Chinese companies operating overseas caused the Chinese government to issue a series of soft guidelines in recent years, calling on its banks and companies to observe better environmental practices as they invest overseas. The main regulations governing Chinese overseas investments are listed in Table A3 in the Appendix, and these include the regulations that encourage environmentally and socially responsible investments.

In the major regulations released so far, a distinction can be made between documents that encourage voluntary compliance and those that include enforcement mechanisms for non-compliance. Policies called Guiding Opinions or Guidelines fall into the former category, whereas Measures, Provisions and Notice or Circular belong to the latter. In policies that do contain an enforcement mechanism, the penalty is either a deduction of the annual inspection score or a record of 'bad credit' assigned to the firm. The worst possible outcome found in these policies is the potential loss of business qualification if the enterprises have violated the relevant laws and regulations and caused serious damages. Detailed information about how to define 'serious' does not exist in current policy documents. To date, no companies have been publicly punished due to environmental problems related to overseas investments.

Disclosure of information about Chinese overseas investments remains limited and results in a lack of transparency. The Administrative Measures on Overseas Investments released by NDRC in 2017 did not strengthen the 2014 policy for environmental protection. Article 41 states that the investment administrative agency 'advocates for ecological and environmental protection'. Article 49 states that violations will be reported to NDRC or the local DRC, which in turn will impose punishments and report to the public. In the Implementation Rules on Reporting for Outbound Investments subject to Record Filing/Approval (Discussion Draft) released by MOFCOM in April 2019, all domestic investors are required to report on a semi-annual basis information, such as project progress, compliance with local laws and regulations, protection of environment and performance of social responsibility to competent regulatory authorities. Taken together, it appears that the Chinese government is trying to strengthen the post-investment monitoring of overseas investments. If violations were ever publicly released, experts and civil society would be able to verify the extent of non-compliance. (NDRC, 2018), but such regulation does not apply to China's outbound investment in the automotive industry.

3.1. Industrial policy

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The Chinese government steers investments to certain industries by announcing which industries are encouraged for investment, which are restricted, and which are prohibited. The government has done so through publication of a series of guidelines and catalogues, the latest of which are discussed here (Figure 2).

In December 2016, the State Council released The Cataloque of Investment Projects Subject to Government Ratification. The main purpose of this latest revision was to further simplify the approval procedure for domestic investment projects, reinforcing the crucial role of industrial policies to guide the direction of investment and emphasizing post-investment supervision by relevant government agencies (State Council, 2016). Most importantly, the revised cataloque clarified for which industries domestic expansion would be strictly controlled to address severe overcapacity, namely the heavy industries including steel, iron, cement and coal mines. Heavy industries including iron and steel, electrolytic aluminum, cement, glass, and ship-building are not allowed to apply for an increase in production capacity domestically, but none are even restricted from outbound investment (see Figures 1 and 3 for lists of those industries encouraged, restricted, or prohibited from investment domestically and overseas). The catalogue encourages increasing investment in energy efficient and environmental technologies and new energy vehicles both domestically and overseas but diverges with respect to vehicles. Domestic investment in manufacturers of traditional fueled vehicles (internal combustion engine) is no longer permitted, but investment for electric vehicles (called 'new energy vehicles' in the document) is encouraged.

The February 2018 *Catalogue of Sensitive Industries for Overseas Investment* issued by the NDRC reiterates the sensitive industries already defined with one addition: the exploitation or utilization of cross-border water resources is listed as one of the sensitive industries subject to NDRC approval.

Comparing the 'negative' lists of industries for domestic and overseas investments, as depicted in Figure 1, their similarity lies only in the common goal of expediting China's economic restructuring process. None of the industries restricted or prohibited from domestic investment is subject to the same restrictions or prohibitions for outbound investments. The inconsistency creates a tacit encouragement of overseas investment in these traditional, legacy industries even while they are restricted or prohibited at home.

As for those encouraged investments shown in Figure 3, a divergence between domestic and overseas guidance also exists. While all of China's high-tech and strategic industries (e.g. next generation IT, energy efficiency, electric vehicles, renewables and biotech) are encouraged for investments both domestically and overseas, there are some categories encouraged only for overseas investments: infrastructure that benefits BRI connections, investments that promote the export of 'advantageous production capacity', investment cooperation with foreign high-tech and advanced manufacturing enterprises, and carefully assessed exploration and development of energy resources such as oil, gas, and minerals, and services.

SASAC likewise issued an order in 2017 entitled, *Measures* for the Supervision and Administration of Outbound

Figure 2. Policies Governing Domestic and Overseas Investment

Policies	Guiding Opinions on Supporting the Development of Green Bonds (CSRC, 2017)				
Governing Domestic Investment	Energy-Efficiency Credit Guidelines (CBRC & NDRC, 2015)				
	Guidelines for the Issuance of Green Bonds (NDRC, 2015)				
	Green Bond Endorsed Project Catalogue (PBoC, 2015)				
	Guiding Opinions on Pilot Scheme for Compulsory Environmental Pollution Liability Insurance (MEP & CIRC, 2013)				
	Opinions on Implementing Environmental Protection Policies and Regulations to Prevent Credit Risks (SEPA, PBoC & CBRC, 2007)				
Policies Governing	Interim Measures for the Reporting of Outbound Investments Subject to Record- filing or Approval (MOFCOM, PBoC, SASAC, CBRC, CSRC, CIRC and SAFE, 2018)				
Outbound Investment	Administrative Measures for Overseas Investment by Enterprises (NDRC, 2017)				
	Opinions on Further Guiding and Regulating Outbound Investment (NDRC, MOFCOM, PBoC & MFA, 2017)				
	The Belt and Road Ecological and Environmental Cooperation Plan (MEP, 2017)				
	Interim Measures for the Supervision and Administration of Overseas Investment of Central Enterprises (SASAC, 2017)				
	Notification on Further Clarifications on Overseas RMB Loans by Domestic Enterprises (PBoC, 2016)				
	Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road (NDRC, MFA and MOFCOM, 2015)				
	Administrative Measure for the Verification, Approval and Record-Filing of Outbound Investment Projects (NDRC, 2014)				
	Administrative Measures for Outbound Investment (MOFCOM, 2014)				
	Guidelines for Environmental Protection in Foreign Investment and Cooperation (MOFCOM & MEP, 2013)				
	Guiding Opinions on Promoting International Development of Strategic Emerging Industries (MOFCOM, NDRC and 8 other government agencies, 2011)				
Policies Governing	The Catalogue of Investment Projects				
Both	Subject to Government Ratification (State Council, 2016 Version)				
Domestic and	Guidelines for Establishing the Green Financial System				
Outbound	(PBOC and 6 other government agencies, 2016)				
Investment	Key Indicators of Green Credit Performance (CBRC, 2014)				
	Green Credit Statistics System (CBRC, 2013)				
	Green Green Green Guidelines (CDRC, 2012)				
	2007)				

Source: Qi and Gallagher (2020).

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Figure 3. Encouraged Chinese Domestic and Overseas Investments

Strategic	Industries that that are encouraged to develop both within and outside China:
emerging industries	Next generation information technology
	 High-end equipment manufacturing
	Energy efficient and environmental technologies
	Energy-saving and new energy vehicles
	New energy
	New materials
	 Biotechnology
Encouraged	
Outbound	 Intrastructure investment that benefits the construction of BRI and connections with neighboring infrastructure
Outbound Investment	 Intrastructure investment that benefits the construction of BRI and connections with neighboring infrastructure Investment that promotes the export of advantageous production capacity, quality equipment, and technology standards
Outbound Investment	 Intrastructure investment that benefits the construction of BRI and connections with neighboring infrastructure Investment that promotes the export of advantageous production capacity, quality equipment, and technology standards Investment cooperation with foreign high-tech and advanced manufacturing enterprises and to encourage enterprises to set up overseas R&D centers
Outbound Investment	 Intrastructure investment that benefits the construction of BRI and connections with neighboring infrastructure Investment that promotes the export of advantageous production capacity, quality equipment, and technology standards Investment cooperation with foreign high-tech and advanced manufacturing enterprises and to encourage enterprises to set up overseas R&D centers The exploration and development of energy resources such as oil gas and minerals on the basis of evaluation of economic benefits

Source: NDRC, MOFCOM, PBoC and MFA (2017) Opinions on Further Guiding and Regulating the Directions of Overseas Investments. People's Republic of China and MOFCOM, NDRC, MIIT, MoF, MEP, SAT, GAC, GAQSIQ (2011) Guiding Opinions on Promoting the International Development of Strategic Emerging Industries. People's Republic of China. Both available in Qi and Gallagher (2020).

Investments Made by Central Enterprises, which stated that SASAC would develop, 'a negative list for overseas investment by central enterprises, creating lists for the investments to be prohibited or requiring special supervision', but the negative list is not publicly available. In the report on the inspection of SASAC by the third central inspection team of the 19th CPC Central Committee published on 20 March 2020, SASAC is requested to revise the negative lists for domestic and overseas investment by SOEs. It is also tasked with providing detailed rules for the implementation of Measures for the Supervision and Administration of Overseas Investments by Central Enterprises for further regulating outbound investment behavior of centrally owned enterprises (CCDI, 2020). Provincial government-level SASACs, however, have begun to publish negative lists for their SOEs, which undoubtedly have been approved by the central SASAC and thus, give an indication of what is included in the central SASAC lists of industries eligible for investment. Jilin, Shaanxi, Yunnan, and Shanxi Provinces, for example, all prohibit investments where the yield of an overseas investment is lower than the 10-year Treasury yield of the host country. The Yunnan negative list includes, 'investments not complying with environmental protection, energy-intensity, safety and technology standards of the host country'.

Thus, in both the provincial SASAC and NDRC lists of restricted overseas investments, projects that are unable to meet the technical, environmental protection, or energy

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consumption standards of the target country are explicitly discouraged. It is exactly these host nation standards that make the overall impact ambiguous, however. Certain investment destinations in the European Union and even some advanced developing countries would demand compliance with stricter emissions controls than China currently requires domestically, but it is incontrovertible that environmental governance is much weaker in many of the countries covered under the BRI compared with China's. Indeed, it is easy to forget that China's own environmental policy regime was much weaker than most industrialized countries until after 2000. China also discovered that when it imposed environmental performance standards, foreign firms were quick to transfer cleaner technology, but they rarely went beyond compliance (Gallagher, K.S. 2006).

One factor that may help avoid a race to the bottom to weaker environmental regulations is China's long-term effort to transfer higher quality production capacity, equipment, and technical standards to recipient countries. A 2015 UNDP survey-based study found that 87 per cent of surveyed Chinese companies have transferred technologies to host countries or have some form of technology cooperation with them. Among Chinese contractors working on construction projects in foreign countries, 77 per cent of them would recommend their own or China's engineering quality standards if they are higher than the host country's standards (UNDP, 2015). Previous empirical studies investigating technology transfer in China's hydropower projects around the world find limited evidence for technology transfer between China and the host countries because technology transfer also depends on the capacities of the host countries to absorb new technologies (Hensengerth, 2018; Kirchherr and Matthews, 2018; Urban, 2018; Urban et al. 2015).

3.2. The policy banks

China has two state-owned policy banks that primarily support overseas investment, CDB and CHEXIM. The CDB is a major lender both domestically and internationally, but CHEXIM is solely devoted to supporting China's foreign trade, investment and international economic cooperation. Unlike commercial banks, policy banks are mainly funded through bond issuance, a cheaper source of capital than deposits. The banks have also received periodic capital injections from the government. For instance, in 2015, the CDB and CHEXIM received respectively \$48 billion and \$45 billion from the country's foreign exchange reserves (Chen, 2015). In addition, two new multilateral banks with major involvement from China, the Asian Infrastructure Investment Bank (AIIB) and New Development Bank (NDB), serve in a similar role for overseas investments.

CDB and CHEXIM provide as much energy finance to foreign governments as do all the world's multilateral development banks combined (Kong and Gallagher 2017). They have together invested \$235 billion in energy projects globally, most of which is in fossil fuels and more than 20 per cent of which in coal. Yet, CDB claims that it has adopted the Equator Principles (EPs) in its operations, even though it is not a formal member of the EP Association. The EPs is a risk management framework for determining, assessing and managing environmental and social risks in projects and is 'primarily intended to provide a minimum standard for due diligence and monitoring to support responsible risk decision-making' (Equator Principles, 2020).

Apart from working with Chinese financial regulators to draft the *Guidance for Green Credit*, CDB has reportedly developed an environmental and social risk assessment system, which provides indices for appraising potential borrowers. Environmental monitoring and social risk controls are included in the clauses for standard overseas financing contracts. Borrowers are also expected to report on risk controls on a regular basis after a loan contract comes into effect (Li and Yao 2016).

CDB's balance of self-reported green loans in 2018 amounted to US\$268 billion (CDB, 2018) for domestically financed projects (this figure could not be independently verified). For its overseas investments, CDB has explicitly prioritized supporting strategically emerging industries and companies seeking to participate in the BRI. It signed a cooperation agreement with the NDRC in June 2017 to provide no less than US\$214 billion in stimulus capital for the development of strategically emerging industries (listed in Figure 3). By the end of June 2017, CDB had cumulatively issued more than \$170 billion in loans to BRI countries (Su, 2017; Wright, 2017).

CHEXIM is in many ways similar to the CDB. Unlike CDB, it is the only bank that can provide concessional loans designated by the Chinese government for China's foreign aid. As of 2018, CHEXIM supported more than 1,800 BRI projects, with a loan balance of more than US\$143 billion (Xinhua, 2019). About 70 per cent of its lending is focused on improving infrastructure connectivity with neighboring countries (Zhao, 2017).

Among financial institutions in China, CHEXIM was an early mover on green finance. As early as 2007, it put in place *Guidelines on Environmental and Social Impact Assessment of Loan Projects* to help control environmental and social risks for both domestic and overseas projects. It updated its Green Credit Guidelines in 2015 and set up a diversified financial services system comprising green credit, green funds, green consulting and green bonds (CHEXIM 2019). However, CHEXIM has never disclosed the stringency or scope of its green credit policies nor are there formal mechanisms through which the public can access an environmental impact assessment or report to a grievance mechanism (Gallagher, K.P. 2013).

In comparing the energy lending of CDB and CHEXIM domestically and overseas (see Table A5 in the Appendix), it appears that clean energy lending domestically far exceeds clean energy lending overseas, although the CBD definition is not provided for what is considered clean domestically.

Another channel through which China could directly or indirectly support its BRI is the MDBs and bilateral investment funds that China has either initiated or is participating in as a member. The three main funds are the AIIB, NDB, and the Silk Road Fund (SRF), but it is important to keep

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their size in perspective. Relative to the CDB and CHEXIM, their combined assets comprise just 10 per cent of CDB and CHEXIM's assets (AIIB, 2017; Gallagher, K.P. et al. 2016; NDB, 2016). For the energy sector specifically, in 2016, CDB invested \$23 billion, CHEXIM \$8.3 billion, and the two combined \$14.2 billion in co-financing (Gallagher, K.P. 2020) compared with just \$1.9 billion for the AIIB and NDB combined.

3.3. Green credit policies

Green credit accounts for the majority of China's commercial green finance business. The outstanding green credit of 21 major Chinese banks (inclusive of CDB, CHEXIM and other commercial banks) rose from roughly \$783 billion mid-2013 to \$1.45 trillion as of June 2019 (CBRC, 2017; Zhou, 2019).

Since CBRC issued the Green Credit Guidelines in 2012, provisions aimed at fending off environmental and social risks associated with credit activities abroad have been an integral part of China's green credit policies. According to Article 21 of the Green Credit Guidelines and Article 4.21 in the Key Indicators of Green Credit Performance issued by CBRC in 2014, China's overseas projects are expected to comply with three layers of regulation: green credit guidelines at home; laws and regulations in the host countries concerning environmental protection; and international standards, norms or best practice. In the Green Credit Statistics System launched by CBRC in 2013, overseas projects aligned with international good practice/standards are separately listed as the 12th category of green projects. However, projects in this category are still required to conform with one of the project descriptions listed in the other 11 categories. This implies consistency in the definition of green projects for the provision of green credits at home and abroad. But overall, according to CBRC statistics, only a small portion of green projects fall into this category, for example, \$5.31 billion out of a total of \$1.19 trillion outstanding green credit extended by the 21 major banks of China as of the end of June 2017. From these statistics, it can also be observed that 0.57 per cent of the green credit had been used to support overseas projects as of mid-2017 (CBRC, 2017).

In practice, explicit preferential fiscal or taxation policies have not yet been introduced to promote the provision of green credit, though there are reports that such policies are under development. To incentivize green lending, the PBoC has incorporated banks' green credit performance in the central bank's macro-prudential assessment (MPA) since 2017. In June 2018, the PBoC added banks' qualified green credit into collateral for the medium-term lending facility (MLF), and then issued the *Green Credit Performance Evaluation Scheme for Banking Depository Financial Institutions* (*Trial*), which further specifies the criteria and frequency for the evaluation of banks' green credit performance.

In spite of the lack of government incentives and mandatory mechanisms, to reduce social and environmental risks and enhance profitability, the majority of the top Chinese banks (accounting for 80 per cent of total banking assets), have integrated the concept of green credit into their operations as documented in Table A6 in the Appendix. For instance, the one-vote veto practice with respect to environmental protection has been widely adopted among major commercial banks in the process of approving green credits. In an effort to align with international standards, most of Chinese major commercial banks have referred to the sustainability reporting guidelines of Global Reporting Initiative (GRI) in their corporate social responsibility reports.

While it is common practice for China's major banks to report on an annual basis their latest green credit balance, reduced lending to overcapacity sectors and an estimation of their associated environmental benefits, none of them have specified the green credit provided to overseas projects nor potential environmental impact of these projects. These facts demonstrate from yet another angle that the emphasis of China's green credit policies to date has been on achieving domestic environmental benefits.

3.4. Green bond policy

The first green bond was issued by the European Investment Bank in 2007 and green bonds have subsequently grown into a mature green financial product in the international market (PBoC and UNEP, 2015). In 2019, market demand for green bonds continued to be strong in China, with green bonds proceeds collected by Chinese issuers amounting to \$22.9 billion, ahead of \$19.6 billion raised by US issuers and \$17.1 billion from French issuers (Refinitive, 2020). The growth and size of the Chinese bond issuance is remarkable given that Xinjiang Goldwind Science & Technology issued China's first official green bond in July 2015. Chinese green bonds are proving attractive to foreign investors, with 70 per cent of the recent ICBC Belt and Road climate bond being bought by European investors (LuxSE, 2017). This RMB-denominated climate bond was issued by the Bank of China in November 2017 on the Euronext stock exchange and it was as oversubscribed by more than a factor of two (Xinhua, 2017a).

Domestically, PBoC oversees the interbank bond market and directly regulates issuance from financial institutions, while NDRC authorizes enterprise bond issuance (Dai et al. 2016). And CSRC supervises the issuance of green bonds by stock exchange listed companies and asset-backed securities.

When issuing green bonds in the self-regulated international market, Chinese issuers willingly adhere to the widely accepted voluntary code of conduct on the international markets, such as Green Bond Principles (GBP) and other guidelines launched and updated by the International Capital Markets Association (ICMA) (Xu and Wang 2016). Chinese cross-border issuers usually have their green bonds rated by the three major credit rating agencies and seek third party certification from approved verifiers to ensure international investors the environmental credentials of their bonds.

The majority of the proceeds from both corporate bonds and financial green bonds (mainly issued by local commercial banks) are to be used for domestic investments, but technically there is no stipulated restriction on channeling proceeds toward overseas projects. Indeed, there is precedent for green bonds issued in China's interbank market being dedicated to offshore projects. For instance, the panda bond issued by the NDB in July 2016 was for financing green projects in BRICS countries, and the inaugural EUR 500 million 7-year green bond issued by China General Nuclear Corporation (CGNPC) in December 2017 was for financing or refinancing six renewable energy projects in Europe. By contrast, Chinese bonds issued in the international markets have a higher chance of being invested in other countries.

While it is hard to associate standards or guidelines adopted in domestic or international markets with the destination of investment, it can be inferred that the limited number of Chinese green bonds issued offshore are on average of higher quality than the much larger number of green bonds issued in the domestic markets due to the ratings and patterns of certification. A higher per centage of Chinese green bonds issued offshore have been rated or certified by internationally recognized rating agencies such as Standard & Poor's compared with domestically issued green bonds. The highest offshore bond rating is an A compared with 73 per cent of onshore green bonds receiving an AAA rating by Chinese domestic rating agencies (CBI, 2019). Domestic and offshore green bonds may also employ different definitions of green. Projects such as retrofits of fossil fuel power stations, clean coal and large hydropower plants, which conform with PBoC and NDRC green definitions, would not be considered green by many international standards. Definitional divergence also exists in the eligible use of proceeds and the degree of transparency requirements (CBI, 2019). For the \$21.8 billion worth of green bonds China issued in the first half of 2019, approximately 51 per cent of them did not meet international standards (Chen and Zhou, 2019).

On the disclosure of information, as a key component of the Climate Bond Initiative (CBI), the Climate Bonds Standard & Certification Scheme (CBSCS) requires that issuers should assess expected environmental objectives of the projects with qualitative and/or quantitative performance indicators where applicable (Dai et al. 2016). In the domestic markets, PBoC strengthened regulations on information disclosure for financial green bonds in March 2018, requiring regular reporting from green bond issuers on the use of proceeds and achievement of environmental benefits.

Another factor that directly affects the integrity of green bond markets is the requirement of third-party verification. For the international markets, CBSCS has established a clear procedure for pre-issuance and post-issuance certification, including the nomination of approved verifiers (CBI, 2018). For the domestic markets, PBoC and CSRC jointly issued *Guidelines for Conducting Assessment and Certification of Green Bonds (Interim)* in October 2017, which specify qualifications and credentials, verification methods, and reporting requirements for the external reviewers. This was the first time that a government introduced a supervisory scheme for green bond verifiers (Ma, 2018). Nevertheless, in 2019, only 47.8 per cent of enterprise bonds had received third party review for the lack of relevant requirement in the NDRC's guidelines (Chen and Jiang, 2020). NDRC and CSRC further streamlined the process for enterprise and corporate bonds in March 2020 with the launch of a registration-based system in lieu of the previous approval mechanism. The new policy allows companies to raise funds more easily for their green projects, but also potentially increases uncertainty about the quality of these types of green bonds.

These persistent inconsistencies among Chinese regulatory agencies and between domestic and international standards continue to raise questions about the quality of China-issued green bonds, whether the bond proceeds are to be used for domestic or overseas investments. In this respect, a positive development is that the PBoC, NDRC and CSRC jointly released a new draft catalogue of projects eligible for green bonds in May 2020. This indicates China's effort to consolidate its green finance standards. Moreover, the removal of clean coal from this draft catalogue brings hope for closer alignment of China issued green bonds with international practices.

4. Findings and policy implications

The policies governing China's overseas development finance have been systematically and comprehensively analyzed in this paper. While China's governance system for overseas investments has matured, the policies governing the environmental dimensions of overseas investments are much weaker relative to domestic policies. They are mostly voluntary in nature except for the requirement that Chinese investors must adhere to host country environmental regulations. Even if there is a failure to comply with host country regulations, there appear to be no serious consequences in practice.

The discrepancy between policies for domestic investment and policies for overseas investment is most conspicuous in the industrial policy catalogue produced by the NDRC. The lists in this catalogue clarify for China's banks which industries are encouraged for investment, which are restricted, and which are prohibited. Most traditional, legacy industries, such as coal mining, heavy industry, and conventional internal combustion engines are restricted from receiving investment domestically but not for overseas investments. Investment in fossil fuels, specifically oil and gas as well as minerals, are explicitly encouraged for overseas investment. This discrepancy reveals a tacit encouragement to export more carbon-intensive equipment and products.

Chinese policies specifically aimed at limiting emissions of climate-altering greenhouse gases from China's overseas investment do not exist. On the other hand, in the future the Chinese government's 'going out' strategy and domestic industrial policies in support of strategic industries could theoretically result in substantial new green investment being made overseas since many of China's designated strategic industries are, in fact, green industries. The relatively recent solar investments in Pakistan are good examples of the alignment between strategic industry promotion

and the provision of green finance. It is important to remember, however, that the more than 80 per cent of China's global energy investments to date have been in fossil fuels.

Domestically, the Chinese government is making a tremendous effort to unlock and promote green finance, and these are likely to lead to spillovers from the domestic provision of green finance to BRI countries. The remarkable growth of China's green bond market, for example, provides evidence that there is strong appetite for green growth inside China. International investors also appear eager to invest in green financial instruments within China. The question now is how to ramp up the use of the same instruments in outbound investments and to place low-carbon performance standards on those green bonds.

The Chinese government's regulatory approach for overseas investments has shifted from ex ante review to management of the whole outbound investment process, inclusive of interim and ex post monitoring and supervision. The review process relies on self-disclosure of information by Chinese firms. While administrative penalties are supposed to be disclosed to the public through the National Enterprise Credit Information Publicity System, no results were available as of October 2020. MOFCOM has a Going Abroad Public Service Platform website where the list of companies covered in each round of spot check is disclosed by MOFCOM. Based on the information provided, only a very small number of overseas investors have been inspected each year. A few issues have been flagged for correction, such as a lack of an emergency response system for major events and missing regular reports regarding business operations.

Four main types of policies could be employed to green China's overseas investments if the Chinese government wishes to do so. China has been criticized by foreign countries for not giving higher priority to greening the Belt and Road, and the government may be motivated to green overseas investments if it wants to improve its global image. In addition, the Chinese government should consider the financial risks associated with continuing to invest in highcarbon infrastructure such as coal-fired power plants that could become stranded if recipient countries decide to decarbonize by mid-century (van der Ploeg and Rezai 2020).

To implement greener overseas development policies, the Chinese government could first. convert its green finance policies from voluntary guidelines to mandatory provisions. The vast majority of Chinese policies in this regard remain voluntary.

Second, China could make its domestic and overseas policies consistent with each other. Further deepening of industrial policies that promote overseas expansion of cleaner industries could naturally lead to a greening of overseas investments and reduced carbon emissions in recipient countries. Conversely, restraining the export of surplus capacity in heavy, carbon-intensive industries like iron and steel, cement, or coal-fired power equipment could prevent the lock-in of long-lived carbon-intensive infrastructure overseas.

Third, Chinese policy and commercial banks could improve their own environmental governance through the development and enforcement of stricter environment and social safeguards. It is arguably in their interest to do so to mitigate social and environmental risks that could affect their global reputations and ability to make future investments. Voituriez et al. (2019) argue that China's development banks should use whichever standard is more stringent, the domestic Chinese standard or the host-country standard. While the new China-led multilateral banks like AIIB are beginning to do so, they are tiny actors in China's overall banking system, and may not even be considered 'Chinese' banks. The fully Chinese state-owned and commercial banks have a long way to go to green their lending practices.

Finally, recipient countries must take a proactive approach to the quality of their own development and specifically require that cleaner technologies conforming with good international standards be transferred or financed through the FDI projects. If the Chinese government's default position is that Chinese firms and banks must adhere to recipient country policies, then the recipient countries must put in place sound environmental governance regimes.

At BRI Forums and other important international events, President Xi Jinping continues to emphasize China's commitment to greening the BRI (Xinhua 2017b; China Daily, 2019). MEP issued the Belt and Road Ecological and Environmental Cooperation Plan, specifying which support policies needed to be formulated, the platforms to be built, and the standards to be enforced, but no binding policies have been released since then. Voluntary Green Investment Principles for the BRI Development were proposed in 2018 by a set of financial institutions and corporations who are investing in the BRI countries. The Chinese government and UN Environment also launched an International Coalition for Green Development on the Belt and Road in support of the 2030 Agenda for Sustainable Development. The bottom line is that while multilateral initiatives and speeches about the need to green the BRI are important, concrete and enforceable policies do not yet match the rhetoric.

Note

1 Gallagher and Qi (2018) was the starting point for this paper, originally published as a discussion paper so it could serve as an initial platform for testing new ideas. The discussion paper was substantially revised and submitted to *Global Policy* for peer review. In the intervening time, new Chinese policies (most importantly new industry catalogues) at the central and local levels were promulgated and are analyzed in this paper. In this paper we also assess the Chinese government's progress in implementing regulations, add new data on the development of different types of green finance instruments, and compare lending by CDB and CHEXIM domestically and overseas. The original discussion paper is available at: https://sites.tufts.edu/cierp/files/2018/03/CPL_ChinaOverseasDev.pdf

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix

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(2P)

272