

Chasing China

Learning to Play by Beijing's Global Lending Rules

Full Report

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Executive Summary

Beijing's overseas lending and grant-giving portfolio is shrouded in secrecy. It remains a major source of speculation and debate, with questions swirling about its true scale, purpose, and impact.

Chasing China sets the record straight with a uniquely comprehensive and granular source of evidence. The report draws upon AidData's newly assembled dataset of more than 30,000 projects and activities across 217 low-income, middle-income, and high-income countries that 1,193 official sector donors and lenders in China financed with grants and loans worth \$2.2 trillion over a 24-year period.

An extraordinary effort was required to document and make sense of the opaque and complex financing arrangements that are documented in the dataset and report. A team of 16 full-time researchers and 126 part-time researchers at AidData spent 36 months triangulating information from over 246,000 sources in more than a dozen languages to build the dataset.¹

What is the true scale and scope of China's overseas lending and grant-giving portfolio?

Five key takeaways

1. Beijing does not disclose any information about its foreign aid projects through international reporting systems, such as the International Aid Transparency Initiative (IATI). Nor does it publish detailed information about its non-concessional and semi-concessional lending activities. All of its loan-by-loan data in international reporting systems—overseen by the World Bank, the

International Monetary Fund, and the Bank of International Settlements—are subject to strict confidentiality rules and restrictions.

2. Our newly collected data demonstrate that China's overseas lending portfolio is vastly larger than previously understood. The overall size of China's lending portfolio has reached \$2.1 trillion, which is two to four times larger than previously published estimates suggest.
3. There are very few jurisdictions in the world where Chinese lending operations are *not* taking place: 179 out of 217 countries and territories received at least one loan from a Chinese state-owned creditor between 2000 and 2023.²
4. China is now the world's largest official creditor, but it administers a small and shrinking foreign aid program.³ For every dollar that it donates to other countries, it lends thirty-five dollars.⁴ Its official development assistance (ODA) budget in a typical year is around \$5.7 billion, putting its foreign aid spending roughly on par with that of a donor like Italy. However, in 2023, its global ODA commitments fell to \$1.9 billion—their lowest level in two decades.
5. China is still outspending its bilateral and multilateral rivals by considerable margins: for every dollar that Washington donates or lends to developing countries, it is matched by 1.5 dollars from Beijing.

² 200 countries and territories received at least one loan or grant from an official sector institution in China during the same period.

³ Our newly collected data also puncture the myth that China's overseas lending and grant-giving operations have plummeted to record lows. In fact, its official lenders and donors provided \$141 billion of international aid and credit in 2023. By way of comparison, consider the World Bank: the single largest official source of international aid and credit. Its financial commitments amounted to \$92 billion in 2023.

⁴ It lends twenty-one dollars for every grant dollar that it provides to developing countries and it lends seven hundred and sixty-one dollars for every grant dollar that it provides to developed countries.

¹ Among other sources, the team reviewed grant agreements, loan agreements, and debt restructuring agreements; the annual reports, financial statements, stock exchange filings, and bond prospectuses of borrowing institutions; official records extracted from the aid and debt information management systems of host countries; reports published by parliamentary oversight institutions in host countries; IMF Article IV reports and World Bank-IMF debt sustainability analyses (DSAs); and the websites and annual reports of Chinese donors and creditors.

What is Beijing trying to accomplish? Is it primarily focused on bankrolling infrastructure projects in the Global South—or does it have broader ambitions?

Five key takeaways

1. Our newly collected data debunk the myth that Beijing's overseas lending portfolio is primarily focused on the Belt and Road Initiative (BRI). For every four dollars that China lends for infrastructure projects in developed and developing countries, it lends another six dollars for overseas projects and activities that have nothing to do with infrastructure. Beijing's portfolio has also become less BRI-centric over time: infrastructure project lending once accounted for 75% of the portfolio, but now it accounts for less than 25%.⁵
2. Another popular myth does not survive empirical scrutiny: the notion that China's overseas lending operations are primarily taking place in developing countries. In fact, Beijing has dramatically reduced the share of its portfolio that supports low-income and lower-middle income countries (from 88% in 2000 to 24% in 2023), while rapidly ramping up the share that supports upper-middle income and high-income countries (from 12% in 2000 to 76% in 2023).
3. Ten of the twenty largest destinations for official sector credit from China are high-income countries—and no country in the world has accepted more from Chinese state-owned creditors than the United States. It has taken in more than \$200 billion to date, with some loans supporting the construction of critical infrastructure or enabling Chinese companies to acquire critical technologies from American companies. However, many of China's lending operations in the United States are guided by the pursuit of profit rather than the pursuit of geopolitical or geoeconomic advantage.
4. Beijing maintains a secretive international acquisition lending program with a major focus on high-tech

assets in sectors—such as microprocessing technology, robotics, defense production, quantum computing, and biotechnology—that wealthy, industrialized countries have designated as “sensitive” on national security grounds. Since the adoption of the “Made in China 2025” (MIC2025) policy in 2015, the percentage of China's cross-border acquisition lending portfolio that targets sensitive sectors has skyrocketed from 46% to 88%.⁶

5. Beijing's playbook for getting overseas mergers and acquisitions approved in sensitive sectors has proven remarkably successful. Its long-run, average success rate is 80%—and it has increased over time.⁷ It has done so by focusing its efforts in countries with relatively weak screening mechanisms for inbound foreign capital. It has also “flown beneath the radar” of regulators, auditors, and counterintelligence officials by channeling funds through offshore shell companies and international bank syndicates.

How are G7 countries learning to play by a new set of international lending and grant-giving rules written by and for Beijing?

Four key takeaways

1. China has become the new global pace-setter, rewriting the rules and norms that govern the cross-border provision of international aid and credit. It is following its own playbook rather than following the rules and norms established by and for its Western competitors after World War II. Beijing's go-it-alone approach is no longer a source of scorn, ridicule or bemusement in Washington, Berlin, London, Tokyo, Paris, Rome, and Ottawa. It has forced G7 policymakers to fundamentally rethink the way they use aid and credit instruments.

⁵ Between 2014 and 2023, China's infrastructure project lending commitments in BRI participant countries amounted to \$249 billion, which represents only 20% of China's entire overseas lending portfolio over the same 10-year period.

⁶ The primary goal of MIC2025 was for China to achieve 70% self-sufficiency in 10 key high-tech sectors by 2025: (1) next-generation information technologies; (2) automated machine tools & robotics; (3) aerospace and aviation equipment; (4) maritime equipment and high-tech shipping; (5) advanced railway transport equipment; (6) new-energy and energy-saving vehicles; (7) electrical equipment; (8) agricultural equipment; (9) new materials; and (10) biopharma and advanced medical products.

⁷ Prior to the adoption of MIC2025, the average success rate in sensitive sectors was 68%. By 2023, it reached 100%.

2. Beijing is not seeking to burnish its reputation as a global do-gooder. The percentage of its overseas lending and grant-giving portfolio that qualifies as aid (ODA) plunged from 22% in 2000 to 1% in 2023.⁸ It is focused on a different goal: cementing its position as the international creditor of first—and last—resort that no one can afford to alienate or antagonize.
3. China's rivals in the G7 are responding by making major adjustments that were once inconceivable—for example, slashing ODA budgets, dismantling foreign aid agencies, ramping up cross-border lending on nonconcessional terms, and taking equity stakes in critical infrastructure assets overseas. They are seeking to compete with China via mimicry rather than differentiation, which is why the G7 is increasingly focused on using its financial firepower to achieve commercial and geostrategic advantage rather than promote economic development and social welfare in less developed countries.
4. Beijing's financial footprint outside of the developing world is far-reaching. To date, it has approved loans and grants worth nearly \$950 billion for 9,764 projects and activities in 72 high-income countries, which represents nearly 45% of its global lending and grant-giving portfolio. For decades, G7 countries tied their own hands and agreed to limit the provision of aid and credit to high-income countries, but now they are taking the gloves off. They are loosening the restrictions that prevent their development finance institutions and export credit agencies from supporting projects and activities in high-income countries via debt, equity, and grant instruments. They are also fast-tracking efforts to bankroll the acquisition of ownership stakes in critical infrastructure and critical mineral assets—such as Greece's Piraeus Port, Greenland's Tanbreez rare earths deposit, the Panama Canal, and Australia's Darwin Port—that reside in the Global North.

Is China's overseas lending and grant-giving portfolio becoming more or less difficult to track over time?

Four key takeaways

1. Beijing's overseas lending and grant-giving activities are becoming increasingly opaque. The discoverability of information about these activities—as measured by the weighted average number of official sources for grant and loan records AidData has identified through the implementation of its Tracking Underreported Financial Flows (TUFF) methodology—declined by 62% between 2010 and 2023.
2. China's cross-border lending operations are increasingly administered by Chinese bank branches and company affiliates that are domiciled outside mainland China. Nearly a third of Beijing's overseas lending portfolio now originates from places other than mainland China, which makes it less likely that Chinese state-owned creditors will be categorized as such in international reporting systems.
3. China's use of shell companies in pass-through jurisdictions—i.e., the routing of funds through a borrowing institution in a jurisdiction other than the one where the financed project/activity takes place—has rendered a large swathe of its cross-border lending portfolio effectively invisible in reporting systems. These types of transactions are particularly common when Beijing is seeking to acquire assets in sectors that industrialized countries have designated as “sensitive” on national security grounds.
4. Beijing has pivoted towards more exotic credit instruments that are substantially more difficult to track. In 2014, it channeled 51% of its overseas lending portfolio through standard credit instruments and 49% through non-standard credit instruments. However, by 2023, only 7% of its portfolio was channeled through standard credit instruments and 93% through non-standard credit instruments. Since official sources disclose 80% more information about standard credit instruments than non-standard credit instruments, a large and growing share of China's overseas lending portfolio is “going dark.”

⁸ Over the same time period, the weighted average grant element—a summary measure of financial concessionality that varies from 0% (the lowest level of concessionality) to 100% (the highest level of concessionality)—of China's overseas lending portfolio declined from 7.4% to nearly zero (1.4%).

Acronyms

AEs	Advanced Economies	CGT	Common Ground Taxonomy
AfDB	African Development Bank	CHICO	China Henan International Cooperation Group Company
AGTF	Africa Growing Together Fund	CIC	China Investment Corporation
AI	Artificial Intelligence	CIDCA	China International Development Cooperation Agency
AIIB	Asian Infrastructure Investment Bank	CLA	Chinese Loans to Africa
AL	Awami League	CLG-Global	China's Loans and Grants Global Dataset
AsDB	Asian Development Bank	CMEC	China Machinery Engineering Corporation
AVIC	Aviation Industry Corporation of China	CNPC	China National Petroleum Corporation
BOA	Bank of America	CODF	China's Overseas Development Finance
B3W	Build Back Better World	CPC	Communist Party of China
BCRA	Central Bank of Argentina (Banco Central de la República Argentina)	CPEC	China-Pakistan Economic Corridor
BCS	Bilateral Currency Swap	CR	China State Railway Group Co. Ltd.
BIS	Bank of International Settlements	CRS	Creditor Reporting System
BNP	Bangladesh Nationalist Party	CSIS	Center for Strategic and International Studies
BOP	Balance of payments	DAC	Development Assistance Committee
BPC	Botswana Power Corporation	DBZ	Development Bank of Zambia
BRI	Belt and Road Initiative	DFC	U.S. International Development Finance Corporation
BRT	Bus Rapid Transit	DLP	Debt Limits Policy
BU	Boston University	DRS	Debtor Reporting System
BUILD	Better Utilization of Investment Leading to Development Act	DSF	Debt Sustainability Framework
CAD	Canadian Dollar	DSRA	Debt Service Reserve Account
CBRC	China Banking Regulatory Commission	DSSI	Debt Service Suspension Initiative
CCDI	Central Commission for Discipline Inspection	EBRD	European Bank for Reconstruction and Development
CCTV	Closed-Circuit Television	EIA	Environmental Impact Assessment
CDB	China Development Bank	EMDEs	Emerging Market and Developing
CEIC	China Economic Information Center		
CFK	Cristina Fernández de Kirchner		
CGD	Center for Global Development		
CGSP	China-Global South Project		

	Economies		of China
EMP	Environmental Management Plan	ICT	Information and Communications
EPC	Engineering, Procurement, and Construction		Technology
EPCF	Engineering, Procurement, Construction and Financing	IDS	International Debt Statistics
ERL	Emergency Rescue Loan	IFAD	International Fund for Agricultural Development
ESG	Environmental, Social, and Governance	IFC	International Finance Corporation
ESIA	Environmental and Social Impact Assessment	IFI	International Financial Institution
EU	European Union	IFRS	International Financial Reporting Standards
EUR	Euros	IMEC	India-Middle East-Europe Economic Corridor
EURIBOR	Euro Interbank Offered Rate	IMF	International Monetary Fund
FASB	Financial Accounting Standards Board	IPSF	International Platform on Sustainable Finance
FOCAC	Forum on China–Africa Cooperation	ISM	Investment Screening Mechanism
FPIC	Free, Prior, and Informed Consent	JPY	Japanese Yen
FSI	Financial Secrecy Index	JV	Joint Venture
FXSL	Foreign Exchange Swap Line	KCHP	Néstor Kirchner and Jorge Cepernic Hydroelectric Power Plant Project
G-24	The Group of 24	KHPC	Kariba Hydro Power Company (Private) Limited
G7	The Group of 7		
GAAP	Generally Accepted Accounting Principles	KRC	Kenya Railways Corporation
GBP	Pound Sterling	LAC	Latin America and the Caribbean
GCDF	Global Chinese Development Finance Dataset	LBS	Locational Banking Statistics
GCL	Government Concessional Loan	LHC	Lahore High Court
GDELT	Global Database of Events, Language, and Tone	LIBOR	London Inter-Bank Offered Rate
GDP	Gross Domestic Product	LICs	Low-Income Countries
GWP	Gallup World Poll	LMICs	Lower-Middle Income countries
HIA	Heritage Impact Assessment	LPR	China Loan Prime Rate
HICs	High-Income Countries	LSF	Liquidity Support Facility
HSBC	Hongkong and Shanghai Banking Corporation Limited	M&A	Mergers And Acquisitions
IADB	Inter-American Development Bank	MCDF	Multilateral Cooperation Center for Development Finance
ICBC	Industrial and Commercial Bank	MCPD	Managed Co-Lending Portfolio Program
		MDB	Multilateral Development Bank
		MICs	Middle-Income Countries
		MMD	Movement for Multi-Party

	Democracy		Investment Screening
MOF	Ministry of Finance		Mechanisms Dataset
MOFCOM	Ministry of Commerce	PxF	Pre-Export Financing
MOU	Memorandum of Understanding	Quad	Quadrilateral Security Dialogue
MUFG	Mitsubishi UFJ Financial Group	RAP	Resettlement Action Plan
NATO	North Atlantic Treaty Organization	RMB	Renminbi
NDRC	National Development and Reform Commission	RCF	Revolving Credit Facility
NGO	Non-Governmental Organizations	S&P	Standard & Poor
NOC	No Objection Certificate	SAFE	State Administration of Foreign Exchange
NORINCO	China North Industries Group Corporation Limited	SAIS-CARI	China-Africa Research Initiative at the Johns Hopkins School of Advanced International Studies
NPV	Net Present Value		Syndicated Banking Statistics
ODA	Official Development Assistance	SBS	Supreme Court of Pakistan
ODI	Overseas Development Institute	SCP	Special Drawing Rights
ODF	Official Development Finance	SDR	Shanghai Interbank Offered Rate
OECD	Organisation for Economic Co-operation and Development	SHIBOR	Structural Impact Assessment
OFC	Offshore Financial Center	SIA	China Export & Credit Insurance Corporation
OFIC	Official Flows to Ineligible Countries	Sinosure	Secured Overnight Financing Rate
OOF	Other Official Flows	SOFR	Special Purpose Vehicle
P4I	Partnerships for Infrastructure	SPV	Tanzania-Zambia Railway Authority
PAP	Project-Affected Persons	TAZARA	Tanzania Petroleum Development Corporation
PBC	Preferential Buyer's Credit	TPDC	Tracking Underreported Financial Flows
PBOC	People's Bank of China	TUFF	United States
PF	Patriotic Front	U.S.	Ultimate Beneficial Ownership
PGII	Partnership for Global Infrastructure and Investment	UBO	Upper Middle-Income Countries
PIIE	Peterson Institute for International Economics	UMICs	United Nations
PIMCO	Pacific Investment Management Company	UN	UN Declaration on the Rights of Indigenous Peoples
PLAD	Political Leaders' Affiliation Database	UNDRIP	United Nations General Assembly
PPG	Public and Publicly Guaranteed Debt	UNGA	United States Dollars
PRISM	Politics and Regulation of	USD	World Database on Protected Areas
		WDPA	World Trade Organization
		WTO	Year-on-Year
		YoY	

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Chapter 1: Beijing's go-it-alone approach to overseas lending and grant-giving

In a remarkably short period of time, China has established itself as the world's largest official creditor. It has also become a global pace-setter, effectively rewriting the rules and norms that govern the cross-border provision of aid and credit.

Beijing's approach to international lending and grant-giving was once a source of scorn, ridicule and bemusement in Western capitals. But this is no longer the case. G7 policymakers are increasingly focused on competing with China via emulation rather than differentiation.

The purpose of this report is to explain how Beijing has written its own playbook rather than following a set of rules and norms established by and for its Western competitors. We also seek to explain how Beijing's go-it-alone approach has forced G7 policymakers to fundamentally rethink the way they use aid and credit instruments.

After World War II, the United States and its allies created a set of international rules and institutions to govern cross-border financial flows and overcome collective action problems among themselves. They created the International Monetary Fund (IMF) as a lender of last resort to promote the stability of the global financial system. They created the World Bank to provide subsidized credit for large-scale, high-quality infrastructure projects in countries with limited access to private capital markets. They established a set of principles and practices at the Paris Club to facilitate timely and orderly restructurings of sovereign debt. Participants in the U.S.-led international financial system also agreed upon a set of rules at the Organization for Economic Cooperation and Development (OECD) to prevent an export credit subsidy war.

Over time, more guardrails were put in place to constrain Western donors and creditors from using aid and credit to narrowly pursue their national interests. In order to encourage developed countries to provide grants and highly concessional loans to promote economic development and social welfare in developing countries, the OECD

set a 0.7% ODA-to-GNI target for each member state and monitored compliance vis-à-vis this target. The OECD also developed a grant element calculator to measure the financial concessionality of individual loans and required its member states to disclose grant elements on a loan-by-loan basis through the Creditor Reporting System (CRS).⁹ At the same time, the OECD put in place export credit “disciplines” and a monitoring mechanism to prevent a race-to-the-bottom dynamic—where countries would compete on the cost of credit rather than the price and quality of their exporters’ goods and services.¹⁰ Additionally, to facilitate the resolution of sovereign debt crises and discourage creditors from engaging in holdout or litigation tactics, the Paris Club required all member states to share information about their loan exposures (outstanding claims) and follow the “comparability of treatment (COT)” principle during coordinated sovereign debt restructuring processes.¹¹

Beijing has demonstrated a lack of interest in supporting the prevailing international rules and institutions that are designed to govern cross-border financial flows and address collective action problems. It has tacitly encouraged low-income and middle-income countries to bypass international rules and institutions by bankrolling large-scale infrastructure projects with substantially less “hassle factor,” offering fast and flexible due diligence procedures, less stringent environmental, labor, and social safeguards, and no competitive bidding requirements (Humphrey 2015; Swedlund 2017; Humphrey and Michaelowa 2019; Zeitz 2021; Dreher et al. 2019, 2022). It has required foreign borrowers to deposit large amounts of cash collateral in lender-controlled bank accounts and contractually prohibited them from disclosing this

⁹ The grant element calculator quantifies how much of a loan is effectively a grant by comparing its face (nominal) value to the present value of future payments.

¹⁰ The monitoring mechanism was put in place in 1978. However, during the 1980s, industrialized countries increasingly used tied aid—loans and grants that were tied to the acquisition of goods and services from the donor/creditor country—to circumvent the OECD’s Gentleman’s Agreement on Officially Supported Export Credits and other export subsidy restrictions (Hall 2011). To address this challenge, OECD member countries signed another agreement in 1991—known as the “Helsinki Package”—to restrict the use of tied aid instruments. This agreement sought to limit the use of tied aid in commercially viable projects and in upper-middle income and high-income countries (Lammersen and Owen 2001). The tied share of ODA subsequently declined to much lower levels (OECD 2022).

¹¹ Members of the club are expected to disclose their loan exposures in borrowing countries to each other and to the World Bank and the IMF. They are also expected to pursue equitable burden-sharing arrangements to reduce the free-riding incentive of each individual creditor (Chen 2023; Parks et al. 2023; Ferry and Zeitz 2024). Permanent members of the Paris Club agree to abide by the club’s debt restructuring rules and principles, and they do not make decisions about restructuring debt without consensus among the participating creditor countries.

source of leverage, thereby positioning itself at the front of the repayment line and subordinating the World Bank, the IMF, and other competitors to junior creditor status (Gelpern et al. 2023, 2025a, 2025b). It has spurned multiple invitations to join the Paris Club and created contractual clauses in its overseas lending agreements¹² that shield Chinese state-owned banks from coordinated debt restructuring efforts with Paris Club creditors (Gardner et al. 2020; Horn et al. 2022; Gelpern et al. 2023; Huang and Brautigam 2025).¹³ Rather than abiding by the OECD’s “Gentlemen’s Agreement” on Officially Supported Export Credits, it has ramped up its use of blended finance instruments—that combine commercial lending and concessional lending—to help Chinese firms gain a competitive edge over Western firms in overseas markets (Xu and Carey 2014; Hopewell 2019; Dreher et al. 2022; Bunte et al. 2022; Søndergaard-Jensen 2019; Dawar 2020; Escobar et al. 2025).

Section 1: It’s a feature, not a bug: China’s pursuit of commercial and geostrategic advantage

In short, for the better part of the last twenty-five years, Beijing has followed its own playbook rather than the official sector financing rules and norms that guide its Western competitors in liberal market economies. Consider the principles of progressivity and concessionality, which privilege the provision of development finance

¹² The vast majority of Chinese loan contracts with public and publicly-guaranteed (PPG) borrowers included some variation of the following clause: “[t]he Borrower hereby represents, warrants and undertakes that its obligations and liabilities under this Agreement are independent and separate from those stated in agreements with other creditors (official creditors, Paris Club creditors, or other creditors), and the Borrower shall not seek from the Lender any kind of comparable terms and conditions which are stated or might be stated in agreements with other creditors” (Gelpern et al. 2023: 378).

¹³ There are concerns that Beijing’s go-it-alone efforts to mitigate repayment risk may undermine the international community’s efforts to provide coordinated debt relief to sovereign borrowers in financial distress. In November 2020, China agreed to participate in the G20 Common Framework on Debt Treatments, which was initially interpreted by Paris Club and multilateral creditors as a tacit endorsement of the idea that Chinese creditors should participate in a coordinated debt restructuring process with non-Chinese creditors and the process should be governed by the “comparable treatment” principle. However, Beijing’s decision to participate in the G20 Common Framework on Debt Treatments has created confusion among distressed sovereigns, because most of their loan contracts with Chinese state-owned creditors expressly prohibit collective debt rescheduling efforts and the application of the comparable treatment principle. Further complicating matters, Chinese state-owned creditors have continued to discreetly negotiate bilateral debt rescheduling agreements, which for the most part do not involve significant reductions in the total net present value of loan repayments (see Franz et al. 2024). Additionally, Beijing has discreetly provided emergency rescue loans to its biggest sovereign borrowers to ensure that they are sufficiently liquid to continue servicing their existing Belt and Road infrastructure project debts (Horn et al. 2023a, 2023b).

to countries most in need on terms that are more favorable than market rates.¹⁴ G7 and OECD countries have endorsed and followed these principles for decades (Easterly 2007; Hynes and Scott 2013; Roodman 2015; Morris et al. 2020). China has largely ignored these principles and forged its own path. It has increasingly flouted the rules and norms that govern the behavior of other international donors and lenders.


“China has increasingly flouted the rules and norms that govern the behavior of other international donors and lenders.”

Figure 1.1 documents a sharp decline in the percentage of China’s overseas lending and grant-giving portfolio that qualifies as Official Development Assistance (ODA)—from 22% in 2000 to 1% in 2023.¹⁵ Figure 1.2 shows a contemporaneous decline in the weighted average grant element—a summary measure of financial concessionality that varies from 0% (the lowest level of concessionality) to 100% (the highest level of concessionality)—of China’s overseas lending portfolio to nearly zero by 2023.¹⁶ Figure 1.3 provides evidence of a parallel shift towards regressivity rather than progressivity: China has dramatically reduced the share of its overseas lending and grant-giving portfolio that supports low-income and lower-middle income countries (from 89% in 2000 to 24% in 2023), while ramping up the share supporting upper-middle income and high-income countries (from 11% in 2000 to 76% in 2023).¹⁷

¹⁴ Loans offered at below-market rates (with high grant elements) typically have lower interest rates, longer repayment periods, and extended grace periods (Morris et al. 2020).

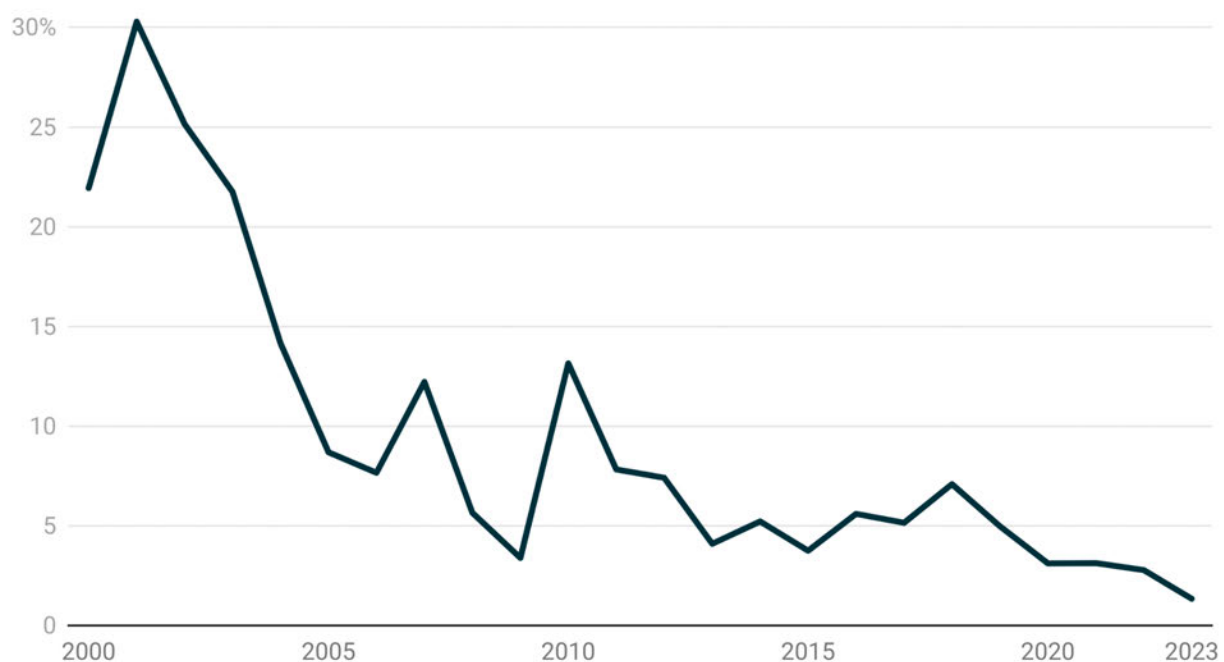
¹⁵ Until 2018, the OECD defined Official Development Assistance (ODA) flows as grants and loans for projects and activities with development intent that were financed by official sector institutions and provided on highly concessional terms (with a minimum grant element of 25 percent). It defined Other Official Flows (OOF) as projects and activities without development intent that were financed by official sector institutions or projects and activities with development intent that were financed by official sector institutions and provided on less concessional terms (with a grant element below 25 percent). ODA-supported projects and activities are widely considered to be “development aid” in the strict sense of the term. After 2018, the OECD redefined ODA with a grant-equivalent methodology that relies on a tiered concessionality threshold system for loans based on the country’s OECD income bracket. Under the grant-equivalent methodology, the threshold concessionality for loans to the official sector in the recipient country is 45% for LDCs and other LICs (using a discount rate of 9%), 15% for LMICs (using a discount rate of 7%) and 10% for UMICs (using a discount rate of 6%). Loans to the private sector, however, continue to use the 25% threshold used in the cash-flow methodology (in alignment with OECD-DAC practices). See Appendix Section A3.1 for more details.

¹⁶ The weighted average grant element declined from 7.4% in 2000 to 1.4% in 2023 (see Figure 1.2).

¹⁷ In Chapter 3, we document striking similarities between China’s overseas lending activities in the Global North and the Global South. The coherence of its portfolio suggests that a common set of

Figure 1.1: Percentage of China's overseas lending and grant-giving portfolio that qualifies as ODA

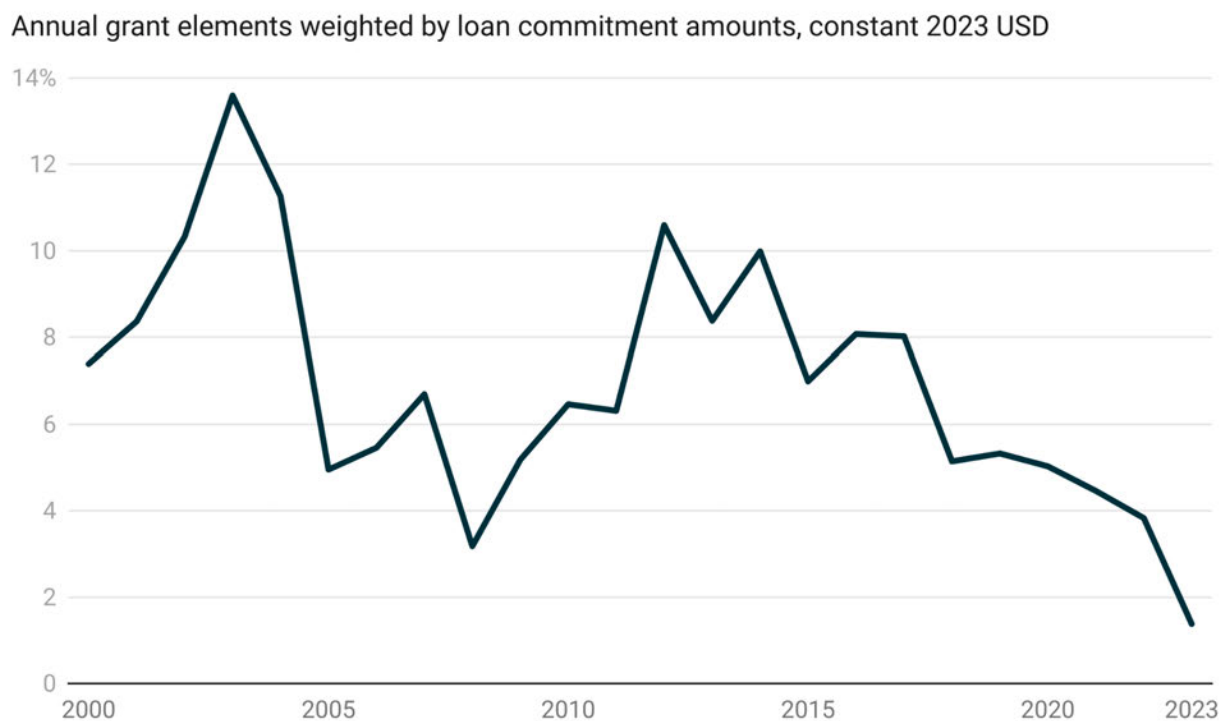
Annual share of official financial flows, constant 2023 USD



Notes: Year-to-year movements reflect changes in portfolio composition and in ODA eligibility of recipient countries under DAC rules. Source: AidData CLG-Global 1.0.

policies, principles, and practices govern the way that Beijing provides aid and credit to the developed and developing world.

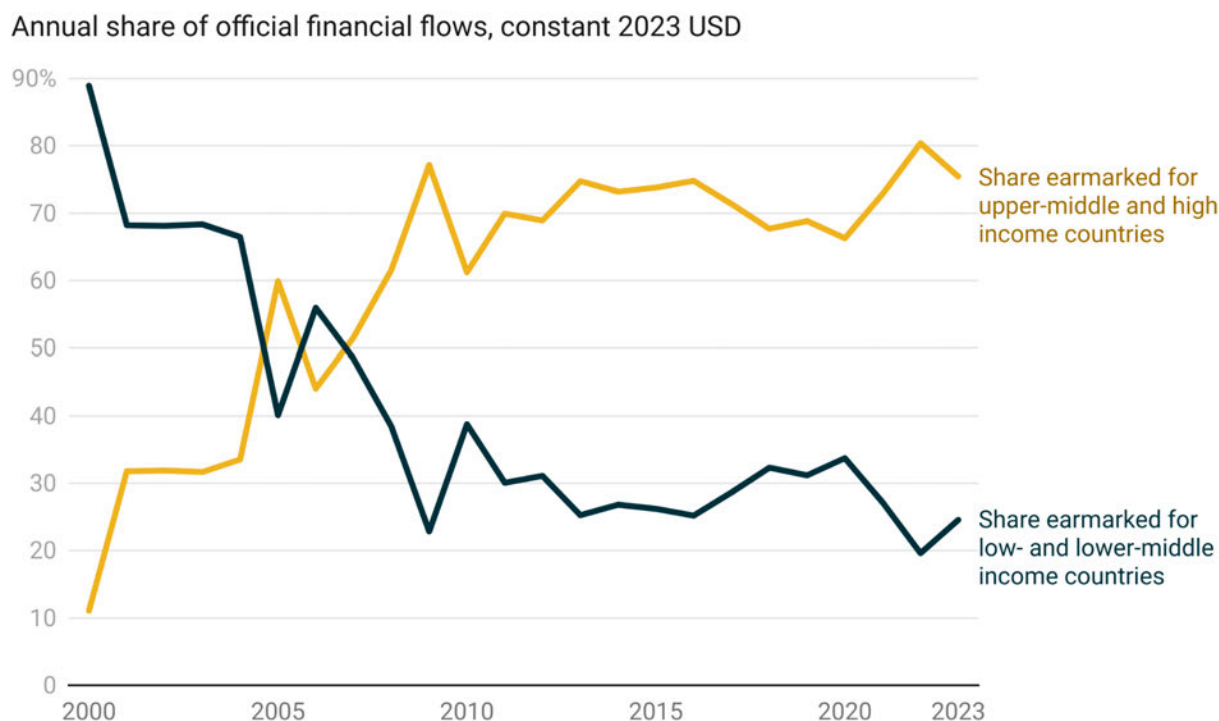
Figure 1.2: Weighted average grant element of China's overseas lending portfolio



Notes: Grant element calculations are based on the IMF's method of measurement. Loans without sufficient data on borrowing terms are excluded from the calculations. Higher grant elements indicate more concessional lending.

Source: AidData CLG-Global 1.0.

Figure 1.3: Decomposition of China's overseas lending and grant-giving portfolio by income brackets



Notes: Each financial commitment is assigned to an income bracket based on the recipient country's World Bank income classification in the year of the commitment. Recipient countries are identified using the Country_of_Activity variable (where the financed project/activity actually takes place). Source: AidData CLG-Global 1.0.

The principle of transparency is another case in point (Honig and Weaver 2019; Dreher et al. 2022; Gelpert et al. 2023, 2025b; Blair et al. forthcoming). In 2006, China was invited to join the Paris Club as a full-fledged member because of its status as an increasingly important sovereign lender. It rejected this offer and chose instead to be an “ad hoc participant,” placing it “under no obligation [...] to inform the Paris Club about the management of its credit activities” (Hurley et al. 2018: 19).¹⁸ Then, in 2009,

¹⁸ Disagreement about the importance of the transparency principle continues to be a source of tension and conflict between China, Paris Club, and international financial institutions. In January 2020, the Deputy Director of the IMF's Strategy and Policy Review Department announced that his organization's “number one message” to the Chinese authorities was that “[i]f you are a big lender, there is no free-riding. [...] If you fail to be transparent, you make it more difficult for everyone else—borrowers and lenders—to take the right decisions, which makes it more likely that there will be a big blow up, which makes it more likely that you as the big lender will get hurt. So, your transparency decisions can actually influence outcomes” (Zettelmeyer 2020).

a DAC-China Study Group was established to increase mutual understanding and socialize China to OECD-DAC reporting standards. However, China decided not to join the OECD's Creditor Reporting System (CRS), a mechanism for information sharing and coordination that is open to both OECD-DAC and non-OECD-DAC members (Xu and Carey 2014; Dreher et al. 2022). Several years later, a large group of official donors, lenders, recipients, and borrowers came together for the High-Level Forum on Aid Effectiveness in Busan, South Korea. A partnership agreement was endorsed by all parties, but it papered over an unresolved conflict between the "incumbents" and "challengers" of the prevailing global development finance regime. Western powers urged China to join the International Aid Transparency Initiative (IATI) and voluntarily comply with transparency standards of the OECD-DAC. China flatly rejected this proposal, stating that the "principle of transparency should apply to north-south cooperation, but [...] it should not be seen as a standard for south-south cooperation" (Tran 2011).

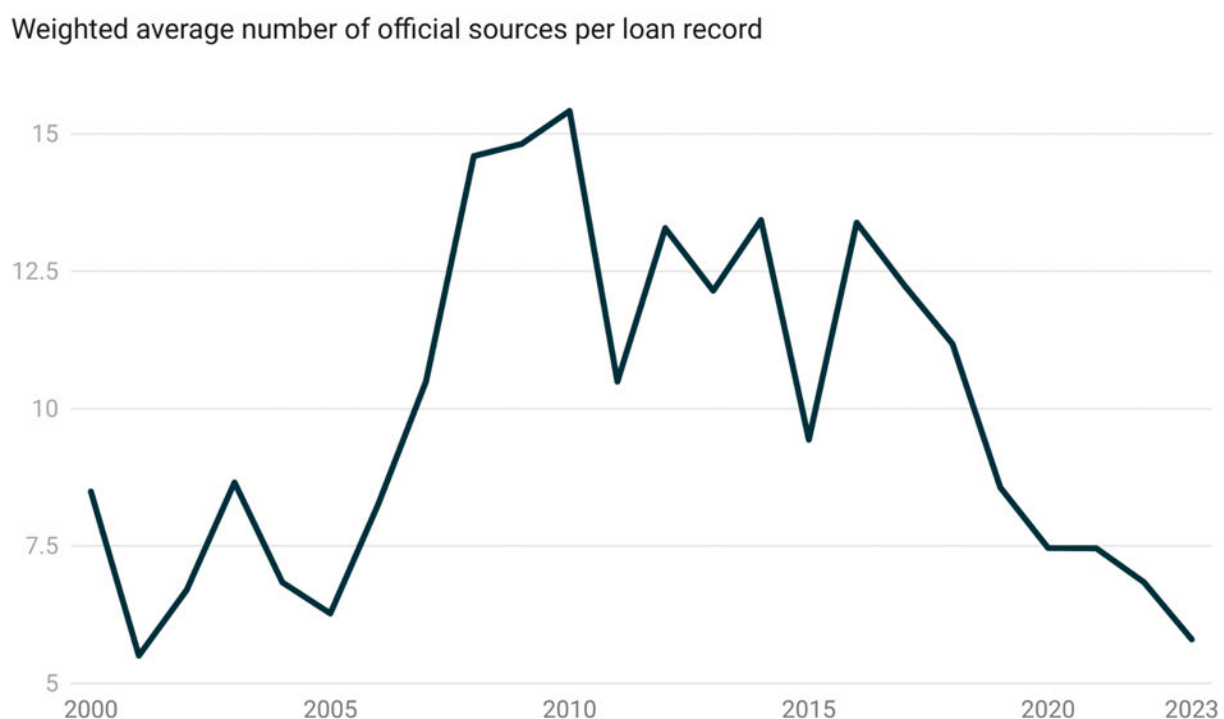
Since then, China's overseas lending and grant-giving portfolio has become increasingly opaque. Figure 1.4 measures the weighted average number of official sources supporting Chinese loan records that AidData has identified through the implementation of its Tracking Underreported Financial Flows (TUFF) methodology. It shows a sharp (62%) decline in the availability of information from official sources between 2010 and 2023.¹⁹ In Chapter 2, we provide additional evidence that Beijing has pivoted over the last fifteen years toward more exotic credit instruments that are substantially more difficult to track (see Figures 2.19, 2.20, and 2.8).²⁰ In order to gauge whether the opacity challenge will likely become more or less acute over time, we also evaluate the discoverability of information in some of the fastest growing segments of Beijing's overseas lending portfolio, including syndicated loans, non-PPG loans, and

¹⁹ We also find evidence of a decline over time in the availability of information from official sources about China's overseas grant-giving program (see Figure A5.1 in the Appendix). Figure A5.2 in the Appendix measures the share of China's overseas lending portfolio for which AidData was able to identify original contracts. It shows a different pattern: the availability of original contracts steadily increases between 2010 and 2022, but sharply declines between 2022 and 2023.

²⁰ On average, over a 24-year period of observation (2000-2023), we find that official sources disclose 74% more information about standard PPG credit instruments than non-standard PPG credit instruments (see Figure 2.8). When we analyze the discoverability of information from official sources for standard and non-standard credit instruments, irrespective of whether they have PPG borrowers, we obtain similar results (see Figure A5.18 in the Appendix). For corroborating sources of evidence, see Gelpert et al. (2023, 2025b).

liquidity support facilities.²¹ In nearly all of these portfolio segments, we find that it is substantially more difficult to identify official sources of information about these lending operations (see Figure 2.8).²²

Figure 1.4: Discoverability of information about China’s overseas lending portfolio



Notes: This figure presents the weighted average number of official sources supporting each loan record. The y-axis starts from 5 sources. Weights are based on loan commitment amounts in constant 2023 USD. Source: AidData CLG-Global 1.0.

Beijing’s disregard for the rules and norms that have traditionally governed cross-border financial flows from bilateral and multilateral sources begs the question of

²¹ These are discussed more extensively in Chapter 2.

²² On average, over a 24-year period of observation (2000-2023), we find 24% more information from official sources about China’s PPG loan commitments than its non-PPG loan commitments; 14% more information from official sources about China’s bilateral loan commitments than its syndicated loan commitments; and 37% more information from official sources about China’s infrastructure project loans than its liquidity support facilities (see Figure 2.8). When we restrict the analysis to all sources of information, irrespective of whether they have an official sector origin, we obtain similar results (see Figure A5.12 in the Appendix).

whether it has chosen to follow an alternative set of rules and norms. We have spent the last 13 years tracking and analyzing China’s international lending and grant-giving activities in collaboration with an international network of researchers from Harvard University, Heidelberg University, the University of Göttingen, the University of Cape Town, the University of Hong Kong, Georgetown University, Brigham Young University, the Center for Global Development, the Peterson Institute for International Economics, and the Kiel Institute for the World Economy (Strange et al. 2013, 2017; Muchapondwa et al. 2016; Dreher et al. 2018, 2019, 2021, 2022; Custer et al. 2021; Malik et al. 2021; Gelpern et al. 2023, 2025a, 2025b, forthcoming; Horn et al. 2023a, 2023b; Parks et al. 2022, 2023; Asmus-Bluhm et al. 2024; Franz et al. 2024; Goodman et al. 2024; Wellner et al. 2025; Bluhm et al. 2025). Our reading of the historical record is that an overarching principle has guided China’s overseas lending and grant-giving portfolio since the turn of the century: the pursuit of commercial and geostrategic advantage.


“An overarching principle has guided China’s overseas lending and grant-giving portfolio since the turn of the century: the pursuit of commercial and geostrategic advantage.”

In 1999, when Beijing adopted the “Going Out” strategy, the country faced a foreign exchange oversupply problem. Annual trade surpluses had led to a rapid accumulation of dollar reserves, which created a risk of currency appreciation and prompted China’s State Administration of Foreign Exchange (SAFE) to search for international assets where it could invest its surplus dollar reserves and get an attractive financial return. SAFE entrusted these surplus dollars to CDB and China Eximbank—the country’s state-owned policy banks—and tasked them with the pursuit of profit via dollar-denominated international lending (Dreher et al. 2021, 2022). This is why China’s cross-border loans carry higher interest rates and shorter repayment periods than those provided by other official sector creditors. They are guided by different principles: the former privileges the pursuit of profit, while the latter privileges the pursuit of economic development and social welfare in borrowing countries (Chen 2020; Malik et al. 2021; Gelpern et al. 2023; Parks et al. 2023).

High levels of industrial overproduction presented another challenge. Many of China's state-owned steel, iron, cement, glass, and aluminum companies were over-leveraged, inefficient, and unprofitable, which the government viewed as a threat to the country's long-term growth prospects and a potential source of social unrest and political instability. Beijing sought to overcome this challenge by contractually obligating its overseas borrowers to import infrastructure project inputs—like steel, iron, glass, aluminum, and cement—from Chinese state-owned firms (Bluhm et al. 2025). They did so by prohibiting borrowers from using the loan proceeds for any purpose other than financing engineering, procurement, and construction (EPC) contracts with Chinese companies that were issued on a sole-source basis (Dreher et al. 2022). These EPC contracts were customarily signed prior to the signature of the loan agreements, effectively disallowing competitive bidding and ensuring that borrowers would purchase China's domestically oversupplied industrial (infrastructure project) inputs from Chinese companies with insufficient domestic customers.²³

Beijing also used the “Going Out” strategy to address the fact that sustaining high levels of domestic economic growth would require access to natural resources (e.g., oil, gas, and minerals) that the country lacks in sufficient quantities at home. To address this challenge, Beijing's policy banks allowed their overseas borrowers to collateralize and repay loans with the money that they earned from natural resource exports to China. They did so by linking their loan contracts with overseas borrowers to commodity sales and purchase agreements (“offtake contracts”) that obligated foreign exporters to sell pre-specified quantities to Chinese importers over long periods of time at discounted prices (Dreher et al. 2022; Gelpert et al. 2023, 2025a; La Zurita et al. 2020).

■
“Over the last 25 years, Beijing has also blended the use of concessional and commercial financing to help its firms gain a competitive advantage vis-à-vis Western firms in overseas markets.”

²³ A major goal of the “Going Out” strategy was to help Chinese companies gain a foothold in overseas markets where they could secure future contracts and investment opportunities and compete for market share. This strategy has yielded significant results: China now enjoys a dominant position in the global construction market—so much so that there is no other country in the world whose firms receive more World Bank contracts via international competitive bidding processes (McLean 2017).

Over the last 25 years, Beijing has also blended the use of concessional and commercial financing to help its firms gain a competitive advantage vis-à-vis Western firms in overseas markets. Every country has an incentive to support its national exporters with subsidized credit. Therefore, after World War II, OECD member countries put in place a set of export credit disciplines to prevent a race-to-the-bottom dynamic, in which countries would compete on the cost of credit rather than the price and quality of their exporters' goods and services. In 1978, under a so-called "Gentlemen's Agreement" on Officially Supported Export Credits, OECD member countries agreed to "tie their own hands" and voluntarily abide by a set of international rules that limit the provision of subsidized credit to domestic companies with overseas operations (Moravcsik 1989). However, Beijing never agreed to participate in this agreement and it has openly used grants and concessional loans—in conjunction with export credits and other types of commercial loans—to help its firms gain a competitive edge over Western firms (Søndergaard-Jensen 2019; Hopewell 2019; Dawar 2020; Bunte et al. 2022).

Consider the Standard Gauge Railway (SGR) in Kenya. To finance the construction of the first phase of the SGR, China Eximbank gave the Kenyan government a \$2 billion export credit at commercial borrowing rates *and* a \$1.6 billion loan on highly concessional borrowing terms.²⁴ Both of these loans include a "use of proceeds" clause that requires the Kenyan government to import all project inputs—including steel, cement, stone, sand, timber, glass, locomotives, train wagons, electricity transmission pylons, and cables—from a Chinese exporter (Dreher et al. 2022).²⁵

Beijing also offered "buy one, get one free" and "buy two, get one free" deals in order to encourage foreign importers to purchase equipment from Chinese exporters. For example, between 2004 and 2013 Cameroon, Zimbabwe, Burundi, Nepal, and Vanuatu received package financing deals from China Eximbank and China's Ministry of

²⁴ The \$2 billion export credit carried an interest rate of 6-month LIBOR plus a 3.6 percent margin and a fifteen-year maturity. The \$1.6 billion loan carried a 2 percent fixed interest rate and a twenty-year maturity. In its *Report to the U.S. Congress on Global Credit Competition*, the Export-Import Bank of the United States argued that China Eximbank's practice of blended finance "brings both financial costs and near-prohibitive competitive advantages into the dealings of commercial transactions [...] [and] seeing its return is a particularly concerning development" (Export-Import Bank of the United States 2017: 20).

²⁵ The construction of the 475-kilometer railroad required extraordinary amounts of steel, cement, stone, sand, timber, and glass. It also required the acquisition of manufactured goods that depend upon industrial inputs, such as locomotives, train wagons, electricity transmission pylons, and cables.

Commerce (MOFCOM) to help them purchase turboprop aircraft—the MA60 and the Y-12—from AVIC Xi'an Aircraft Industry Group Company Ltd. (AVIC XAC) and Harbin Aircraft Industry Group (HAIG). In each deal, the recipient (importing) country received an aircraft acquisition loan and an aircraft acquisition grant and it was required to use the loan and grant proceeds to purchase multiple aircraft from the same Chinese exporter. This arrangement helped AVIC XAC and HAIG overcome barriers to market entry because it was offered to “price-sensitive” foreign (government) importers at a time when neither company enjoyed significant overseas market share.

Since the adoption of the “Going Out” strategy, China’s state-owned creditors and companies have also learned to adapt their offerings to the needs and preferences of foreign buyers and borrowers. For example, the Royal Thai Navy (RTN) agreed in principle to participate in a “buy two, get one free” deal for Chinese submarines in 2015. However, after contracting a supplier’s credit (loan) from China Shipbuilding & Offshore International Co Ltd (CSOC) for the acquisition of the first Yuan-class S26T submarine in 2017, the RTN’s participation in the deal encountered public scrutiny and parliamentary opposition.²⁶ CSOC responded by offering several deal-sweeteners in 2020. It agreed to upgrade the armament of the first submarine—by providing CM-708 missiles free of charge—and improve its sound-proofing. However, it made these “freebies” conditional upon RTN completing the acquisition of the second and third submarines.

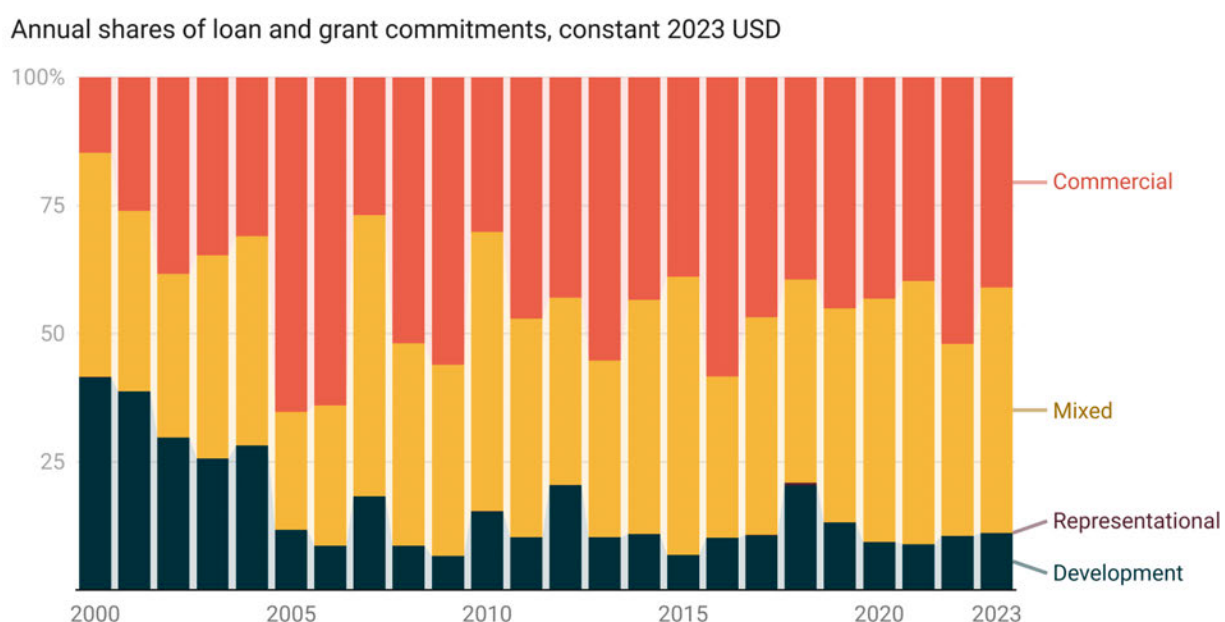
In Figure 1.5, we decompose China’s overseas lending and grant-giving portfolio according to its “intent” (i.e. the fundamental purpose of each financial commitment). 43% of its portfolio had commercial intent between 2000 and 2023.²⁷ Another 41% of the portfolio had “mixed intent,” which in nearly all cases means that the financial commitments had commercial intent and either development or representational

²⁶ The secrecy of the deal fueled suspicion and speculation (Pandey 2017; Chalermpanupap 2020; Chambers and Chalermpanupap 2024).

²⁷ Loan- and grant-financed projects and activities assigned to the commercial intent category are those that primarily seek to promote the commercial interests of the country from which the financial transfer originated—in particular, those that facilitate the export of Chinese goods and services (Custer et al. 2023: 23).

intent.²⁸ Therefore, the sum of the “commercial intent” and “mixed intent” shares provides the best approximation of the overall percentage of China’s overseas lending and grant-giving portfolio supporting projects and activities that seek to produce commercial benefits for China. On average, between 2000 and 2023, this headline figure stood at 84%. The fact that this figure has remained relatively stable over time also highlights that it is a feature rather than a bug: China uses aid and credit to pursue commercial advantage and it is largely unconstrained by the international rules and norms that guide its Western peers and competitors.

Figure 1.5: Decomposition of China’s overseas lending and grant-giving portfolio by intent



Notes: Commitments in the “mixed” category consist of those for which a primary purpose is not identifiable. These commitments have multiple purposes (i.e., some combination of development, commercial, and/or representational intent). Representational intent constitutes only 0.04% of China’s portfolio on average per year. It is included for completeness but not visible in the chart. Source: AidData CLG-Global 1.0.

²⁸ Loan- and grant-financed projects and activities assigned to the mixed intent category are those for which it is not possible for AidData to identify the primary purpose of the project/activity and the project/activity has multiple purposes (Custer et al. 2023: 23). Nearly all projects and activities that are assigned to the mixed intent category involve commercial intent and either development or representational intent.

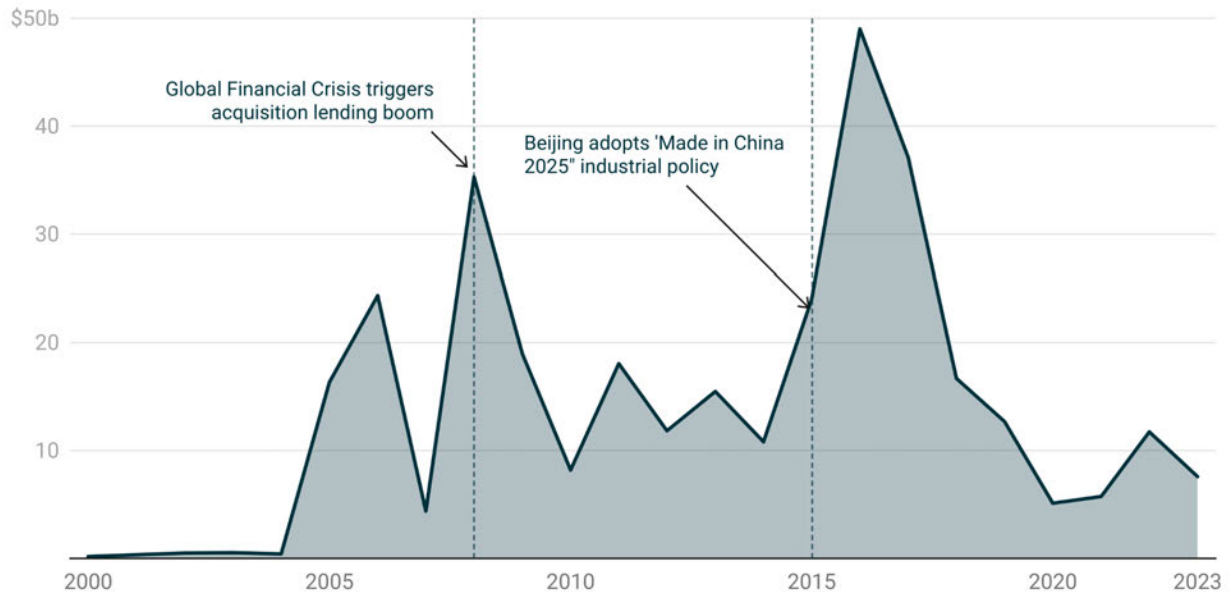
Another major source of commercial and geostrategic advantage is Beijing's cross-border acquisition lending strategy. Most OECD countries lack official sector financing instruments that facilitate mergers and acquisitions in developed and developing countries, but China's state-owned banks have developed M&A lending instruments that seek to ensure that Chinese companies have enough cash on hand to acquire ownership (equity) stakes in high-tech firms and geostrategic assets in foreign jurisdictions (Gallagher and Irwin 2014; Kong and Gallagher 2017; Escobar et al. 2025).²⁹ Figure 1.6 demonstrates that Beijing has turbocharged the implementation of this strategy on two occasions since the turn of the century—once in the immediate aftermath of the 2008 global financial crisis and again after the adoption of the "Made in China 2025" policy in 2015.


"Most OECD countries lack official sector financing instruments that facilitate mergers and acquisitions in developed and developing countries, but China's state-owned banks have developed M&A lending instruments."

²⁹ Cross-border lending for mergers and acquisitions (M&A) involves the provision of bank or nonbank credit to a borrowing institution to facilitate its purchase of a company in another country.

Figure 1.6: China's cross-border M&A lending volumes

Annual loan commitments for overseas mergers and acquisitions, constant 2023 USD



In September 2008, Lehman Brothers (the fourth-largest investment bank in the U.S.) filed for bankruptcy, triggering a set of bank runs and stock market crashes that ultimately resulted in a global financial crisis. International commodity prices plummeted to record lows between September and December of 2008, and the Chinese authorities responded to this unique window of opportunity. They quickly pivoted and invested their surplus foreign exchange reserves in undervalued—and geostrategically significant—overseas commodity assets via dollar-denominated international lending operations (Dreher et al. 2021). China's State Administration of Foreign Exchange (SAFE) and China Development Bank (CDB) signed so-called "entrust loan" agreements, whereby SAFE would assume the role of principal and CDB would act as its agent. CDB effectively became a custodian of funds for SAFE, identifying transactions that aligned with SAFE's policy objectives, disbursing loans to borrowers, supervising the use of the funds, and managing repayments (Parks et al. 2023). SAFE directed CDB to focus its cross-border lending activities in the natural

resource and energy sector and CDB followed the instructions of its principal (Dreher et al. 2021).³⁰

In December 2008, the State Council and the China Banking Regulatory Commission (CBRC) also took advantage of this unique window of opportunity by lifting a ban on state-owned commercial banks issuing loans for overseas mergers and acquisitions (CBRC 2008). China's cross-border brownfield (M&A) lending operations quickly soared to record levels, enabling Beijing to purchase major ownership stakes in oil, gas, and critical mineral assets in the developing world and the developed world.³¹


"To support the implementation of the Made in China 2025 policy, Beijing directed its state-owned banks to help Chinese companies gain access to advanced technologies by ensuring that they have enough cash on hand to purchase majority or minority ownership stakes in high-tech companies."

Then, in May 2015, Beijing announced a new state-led industrial policy called "Made in China 2025" (MIC2025) that would seek to ensure China's dominance in a wide array of high-tech manufacturing sectors—including, but not limited to, artificial intelligence, advanced robotics, semiconductors, quantum computing, 5G, biotechnology, and

³⁰ Chen Yuan, the President of China Development Bank, said at the time that "[e]veryone is saying we should go to the western markets to scoop up [underpriced assets]. [...] I think we should not go to America's Wall Street, but should look more to places with natural and energy resources" (Anderlini 2009).

³¹ Following the 2008 financial crisis, the largest M&A loan commitment was made in April 2009. China Eximbank provided a \$3 billion loan to Mangistau Investments B.V. (MIBV)—a joint venture between Joint Stock Company National Company KazMunayGas (KMG) (50% equity stake) and CNPC Exploration and Development Company Ltd (CNPC E&D) (50% equity stake)—to facilitate its acquisition of a 50% ownership stake in the exploration assets of JSC Mangistaumunaigas (MMG), Kazakhstan's fifth-largest oil producer, for a purchase price of \$2.6 billion. In the same year, China Eximbank and CDB each provided approximately \$2.715 billion in overseas investment loans to finance Sinopec's 100% acquisition of Addax Petroleum Corporation through Sinopec's Canada-incorporated SPV and indirect wholly-owned subsidiary, Mirror Lake Oil and Gas Company Limited. Bank of China also provided a \$1 billion loan to PetroChina International (Singapore) Pte. Ltd. to facilitate its acquisition of Keppel Oil and Gas Services' ownership stake in Singapore Petroleum Company (SPC). A June 2009 agreement gave PetroChina International (Singapore) Pte. Ltd. a 45.5% ownership stake in SPC, but subsequently completed a mandatory general cash offer for all the remaining shares in October 2009.

renewable energy—by 2025.³² To support the implementation of the policy, Beijing directed its state-owned banks to help Chinese companies gain access to advanced technologies by ensuring that they have enough cash on hand to purchase majority or minority ownership stakes in high-tech companies (Gallagher and Irwin 2014; Mozur and Ewing 2016; USTR 2018; Liu 2023). Illustrative, cross-border loans that facilitated the acquisition of strategically important high-tech companies and assets during the first few years of MIC2025 implementation include:

- An \$800 million loan from Bank of China and China Merchants Bank in 2015 that enabled a consortium of Chinese firms to purchase a 100% ownership stake in OmniVision Technologies, a U.S.-listed technology company that builds powerful compact cameras for portable devices and state-of-the-art image sensors.
- A \$600 million loan from Bank of China, China Eximbank, and China Minsheng Bank in 2015 for Beijing JianGuang Asset Management Co., Ltd. (JAC Capital)—a Chinese state-owned investment company and private equity firm—to acquire a 77% ownership stake in the radio frequency (RF) power business of NXP Semiconductors N.V. (a Dutch firm that was later renamed Ampleon Coöperatief U.A.).³³ RF power semiconductor devices are widely used in the aerospace, military, and telecommunication industries. They are also crucial inputs for China’s 5G and 6G network expansion efforts at home and abroad.
- A €4.6 billion loan from ICBC that enabled Midea Group—a Chinese appliance maker—to acquire a 94.5% ownership stake in Germany-based robotics manufacturer Kuka AG in 2016.

³² More specifically, China’s goal under MIC2025 was to achieve 70% self-sufficiency in 10 key high-tech sectors by 2025: (1) next-generation information technologies; (2) automated machine tools & robotics; (3) aerospace and aviation equipment; (4) maritime equipment and high-tech shipping; (5) advanced railway transport equipment; (6) new-energy and energy-saving vehicles; (7) electrical equipment; (8) agricultural equipment; (9) new materials; and (10) biopharma and advanced medical products.

³³ Then, in 2022, Wuxi Xichanweixin Semiconductor Co., Ltd—a Chinese state-backed semiconductor and chip company based in Wuxi, Jiangsu Province with its largest shareholder being Wuxi Industry Development Group Co., Ltd. (an entity owned by the Wuxi Government)—purchased a 100% ownership stake in Ampleon Coöperatief U.A. from Beijing JianGuang Asset Management Co., Ltd. and China Wealth Growth Fund II L.P. It did so with a loan from the Industrial and Commercial Bank of China (ICBC) with an estimated value of \$1.036 billion.

- A £551.6 million loan in 2017 from Canyon Bridge Fund I, LP—a Chinese state-owned investment fund—to CBFI Investment Limited to facilitate its acquisition of a British semiconductor and software design company called Imagination Technologies Group Limited.
- Two loans worth \$150 million from China Eximbank to facilitate the acquisition of a 100% ownership (equity) stake in The Paslin Company (a Michigan-based robotic equipment manufacturer) by Zhejiang Wanfeng Technology Development Co., Ltd. in 2016.
- A €940 million loan from China Merchants Bank in 2017 to Creat Group to facilitate its acquisition of Biotest, a Germany company that generates blood plasma products to treat blood coagulation disorders, auto-immune diseases, and immune deficiencies. Prior to the acquisition, Creat Group's U.S. subsidiary maintained databases with personal identifying information and patient health information for donors, receivers and other patients.

China's cross-border lending strategy has also supported M&A transactions in sensitive sectors that could threaten the national security interests of Western competitors. A case in point is the \$1.2 billion loan that Fosun International Limited obtained to facilitate its acquisition of Ironshore Inc., which is described in Box 1a.

Box 1a: The “buy it, strip it, and sell it” model

In 2015, four Chinese state-owned banks—Bank of China, ICBC, Agricultural Bank of China, and Bank of Communications—provided a \$1.2 billion syndicated loan to facilitate Fosun International Limited’s acquisition of an 80% ownership stake in Ironshore Inc., which is a Bermuda-headquartered and Cayman Islands-incorporated company that for nearly three decades sold liability insurance to U.S. government officials at the Central Intelligence Agency (CIA) and Federal Bureau of Investigation (FBI) through an American subsidiary known as Wright USA. This transaction, which we discuss at greater length in Chapter 3, was conducted discreetly through offshore shell companies and without an advanced notification to or review by the Committee on Foreign Investment in the United States (CFIUS).³⁴ However, after concerns arose that the acquisition “gave Chinese spy agencies a pipeline into the names, job titles, addresses and phone numbers of tens of thousands of American intelligence and counterterrorism officials,” Fosun International Limited divested from Wright USA by selling it to Starr Companies in late 2016 (Stein 2016).³⁵

According to the U.S.-China Economic and Security Review Commission, “[i]t was not until a month after the acquisition was complete [in December 2015] that CFIUS expressed concern about the purchase and began reviewing the deal to determine whether it had granted Chinese agencies access to the personal information of tens of thousands of U.S. intelligence and counterterrorism officials” (U.S.-China Economic and Security Review Commission 2017b: 83). After the acquisition was complete, Michelle Van Cleave—who served as the statutory head of U.S. counterintelligence during the George W. Bush administration—told *Newsweek* magazine that “Fosun’s ownership of Wright USA poses a grave security risk, whether it knowingly provided information to its Chinese parent company or not. The breach only begins, she says, when intelligence officials, including undercover personnel, provide Wright [USA] with their real names, home addresses, telephone numbers and email addresses. But it widens considerably

³⁴ If a borrower is not legally domiciled in the country where the financed project or activity takes place, then it is an “offshore” borrower.

³⁵ The CEO of Starr Companies is Maurice Greenberg, the former CEO of American International Group (AIG).

when officials file claims because a federal or congressional investigation causes them to hire a lawyer. 'Knowing that an individual in a sensitive position may have a problem at work is red meat to an espionage service looking to recruit inside sources.' [...] Usually, spies have to work hard for that information. Owning the insurance company means that the unwitting American is filling out the forms that say 'target me'" (Stein 2016).

Fosun International Limited's indirect acquisition and rapid divestiture of Wright USA suggests that the Chinese company may have followed a "buy it, strip it, and sell it" model. In Chapter 3, we discuss another high-profile case, involving a British semiconductor company called Imagination Technologies, in which there is evidence of the same model being followed (see Box 3b). The 1.0 version of AidData's CLG-Global dataset also includes many other cases of Chinese cross-border M&A loans being used to acquire overseas companies and assets in sensitive sectors that are quickly resold.

The extraction of critical minerals—key inputs for clean energy technologies (including electric vehicles, wind turbines, and solar panels), digital technologies (including semi-conductors, fiber-optic cables, and memory chips that power AI and cloud computing), and defense technologies (including missile defense radars, jet engines, night-vision goggles, and satellite communications)—has become another major focus of Beijing's international acquisition lending strategy (Escobar et al. 2025). One of the most important ways that China has secured its critical mineral supply chain is by helping its firms overcome barriers to market entry. Beijing's state-owned banks have helped Chinese firms break into the capital-intensive sector through an aggressive acquisition lending program.³⁶ Also, once a Chinese firm has established a foothold, it is common for Chinese state-owned creditors to provide a series of consecutive loans to the same firm for the development and expansion of the mine and working capital

³⁶ For example, consider a Chinese firm that wishes to acquire a majority ownership stake in an overseas mine for a cash consideration of \$1 billion. It would not be uncommon for Beijing's state-owned banks to offer the firm a \$700 million "acquisition loan" to provide 70% of the liquidity needed to purchase the asset. However, accessing this type of state credit typically depends upon the Chinese firm (borrowing institution) using its own money to cover the remaining cost of the asset acquisition (\$300 million).

to sustain operations at the facility.³⁷ However, as we explain at greater length in Box 1b, Beijing's use of the "buy it, hold it, and build upon it" model is not unique to the critical minerals sector.


"One of the most important ways that China has secured its critical mineral supply chain is by helping its firms overcome barriers to market entry."

Nor is China's competitive edge restricted to brownfield (M&A) FDI transactions.³⁸ It also applies to greenfield FDI transactions—in particular, those of the limited recourse project finance variety where a special purpose vehicle (SPV) uses a mix of debt and equity financing to undertake an investment project.³⁹ These types of FDI projects can be undertaken without any debt financing or equity financing from an official sector (state-owned) institution. However, when an export credit agency (ECA) or development finance institution (DFI) from a G7 or OECD country is involved, it usually provides debt financing and requires the SPV to secure equity contributions from its shareholders (Dewar 2017; OECD 2023a). It is exceedingly rare for official sector institutions from the same country of origin to meet an SPV's debt *and* equity financing needs. But Beijing has outflanked its competitors by dispensing with this longstanding norm. When it seeks to bankroll greenfield FDI projects in overseas jurisdictions, it is

³⁷ Escobar et al. (2025) find that 83% of Beijing's official sector lending for copper, cobalt, nickel, lithium, and rare earth element (REE) operations in developing countries is earmarked for mining operations that are partially or wholly owned by Chinese companies. China has selectively directed credit to those copper, cobalt, lithium, nickel, and REE operations where Chinese firms have recently acquired or already possess ownership stakes, ensuring long-term access to the mineral outputs produced by these sites. Escobar et al. (2025) also provide evidence that Beijing has also prioritized the provision of subsidized credit—i.e., loans that are priced below market rates—to facilitate these activities.

³⁸ Brownfield FDI transactions expand, improve, or take ownership stakes in existing overseas assets. Greenfield FDI transactions build new assets rather than modifying or acquiring existing ones in overseas jurisdictions.

³⁹ A loan that is directly issued to a government agency is called a full-recourse sovereign loan. The repayment of this type of debt does not depend upon the financial viability of a project or the cash flow generated by any particular asset. By contrast, when a project is financed with a limited-recourse structure, the loan that is used to finance the acquisition, construction, and/or maintenance of an asset—such as a toll road, a seaport, or a power plant—is exclusively repaid with the cash flow generated by the asset (e.g., toll revenue, container fees, or electricity sales), and the creditor either has no claim ("recourse") or a limited claim to any other assets as a basis for recovering the debt. Limited recourse project finance transactions are often financed according to a debt-to-equity ratio of 60:40, 70:30, or 80:20.

not unusual for the project owners (SPVs) to receive debt financing from Chinese state-owned creditors *and* equity financing from Chinese state-owned companies.⁴⁰

“In the year when the MIC2025 policy was adopted (2015), only 46% of these lending operations were focused on the 17 related sectors that host countries have most frequently deemed “sensitive” on national security grounds. However, by 2023, this figure reached 88%.”

Beijing possesses another source of competitive advantage vis-à-vis G7 and OECD countries: it can more effectively align the overseas priorities and activities of Chinese companies with the policy directives of the party-state.⁴¹ In Chapter 3, we crosswalk the overseas M&A lending activities of Chinese state-owned creditors to the 10 sectors that Beijing prioritized in its MIC2025 policy and 17 related sectors that host countries have most frequently deemed “sensitive” on national security grounds. We assess the extent to which these cross-border M&A lending operations (a) aligned with the goals of MIC2025 and (b) focused on “sensitive” sectors in host countries, finding that the cross-border M&A lending operations of Chinese state-owned creditors were more closely aligned with MIC2025 goals after the adoption of the policy (see Figure 3.17). We also find that, in the year when the MIC2025 policy was adopted (2015), only 46% of these lending operations were focused on the 17 related sectors that host countries have most frequently deemed “sensitive” on national security grounds. However, by 2023, this figure reached 88% (see Figure 3.16).⁴² Beijing’s competitors in liberal market economies have fewer legal authorities and financial instruments at their disposal to align the efforts of their companies with government policy and strategy.

⁴⁰ A case in point is the Ramu Nickel-Cobalt Mine in Papua New Guinea, a \$1.4 billion project that was financed according to a debt-to-equity ratio of 70:30. China Eximbank provided a loan worth \$560 million (captured via Record ID#64520 in the 1.0 version of the CLG-Global Dataset) to cover 40% of the project cost, and the Chinese joint venture company MCC-JJJ Mining Development Company Limited provided a \$473 million syndicated shareholder loan (captured via Record ID#64653 in the 1.0 version of the CLG-Global Dataset) to cover 30% of the project cost. The remainder of the project cost was financed via shareholder equity contributions, with China Metallurgical Group Corporation holding the largest (controlling) share in the project.

⁴¹ The term “party-state” refers to an entity that consists of Chinese government bodies and organs of the Chinese Communist Party (CCP). For more on the Chinese party-state, see Shue (2018) and Kardon and Leutert (2022).

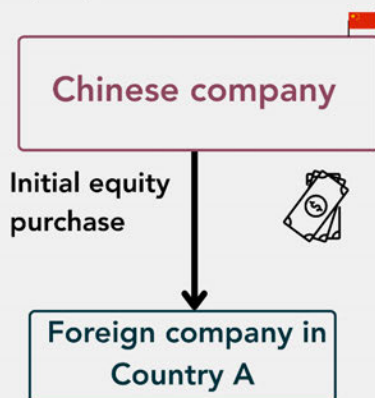
⁴² In Chapter 3, we also find evidence of a “fly beneath the radar” playbook to get cross-border mergers and acquisitions approved in sensitive sectors, including those that are aligned with the goals of MIC2025, that has proven effective (see Figures 3.20, 3.8 and 3.10).

Box 1b: The “buy it, hold it, and build upon it” model

In the 1.0 version of AidData’s CLG-Global Dataset, there are many cases of Chinese cross-border M&A loans being used by a Chinese company to purchase an initial equity stake in an overseas company, which is then held for a period of time before the same Chinese company seeks to gain greater control of the overseas company through additional equity stake acquisitions. The “buy it, hold it, and build upon it” model can take many forms, but three are especially popular.

Version 1: Increase equity stake in the newly acquired company

Phase 1: Chinese company buys initial ownership stake in foreign company



Phase 2: Chinese company increases ownership stake in same foreign company

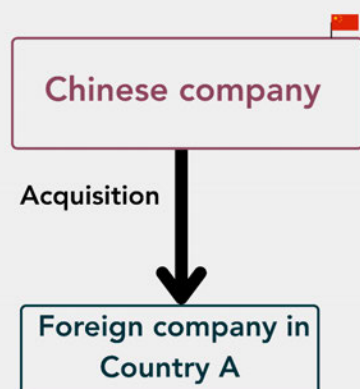


A case in point is COSCO Shipping’s acquisition of a majority ownership stake in the Port of Piraeus. As part of a larger Piraeus Port Authority (PPA) privatisation deal, COSCO Shipping—a Chinese state-owned company that is supervised by the State Council’s State-owned Assets Supervision and Administration Commission (SASAC)—purchased a 51% ownership stake in PPA (a Greek state-owned company) for EUR 280 million in August 2016. Prior to the completion of this acquisition, PPA and COSCO Pacific (a subsidiary of COSCO Shipping) signed a 30-year, build-operate-transfer (BOT) lease agreement in November 2008, which made COSCO Pacific responsible for the upgrading, operations, and management of two container terminals (terminals II and III) at the Port of Piraeus. CDB bankrolled the BOT deal, providing two loans worth EUR 345 million to Piraeus Container Terminal S.A. (PCT)—a

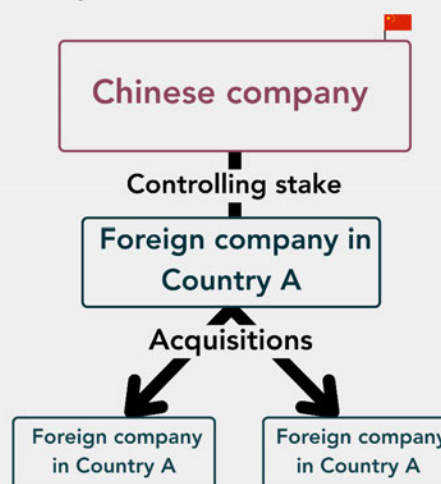
Greece-incorporated special purpose vehicle and wholly owned subsidiary of COSCO Pacific—in 2009 and 2015. The terminal was completed in 2018 with PPA successfully operating the port. COSCO Shipping invested again in October 2021 by purchasing an additional 16% stake in PPA for EUR 88 million, bringing its total ownership stake in the Greek port's operations and terminals to 67%.

Version 2: Use the newly acquired company to purchase additional companies in the same country to gain greater market share

Phase 1: Chinese company acquires foreign company



Phase 2: Foreign company used to acquire other companies in same country and sector



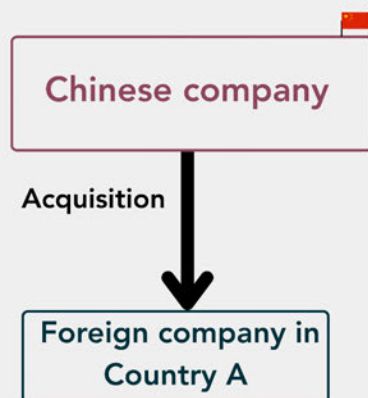
There are also cases in which a Chinese parent company uses its newly acquired company in a given sector and jurisdiction to gain greater market share in the same sector and jurisdiction (by using it as a local acquisition vehicle). Many such cases can be found in the 1.0 version of AidData's CLG-Global dataset. Consider for example Gardner Aerospace Holdings Limited's effort to purchase other UK aerospace companies after being acquired by Chengdu Aerospace Superalloy Technology Co., Ltd. (CAST).⁴³ In June 2017, CAST, a wholly-owned subsidiary of Shaanxi Ligeance Mineral Resources Co. Limited (SLMR), acquired a 100% ownership stake in Gardner Aerospace Holdings Limited—an aerospace components manufacturer headquartered

⁴³ Gardner Aerospace Holdings Limited is widely recognized as a leading European manufacturer of aerospace components (metallic detailed parts). It is a key supplier for Airbus, Boeing, Rolls Royce and various airframe and engine manufacturers. Its products are included in military platforms for Airbus A400M's and engine platforms for RTM322.

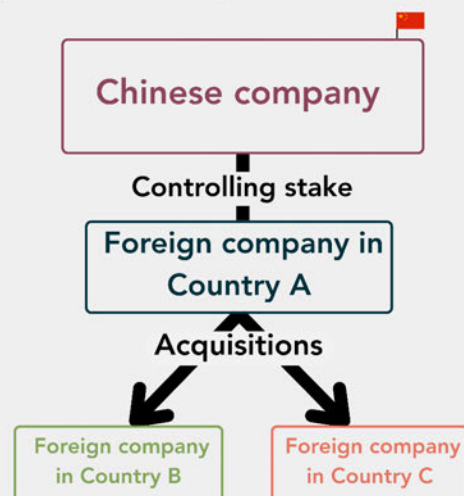
in Derby, England—for £326 million (RMB 2.793 billion). Chengdu Shuangliu Xingcheng Construction Investment Co., Ltd. (CXIG)—a Chinese state-owned capital investment and operation firm—provided a loan worth approximately RMB 1.8 billion to cover nearly two-thirds of the total acquisition cost. One year after the completion of the acquisition, Gardner Aerospace Holdings Limited—under Chinese ownership—purchased a 100% equity stake in Northern Aerospace Ltd. (a UK manufacturer of civil aerospace components). Then, in 2019, Gardner Aerospace Holdings Limited sought to acquire Impcross Limited, a UK-based manufacturer of components for the aerospace industry (including military aircraft components). However, the UK government blocked the acquisition on national security grounds.

Version 3: Use the newly acquired company to purchase additional companies in other countries to gain greater market share

Phase 1: Chinese company acquires foreign company



Phase 2: Foreign company used to acquire other companies in different countries



Another version of the “buy it, hold it, and build upon it” model is when a newly acquired overseas company is used by its Chinese parent company as a beachhead for market share expansion into other countries (often within the same geographic region). A case in point is the phased acquisition of Newport Wafer Fab, the largest semiconductor wafer factory in the UK. This acquisition took place after multiple Chinese companies completed a series of acquisitions in the Netherlands over a 5-year period. First, two Chinese investment firms—Beijing JianGuang Asset Management

Co., Ltd. and Wise Road Capital—acquired a 100% ownership stake in the Standard Products (SP) business of NXP B.V. (later renamed Nexperia) in February 2017.⁴⁴ They did so with the support of an \$800 million syndicated loan from China CITIC Corporation Bank Limited, China Minsheng Banking Corporation, and DBS Bank. Then, between December 2019 and July 2020, a separate Chinese state-owned semiconductor and communications company called Wingtech Technology Co., Ltd. acquired a nearly 100% equity stake in Nexperia.⁴⁵ Only 9 months after the acquisition, Nexperia—a Netherlands-based company now under new Chinese ownership—purchased a 14% equity stake in the UK’s Newport Wafer Fab in March 2021. It then bought the remaining 86% stake in July 2021. As such, Nexperia essentially became a springboard for its Chinese owners to gain greater market share in Europe’s semiconductor industry.⁴⁶

Section 2: Is China’s overseas lending and grant-giving portfolio a competitive asset or a liability?

Beijing’s disregard for the rules and norms that have traditionally governed official sector financial flows has instigated a debate about whether its overseas lending and grant-giving portfolio is a source of competitive advantage or disadvantage vis-à-vis advanced economies with limited industrial policy tools. There are two schools of thought about China’s overseas lending and grant-giving program that could be characterized as the “Pollyannas” and the “Cassandras.”

⁴⁴ At the time, the SP business of NXP was considered to be the world’s leader in coverage, production capacity, and profitability of semiconductor components.

⁴⁵ Wingtech Technology Co., Ltd. is a partially state-owned Chinese company that was eventually placed on the U.S. Department of Commerce’s Entity List. Companies are placed on the Entity List if there is reasonable cause to believe they have been involved, are involved, or pose a significant risk of being involved in activities contrary to U.S. national security or foreign policy. Companies on the Entity List face a “presumption of denial” for transactions that involve the export, re-export, and transfer of U.S.-origin goods, software, and technology.

⁴⁶ Then, in October 2025, the Dutch Government announced that it was taking the “highly exceptional” decision to assume full control of Nexperia due to “acute signals of serious governance shortcomings” within the semiconductor manufacturer. Elaborating on this point, it said that “[t]hese signals posed a threat to the continuity and safeguarding on Dutch and European soil of crucial technological knowledge and capabilities” and that “[l]osing these capabilities could pose a risk to Dutch and European economic security” (Chia 2025).

The first school takes the position that China's cross-border financial activities are either benign or destined to collapse under the weight of central planning (e.g., Ansar et al. 2016; Bennon and Fukuyama 2023; Caskey 2024). It considers G7 efforts to compete with Beijing (on its terms) as misguided, although there is considerable disagreement about *why*. Some in the "Pollyanna" camp argue that Beijing's overseas lending program is innocuous because its banks are simply searching for overseas assets where they can invest surplus dollars and get an attractive rate-of-return. If the "shoe was on the other foot" and Beijing's rivals had experienced two decades of current account surpluses, they too would have invested their foreign currency earnings in high-yield overseas assets. Others in the "Pollyanna" camp claim that China's party-state is on a financially perilous path because it has privileged government control of the credit allocation process. This fundamental flaw in Beijing's geoeconomic strategy, they argue, will ultimately result in failure, which implies that the U.S. and its allies need not devote much time, money, and attention to competition with the rising Asian power.

However, there is another school of thought, which maintains that the U.S. and its allies cannot afford to rest on their laurels because Beijing sits atop a mountain of foreign exchange reserves and is positioning itself as an international lender of first—and last—resort to gain the upper hand in a zero-sum, great power competition (e.g., Hopewell 2017; Atkinson 2020; Henderson and Hooper 2021; Allison et al. 2021; Rubio 2024). Those in the "Cassandra" camp argue that, left unchecked, China's party-state will use its financial firepower to gain access to critical infrastructure assets and replace the U.S. as both world's leading high-tech manufacturer and the global science and technology hegemon.⁴⁷

This debate remains unresolved because the existing body of empirical evidence does not overwhelmingly support one school of thought or another. On one hand, there is evidence that Beijing's lending activities around the world are guided by the pursuit of profit and its behavior is similar to that of a yield-maximizing investment manager (Dreher et al. 2021, 2022; Horn et al. 2021; Parks et al. 2023; Franz et al. 2024). It initially tasked its policy banks with providing bilateral loans to sovereign borrowers. However, a rising tide of sovereign debt distress brought lower yields, which paved the

⁴⁷ Similar arguments have been made about Europe losing market share to China in high-tech sectors due poorly regulated cross-border M&A transactions (Heilmann 2016).

way for several strategic course corrections: less bilateral lending and more syndicated lending, fewer full-recourse sovereign debt transactions and more limited-recourse project finance transactions, and less lending via policy banks and more lending via commercial banks (as we document in greater detail in Chapter 2). Based upon this reading of the evidentiary record, China's reliance upon syndicated lending instruments and special purpose vehicles (shell companies) does not provide grounds for concern. Nor does it imply guile or obfuscation.⁴⁸ It simply reflects a yield-maximizing investment manager's attempt to rebalance the risk profile of an international asset portfolio.

A separate, but related, strand of empirical literature suggests that the PRC party-state's effort to allocate credit in support of its policy objectives will be difficult to sustain over time—and its attempts to pick “winners” and “losers” will ultimately backfire. A new study by Carnegie Mellon University and Shanghai Tech University researchers provides evidence that, while the “Made in China 2025” industrial policy has increased the provision of subsidies to a set of targeted firms, it has not increased the productivity or profitability of those firms (Branstetter and Li 2022).⁴⁹ Other studies have found that Chinese state-owned banks systematically favor politically-connected firms, resulting in lower-performing loans that may make it more difficult in the long-run for the party-state to effectively compete with its rivals in the industrialized world (Li et al. 2008; Bailey et al. 2011; Ru 2018; Barwick et al. 2019; Gao et al. 2021).

Those in the “Pollyanna” camp generally take the position that recipients of subsidies from the party-state will eventually fail or underperform, which implies that the U.S. and its allies should bide their time and resist the temptation to engage in a costly competition with China on its terms (i.e., by allowing their own governments to pick “winners” and “losers”). Advocates for restraint point to high-profile insolvency cases—such as the dissolution and liquidation of Anbang Insurance Group—that are difficult to reconcile with the view that Beijing has strategically and surreptitiously

⁴⁸ A benign interpretation of China's intentions would suggest that its companies rely on SPVs (shell companies) in offshore financial centers to avoid paying profit repatriation tax in China (Wilmer Cutler Pickering Hale and Dorr LLP 2005) and it relies on syndicated lending arrangements for risk management purposes (Parks et al. 2023).

⁴⁹ Also, see Ansar et al. (2016), Zilibotti (2017), Barwick et al. (2019), and König et al. (2022).

instrumentalized Chinese companies and their lenders to achieve geostrategic aims in developed and developing countries.⁵⁰

Those in the “Cassandra” camp are not so sure that the hidden hand of the party-state is a source of competitive disadvantage vis-à-vis advanced economies that lack industrial policy tools. They argue that China’s credit-fueled geoeconomic strategy may still prove successful—even if its implementation by the party-state is plagued by rent-seeking and regulatory capture. Dani Rodrik, a Harvard economist, recently told the *Financial Times* that Beijing’s provision of subsidized credit to a select group of companies has “created a much richer Chinese economy” (Armstrong and Wu 2024).⁵¹ Rodrik and other macro-economists with sanguine views of industrial policy still find themselves in the minority within their profession. However, among many national security and foreign policy scholars, it has quickly become an article of faith that China’s industrial policy toolkit is an asset rather than a liability in its campaign to replace the U.S. as the world’s science and technology hegemon and leading high-tech manufacturer. In a 2021 study on the “Great Tech Rivalry” between China and the U.S., Graham Allison and his colleagues at Harvard Kennedy School noted that “China’s decades-long campaign to become a semiconductor powerhouse has yielded significant results” and “has narrowed its gap in semiconductor production and design to just one to two generations behind lead players” (Allison et al. 2021: 21). Similarly, a 2023 report by Peter Engelke and Emily Weinstein of the Atlantic Council concludes that “[u]ntil recently, the United States was the undisputed leader in the development of breakthrough technologies, and in the innovation and commercial scaling of emerging and existing technologies, while China was a laggard in both categories. [...]

⁵⁰ The catastrophic deleveraging of HNA Group, a Chinese state-owned conglomerate, is sometimes invoked as a “proof point” by those in the “Pollyanna” camp. It grew rapidly by acquiring assets around the globe—including a 648-foot skyscraper in Manhattan (245 Park Avenue), the Frankfurt-Hahn airport in Germany, an aviation leasing company in Ireland, and a semiconductor company in California—with easy access to extraordinary amounts of credit from Chinese state-owned banks. However, by 2021, the company was saddled with an enormous debt pile worth nearly \$170 billion and it ultimately went bankrupt. Rather than seizing and retaining ownership of the company’s assets, Chinese creditors sold many of its overseas assets to non-Chinese buyers at a financial loss (Reuters 2020; Zhao 2021).

⁵¹ Scholars from the “Cassandra” camp also emphasize that state-led industrial policy has played a major role in generating high-tech entrepreneurship, employment, and economic growth in a wide variety of countries, including South Korea and the U.S. (Lane 2021; Gross and Sampatt 2023). There is also a separate, but related, literature on the economic effects of industrial espionage (Glitz and Meyersson 2020; Lichter et al. 2021).

China is now the greatest single challenger to US preeminence in this space” (Engelke and Weinstein 2023).

Section 3: Beijing’s competitors are moving from the back foot to the front foot

The academic debate over whether China’s overseas lending and grant-giving program is a competitive asset or a liability remains unresolved. However, for many policymakers in G7 and OECD member countries, the debate is over. It is now conventional wisdom in Western capitals that Beijing’s official sector financial flows to the developed and developing world threaten Western interests in two ways: (1) by facilitating the acquisition of technology assets and critical minerals in overseas jurisdictions that are necessary for China to become a leading manufacturer of high-tech products and a global science and technology hegemon; and (2) by enabling China’s party-state to control or influence the uses of physical infrastructure in overseas jurisdictions.



“It is now conventional wisdom in Western capitals that Beijing’s official sector financial flows to the developed and developing world threaten Western interests.”

Section 3.1: Bankrolling the acquisition of technology assets and critical minerals

The pursuit of technological superiority has become a defining characteristic of great power rivalry during the 21st century. In Washington, there is deep concern that Chinese state-sponsored takeovers of high-tech companies threaten long-term U.S. national security interests by endangering U.S. military technology superiority and undermining the technological advantages possessed by America’s allies. Geostrategic competition is increasingly focused on “dual-use” technologies that have both civilian and military applications. Facial recognition technologies, which are widely used to protect sensitive, personal information on personal devices, can also be used to monitor and target combatants. Augmented and virtual reality technologies, which are widely used in video gaming applications, can also be used for combat simulation purposes. Advanced robotic technologies, which are commonly used to increase the

efficiency of manufacturing plants, can be used to detect and clear land mines, conduct surveillance and reconnaissance activities, and transport military supplies. Even biotechnologies have potential battlefield applications, as they can be used for human performance enhancement and gene editing purposes. In July 2021, William Burns, the Director of the Central Intelligence Agency, characterized technology as “the main arena for competition and rivalry with China” (NPR 2021).⁵²

At the same time, there is a growing consensus in the U.S. that the race for military technological superiority cannot be won in the absence of the critical minerals that high-tech products require (Berg 2024; Vivoda et al. 2025; Vergun 2025). Without rare earth elements (REEs), it is difficult to produce fighter jets, submarines, precision-guided munitions and lasers, stealth technology, and electronic warfare equipment. Without gallium, germanium, and hydrogen fluoride, it is difficult to produce the wide bandgap semiconductors that are used in radar systems, smart grids, data centers, and 5G/6G infrastructure. Without cobalt, lithium, and nickel, it is difficult to produce the rechargeable battery technologies that are required by drones, unmanned ground vehicles, missile systems, electric vehicles, and smartphones.

Beijing’s bid to seize the technologies of the future has also aroused concern in European capitals. In 2017, a “mystery buyer” known as Canyon Bridge Capital Partners used a set of shell companies in the Cayman Islands, the U.S., and the UK to acquire Imagination Technologies Group Limited—a British semiconductor and software design company—with relatively little scrutiny from British regulators and national security officials. However, it eventually came to light that the ultimate beneficial owner of Canyon Bridge Capital Partners is an entity owned by China’s State Council that is “substantially invested in the PRC’s military-industrial complex and has stakes in the main contractors for the PRC’s navy, air force, space programme, and army [...] [as well as] minority stakes in PRC companies involved in the development of AI for military use and of autonomous weapons systems and combat drones, and in a chip design company that works with the Chinese military” (UKCT 2024: 6). Credible allegations of asset-stripping soon followed (as we discuss at greater length in Chapter

⁵² Several months earlier, Xi Jinping said that “[t]echnological innovation has become the main battleground of the global playing field, and competition for tech dominance will grow unprecedentedly fierce” (Jinping 2021).

2 and Box 3b). Then, in January 2022, the UK's National Security and Investment Act (NSIA) went into effect, putting in place a more robust national security screening mechanism for inbound foreign capital. The UK's Secretary of State for Business, Energy and Industrial Strategy quickly exercised his statutory authority under the NSIA to order Nexperia—a Chinese-owned company that is headquartered in the Netherlands—to sell its majority (86%) ownership stake in Newport Wafer Fab (NWF), the largest semiconductor wafer factory in the UK (Williams 2022).⁵³ He did so on national security grounds, arguing that the acquisition could “undermine UK capabilities” to produce semiconductors and “facilitate access to technological expertise and know-how” (UK Department for Business Energy & Industrial Strategy 2022).⁵⁴

Similar events have transpired elsewhere in Europe. In July 2022, Ampleon—a semiconductor company in the Netherlands—was “silently acquired” by a Chinese state-backed semiconductor and chip company called Wuxi Xichanweixin Semiconductor Co., Ltd. (van Gerven 2024). The Dutch authorities responded in 2023 by adding semiconductor technologies to a fixed list of “sensitive technologies” that would be subjected to more stringent investment review procedures and scrutinizing Ampleon's involvement in a government-funded 6G telecommunications project (Prompers et al. 2023; Olsthoorn 2024).⁵⁵ Then, in April 2024, the Dutch military intelligence agency said in its annual report that spies had “targeted the Dutch semiconductor, aerospace and maritime industries to try to strengthen China's armed forces” (Kok 2025).

Efforts are also being undertaken elsewhere on the European continent to harden internal defenses against sources of inbound foreign capital that could undermine

⁵³ In January 2017, China CITIC Corporation Bank Limited, the Shanghai Free Trade Zone Branch of China Minsheng Banking Corporation (CMBC), and DBS Bank entered into a \$800 million loan agreement to facilitate Beijing JianGuang Asset Management Co., Ltd. (JAC Capital) and Wise Road Capital Ltd.'s acquisition of the Standard Products (SP) business of NXP B.V. (later renamed Nexperia).

⁵⁴ In 2024 and 2025, the UK government undertook a “China Audit,” but there has been little public discussion of the findings and recommendation because the authorities have disclosed very few details (Macaskill and Elizabeth Piper 2024; Yeh 2024; Matthews 2025).

⁵⁵ Other Chinese M&A transactions involving Dutch semiconductor companies include Suzhou Jingfang Semiconductor Technology Co., Ltd.'s acquisition of Anteryon Optical Solutions in 2019, Beijing JianGuang Asset Management and Wise Road Capital's acquisition of Nexperia in 2017, and the unsuccessful attempt of GO Scale Capital to buy a 80.1% stake in Philips LumiLeds Holding B.V. in 2015 (Michaels 2020; Datenna 2020a, 2020b).

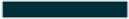
national security or economic competitiveness. In order to justify the introduction of more stringent foreign capital screening mechanisms in September 2017, the President of the European Commission said that “Europe must always defend its strategic interests. [...] If a foreign, state-owned, company wants to purchase a European harbour, part of our energy infrastructure or a defense technology firm, this should only happen in transparency, with scrutiny and debate. It is a political responsibility to know what is going on in our own backyard so that we can protect our collective security if needed” (EC 2017). Then, in July 2023, the German government published a “Strategy on China,” which indicates that “Chinese direct investments [in Germany] pose particular challenges for us owing to the political and economic circumstances in the country of origin. The Military-Civil Fusion policy pursued by the Chinese Government is particularly critical in this context as civilian corporate interests and the development of military capabilities can no longer be clearly distinguished from one another” (Federal Foreign Office 2023: 40).⁵⁶

Section 3.2: Using the power of the purse to access and control strategic infrastructure assets

Washington and its allies are also increasingly concerned about why Beijing is bankrolling overseas projects that involve strategic infrastructure assets—such as power plants and transmission lines in Texas, New Jersey, Oregon, Virginia, Ohio, and Michigan; seaports and airports in the United Arab Emirates, Israel, Panama, and Greece; railways and highways in Australia and Hungary; cell phone towers and fiber optic networks in Portugal and Saudi Arabia; oil and liquid natural gas terminals in Canada, Singapore, and Qatar; copper, cobalt, and lithium mines in Chile, Argentina,

⁵⁶ Consistent with the strategies employed by the European nations, Australia and Japan have taken steps to harden their defenses against foreign direct investment in sectors that they have deemed “sensitive” on national security grounds. Australia first enacted a cross-sectoral foreign investment screening mechanism in 1975. It passed legislation to strengthen the mechanism in 2017, 2018, and 2020. Specifically, these measures strengthened ownership reporting protocols for critical infrastructure, ownership regulations for telecommunications assets, and equity threshold and timeframe specifications from the 1975 cross-sectoral legislation. Most recently, in February 2025, Australia temporarily banned foreign entities from purchasing extant dwellings, and further revised its foreign investment screening process in May 2025. Similarly, Japan amended its Foreign Exchange and Foreign Trade Act in 2019. In April 2023, it expanded the policy’s list of core business sectors to include nine new sectors such as semiconductors, metals and mineral products, and marine equipment (Bauerle Danzman and Meunier 2023; Hoff 2025). For further information on examples of ISMs, see Box 3a in Chapter 3.

Kazakhstan, and Indonesia; and underwater sea cables with landing stations in the UK, France, New Zealand, and Africa.


“U.S., European, and Australian policymakers have flagged three different concerns about how PRC party-state control and influence over strategic infrastructure assets could endanger their national security interests.”

By way of illustration, in September 2016, COSCO Shipping Ports (Abu Dhabi) Limited—a wholly-owned subsidiary of the PRC state-owned COSCO Shipping Ports Limited (“COSCO Shipping”)—entered into a 35-year concession agreement with the government-owned Abu Dhabi Ports Company PJSC to support the construction and operation of a new container terminal at Khalifa Port. Then, in 2018, Bank of China participated in a \$260 million syndicated loan agreement with CSP Abu Dhabi Terminal L.L.C.—a UAE-incorporated special purpose vehicle (SPV) then jointly owned by COSCO Shipping Ports (Abu Dhabi) Limited (90% equity stake) and Abu Dhabi Ports Company PJSC (10% equity stake)—to facilitate the implementation of the project.⁵⁷ The project initially appeared to be a benign commercial transaction and did not arouse suspicion. However, in the spring of 2021, the U.S. intelligence community concluded—based on reports and satellite imagery of the excavation of a hole and the construction of girders to accommodate a multi-story building—that Chinese state-owned firms were constructing a military installation at Khalifa Port. The construction site was later covered up, allegedly to prevent scrutiny. During a September 2021 visit to Abu Dhabi, U.S. National Security Advisor Jake Sullivan and U.S. National Security Council Coordinator for the Middle East and North Africa Brett McGurk presented American intelligence findings on the site at Khalifa Port to the Emirati government. Construction at the site was subsequently halted, and American officials were allowed to inspect the project site. The Emirati government—a U.S. ally in the vital Persian Gulf region—was reportedly unaware of the “dual-use” nature of the

⁵⁷ CSP Abu Terminal’s indirect ownership later changed, as COSCO Shipping Ports sold a 33% stake in COSCO Shipping Ports (Abu Dhabi) to Qingdao Port International (Si 2019). Then, in its 2020 annual report, COSCO Shipping Ports Ltd. reported a share interest decrease from 90% in CSP Abu Dhabi the year prior to 40% in 2020, a greater decline than simply the stake sale to Qingdao Port (COSCO Shipping Ports Ltd. 2020). It is unknown at this time whether there was a second sale of shares in COSCO Shipping Ports (Abu Dhabi), or a new sale of a portion of CSP Abu Dhabi, or an internal dilution or reorganization between COSCO, Qingdao, and AD Ports.

infrastructure project and was quick to deny any “talks or intention to host a Chinese military base or outpost of any kind” (Lubold and Strobel 2021).⁵⁸

U.S., European, and Australian policymakers have flagged three different concerns about how PRC party-state control and influence over strategic infrastructure assets could endanger their national security interests, including the ability to engage in (a) espionage, (b) sabotage, and (c) global power projection (EC 2017; ODNI 2021; Satter et al. 2023; Saul 2025).

Espionage concerns figured prominently in the Australian effort to keep Huawei Marine Networks Co., Ltd. out of a 4,700 km Coral Sea Cable system that connects Australia to the Solomon Islands and Papua New Guinea, the British effort to prevent Huawei Marine Networks Co., Ltd. from constructing a submarine fiber optic cable system between London and New York City, and the American effort to block HMN Technologies from building the Southeast Asia-Middle East-Western Europe 6 (SeaMeWe-6) submarine fiber optic cable system.⁵⁹ According to counterintelligence officials in Washington and other Western capitals, PRC-financed hotels and office buildings in AEs that host politicians and policymakers represent another set of “soft targets” for intelligence-gathering.⁶⁰ Questions also continue to swirl about whether

⁵⁸ In January 2025, the U.S. Department of Defense designated COSCO Shipping as a “Chinese military company.” The designation was made under the National Defense Authorization Act (NDAA), which calls upon the U.S. Department of Defense to identify entities that support China’s military-civil fusion strategy. Then, in September 2025, *Reuters* reported that the Trump administration was seeking to eliminate or reduce COSCO Shipping’s control of the Port of Piraeus in Greece (Saul 2025).

⁵⁹ At the beginning of World War I and the beginning of World War II, submarine telegraph cables were severed or commandeered by world powers seeking to surveil and outflank their adversaries (Rankin 2008). Today, more than 95% of global communications are transmitted via submarine cables. UK Prime Minister Rishi Sunak has said that “a successful attack on the UK’s undersea cable infrastructure would be an existential threat to our security” (Sunak 2017).

⁶⁰ The Waldorf Astoria Hotel in New York City is a case in point (Rosenberg 2015; Harris 2018; Bradsher and Stevenson 2018). According to the *New York Times*, “[f]or decades, the [U.S.] president and hundreds of other American officials have descended on the Waldorf each September for the [U.N.] General Assembly, securing whole floors for meetings. The Waldorf is among the world’s best known hotels, and its guests regularly include celebrities and world leaders. Every Chinese leader has stayed there since Mr. Deng first visited the United States in 1974. An apartment on the 42nd floor of the hotel’s Waldorf Towers has served as the official residence of the United States ambassador to the United Nations for more than 50 years.” However, after Anbang Insurance Group (a Chinese entity with close ties to the PRC party-state but an opaque ownership structure) financed the acquisition of the hotel, the U.S. Government decided to send its senior officials elsewhere.

Beijing's overseas portfolio of seaport projects has become a global network of "listening posts."⁶¹

At the same time, the U.S. and its allies have sounded the alarm about China's ability to sabotage critical infrastructure in overseas jurisdictions.⁶² In April 2021, the Office of the Director of National Intelligence (ODNI) published a threat assessment, in which it concluded that "China can launch cyber attacks that, at a minimum, can cause localized, temporary disruptions to critical infrastructure within the United States" (ODNI 2021). Then, in May 2023, the U.S. Department of State issued a warning that China was capable of launching cyber attacks against critical domestic infrastructure assets, including oil and gas pipelines, the electricity grid, and rail systems (Satter et al. 2023).⁶³ At the time of the warning, the Executive Assistant Director of the U.S. Cybersecurity and Infrastructure Security Agency (CISA) told Reuters that "the adversary is *often using legitimate credential and legitimate network administration tools* to gain access to execute their objectives on a target network."⁶⁴ This observation suggests that China's ability to disrupt critical infrastructure depends upon its access to—and control/influence over—infrastructure assets in host countries.⁶⁵

⁶¹ In June 2018, *The New York Times* ran a story on the Chinese loan-financed construction of Hambantota seaport in Sri Lanka. The story quotes Nihal Rodrigo, a former Sri Lankan foreign secretary and Sri Lankan ambassador to China, as saying "that discussions with Chinese officials at the time made it clear that intelligence sharing was an integral, if not public, part of the deal" (Abi-Habib 2018). Also, see Manson (2016), Hudson et al. (2023), Strobel et al. (2023), Volz (2024), and Saul (2025).

⁶² With respect to China's intentions, there are several scenarios in which it might be motivated to sabotage critical infrastructure. In the event of a military conflict with Taiwan, China would almost certainly want to prevent the U.S. military and its allies from quickly resupplying and reinforcing their forces in Asia. It would also likely seek to disrupt telecommunications infrastructure that enables the flow of information between Taiwan and the outside world. This concern is neither theoretical nor far-fetched: Microsoft recently warned that "a state-sponsored actor based in China [...] is pursuing development of capabilities that could disrupt critical communications infrastructure between the United States and [the] Asia region during future crises" (Microsoft Threat Intelligence 2023).

⁶³ Also see Perloth and Sanger (2021).

⁶⁴ Satter et al. (2023), emphasis added. In January 2024, FBI Director Christopher Wray issued an additional warning, telling the U.S. House of Representative Select Committee on the Chinese Communist Party that "China's hackers are positioning on American infrastructure in preparation to wreak havoc and cause real world harm to American citizens and communities if and when China decides the time is right to strike."

⁶⁵ Kardon and Leutert (2022: 26-27) argue that "operational control [...] derives from the domestic ownership structure of a given firm and its ownership stakes in overseas [infrastructure] assets." By their count, "[a]pproximately two-thirds of Chinese companies involved in overseas port operations and investments are state-owned enterprises (SOEs)." However, regulators and counterintelligence officials argue that infrastructure asset ownership is not, strictly speaking, necessary. The ability of Chinese contractors and subcontractors to access physical infrastructure assets in AEs may be sufficient for espionage or sabotage purposes (Volz 2024).

A final concern is global power projection, which requires the ability to sustain overseas military operations during times of peace and war. The People's Liberation Army (PLA) cannot fulfill this mandate unless it can access and use infrastructure assets in far-flung locations for resupply, repair, and reconnaissance purposes (Kardon and Leutert 2022; Wooley et al. 2023). The PLA understands this challenge and is actively seeking to overcome it. The *Washington Post* recently obtained confidential documents that provide evidence of a secret PLA plan—called “Project 141”—to build a global military network that consists of no fewer than 5 overseas bases and 10 logistical support sites by 2030 (Hudson et al. 2023).⁶⁶ In their analysis of Beijing's global seaport portfolio, Kardon and Leutert (2022: 10) make the important point that “unlike other navies, [China's navy] enjoys privileged access to dual-use facilities that Chinese firms own and operate overseas.” Such access would not exist if the firms owning and operating the facilities were not controlled by China's party-state.

Section 4: Beijing leads and its competitors follow

As G7 and OECD countries have coalesced around the idea that China's overseas lending and grant-giving program endangers their economic competitiveness and national security, they have also reconsidered the wisdom of the rules and norms that have governed their own cross-border financial flows for more than 50 years. Indeed, the international regime that governs aid and credit is undergoing a period of contestation, disruption and reinvention. Longstanding rules and norms are being challenged, displaced, reversed, and rewritten. Beijing has dislodged the status quo, forcing its competitors to fundamentally rethink the *purposes*, the *recipients*, and the *instruments* of international aid and credit.

⁶⁶ In response, the U.S. Department of Defense stepped up efforts to prevent China from establishing new installations in strategic locations (Hinshaw and Page 2019). For example, when the Government of Greenland selected state-owned China Communications Construction Co., Ltd. (CCCC), with the backing of several PRC state-owned banks, as a finalist for the construction and expansion of three airports in Nuuk, Ilulissat, and Qaqortoq, the U.S. Department of Defense raised concerns about Greenland potentially defaulting on the loans for airport construction and ceding control to the PRC. Greenland hosts a U.S. air base—previously known as Thule Air Base and now known as Pituffik Space Base—750 miles north of the Arctic Circle that is part of the U.S. ballistic missile early warning system. In May 2018, U.S. Secretary of Defense Jim Mattis met with the Danish Minister of Defense and pushed for CCCC's bid to be blocked. Danish Prime Minister Lars Løkke Rasmussen subsequently announced his opposition to CCCC's bid and that the Government of Denmark would step in to fund and construct the airports. In June 2019, CCCC withdrew its bid.

Section 4.1: Changing the purposes of international aid and credit

For more than fifty years, the Development Assistance Committee (DAC) of the OECD successfully encouraged its member states—high-income countries—to use official sources of aid and subsidized credit to promote economic development and social welfare in low-income and middle-income countries (Roodman 2015). However, support for this basic principle has rapidly eroded. In the spring of 2025, the Trump administration shuttered the United States Agency for International Development (USAID) and dramatically reduced the U.S. government expenditure on official development assistance (ODA) for low-income and middle-income countries. The EU and several major European countries—including the UK, France, and Germany—have also announced significant ODA cuts (OECD 2025).

“U.S. and European policymakers are seeking to refocus international aid and credit on a different set of objectives—namely, safeguarding their economic competitiveness and national security.”

At the same time, U.S. and European policymakers are seeking to refocus international aid and credit on a different set of objectives—namely, safeguarding their economic competitiveness and national security. Between 2021 and 2023, the Biden administration rallied its G7 allies to create the Partnership for Global Infrastructure and Investment (PGII)—previously known as the Build Back Better World (B3W) initiative—as an alternative to China’s BRI (Malik et al. 2021; Parks et al. 2023; Lewis 2023).⁶⁷ Then, in late 2024, it sought legislative approval for the creation of a Strategic Investment Fund (SIF) that would “help the U.S. compete in the 21st century” by

⁶⁷ A series of earlier decisions by the first Trump administration laid the groundwork for this reorientation. In January 2018, the U.S. Department of Defense published a new National Defense Strategy, which asserted that “[t]he central challenge to U.S. prosperity and security is the reemergence of long-term, strategic competition...[with] revisionist powers” (United States Department of the Defense 2018). It called upon the U.S. government to “out-think, out-maneuver, out-partner, and out-innovate revisionist powers” (United States Department of the Defense 2018). Then, in October 2018, the U.S. Congress passed the Better Utilization of Investment Leading to Development (BUILD) Act, establishing United States International Development Finance Corporation (DFC) as a “full service” development finance institution to help the U.S. government compete with China around the globe. Two months later, USAID announced the adoption of a “Clear Choice Framework,” which would seek to distinguish the American and Chinese value propositions and proactively communicate these differences to the leaders of low-income and middle-income countries. Then, in September 2019, the U.S. Congress authorized the creation of a “Countering Chinese Influence” fund.

“mak[ing] investments at home and abroad [...] that advance strategic national interests in energy security, supply chain resilience, technological preeminence, and possibly other long-term economic or national security priorities.”⁶⁸ Several months later, the Trump administration came to power (for a second time) and it immediately issued an executive order in February 2025, calling upon the U.S. government to create a sovereign wealth fund that would “promote U.S. economic and strategic leadership internationally by creating an instrument of foreign policy capable of investing abroad in assets or projects that promote U.S. national security or strategic objectives” (Henagan 2025b).

By May 2025, the Trump administration had largely dismantled USAID and developed a budgetary proposal to effectively replace it with an “America First Opportunity Fund” that would “counter China and other near-peer rivals [...] and fund new activities to strengthen America’s national security priorities” (OMB 2025: 1).⁶⁹ It is now seeking to use aid and development finance instruments to support a diverse set of national security objectives, which include: (1) weakening China’s control and influence over global seaport assets and international maritime chokepoints to ensure that the U.S. is not at a logistical disadvantage in a potential conflict with China; (2) countering China’s dominance of the global supply chain for critical minerals that support advanced military technologies, such as fighter jets, submarines, radar systems, and missile systems; and (3) challenging China’s global dominance of the drone industry by supporting the drone manufacturing supply chain in the U.S. and financing the export of U.S. manufactured drones (Saul 2025; Furness 2025; The Economist 2025a, 2025b).⁷⁰

In parallel, aid and development finance are now being used to boost U.S. economic competitiveness in strategic sectors, such as artificial intelligence, semiconductors, and

⁶⁸ The SIF proposal was distributed to Congressional staff but never published by the White House. We obtained a copy of the proposal via correspondence with U.S. government officials.

⁶⁹ These efforts to reorient towards the goal of safeguarding economic competitiveness and national security began during the first Trump administration. In the run-up to the creation of the DFC in October 2018, Riva Levinson, President of KRL, a Washington-based emerging markets consultancy, told *The Financial Times* that “[t]his is the first real attempt to recognise that the US needs to support its companies in the commercial battlefield in the developing world [...]” (Pilling 2018).

⁷⁰ In March 2025, the Trump administration launched an investigation—through the Federal Maritime Commission (FMC)—of whether and how foreign governments have created unfavorable conditions for U.S. shipping and trade. The investigation identified seven maritime chokepoints: the English Channel, the Malacca Strait, the Singapore Strait, the Panama Canal, the Suez Canal, the Strait of Gibraltar, and the Northern Sea Passage (Curtis 2025).

critical minerals. Troy Fitrell, a senior official in charge of the State Department's Bureau of African Affairs, explained to the U.S. Senate Committee on Foreign Relations (SFRC) in June 2025 that "we are fundamentally shifting our approach to Africa from one rooted primarily in development assistance to a strategy that prioritizes robust commercial engagement [...]. By focusing on private sector-led growth and empowering American companies to compete more effectively across sub-Saharan Africa, the [Trump] Administration is responding to longstanding gaps that have allowed global competitors, such as China, to dominate the continent and monopolize its natural resources to its own advantage and to the expense of Africans" (Fitrell 2025). The Trump administration is also seeking to refocus international aid and development finance instruments and institutions on domestic industrial policy goals—for example, by authorizing the United States International Development Finance Corporation (DFC) under the Defense Production Act (DPA) to finance the domestic production of critical minerals (The Economist 2025a, 2025b).⁷¹ In this regard, it appears to be taking a page out of Beijing's MIC2025 playbook.

All of these changes highlight a fundamental reorientation away from the promotion of economic development and social welfare in recipient countries (as a primary goal) and towards the promotion of the economic competitiveness and national security of aid and credit providers. This change has been gathering momentum over several years. In June 2022, 14 countries—Australia, Canada, Estonia, Finland, France, Germany, India, Italy, Japan, Norway, South Korea, Sweden, the UK, and the U.S.—and the EU launched the Minerals Security Partnership (MSP) to address China's concentrated control over the critical minerals sector. Participants in the MSP, which is also known as the "NATO of Minerals and Metals," are making debt and equity investments in overseas projects and activities that safeguard their critical mineral supply chains (Escobar et al. 2025).⁷² Then, in December 2022, the U.S. Department of Defense launched the Office of Strategic Capital (OSC) and gave it a mandate to attract and scale private capital in industries and technologies that are critical to America's national and economic security. OSC is tasked with issuing loans and loan guarantees to

⁷¹ The DPA is "a Cold War-era piece of legislation aimed at boosting production of goods for national security purposes" (Renshaw et al. 2025).

⁷² The G7's Partnership for Global Infrastructure and Investment (PGII) also identifies "mining of metals and critical materials" as a strategic priority and calls for the establishment of "new global refining, processing, and battery manufacturing sites" with development financing (White House 2022a).

“enable capital investment into companies and assets that increase the competitiveness of the United States and its partners and allies’ collective industrial base” (United States Department of the Defense 2025: 2). It works in partnership with the United States International Development Finance Corporation (DFC) and directs official sector credit to industry segments that correspond to the following arenas of geostrategic competition: Advanced Bulk Materials, Advanced Manufacturing, Autonomous Mobile Robots, Battery Storage, Biochemicals, Bioenergetic, Biomass, Hydrogen Generation and Storage, Microelectronics Assembly, Testing, and Packaging, Microelectronics Manufacturing Equipment, Microelectronics Materials, Nanomaterials and Metamaterials, Sensor Hardware, Spacecraft, and Synthetic Biology (United States Department of the Defense 2025: 1).

Section 4.2: Changing the recipients of international aid and credit

A separate, but related, shift is underway in the types of countries that are considered to be appropriate recipients of aid and subsidized credit from official sector institutions. When there was still a consensus that bilateral and multilateral aid agencies and development finance institutions should privilege the economic development and social welfare interests of low-income and middle-income countries, various rules and norms were put in place to limit the provision of aid and subsidized credit to high-income countries (Easterly 2007; Hynes and Scott 2013; Roodman 2015). The OECD formulated its definition of ODA and OOF in a way that effectively excluded all high-income countries from a list of approved ODA and OOF recipients (Staur 2023).⁷³ Many bilateral and multilateral aid agencies and DFIs were either constitutionally or statutorily prohibited from providing aid or subsidized credit to high-income countries.⁷⁴ In other cases, eligibility restrictions were put in place to limit such financial

⁷³ The OECD Development Assistance Committee (DAC) sets clear criteria for determining ODA eligibility. Countries are reviewed every three years to assess whether they should remain eligible or “graduate” after sustaining high-income status for three consecutive years or securing a firm accession date to the European Union (Staur 2023). Once a country graduates, it is no longer considered ODA-eligible, and the DAC ceases to track any official financial flows—including ODA and OOF—from donor countries. For instance, Saudi Arabia graduated from ODA eligibility in 2008, and OECD-DAC reporting no longer recorded any ODA or OOF flows to the country after 2007.

⁷⁴ For example, the authorizing legislation for the Millennium Challenge Corporation (MCC)—a U.S. government agency—only allows it to provide grants to low-income and lower-middle income countries (Collinson and Hurley 2023). Likewise, the articles of agreement that govern many international financial institutions and multilateral development banks limit the provision of grants and high-concessional loans to developing countries based on their per capita income levels (e.g., ADB 2005; IADB 2010; GEF 2013).

flows to upper-middle income countries (Galiani et al. 2017; Kerner et al. 2017; Dolan 2018; BenYishay et al. 2022; Collinson and Hurley 2023).

However, several recent policy decisions indicate that this consensus was not as strong or durable as many observers assumed. In March 2019, under the European Energy Security and Diversification Act, the DFC was granted legislative authority to support certain energy-related investments in several dozen high-income countries, including the Netherlands, Belgium, Germany, Finland, Norway, and the UK (Baskaran 2024).⁷⁵ Then, in late-2019, the U.S. Ambassador to Greece successfully lobbied the U.S. Congress to move Greece—a high-income country that became an OECD-DAC donor in 1999—onto a list of countries eligible for DFC financing. The ad hoc eligibility determination was reportedly motivated by COSCO Shipping’s acquisition of a majority ownership stake in the Port of Piraeus outside of Athens (see Box 1b)—a critical transshipment hub linking Europe, Africa and Asia—and fears that Beijing might also “snap up the [Elefsina] shipyard” (Woo and Michaels 2021).⁷⁶ The DFC subsequently sprang into action, providing a \$125 million loan to ONEX Elefsis Shipyards and Industries S.A. to support the acquisition and rehabilitation of the shipyard in Elefsina, which is located only 12 miles from the Port of Piraeus (DFC 2023, 2024).⁷⁷ Then, in 2021, USAID established a presence and ramped up its grant-giving activities in another high-income country: Greenland (Cully 2021; Gronholt-Pedersen 2021).

A broader set of policy changes soon followed. In July 2023, as part of a “modernization” of the “Gentleman’s Agreement” on Officially Supported Export Credits, the OECD loosened the rules that govern official sector credit to borrowers in high-income countries (OECD 2023b: 4-5). It also relaxed the rules that govern the

⁷⁵ In the interest of supporting clean energy companies, assets, and projects, European ECAs are also increasingly redirecting official sector credit to borrowers in high-income countries (Atkins 2025; Censkowsky et al. 2025).

⁷⁶ COSCO Shipping is a Chinese state-owned company that purchased a 51% ownership stake in Piraeus Port (with support from CDB, a Chinese state-owned policy bank) in 2016 and an additional 16% ownership stake in 2021. Xi Jinping has characterized the Port of Piraeus as the “dragon’s head” of the BRI in Europe (Woo and Michaels 2021).

⁷⁷ There were also some signs that Greece experienced “BRI buyer’s remorse” after COSCO Shipping assumed control of the Port of Piraeus—and the DFC saw and seized the window of opportunity. According to the *Wall Street Journal*, “Greek satisfaction with the [Port of Piraeus] deal soon waned, after China started exerting political pressure to support it in international disputes. Athens residents [also] saw little economic gain from Cosco’s spending inside the vast port facility” (Woo and Michaels 2021). Years later, the DFC claimed that its investment in the Elefsina shipyard “countered efforts by the Government of China to expand its influence in the region” (DFC 2025).

provision of official sector credit for overseas investment projects (OECD 2023b: 9).⁷⁸ No more than a year later, discussions were underway in Washington about whether the DFC's reauthorization bill would allow it to finance projects in high-income countries (Collinson et al. 2024; Furness 2025; Henagan 2025a; The Economist 2025a, 2025b). Another important signal came in October 2025 when the U.S. Treasury green-lit a \$20 billion emergency rescue loan for Argentina—a country that over the last decade has hovered right above or below the per capita income threshold that separates upper-middle income countries from high-income countries (The Economist 2025a; Setser and Paduano 2025).⁷⁹

Section 4.3: Changing the instruments of international aid and credit

Another source of concern is whether the U.S. and its allies have enough financial firepower to compete with China. Beijing uses debt, equity, and grant instruments in flexible, innovative, and complementary ways to advance its geostrategic and commercial interests (as we explain at greater length in Section 2 of Chapter 3). However, its competitors in liberal market economies—where governments have less control over the financial sector by design—do not possess all of the same tools and authorities.

China's competitors are responding to this challenge by making major adjustments—that were once inconceivable—in order to keep up with the new global pace-setter. For example, in June 2023, U.S. Senators Chris Coons (a Democrat from Delaware) and John Cornyn (a Republican from Texas) introduced the Enhancing American Competitiveness Act to “strengthen the U.S. International Development Finance Corporation (DFC) so that [it] can promote U.S. interests and better compete with Chinese influence in the developing world” (United States Senate. 2023a). More specifically, the bill proposed “scoring” changes that would make it easier for the DFC to make equity investments. In his written justification for the proposed legislation, U.S. Senator Chris Coons argued that “[e]quity investments are important to the DFC’s

⁷⁸ More specifically, the OECD loosened the rules that govern ECA credit to borrowers by (a) increasing the maximum repayment terms from 8.5 years to 15 years for borrowers in high-income countries, and (b) removing special rules that previously applied to limited recourse project finance transactions (including detailed eligibility criteria and shorter repayment terms for some transactions in high-income countries).

⁷⁹ Argentina's annual income bracket designations are documented in Figure 2.6.

development capacity because they support early and growth-stage companies that would otherwise not be able to take on debt. [...] Due to this scoring issue, the DFC has been restricted in its ability to finance projects that would have advanced our national security and foreign policy objectives. This bill enables the DFC, as an important part of our foreign policy and national security architecture, to align its financing with our allies and better compete with China in the developing world” (United States Senate 2023b).


“China’s competitors are responding to this challenge by making major adjustments—that were once inconceivable—in order to keep up with the new global pace-setter.”

However, after it became clear that the Enhancing American Competitiveness Act would not be enacted into law, the Biden administration took a different tack. It proposed creating a sovereign wealth fund—known as the Strategic Investment Fund (SIF)—and placing it under the management of an independent federally chartered corporation.⁸⁰ Under its proposal, the SIF would have been granted several new authorities, including the ability to:

- “[p]rovide first loss equity capital, guarantees, or bridge financing to illiquid but solvent companies to shore up the resilience of critical supply chains for goods or technologies”
- “[i]nject equity into ‘moonshot’ investments that target transformational technologies in which there’s a first mover advantage, high barriers to entry, or large economies of scale (e.g., specialized shipbuilding, nuclear fusion, enhanced geothermal, quantum cryptography)”; and
- “[d]irectly buy-out Chinese debt [...] and replace it with more sustainable, transparent, and concessional lending” (White House 2024a: 7-8).⁸¹

⁸⁰ The Biden administration proposed that “[t]he corporation would have the powers of a private entity—similar to the Railroad Retirement Board, the Tennessee Valley Authority, or the National Fish & Wildlife Foundation—to operate independently from federal budgetary, pay, or other relevant limitations that may prevent the normal operations of an investment fund” (White House 2024a: 3).

⁸¹ In the U.S., this idea has gained bipartisan traction. In the waning days of the first Trump administration, the DFC attempted to provide a \$2.8 billion loan to help the Government of Ecuador

As we previously noted, when the Trump administration came to power, it too proposed the creation of a sovereign wealth fund (Henagan 2025b). However, after encountering various obstacles, it turned its attention to other cross-border financial instruments that could be leveraged in the service of its foreign and domestic policy objectives. In May 2025, the Trump administration sought to empower the DFC with new authorities—including a \$3 billion revolving fund that would allow the agency to retain and reinvest its earnings (OMB 2025; OECD 2025; Collinson and Hurley 2025). It also proposed the creation of a \$5 billion fund through which DFC and Orion Resource Partners (a New York-based private investment firm that specializes in mining and commodities) would take equity stakes in “[overseas] projects to extract critical minerals such as copper and rare earths, which are crucial for defence and high-tech manufacturing” (Hook and Sevastopulo 2025).⁸² At the time of the writing of this report, the White House was seeking to persuade U.S. legislators that the DFC’s reauthorization bill should (a) increase the agency’s total investment cap from \$60 billion to \$250 billion; (b) make it easier for the agency to take equity stakes in companies, assets, or projects of geostrategic significance around the globe, such as mines, shipyards, telecommunications infrastructure, and seaports; and (c) allow the agency to bankroll projects within the U.S. related to critical supply chains and critical infrastructure (Collinson et al. 2024; Furness 2025; Henagan 2025a; The Economist 2025a, 2025b).⁸³

In parallel, G7 and EU member states have stepped up efforts to compete with China’s Belt and Road Initiative (BRI) via blended finance instruments. One of the first projects to be approved under the G7’s Partnership for Global Infrastructure and Investment (PGII) was the Lobito Corridor Project, which seeks to establish a railway route between copper and cobalt mines in Zambia and the DRC and the Lobito seaport in Angola. It

repay some of its outstanding debts to China ahead of schedule—in exchange for a commitment to exclude Chinese companies from its telecommunications networks. However, the loan was not offered on concessional terms. The proposed borrowing terms included an 8-year maturity, a 1-year grace period, and an interest rate of LIBOR plus a 2.25% margin (Parks et al. 2023). At the time, the DFC’s CEO, Adam Boehler, said that the loan would “refinance predatory Chinese debt and help Ecuador improve the value of its strategic assets” (DFC 2021).

⁸² Also, see Clowes et al. (2025).

⁸³ The Trump administration has also recently sought to take equity stakes in domestic and international mines to more effectively compete with China (Emont 2025; Renshaw et al. 2025). For example, during the summer of 2025, the U.S. Defense Department took a 15% equity stake in MP Materials (the largest rare earths miner in the U.S.) and committed to “purchasing its output in order to undercut China’s dominance of rare earth magnets needed in the manufacture of weapon systems” (IER 2025).

was made possible through a blended finance arrangement (The White House 2024b; AFC 2025). Global Gateway—the EU’s effort to create an alternative to the BRI by mobilizing EUR 300 billion of funding for physical and digital infrastructure projects in Africa, Asia, the Middle East, and Latin America—is also taking a blended finance approach (EC 2025; EIB 2025; Síkela 2025).

In Figure 1.7, we summarize how G7 and OECD countries have changed the ways they use cross-border financial instruments to keep up with China as the new global pace-setter. The number of completed items on this “checklist” suggests that Western powers are increasingly focused on competing via mimicry rather than differentiation.⁸⁴ Indeed, even some of the items that have not been “checked off the list” are under active consideration or early experimentation. The Trump administration is currently following Beijing’s lead by providing a \$20 billion bailout to the Government of Argentina through a swap facility with the U.S. Treasury’s Exchange Stabilization Fund (The Economist 2025a; Setser and Paduano 2025).⁸⁵ It is also taking a page out of the Biden administration’s playbook by seeking to bankroll the acquisition of equity stakes in seaports and critical mineral operations around the globe (Renshaw et al. 2025; Saul 2025).⁸⁶ If the U.S. Congress grants it expanded authority to support projects and activities in high-income countries with debt, equity, and grant instruments, it is also possible that U.S. aid and development finance will become substantially less transparent (see Figure 1.7).⁸⁷

⁸⁴ On the strategic question of whether to compete via mimicry or differentiation, see Zeitz (2021) and Asmus-Bluhm et al. (2024).

⁸⁵ As of October 2025, it was not yet known if the \$20 billion swap facility from the Exchange Stabilization Fund (ESF) was supported by one or more sources of collateral (Saeedy and Pérez 2025). The U.S. Treasury has not provided a large-scale emergency rescue facility to a sovereign borrower since the mid-1990s, when the Government of Mexico and its central bank received a \$20 billion ESF loan that was collateralized against oil export receipts (Congress of the United States 1995).

⁸⁶ During the Biden administration, the DFC provided a \$125 million loan for the acquisition of Greece’s Elefsina shipyard (DFC 2023, 2024). Several years later, in October 2025, the Trump administration was seeking to convert a \$50 million DPA grant into an 8% equity stake in Greenland’s largest (Tanbreez) rare earths deposit, while also providing a \$120 million loan from the U.S. Export-Import Bank to a New York-based company (Critical Metals Corp.) for the development of the Tanbreez mine (Renshaw et al. 2025). At the same time, it was reportedly seeking to finance U.S. or Western firms to buy Chinese equity stakes in Greece’s Piraeus Port, Jamaica’s Kingston Container Terminal, and Australia’s Darwin Port (Saul 2025).

⁸⁷ Under the existing OECD-DAC monitoring framework, member states are not asked to disclose official sector grants and loans that support projects and activities in ODA- and OOF-ineligible countries—a cohort that largely consists of high-income countries.

Figure 1.7: The G7 and the OECD: Keeping up with China as a global pace-setter

Course correction	Major G7/OECD effort underway?
Reduce grant-giving and ODA	✓
Boost lending and OOF	✓
Shift from PPG to non-PPG borrowers	✓
Make borrowing terms less concessional	✓
Increase blended finance, including equity	✓
Loosen eligibility restrictions on upper middle and high-income recipient countries	✓
Privilege financial returns, commercial benefits, and national security advantages for the creditor/donor country	✓
Prioritize technological pre-eminence	✓
Prioritize critical infrastructure	✓
Prioritize critical minerals	✓
Ramp up official sector financing for cross-border M&A transactions	✗
Bailout distressed sovereigns via emergency rescue lending	✗
Collateralize loans to sovereign borrowers	✗
Make aid and development finance less transparent	✗

Notes: The blue (✓) entries on the checklist summarize the policies and practices of G7 and OECD countries that have already been brought into closer alignment with those of China. The red (✗) entries on the checklist represent areas where G7 and OECD countries have not yet harmonized their policies and practices with those of China, but there are some indications that they may do so. For additional details, see Section 3.

Section 5: The “streetlight effect”: where we shine the light determines what we know

The existing monitoring regime for official sector financial flows—overseen by the World Bank, the IMF, the OECD, and the Paris Club—is currently facing a crisis of confidence and a crisis of relevance due to eroding support for the rules-based international economic order that was initially put in place after World War II and strengthened during the post-Cold War era (Woods 2008; Zimmerman and Smith 2011; Hopewell 2019; Honig and Weaver 2019; Chen 2020; Dreher et al. 2022; Bunte et al. 2022; Ferry and Zeitz 2024; Rodriguez-Toribio and Zeitz 2025). The regime was designed to track official sector financial flows from *Western countries* to the *developing world*. This made sense at the time because the primary purpose of international aid and credit was to facilitate post-war reconstruction efforts and promote economic development in low- and middle-income countries.

The existing monitoring regime for official sector financial flows was not designed to track such flows to the *developed world*. The basic assumption—shared by liberal market economies in the OECD—was that the market mechanism would efficiently allocate private capital in high-income countries (Moravcsik 1989). Consequently, when countries graduated from middle-income status to high-income status, the OECD assumed that official sector financial flows would for the most part cease because there would no longer be a need or rationale for such flows. The OECD also assumed that a monitoring mechanism would no longer need to be in place to track such flows.

But that is not what we witnessed in practice. The OECD never envisaged the possibility of large-scale official sector financial flows from a country outside of its club to high-income countries. Nor did it envisage that OECD member countries themselves might be interested in directing official sector financial flows to companies, assets, and projects in high-income countries. In the post-Cold War period of U.S. hegemony, there was no rivalry between great powers, so there was little need for official sector entities to direct aid and credit in ways that would help their governments prevail in a geostrategic competition.

In summary, the existing monitoring regime for official sector financial flows was designed by and for Western donors and creditors. The post-World War II, rules-based international economic order was not established by China or for China. Nor did China have a seat at the table when mechanisms were put in place to monitor and encourage compliance with the international rules and norms.


“The existing monitoring regime for official sector financial flows was designed by and for Western donors and creditors.”

At the beginning of the 21st century, China’s decision to not participate in international monitoring, coordination, and compliance mechanisms was mostly viewed as a nuisance. It was not yet viewed as an existential threat to the prevailing international economic order. Its official financial flows to developed and developing countries constituted only 5% of the official financial flows from OECD countries. However, the scale of China’s official sector financial flows eventually became so large that it threatened the viability of the OECD’s monitoring, coordination, and compliance mechanisms. By 2023, China’s official sector financial flows to developed and developing countries were equivalent to 40% of the official financial flows from OECD countries.⁸⁸

By the beginning of the third decade of the 21st century, the conflicts of interest and failures to resolve coordination and collective action problems had become acute—so much so that the prevailing international monitoring mechanisms faced a crisis of confidence and relevance (Dreher et al. 2022; Bunte et al. 2022; Ferry and Zeitz 2024; Rodriguez-Toribio and Zeitz 2025). After years and years of trying to “name and shame” China for non-compliance with a set of rules that it never agreed to follow, the participants in the OECD’s Arrangement on Officially Supported Export Credits decided to loosen the rules so that they would not continue to be outflanked by China (OECD 2023b). In parallel, OECD countries started to relax the restrictions that prevent their DFIs and ECAs from supporting projects and activities in high-income countries (OECD 2023b; Baskaran 2024; Atkins 2025; Censkowsky et al. 2025). OECD and Paris

⁸⁸ Under the OECD’s reporting directives, member states are not asked to disclose their official financial flows to high-income countries. Therefore, to the extent the OECD member states have provided official financial flows to high-income countries, the 5% and 40% estimates could be upwardly biased.

Club creditors also took steps that signal a possible erosion of commitment to the “no collateralization of public debt” principle,⁸⁹ which in a worst-case scenario could set off a collateral “arms race.”⁹⁰

Therefore, existing international monitoring mechanisms are arguably no longer fit-for-purpose if their fundamental purposes are to (a) comprehensively track cross-border financial flows from official sector institutions, and (b) help official sector financiers overcome coordination and collective action problems. Fixing these problems will require political will and a sustained reform and modernization effort by G7 and OECD member countries. And it remains to be seen if such an effort will be undertaken.

In the meantime, AidData has introduced three major data architecture changes to ensure that it can comprehensively and reliably monitor China’s official sector financial flows on a going forward basis:

1. Rather than continuing to exclusively monitor China’s official sector financial flows to the developing world, AidData will prospectively and retrospectively track all official sector financial flows from China to the developed and developing world, including all low-income, middle-income, and high-income countries.
2. To capture over-time variation in the per capita income status of recipient countries, AidData will introduce categorical variables that assign each recipient country on an annual basis to a year-specific income bracket.

⁸⁹ A December 2023 guidance note from the World Bank and IMF warns that collateralized borrowing is on the rise, but neither creditors nor borrowers disclose detailed information about collateralization arrangements (World Bank and IMF 2023: 11-12). The DFC is statutorily prohibited from lending to sovereigns. However, the 2018 BUILD Act does not bar it from lending to state-owned entities in foreign countries (Parker 2020). It is also able to collateralize its cross-border loans in ways that are not dissimilar from the collateralization practices of Chinese state-owned creditors (Landers et al. 2021; DFC 2022; Gelpern et al. 2025a, 2025b, forthcoming). As of late-2025, EU member countries were also planning to provide loans worth EUR 140 billion to the Ukrainian government and use the income generated from frozen Russian central bank deposits as a source of cash collateral (Tankersley 2025).

⁹⁰ If such an “arms race” took place, it would be a textbook collective action problem in that sovereign debt restructurings would become more complex and time-consuming to complete for all or most external creditors, irrespective of whether they chose to collateralize their claims (World Bank and IMF 2023; Gelpern et al. 2025a; World Bank 2025b: 31).

3. To differentiate between China's official sector financial flows that travel through jurisdictions versus to jurisdictions, AidData will assign each project/activity to two jurisdictions. The first jurisdiction will capture the country in which the funded project/activity takes place. The second jurisdiction will capture the country in which the borrowing institution (or recipient institution for grants and in-kind donations) is legally incorporated.⁹¹

AidData's Global Chinese Development Finance (GCDF) Dataset, which we have renamed the China's Loans and Grants to Low- and Middle-Income Countries (CLG-LMIC) Dataset, systematically tracks financial and in-kind transfers from official sector institutions in China to every low-income, lower-middle income, and upper-middle income country and territory in every major world region.⁹² However, a major limitation of this dataset is that it does not capture China's official sector lending and grant-giving activities in high-income countries.

AidData has undertaken a major effort to close this information gap over the last three years. In this report, we introduce and analyze a new dataset that systematically tracks financial and in-kind transfers from official sector institutions in China to every high-income country in every world region. The 1.0 version of the China's Loans and Grants to High-Income Countries (CLG-HIC) Dataset captures 9,764 projects and activities in 72 high-income countries supported by grant and loan commitments worth \$943 billion (in constant 2023 USD) between January 1, 2000 and December 31, 2023.⁹³ This report also introduces and analyzes the CLG-LMIC 1.0 Dataset, which captures 23,816 projects and activities in 142 low-income and middle-income countries supported by grant and loan commitments worth \$1.22 trillion (in constant 2023 USD) between January 1, 2000 and December 31, 2023.⁹⁴

⁹¹ On a going forward basis, AidData will also track the owners—including UBOs and non-UBOs—of borrowing institutions and their countries of origin. Such owners will be identified for loan commitment records but not for grant commitment records. The corresponding variables in the Borrower Ownership Records data file are Parent_Owner, Parent_Owner_Nationality, and Parent_Owner_Incorporation.

⁹² For ease of exposition, we use the term "countries" to refer to the countries and territories for which we provide data coverage in the CLG-HIC Dataset, the CLG-LMIC Dataset, and the CLG-Global Dataset.

⁹³ The CLG-HIC 1.0 Dataset captures 5,942 projects and activities in 72 high-income countries supported by loan commitments worth \$942 billion (in constant 2023 USD) and 3,060 projects and activities in 72 high-income countries supported by grant commitments worth \$814 million (in constant 2023 USD).

⁹⁴ These summary statistics are based upon the income classifications that the OECD uses to make ODA and OOF eligibility determinations. If World Bank income classifications are used in lieu of OECD income classifications, the CLG-Global 1.0 Dataset captures (i) 9,733 projects and activities in 78

Together, these two fully interoperable datasets provide global coverage of China's overseas loan and grant commitments.⁹⁵ However, for those seeking a unified view of China's official financial flows across ODA-eligible and non-ODA-eligible countries, AidData has also produced an integrated data file, which it refers to as the 1.0 version of the China's Global Loans and Grants Dataset (CLG-Global 1.0).⁹⁶

We understand that many analysts will want an unobstructed view of China's entire international lending and grant portfolio and therefore choose the CLG-Global 1.0 dataset. At the same time, the CLG-Global 1.0 dataset relies on two component datasets (CLG-LMIC 1.0 and CLG-HIC 1.0) that have been designed to ensure compatibility with internationally-accepted definitions and measures for those who prefer to analyze official financial flows according to such definitions and measures. To this end, the scope parameters of both the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets have been aligned with the *year-specific* OECD Development Assistance Committee's (DAC) definitions of ODA and OOF eligibility.⁹⁷ All grant and loan commitments to countries that were ODA-eligible—and therefore OOF-eligible—in a given year are captured in the CLG-LMIC dataset and classified as ODA, OOF, or Vague (ODA or OOF).⁹⁸ Grant and loan commitments to countries that were high-income or otherwise

high-income countries supported by grant and loan commitments worth \$847 billion (in constant 2023 USD), and (ii) 23,449 projects and activities in 146 low-income and middle-income countries supported by grant and loan commitments worth \$1.3 trillion (in constant 2023 USD). In the remainder of this report, we use the World Bank's income classifications.

⁹⁵ There are 17 countries that transitioned from ODA/OOF eligibility to ineligibility during the 2000-2023 timeframe. As such, these countries are included in the CLG-LMIC 1.0 Dataset in some years and the CLG-HIC 1.0 Dataset in other years. There are also 17 countries for which we conducted systematic searches, but no financial or in-kind transfers from Chinese state-owned entities were identified between 2000 and 2023.

⁹⁶ The 1.0 version of the CLG-Global Dataset tracks projects and activities over 24 commitment years (2000-2023), and it includes details on the timing of project/activity implementation over a 26-year period (2000-2025). 30,133 records in the dataset represent formally approved, active, and completed projects and activities. The remaining 3,447 records in the dataset represent (1) projects and activities that secured official financial or in-kind commitments from China but were subsequently suspended or canceled; (2) projects and activities that secured pledges of financial or in-kind support from official sector institutions in China but never reached the formal approval (official commitment) stage; and (3) so-called "umbrella" records that are designed to support multiple subsidiary projects and activities.

⁹⁷ The year-specific ODA eligibility determinations are effectively also year-specific OOF eligibility designations (Staur 2023).

⁹⁸ Records that are assigned to the Vague (ODA or OOF) category represent financial or in-kind transfers from Chinese government or state-owned institutions for which publicly available information is insufficient to determine if the flows in question meet the OECD-DAC criteria for ODA or OOF in ODA- or OOF-eligible countries. These records are assigned to a residual category to (i) ensure transparency

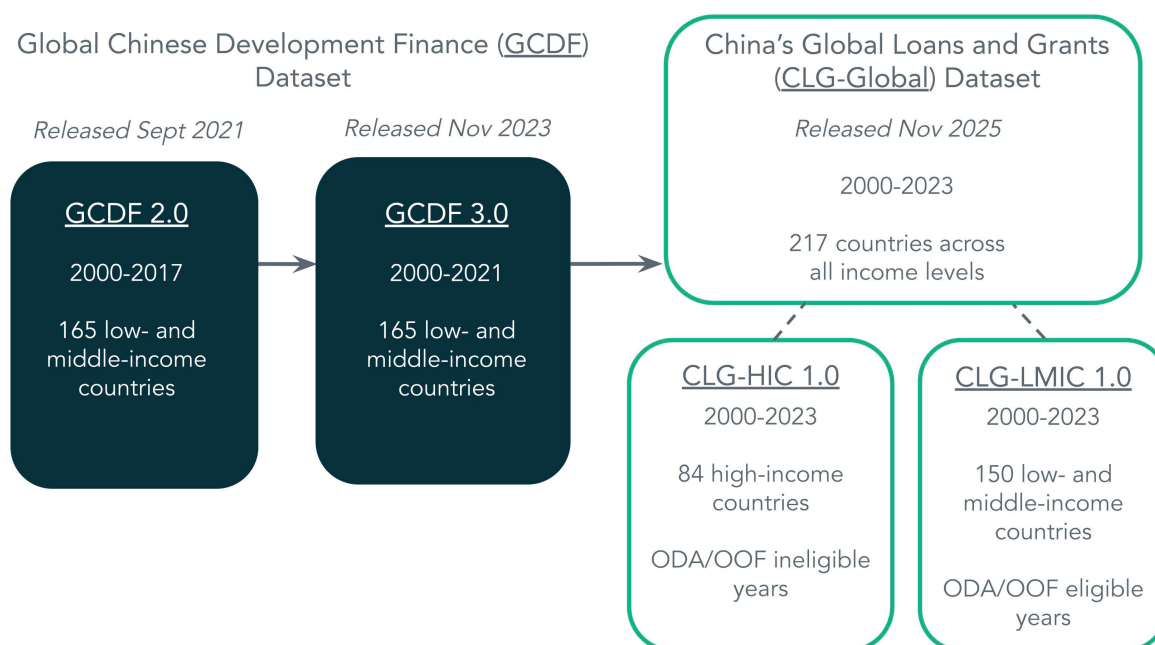
ineligible for ODA and OOF in the year of commitment are captured in the CLG-HIC dataset and classified as Official Flows to Ineligible Countries (OFIC).⁹⁹ Countries that crossed over the ODA eligibility threshold between 2000 and 2023 are therefore represented in both datasets: the CLG-LMIC dataset for years when they were ODA-eligible and the CLG-HIC dataset for years when they were not.¹⁰⁰

about sources of measurement imprecision, and (ii) facilitate reassignment to the ODA or OOF categories when additional sources of information become available.

⁹⁹ Previously, the 3.0 version of AidData's GCDF dataset included 165 countries that at some point between 2000 and 2021 were classified as low- or middle-income using the World Bank's annual income classifications. This list often diverges from the OECD's ODA eligibility list, as several countries designated by the World Bank as middle-income were excluded from ODA eligibility (e.g., EU accession states, Russia, post-Soviet economies). Earlier versions of the GCDF dataset included financial and in-kind transfers to countries deemed ineligible for ODA as OOF, but following consultations with the OECD, AidData has established a new architecture for the CLG-LMIC dataset that ensures all ODA-ineligible countries are also deemed ineligible for OOF, which necessitates the creation of a new flow class (OFIC).

¹⁰⁰ This new structure is designed to facilitate apples-to-apples comparisons with the OECD-DAC's ODA and OOF statistics. Those who wish to compare Chinese ODA and OOF to other bilateral and multilateral sources of ODA and OOF should use the 1.0 version of the CLG-LMIC dataset.

Figure 1.8: How AidData’s tracking of Chinese loans and grants has evolved



Notes: For our China’s Global Loans and Grants Dataset, Version 1.0, we searched for Chinese loans and grants across 217 countries and territories total, of which 150 were low- and middle-income countries and 84 were high-income countries (17 countries transitioned between income brackets during the period of study and are therefore counted in both income groups). We found grants and/or loans in 142 out of 150 low- and middle-income countries studied and in 72 out of 84 high-income countries studied.

On a going forward basis, AidData plans to regularly publish updates to the CLG-LMIC Dataset and the CLG-HIC Dataset. These datasets will be accessible as separate, stand-alone files for users who are interested in analyzing China’s official sector financial flows to the developing world or the developed world. However, for those users who would like to gain a truly comprehensive picture of China’s overseas lending and grant-giving portfolio, AidData will make a single file available that merges the two separate datasets into one, which will be called the China’s Global Loans and Grants (CLG-Global) Dataset.

The 1.0 version of the CLG-Global Dataset has several advantages. One advantage is that it enables analysts to consistently track China’s official sector financial flows over time to individual countries that have graduated from middle-income to high-income status. Consider for example Chile. It graduated from the former category to the latter category in 2017. It is therefore present in the 1.0 version of the CLG-LMIC Dataset for 2000-2017 commitment years and the 1.0 version of the CLG-HIC Dataset for 2018-2023 commitment years. However, if one would like to consistently analyze China’s official sector financial flows to Chile from 2000 to 2023 (without interruption), all of the data can be accessed in the merged data file (the 1.0 version of the CLG-Global Dataset).


“Beijing did not design the Belt and Road Initiative (BRI) for developing countries alone. It was designed to be global in scope, encompassing the developed world and the developing world.”

Another advantage of the CLG-Global Dataset is that Beijing did not design the Belt and Road Initiative (BRI) for developing countries alone. It was designed to be global in scope, encompassing the developed world and the developing world. Indeed, a wide array of high-income countries—including Italy, Portugal, Greece, Poland, Hungary, Luxembourg, Austria, New Zealand, Saudi Arabia, Qatar, and UAE—joined the BRI and received large amounts of official sector credit from Chinese state-owned entities (see Chapter 3). However, until now, there were no publicly available datasets that comprehensively tracked China’s grant- and loan-financed (infrastructure) projects in low-income, middle-income, and high-income BRI participant countries.¹⁰¹ Therefore, the CLG-Global Dataset will likely be of special interest to users who would like to analyze the full set of official sector financial flows from China that supported past and present BRI participant countries, irrespective of their per capita income levels.

A third advantage of the CLG-Global Dataset dataset is that it accounts for an important but poorly understood feature of China’s overseas lending portfolio: transactions that support a project or activity in one jurisdiction but rely on a borrowing

¹⁰¹ As of May 2025, there were 151 BRI participant countries. See Table A6.1 in the Appendix for a full list of BRI participants and when they joined or exited the BRI.

institution legally domiciled in another jurisdiction (see Box 2a for more information about “offshore” borrowers).¹⁰² Figure 2.10 demonstrates that such transactions account for nearly 20% (\$354 billion) of China’s overseas lending portfolio. The majority of these transactions are routed through offshore financial centers, such as the Cayman Islands and the British Virgin Islands, or jurisdictions with relatively high levels of financial secrecy.¹⁰³ They are particularly common when Chinese state-owned creditors seek to finance projects or activities in high-income countries (see Figure 4.3 in Chapter 4).

However, a disadvantage of using the CLG-Global Dataset is that it combines official sector financial flows from China that qualify as ODA and OOF under OECD-DAC rules with those that do not. Users who are narrowly interested in flows that qualify as ODA and OOF—or making comparisons to Western ODA and OOF flows—should use the latest version of the CLG-LMIC Dataset.

¹⁰² As we explain at greater length in Chapters 2 and 3 of this report, China’s official sector financial flows to low- and middle-income countries are increasingly channeled through so-called special purpose vehicles and joint ventures—entities that are often legally incorporated in offshore financial centers (OFCs) like Bermuda, the British Virgin Islands, the Cayman Islands, Cyprus and Singapore. This practice of routing funds through borrowing institutions that are domiciled in high-income OFCs has made it increasingly difficult to systematically capture official financial flows to low- and middle-income countries. The opposite is also true: China’s use of low- and middle-income OFCs—such as Mauritius, Panama, Lebanon, and the Marshall Islands—to route money to high-income countries has resulted in AidData overestimating China’s official sector financial flows to low- and middle-income countries. For more details, see Figures 2.10, 3.9, and 4.3 in Chapters 2, 3, and 4.

¹⁰³ 56% of these transactions (worth \$202 billion) are either routed through (a) OFCs or (b) non-OFC jurisdictions with relatively high levels of financial secrecy. See Chapter 4 for more details on how we identify jurisdictions with relatively high levels of financial secrecy.

Box 1c: How AidData categorizes financial and in-kind transfers from official sector institutions in China

As part of its data collection and classification system, AidData assigns each financial and in-kind transfer (“flow”) from an official sector institution in China that supports a project/activity in another country to one of four categories (“flow classes”) that are consistent with OECD-DAC methods and measures: Official Development Assistance (ODA), Other Official Flows (OOF), Vague (ODA or OOF), and Official Flows to Ineligible Countries (OFIC).

AidData adheres to the reporting directives of the OECD’s Development Assistance Committee (DAC), which define specific eligibility criteria for ODA and OOF, in order to ensure that users of the CLG-LMIC, CLG-HIC, and CLG-Global datasets can make valid comparisons between measure China’s overseas lending and grant-giving activities and those of its peers and competitors (that report their ODA and OOF data to the OECD-DAC).¹⁰⁴

The OECD-DAC has used ODA and OOF designations since 1972 to distinguish between flows from official sector institutions that (a) are provided on concessional terms and that promote and specifically target the economic development and welfare of developing countries (ODA), and (b) are provided on non-concessional terms or do not specifically target the economic development and welfare of developing countries (OOF). AidData assigns projects/activities to the ODA category if they meet three criteria. First, the primary purpose of the project/activity must be the promotion of economic development and welfare in the recipient country (i.e., have development intent). Second, the project/activity must take place in a country that the OECD-DAC defines as eligible for ODA and OOF. Third, the official commitment supporting the project/activity must be concessional in nature (i.e., grant, technical assistance, scholarship, debt forgiveness, or loan with a grant element meeting a specified

¹⁰⁴ Many DAC countries, non-DAC countries, and multilateral institutions report the volume and composition of their official sector flows according to these categories and criteria.

threshold).¹⁰⁵ AidData assigns projects/activities to the “OOF” category if they do not meet all three of these criteria, but they are supported by a financial or in-kind transfer from an official sector institution in China and they take place in a country that the OECD-DAC defines as eligible for ODA and OOF. AidData assigns financial and in-kind transfers from China that qualify as ODA or OOF but cannot be reliably assigned to one of these categories because of insufficiently detailed information to the Vague (ODA or OOF) category.¹⁰⁶ A final category—known as OFIC—captures financial and in-kind transfers from official sector institutions in China that support projects/activities in countries that the OECD-DAC has deemed ineligible for ODA and OOF.¹⁰⁷

The 1.0 version of AidData’s CLG-Global Dataset provides truly global coverage of China’s official sector lending and grant-giving portfolio, tracking official flows to 217 countries and territories between 2000 and 2023. It captures the full range of projects/activities across the ODA, OOF, Vague (ODA or OOF), and OFIC categories. However, those who are only interested in flows that qualify as ODA and OOF should use the latest version of the CLG-LMIC dataset.

Section 6: A macroscopic view of China’s overseas lending and grant-giving portfolio

In this report, we provide the first-ever comprehensive analysis of China’s overseas lending and grant-giving portfolio, including all of the projects and activities that it has bankrolled in the developing world and developed world since the turn of the century.

¹⁰⁵ For official commitments issued (flows reported) between 2000 and 2017, we follow the OECD’s practice to use the cash-flow methodology to define ODA, which included a threshold level of 25% grant element with a discount rate of 10% for all loans. For official commitments issued (flows reported) in 2018 and subsequent years, we use the OECD’s grant-equivalent methodology, which relies upon a tiered concessionality threshold system for loans. Under the grant-equivalent methodology, the threshold concessionality for loans to the official sector in the recipient country is 45% for LDCs and other LICs (using a discount rate of 9%), 15% for LMICs (using a discount rate of 7%) and 10% for UMICs (using a discount rate of 6%). Loans to the private sector, however, continue to use the 25% threshold used in the cash-flow methodology (in alignment with OECD-DAC practices).

¹⁰⁶ For the most part, projects/activities in the Vague (ODA or OOF) category consist of those that take place in a country that the OECD-DAC defines as eligible for ODA and OOF and are either (a) financed with development-intent loans for which AidData lacks the borrowing terms (interest rates, grace periods, or maturity dates) needed for concessionality determinations; or (b) assigned to an unspecified “Flow Type” category (i.e., values of “Vague TBD”).

¹⁰⁷ These countries include high-income countries, current and former G8 member countries, or countries that have ascended to the EU. See Parks et al. (2025) for more details.

Our newly collected data reveal that the overall size of the portfolio has reached \$2.2 trillion, which is two to four times larger than previous estimates suggest (Horn et al. 2019, 2021; Dreher et al. 2021, 2022; Parks et al. 2023). There are very few jurisdictions in the world that have not received grants or loans from Chinese state-owned entities: 200 out of 217 countries and territories received at least one grant or loan commitment from an official sector creditor or donor from China between 2000 and 2023.¹⁰⁸ While 61% of China's overseas lending and grant-giving portfolio supports projects and activities in low-income and middle-income countries, the remaining 39% supports projects and activities in high-income countries.¹⁰⁹


“Our newly collected data reveal that the overall size of China’s lending and grant-giving portfolio has reached \$2.2 trillion, which is two to four times larger than previous estimates suggest.”

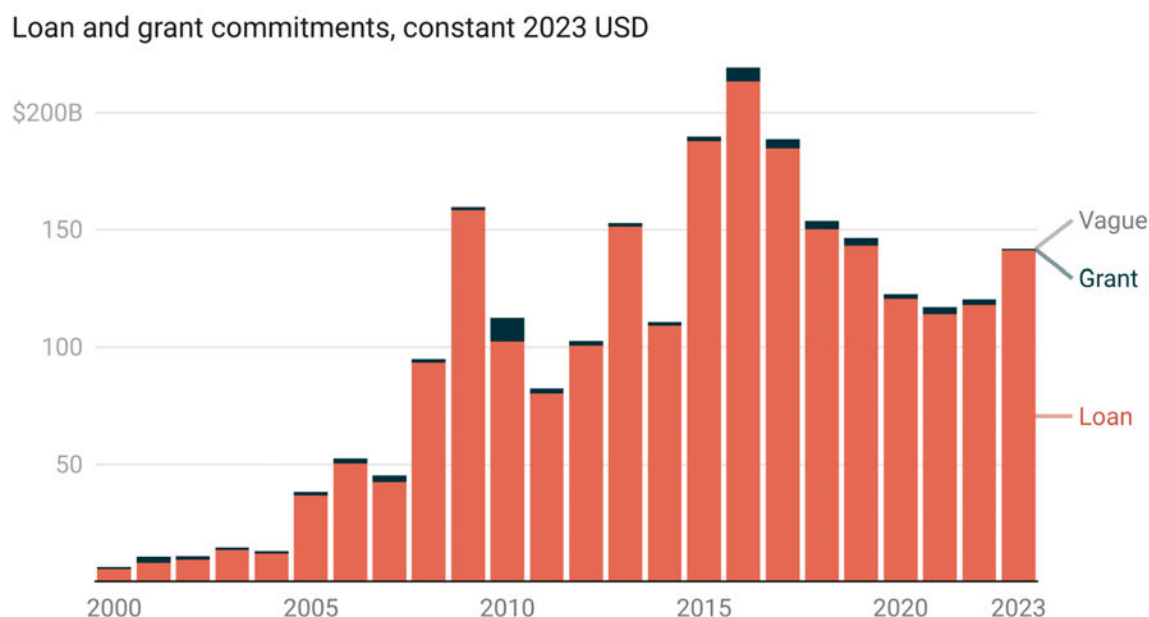
Loans predominate: they account for 97.4% of the portfolio, while grants account for only 2.5% (see Figure A5.4 in the Appendix for annual commitments).¹¹⁰ China International Development Cooperation Agency (CIDCA) and China's Ministry of Commerce (MOFCOM), which jointly coordinate and administer the country's foreign aid programs at the direction of the State Council, account for a vanishingly small fraction of the portfolio (see Figure A5.5 in the Appendix). State-owned commercial banks, state-owned enterprises, state-owned policy banks, and the central bank are responsible for more than 95% of the portfolio (see also Figure A5.5 in the Appendix).

¹⁰⁸ For a complete list of the countries and territories that are covered by the 1.0 version of AidData's CLG-Global Dataset, see Table A6.2 in the Appendix.

¹⁰⁹ These summary statistics are based upon the low-, middle-, and high-income classifications of the World Bank.

¹¹⁰ In Figure A5.4 in the Appendix, we replicate Figure 1.9 in shares rather than monetary volumes. On average, over the entire 24-year period of observation, China lent 34.6 dollars for every grant dollar that it provided to low-income, middle-income, and high-income countries. If one excludes high-income countries from the analysis, China lent 21.1 dollars for every grant dollar that it provided to low-income and middle-income countries. If one only includes high-income countries in the analysis, China lent 761 dollars for every dollar that it donated.

Figure 1.9: China's cross-border financial commitments by grants and loans



Source: AidData CLG-Global 1.0.4

To compare China's grant and loan commitments with those provided by its peers and competitors, we cross-walk each of these financial and in-kind transfers ("flows") from an official sector institution in China to one of four categories ("flow classes"): Official Development Assistance (ODA), Other Official Flows (OOF), Vague (ODA or OOF), and Official Flows to Ineligible Countries (OFIC).¹¹¹ All members of the OECD-DAC categorize their grant and loan commitments to eligible countries as either ODA or OOF. Therefore, one can compare the ODA and OOF volumes that are recorded by OECD-DAC member countries to the Chinese ODA, OOF, and Vague (ODAa or OOF) volumes that are recorded in the 1.0 version of AidData's CLG-Global Dataset.¹¹² We have also introduced a fourth category (OFIC) to capture official sector grant and loan commitments from China to countries that the OECD has deemed ineligible for ODA

¹¹¹ We provide more methodological details in Box 1c, Table A6.1 in the Appendix, and Parks et al. (2025).

¹¹² Flows that are assigned to the Vague (ODA or OOF) category represent financial and in-kind transfers from China that qualify as ODA or OOF but cannot be reliably assigned to one category or the other because of insufficiently detailed information. See Box 1c for more details.

and OOF.¹¹³ At present, China's OFIC volumes cannot be compared to OFIC volumes from OECD-DAC member countries. However, given that many Western donors and creditors are following Beijing's lead and redirecting aid and credit to high-income countries, there is a growing interest in tracking and analyzing such flows (OECD 2024a; Staur 2023).

Our newly collected data allow for a systematic comparison of ODA and OOF from China and its DAC and G7 counterparts. Figures 1.10 and 1.11 demonstrate that, between 2000 and 2023, Beijing extended grant and loan commitments to ODA- and OOF-eligible countries worth \$1.38 trillion, of which 10% (\$137 billion) qualified as ODA and 90% (\$1.24 trillion) qualified as OOF.¹¹⁴ These financial commitments accounted for roughly 60% of China's overseas lending and grant-giving portfolio during the same time period.¹¹⁵

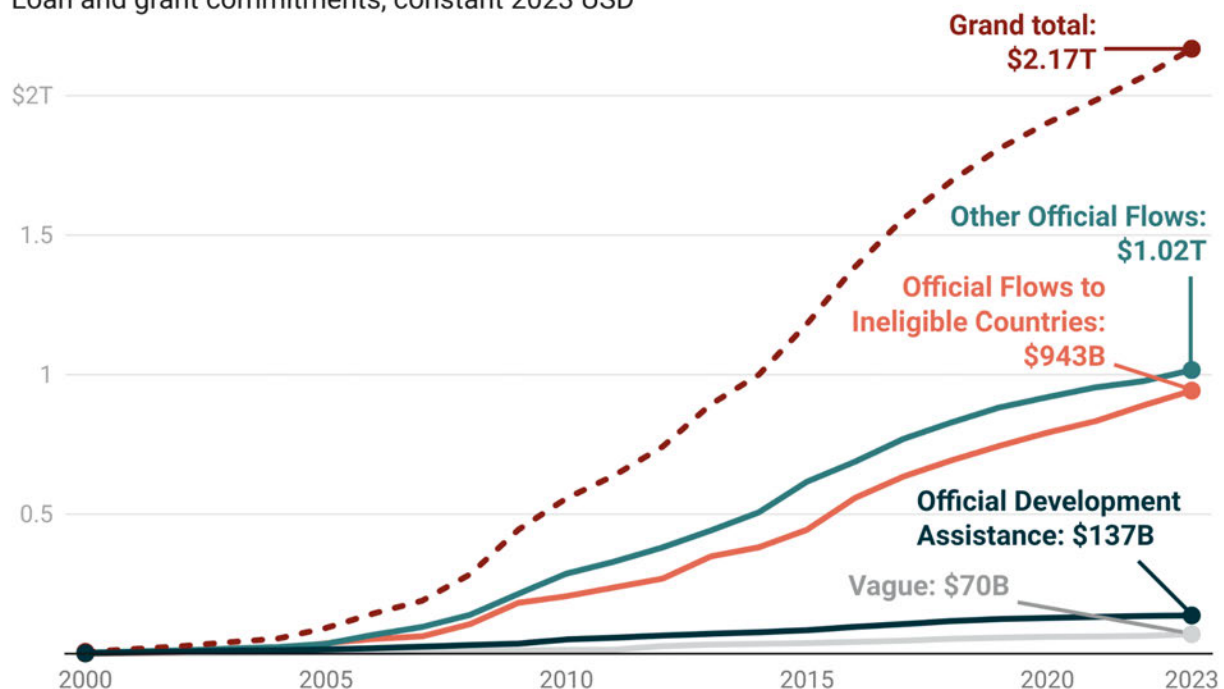
¹¹³ These ODA- and OOF-ineligible countries largely consist of high-income countries. See Box 1c for more details.

¹¹⁴ On average, between 2000 and 2023, China provided annual ODA commitments worth \$5.7 billion (in constant 2023 USD), which puts its foreign aid spending roughly on par with that of a donor like Italy. Figure 1.11 also demonstrates that Chinese ODA levels steadily declined from \$10.9 billion in 2018 to \$1.9 billion in 2023 (its lowest level since 2004).

¹¹⁵ This percentage includes approximately \$70 billion in Vague (ODA or OOF) flows—equivalent to roughly 3% of China's portfolio to ODA- and OOF-eligible countries between 2000 and 2023. These flows represent officially supported financial or in-kind transfers for which available information is insufficient to determine whether they meet OECD-DAC criteria for ODA or OOF flows.

Figure 1.10: Cumulative official financial flows from China to the world

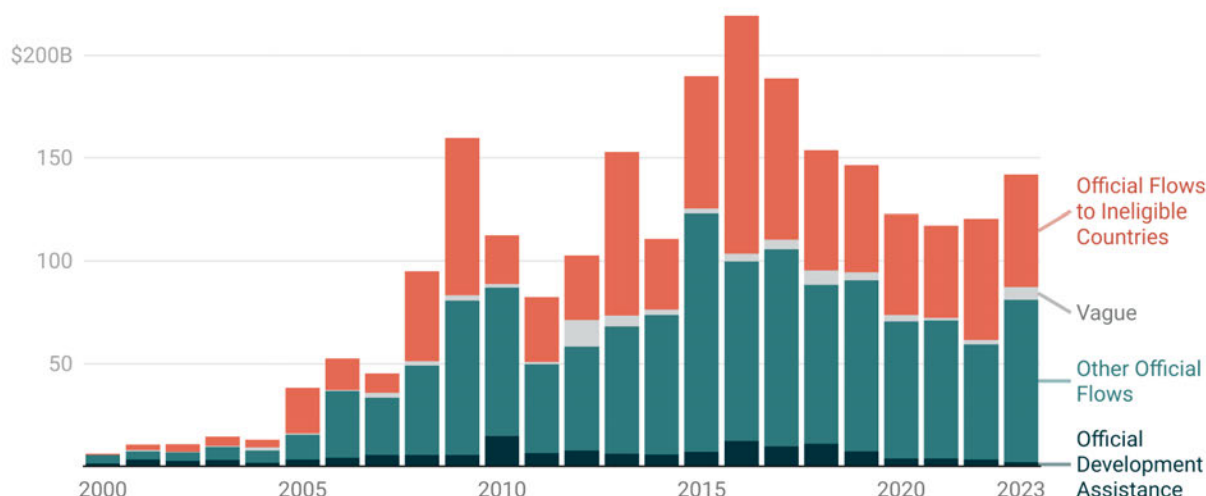
Loan and grant commitments, constant 2023 USD



Notes: The "ODA" and "OOF" categories are based on OECD-DAC measurement criteria. "Vague" is a residual category for grant and loan commitments to ODA- and OOF-eligible countries that cannot be reliably categorized as ODA or OOF because of insufficiently detailed information. "OFIC" is a category for grant and loan commitments to countries to ODA- and OOF-ineligible countries. This figure excludes all short-term rollover facilities. Source: AidData CLG Global 1.0.

Figure 1.11: China's official financial flows to the world

Loan and grant commitments, constant 2023 USD



Notes: The "ODA" and "OOF" categories are based on OECD-DAC measurement criteria. "Vague" is a residual category for grant and loan commitments to ODA- and OOF-eligible countries that cannot be reliably categorized as ODA or OOF because of insufficiently detailed information. "OFIC" is a category for grant and loan commitments to countries to ODA- and OOF-ineligible countries. Source: AidData CLG Global 1.0.

OECD-DAC member countries as a group have substantially more financial firepower than China. They provided \$3.87 trillion in ODA and OOF between 2000 and 2023, with the G7—the United States, Japan, Germany, the United Kingdom, France, Italy, and Canada—footing more than 75% (\$2.95 trillion) of the bill (Figure A2.1.1 in the Appendix). The U.S. and Germany do most of the heavy-lifting; they together accounted for nearly 60% of total ODA and OOF from the G7 between 2000 and 2023.¹¹⁶

However, Beijing's ODA and OOF portfolio remains larger than that of any individual G7 or OECD member country. Between 2014 and 2023, every ODA/OOF dollar spent by Washington was matched by 1.5 dollars of ODA/OOF from Beijing. The second largest source of ODA/OOF in the G7—Berlin—was outspent on a two-to-one basis by Beijing over the same time period.¹¹⁷

¹¹⁶ The U.S. is the largest bilateral source of ODA and OOF inside the G7 and the OECD, contributing \$1 trillion between 2000 and 2023 (see Figure A2.1.1).

¹¹⁷ These figures are based on spending totals in the developing world (ODA and OOF alone). If Beijing's grant and loan commitments to high-income countries are included in the comparison, the margin grows

China also outspends its multilateral rivals by considerable margins. Consider the single largest multilateral source of international aid and credit: the World Bank. For every dollar that it lent or donated to developing and developed countries between 2014 and 2023, Beijing lent or donated 2.2 dollars (see Figure A2.1.1 in the Appendix).¹¹⁸ China therefore remains the world's largest official creditor.¹¹⁹

Beijing's leadership position becomes even more obvious in an analysis of "flows" rather than "stocks." Figure A2.1.2 in the Appendix demonstrates that, in 2023, its grant and loan commitments to developing countries (\$87 billion) surpassed those of the U.S. and all other members of the G7. As such, it remains the single largest bilateral source of official sector financing (ODA and OOF) to the developing world.¹²⁰

"China remains the single largest bilateral source of official sector financing (ODA and OOF) to the developing world."

The 1.0 version of AidData's CLG-Global Dataset also confirms that Beijing's financial footprint outside of the developing world is vast. It identifies \$960 billion in official financial commitments to ODA- and OOF-ineligible countries—financial flows that AidData has designated as OFIC and that fall outside the boundaries of OECD-DAC reporting directives. Although these financial flows once accounted for a very small percentage of China's overseas lending and grant-giving portfolio, they now represent a major segment of the portfolio. Figure 1.12 demonstrates that, at the turn of the century, these types of grant and loan commitments accounted for only 10% of the portfolio. However, by 2023, this figure quadrupled to 40%. The extraordinary expansion of China's OFIC portfolio segment underscores a major theme of this

even larger. For every dollar that Washington spent, Beijing provided roughly 2.7 dollars. For every dollar that Berlin spent, Beijing provided roughly 3.65 dollars. However, given that the United States, Germany, and other OECD-DAC member countries do not systematically report their grant and loan commitments to high-income countries, these estimates should be interpreted with caution.

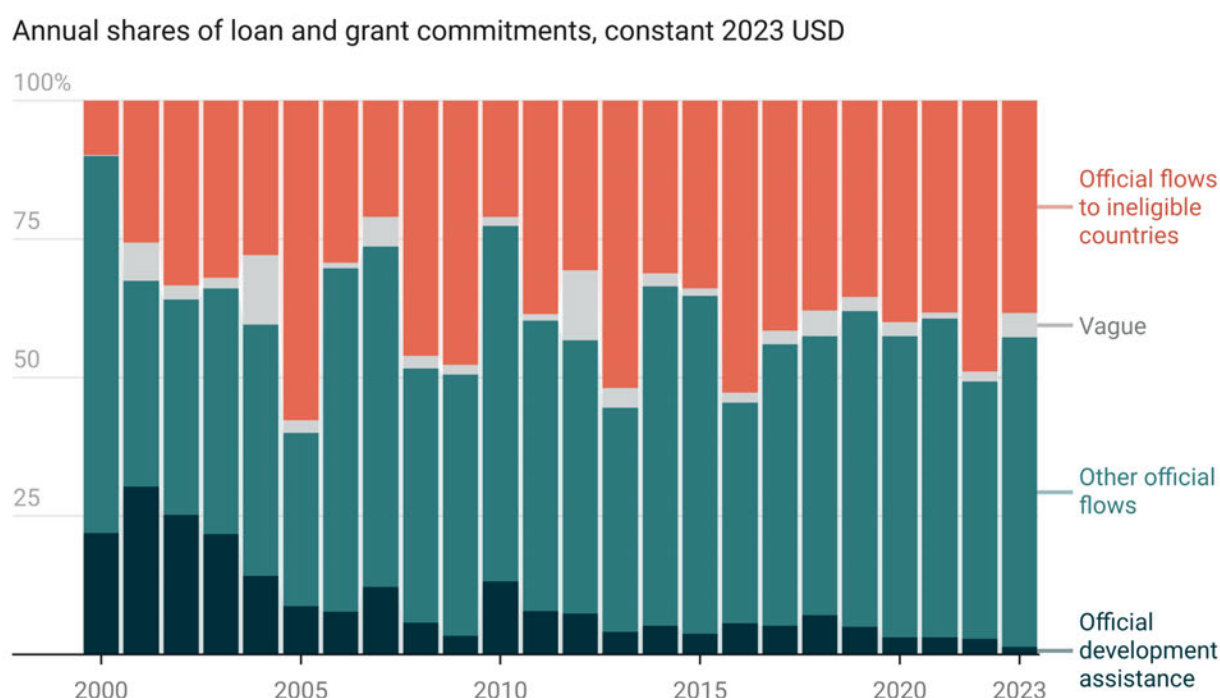
¹¹⁸ Unlike the OECD data on ODA and OOF, the World Bank data on grant and loan commitments cover the full scope of institution's operations in low-income, middle-income, and high-income countries (see Figure A2.2.1 in the Appendix).

¹¹⁹ As in previous years, China outspent the World Bank in 2023. It issued aid and credit commitments worth \$141 billion, while the World Bank provided \$92 billion (see Figure A2.2.1 in the Appendix).

¹²⁰ In 2023, China's ODA and OOF commitments to low-income and middle-income countries amounted to \$87 billion. By comparison, ODA and OOF from the U.S. to low-income and middle-income countries amounted to \$61 billion in the same year (see Figure A2.1.2 in the Appendix).

chapter: the fact that Washington, Berlin, Tokyo, London, Paris, Ottawa and Rome are now learning to play by a set of international lending and grant-giving rules written by and for Beijing.

Figure 1.12: Decomposition of China's official financial flows to the world



Notes: The "ODA" and "OOF" categories are based on OECD-DAC measurement criteria. "Vague" is a residual category for grant and loan commitments to ODA- and OOF-eligible countries that cannot be reliably categorized as ODA or OOF because of insufficiently detailed information. "OFIC" is a category for grant and loan commitments to countries to ODA- and OOF-ineligible countries.

There are some indications that China's competitors are seeking to catch up with their rival by changing the "color of the money" that they provide (see Figure A2.1.2 in the Appendix). In 2021, Washington increased its OOF commitments fifteen-fold by ramping up the semi-concessional and non-concessional lending activities of the DFC (Parks et al. 2023). Several years later, it obliterated USAID, the principal institution

responsible for the provision of ODA.¹²¹ U.S. legislators are currently considering a DFC reauthorization bill that would increase the agency's lending cap from \$60 billion to \$250 billion and extend its operational mandate for another seven years. If approved, the legislation would almost certainly lead to a major increase in OOF. There are also signs that Berlin may follow suit. In 2023, Germany's OOF spending more than doubled, likely due to increased lending from the export credit and project finance arm (KfW IPEX-Bank) of the German Development Bank (see Figure A2.1.3 in the Appendix). KfW IPEX-Bank also approved a series of lending operations in high-income (ODA- and OOF-ineligible) countries, including an electric vehicle charging network in the U.K, offshore wind farms in the North and Baltic Sea, and fiber optic projects in Finland, Spain and Poland (KfW 2023).¹²²

In the remainder of this report, we seek to answer the following questions:

- What is the true scale and scope of China's overseas lending and grant-giving portfolio? How much aid and credit does it direct to the developed world versus the developing world?
- Why does China provide aid and credit to high-income countries? What are its strategic aims? Are its strategic aims in low- and middle-income countries similar or different?
- Is Beijing's overseas lending portfolio still largely focused on the Belt and Road Initiative and big-ticket infrastructure projects?

¹²¹ Similarly, the UK, Germany, France, and the EU have each taken steps to scale back their ODA commitments in recent years. In 2024, France announced its third aid budget cut in 2 years (Bollag 2024). Then, in early 2025, UK Prime Minister Keir Starmer announced an aid budget cut—from 0.5 percent to 0.3 percent of gross national income between 2025 and 2027 (Mitchell and Hughes 2025). Germany's coalition government is currently considering cuts to development aid in favor of other policy goals (Chase-Lubitz 2025). According to leaked internal documents, the EU also plans to reduce its spending by 35% to less developed nations between 2025 and 2027. Many of these cuts are being undertaken in conjunction with increased military and defense spending in Ukraine (Cserep 2024). In light of these changes, the OECD has predicted a 9-to-17% reduction in ODA in 2025 (OECD 2025).

¹²² Germany reported gross OOF disbursements to the OECD-DAC worth more than \$17 billion in 2023, as compared to average annual OOF disbursements of \$8.5 billion during the previous decade. Total official sector credit from Germany is likely even higher, as KfW IPEX-Bank supports lending operations in high-income countries that fall outside the OECD-DAC reporting directives (KfW 2023).

- Who are the biggest recipients of cross-border credit from Chinese state-owned entities—and how has this changed over time? How are the borrowers that are currently favored by Beijing today different from the borrowers of the past?
- Which sectors and sub-sectors are currently favored by China—and why? How closely do its cross-border financial flows align with the PRC’s policy priorities, as described in MIC2025?
- To what extent do legal, policy, and regulatory barriers to entry in recipient countries limit inbound capital from China?
- Are the lending policies and practices of Chinese creditors converging or diverging in the developed and developing world?
- Is China’s overseas lending portfolio becoming easier or more difficult to track over time—and why?

Another key objective of this report is to help international organizations, credit rating agencies, civil society organizations, media outlets, practitioners from the public and private sectors, and researchers better understand the “art of the possible” with these newly collected data. Longstanding sources of debate and conjecture can now be subjected to empirical scrutiny with the uniquely comprehensive and granular data that we have collected. There are 10 major advantages of the new data:

1. **Lender and donor coverage:** Our newly collected data—from the 1.0 version of CLG-Global dataset—captures projects and activities in developed and developing countries supported by 1,193 official sector donors and lenders in China. It also identifies the participation of 2,606 co-financing institutions—including Western and non-Western commercial banks, multilateral financial institutions, and bilateral DFIs and ECAs that have chosen to collaborate or coordinate with Beijing—in Chinese grant- and loan-financed projects and activities. By way of comparison, the 3.0 version of the GCDF dataset covered 791 official sector financiers and 1,225 co-financing institutions. We have also added new variables that allow for (a) differentiation between Chinese state-owned creditors in mainland China and their overseas branches/affiliates and (b) the identification of the jurisdictions where each

Chinese state-owned creditor is based. In Chapter 2, we explain why these variables have become increasingly important to understand the changing nature of China's overseas lending portfolio.

2. **Borrower and recipient country coverage:** Our newly collected data provide comprehensive coverage of financial and in-kind transfers from official sector institutions in China to every low-income, middle-income, and high-income country in every major world region. Whereas the 3.0 version of the GCDF dataset provided comprehensive coverage for developing countries, the 1.0 version of the CLG Global dataset provides comprehensive coverage for developed and developing countries. Another feature of the 1.0 version of the CLG Global dataset is that we assign each country-year to two different income brackets: one that is based on the OECD guidelines and another that is based on the World Bank guidelines. We have taken this approach to give users of the dataset the ability to choose the income bracket classifications that best suit their analytic needs.¹²³
3. **Borrower and recipient institution coverage:** The 1.0 version of the CLG Global dataset identifies 10,040 receiving institutions, including entities that receive grants as well as those that borrow under loan arrangements. By way of comparison, the 3.0 version of the GCDF dataset identified 5,037 receiving institutions.¹²⁴ We have categorized each of these institutions by type (government agency, state-owned bank, state-owned company, special purpose vehicle/joint venture, intergovernmental organization, private sector, etc.), country of origin (recipient country, China, or a third country), and, when applicable, role (direct borrower or indirect borrower through an on-lending arrangement). We have also introduced a new marker to indicate if a loan qualifies as public or publicly guaranteed (PPG) debt, as defined in the Debtor

¹²³ While income bracket determinations are made at the country-year level, individual records are mapped to these income brackets via the OECD_Income_Status_Host_Country and WB_Income_Group_Host_Country variables, based on the year and country in which the project/activity took place.

¹²⁴ The 1.0 version of the CLG Global dataset also identifies 1,832 institutions ("accountable agencies") that have supported Chinese loan-financed projects and activities by providing repayment guarantees, insurance policies, and collateral which can be seized in the event of default. The 3.0 version of the GCDF dataset identified 422 accountable agencies.

Reporting System (DRS) directives that support the World Bank's International Debt Statistics (World Bank 2000, 2019, 2020b, 2021b).¹²⁵

4. Ultimate beneficial owner (UBO) coverage: China's loan-financed projects and activities generate financial gains and losses. In order to identify the entities that experience these gains and losses, we have collected detailed data on the UBOs ("ultimate parent owners") of all the borrowing institutions ("direct receiving agencies") for all loan records in the 1.0 version of the CLG-Global dataset. The dataset includes new fields that designate if a Chinese or host country institution has a shareholding in the borrowing institution that exceeds 25% (i.e., meets the threshold to be considered an ultimate beneficial owner), and fields that provide the number of unique Chinese or host country institutions that are considered UBOs along with the type of institution that has the shareholding.¹²⁶ For users interested in analyzing the liabilities that parent owners of the borrowing institution may bear, the dataset includes a new marker that identifies whenever an institution related to the direct receiving agency provided any kind of credit enhancement (Credit_Enhancement_from_DRA_Related_Org), along with fields that provide the name, type of institution, origin, type of credit enhancement provided, and the type of relationship the institution has to the direct receiving agency (e.g., the direct receiving agency itself, an ultimate parent owner, or an intermediate owner).¹²⁷ The underlying parent ownership data that we collected to identify the ultimate beneficial owners is in the new Borrower Ownership data file that accompanies the main dataset, and it includes detailed information

¹²⁵ AidData has aligned its categorization of each loan with the World Bank's PPG definition through the Level_of_Public_Liability field in the 1.0 version of the CLG-Global Dataset. Each loan is assigned to one of 6 categories: central government debt, central government-guaranteed debt, other public sector debt, potential public sector debt, private debt, or unallocable. Three of these categories correspond to the World Bank's definition of PPG debt: central government debt, central government-guaranteed debt, or other public sector debt.

¹²⁶ The Chinese_Group_UBO field provides a marker for all loan records of whether the borrowing institution has a UBO with a nationality of China, Macau, or Taiwan. The Host_Country_UBO field provides a similar marker of whether the borrowing institution for a given record has an UBO with a nationality that matches the host country (as designated in the Country_of_Activity field). Several additional fields—Chinese_Group_UBO_Count, Host_Country_UBO_Count, Chinese_Group_UBO_Type and Host_Country_UBO_Type—provide the number of unique Chinese or host country institutions that are considered UBOs of the borrowing institution for a given record and the type of institution that is considered a UBO (i.e., public sector or private sector).

¹²⁷ These new fields are Related_Credit_Enhancement_Provider, Related_Credit_Enhancement_Provider_Org_Type, Related_Credit_Enhancement_Provider_Origin, Related_Credit_Enhancement_Type, and Related_Credit_Enhancement_Provider_Relation_to_DRA.

regarding all parent owners, including those with less than 25% shareholding. This file includes 32 variables about the UBO(s) of each borrowing institution in the dataset. These variables include but are not limited to (i) the Parent_Ownership_Percentage field, which measures the stake a Parent Owner holds in the Direct Receiving Agency, (ii) the Parent_Owner_Nationality, which records the country that best reflects where the Parent Owner is operationally headquartered, (iii) information about the Country of Incorporation of a Parent Owner, (iv) a Parent_Owner_Type field that indicates whether the Parent Owners are government agencies, state-owned enterprises, private companies, or multilateral institutions, (v) an AidData_Record_ID field that ensures every observation can be tied back to the loan it corresponds to in the 1.0 version of the CLG-Global dataset.

5. Financial instrument coverage: The 1.0 version of the CLG Global dataset allows users to easily differentiate between the 12,933 grant-financed projects/activities and 19,366 loan-financed projects/activities. As a point of reference, the 3.0 version of the GCDF dataset allowed users to easily differentiate between the 10,291 grant-financed projects/activities and 4,776 loan-financed projects/activities. Since China relies on an increasingly diverse set of credit instruments to finance projects/activities (see Chapter 2 for more details), AidData has also introduced a new and improved credit instrument scheme that allows users to isolate specific types of credit instruments, including but not limited to bilateral loans, syndicated loans, balance of payments (BOP) loans, repurchase (“repo”) agreements, currency swap borrowings, deferred payment agreements, pre-export financing (PxP) agreements, EPCF arrangements, exploration/development carry arrangements, public investment loans, M&A loans, working capital loans, inter-bank loans, refinancing loans, shareholder loans, revolving credit facilities, government concessional loans, preferential buyer’s credits, and zero-interest loans. AidData has also added a number of new variables to facilitate analysis of syndicated loans, including (i) a Loan Event ID variable, which assigns a common identification number to all Chinese creditor contributions to the same syndicated loan; (ii) a Loan Tranche variable, which identifies the specific tranche of a syndicated loan to which a Chinese creditor contributed; (iii) a Syndicated_Loan_Amount variable, which identifies

the total face value of the syndicated loan to which one or more Chinese creditors contributed; (iv) a `Syndicated_Loan_Currency` variable, which identifies the currency of denomination of the syndicated loan; and (v) a `Syndicated_Loan_Share` variable, which measures the relative size of each Chinese creditor's contribution to a syndicated loan (i.e., its "ticket size").¹²⁸

6. **Borrowing terms and conditions:** Our newly collected data identify 5,462 interest rates, 8,660 maturity lengths, 2,501 grace periods, 785 commitment fees, 564 management fees, 76 insurance fees, 267 penalty (default) interest rates, and 5,229 grant elements (using the IMF method of measurement) across 11,542 loan commitments.¹²⁹ By way of comparison, the 3.0 version of the GCDF dataset identified 2,627 interest rates, 3,252 maturity lengths, 1,812 grace periods, 493 commitment fees, 474 management fees, 59 insurance fees, 193 penalty (default) interest rates, and 2,537 grant elements (using the IMF method of measurement) across 4,776 loan commitments. Our newly collected data also provide substantially more detail on variable interest rate loans. We have introduced a variable that indicates if a loan uses a fixed or variable interest rate, a variable that indicates the benchmark reference rate used in case that the loan's interest rate is variable (e.g., LIBOR, SHIBOR, EURIBOR), a variable that indicates the tenor of the benchmark reference rate tenor (e.g. 1-month LIBOR, 3-month SHIBOR, 6-month LIBOR), and a variable that identifies the margin above the benchmark reference rate that is assigned to the loan.¹³⁰

¹²⁸ We also include variables capturing the total face value of a syndicated loan to which one or more Chinese creditors contributed in both nominal and constant 2023 USD. In cases where there are multiple tranches of a syndicated loan, the `Syndicated_Loan_Amount` and `Syndicated_Loan_Share` variables capture the value and proportion of the specific tranche to which the Chinese creditor contributed.

¹²⁹ The 1.0 version of the CLG-Global Dataset includes 5,143 bilateral loan commitments and 6,399 commitments to 3,474 syndicated loans. It identifies 2,659 interest rates, 3,267 maturity lengths, 1,993 grace periods, 525 commitment fees, 493 management fees, 45 insurance fees, 199 penalty (default) interest rates, and 2,520 grant elements (using the IMF method of measurement) across 3,413 of the total bilateral loan commitments. It also identifies 2,803 interest rates, 5,393 maturity lengths, 508 grace periods, 260 commitment fees, 71 management fees, 31 insurance fees, 68 penalty (default) interest rates, and 2,709 grant elements (using the IMF method of measurement) across 5,507 of the total syndicated loan commitments.

¹³⁰ Additionally, we have introduced two variables (`Commodity_backed` and `Commodity`) that indicate if one or more underlying sources of collateral for a loan includes a commodity asset or commodity revenue stream, as well as the specific commodity, to enable further analysis of the collateral packages that support China's overseas lending operations.

7. **Spatial and temporal granularity:** Our newly collected data provide an unprecedented level of detail on project commencement dates and project completion dates. We now identify precise, calendar day-level commencement dates for 16,729 projects (backed by financial commitments worth \$1.11 trillion in constant 2023 USD) and calendar day-level completion dates for 17,849 projects (backed by financial commitments worth \$957 billion in constant 2023 USD). By way of comparison, the 3.0 version of the GCDF dataset identified calendar day-level commencement dates for 11,286 projects (backed by financial commitments worth \$767 billion in constant 2021 USD) and calendar day-level completion dates for 11,542 projects (backed by financial commitments worth \$606 million in constant 2021 USD). The newly collected data also provide an extraordinary amount of geographical detail regarding where projects take place. For 14,192 projects that have physical footprints or involve specific locations, we are now able to identify point, polygon, and line vector data via OpenStreetMap URLs. By way of comparison, the 3.0 version of the GCDF dataset provided such information for 9,497 projects.
8. **Official sector financial flow and sector categorizations:** In the interest of facilitating comparisons to official sector financial flows from sources other than China, we still adhere to OECD-DAC reporting directives that define specific eligibility criteria for Official Development Assistance (ODA)¹³¹ and Other Official Flows (OOF) and categorize China's official sector financial commitments as ODA, OOF or Vague (ODA or OOF) based on measurement of the primary intent and the concessionality at the individual commitment level.¹³² However, in the new CLG-Global 1.0 dataset, we add a new flow class: Official Flows to Ineligible Countries (OFIC). OFIC consists of flows from official sector donors and creditors in China to receiving agencies in countries that are neither ODA-eligible nor OOF-eligible at the time of financial commitment, per the

¹³¹ The OECD's definition of aid and standard for measuring it is called ODA (see Box 1c for more details). To the best of our knowledge, there is no organization other than AidData that uses the OECD definition of ODA to determine which Chinese government-financed activities qualify as aid in the strict sense of the term. Consequently, some analysts claim that China's aid giving rivals that of other major donors, while others claim that China is a relatively small player in the aid market. These disagreements are rooted in basic definitional and methodological differences (Strange et al. 2017; Dreher et al. 2018, 2021, 2022).

¹³² The Vague (ODA or OOF) is a residual category for official sector financial commitments from China that could not be reliably categorized as ODA or OOF because of insufficiently detailed information.

OECD-DAC's eligibility criteria. Had these flows gone to an ODA- or OOF-eligible country, they would have been considered ODA or OOF. We also assign 3-digit OECD sector codes and names to all Chinese loan- and grant-financed project projects/activities using OECD-DAC classification criteria, which enables comparisons to other bilateral and multilateral sources of international development finance that use the same criteria.

9. **Qualitative detail:** Our newly collected data provide detailed narratives that “tell the story” of each project in the “description” field. The average length of each project narrative is now 269 words, which is a significant increase over the average length (166 words) in the 3.0 version of the GCDF dataset. Whereas the project narratives in the 3.0 version of the GCDF dataset consisted of 3.48 million words (roughly the same number of words one would find in 34 full-length books), the project narratives now consist of 9.04 million words (roughly the same number of words one would find in 90 full-length books).¹³³ These narratives are useful in that they document the risks and challenges that arose during project design and implementation (e.g., bankruptcies, scandals, protests, labor strikes, and criminal investigation) and how funding, receiving, implementing, and accountable institutions responded to these risks and challenges.
10. **Scale, diversity, quality, and transparency of sourcing:** Our newly collected data were assembled with 246,261 sources (including 138,420 unique sources in more than a dozen languages, of which 74,535 are official sources). By way of comparison, the 3.0 version of the GCDF dataset was assembled with 147,703 sources (including 99,393 unique sources in more than a dozen languages, of which 51,597 are official sources). The average record in our newly collected data is based upon 7.33 sources, which represents a modest improvement vis-à-vis the average number of sources from the 3.0 version of the GCDF dataset (7 sources). In our newly collected data, more than 88% of the records are underpinned by at least one official source. By way of comparison, 87% of the records in the 3.0 version of the GCDF dataset were underpinned by at least one official source. To expose our coding and categorization determinations to

¹³³ A typical, full-length book includes 100,000 words.

public scrutiny and promote replicable research findings, we disclose all of the sources that were used to construct the dataset at the individual record level. These sources include a large trove of grant agreements, loan agreements, on-lending agreements, four-party agreements, common terms agreements, guarantee agreements, debt restructuring agreements, debt cancellation agreements, mortgage agreements, escrow account agreements, deeds of covenant, deeds of security, share pledge agreements, and account charge agreements.¹³⁴

¹³⁴ The 1.0 version of the CLG-Global Dataset includes 1,055 unique original agreements in its underlying source documentation, underpinning 1,586 records in the dataset. An original agreement is defined as a copy of an original official contract between two parties related to an official financial flow captured in the dataset. To allow for easy identification of original agreements, the dataset includes a field that indicates whenever the underlying sources contain an original agreement (Original_Agreement), as well as fields (Original_Agreement_Title and Original_Agreement_URL) that provide the name and title of the source as well as a stable URL link to a copy of the original agreement. AidData has also assigned each original agreement to general (e.g., debt-related contract or grant agreement) and specific (e.g., loan agreement as a sub-category of debt-related contracts) categories to facilitate analysis and enable users to more easily identify and review sources of interest. For more detailed information about the Original_Agreement_Type_General and Original_Agreement_Type_Specific fields, see Parks et al. (2025).

Chapter 2: Seven myths about scale, scope, and composition of China's overseas lending portfolio

In this chapter, we debunk seven myths about Beijing's overseas lending portfolio with newly-collected data. The first myth is that the overall size of its overseas lending portfolio is somewhere in the ballpark of \$400 billion to \$1 trillion. In fact, it is well in excess of \$2 trillion. The second myth is that China's overseas lending commitments have plummeted to record lows. In fact, they have not fallen below the \$100 billion a year threshold since the BRI was first announced, which means that China has remained the world's largest official creditor for more than a decade. The third myth is that BRI and China's overseas lending portfolio are one and the same. In fact, China is scaling back its lending for infrastructure projects in BRI participant countries, while scaling up the provision of cross-border credit via liquidity support facilities to countries that do and do not participate in the BRI. The fourth myth is that China is largely focused on lending to borrowers in the Global South. In fact, it is increasingly focused on borrowers in the Global North. By 2023, more than 75% of its overseas lending operations supported projects and activities in upper-middle income and high-income countries. The fifth myth is that Chinese creditors are largely focused on public sector borrowers rather than private sector borrowers. In fact, our data demonstrate that China's non-PPG lending portfolio is now larger than its PPG lending portfolio. The sixth myth is that Beijing almost exclusively provides cross-border credit through lending institutions in mainland China. In fact, Beijing's overseas lending portfolio is increasingly administered by Chinese bank branches and company affiliates that are domiciled outside of mainland China. The seventh myth is that international reporting systems are increasingly effective at documenting the full range of China's cross-border lending operations. Our newly collected data provide evidence that Beijing is pivoting toward more exotic credit instruments that are more expensive and difficult to track.

These popular misconceptions exist because existing sources of data provide an incomplete and biased picture of China's cross-border lending operations. Our goal in this chapter is to correct the evidentiary record with substantially more complete and granular data about China's overseas lending activities between 2000 and 2023. In total, the 1.0 version of AidData's CLG-Global Dataset identifies 11,542 loan

commitments¹³⁵ worth \$2.11 trillion (in constant 2023 USD) from 300 Chinese state-owned creditors to 4,336 borrowing institutions in 179 countries between 2000 and 2023.¹³⁶

Section 1: What is the true size of China's overseas lending portfolio?

Over the past two decades, Beijing has provided record amounts of official sector credit to foreign governments and firms. With the 1.0 version of AidData's CLG-Global Dataset, Figure 2.1 presents the full portfolio of cross-border loan commitments from Chinese state-owned creditors and decomposes it by creditor category.¹³⁷ China's annual overseas lending commitments declined from a peak of \$213 billion in 2016 to \$114 billion in 2021, but then rebounded to \$141 billion in 2023.

These findings run contrary to the conventional wisdom that Beijing has dramatically scaled back its loan commitments for overseas projects and activities (Wilson 2022; Olander 2023; Ray 2023; Myers and Ray 2023; Ray et al. 2025).¹³⁸ To be sure, we have witnessed a sharp decline in overseas lending commitments from China's policy banks, but the cross-border lending operations of China's state-owned commercial banks, state-owned enterprises, and central banks have either increased or remained stable.

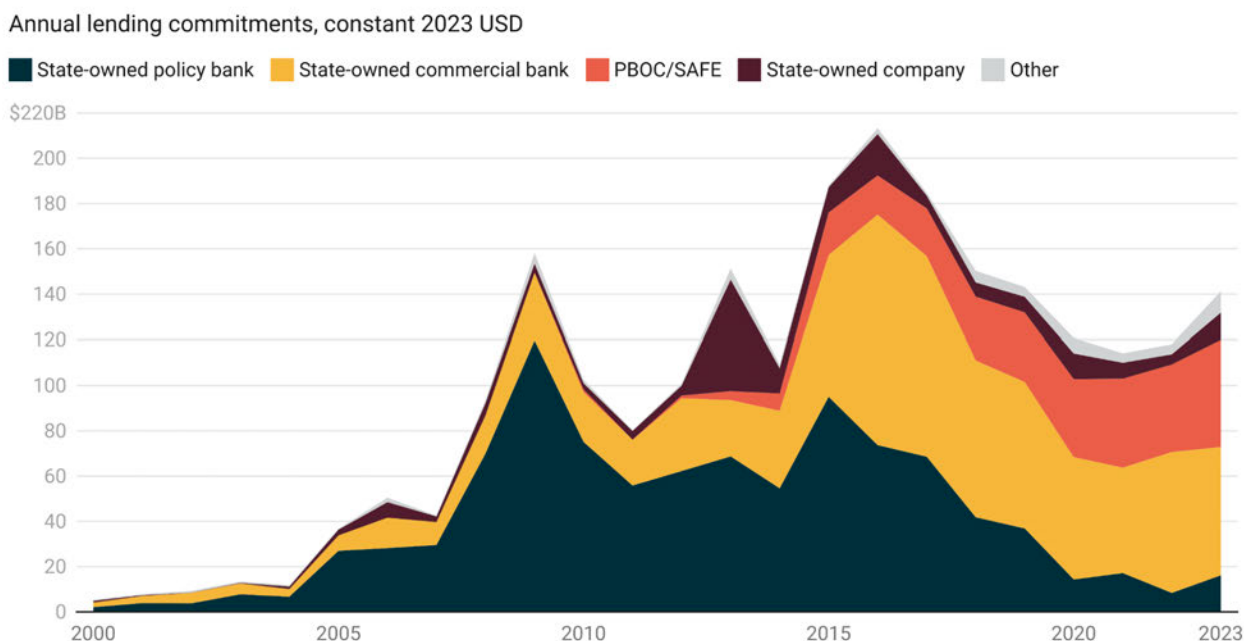
¹³⁵ To be more precise, it identifies 5,143 bilateral loan commitments and 6,399 commitments to 3,474 syndicated loans. A new feature of the CLG-Global Dataset is the "Loan Event ID" variable, which assigns a common identification number to all contributions by Chinese creditors to the same syndicated loan. This feature allows users to conduct loan-level or loan commitment-level analysis.

¹³⁶ This tally excludes short-term, emergency rescue facilities of the rollover variety that refinance maturing debts. When such facilities are included, the tally increases to \$2.35 trillion (in constant 2023 USD).

¹³⁷ Figure A5.5 in the Appendix decomposes China's overseas lending and grant-giving portfolio by creditor/donor category.

¹³⁸ In 2023, Eric Olander, co-founder of the China-Global South Project (CGSP), summarized the state of expert opinion in the following manner: "[t]here was a time when Chinese lending to developing countries rivaled the World Bank" but "[t]hose days are now long gone as Chinese overseas development lending has been on a steady downward trajectory" (Olander 2023). Similarly, Elliot Wilson of *Euromoney* magazine said in 2022 that "Chinese overseas lending to the developing world has collapsed" (Wilson 2022). However, the evidence that journalists, commentators, and researchers have used to support their claims is primarily based on the overseas PPG lending commitments of two creditors (CDB and China Eximbank) in a limited set of low-income and middle-income countries. For an extended discussion of this issue, see Parks et al. (2023).

Figure 2.1: Decomposition of China's overseas lending portfolio by creditor category



The overall size of China's overseas lending portfolio is a subject of longstanding debate and controversy. Various think tanks and research institutions have published estimates that suggest China has cumulatively extended loan commitments worth \$300 to \$500 billion to approximately 100 countries (Gallagher and Ray 2020; Hwang et al. 2022; Moses et al. 2023; Myers and Ray 2023; Ray 2023; Ray et al. 2025a, 2025b; World Bank 2024c, 2024d). However, these figures are based on loan-level data for a limited number of creditors, borrowing institutions, recipient countries, credit instruments, and years (Parks et al. 2023).

Horn et al. (2019) conducted pioneering work by synthesizing data from AidData, Inter-American Dialogue, Boston University, and the China-Africa Research Initiative at Johns Hopkins University (SAIS-CARI) to build a "consensus" database of China's overseas lending portfolio.¹³⁹ They estimated that China's overseas loan commitments to PPG and non-PPG borrowers amounted to \$536 billion (in nominal USD) between

¹³⁹ A revised version of Horn et al. (2019) was later published in the *Journal of International Economics* (Horn et al. 2021). The replication dataset for Horn et al. (2021) is accessible via <https://data.mendeley.com/datasets/4mm6kdj4xg/1>.

2000 and 2017.¹⁴⁰ After accounting for estimated disbursements and repayments, they also produced an estimate of total outstanding cross-border credit from Chinese creditors: \$400 billion (in nominal USD) as of 2017.¹⁴¹

The IMF and the World Bank were quick to defend their own estimates and characterize the Horn et al. (2019) figures as a “significant overestimation” (IMF and World Bank 2020: 17). At the time, the World Bank’s International Debt Statistics (IDS) identified only \$200 billion of official sector lending commitments from China to overseas PPG borrowers.¹⁴² The IMF and World Bank also used their own data to estimate lower-bound and upper-bound estimates of outstanding PPG debt to China in 10 countries and benchmark these estimates against the corresponding debt stock measures in Horn et al. (2019).¹⁴³ They found that the Horn et al. (2019) estimates for the same 10 countries exceeded their own upper-bound estimates, which led them to the conclusion that Horn et al. (2019) “could have overestimated, possibly [by] including unverified commitments” (IMF and World Bank 2020: 18).

Several scholars echoed the questions and concerns of the IMF and World Bank. Bräutigam and Acker (2020) published a critique, concluding that they “agree[d] with the IMF” and “[took] issue with the ‘hidden lending’ analysis.” Papageorgiou (2019) claimed that the “severity of the [hidden debt] problem is less pronounced” because of “sizable measurement error.” Jepson (2021: 1244) found “little evidence of the existence of hidden loans” and argued that the scale of the hidden debt problem was “exaggerated.”

In a rejoinder, Horn et al. (2020a) maintained that their estimates were in fact conservative: “our numbers are substantially below comparison figures [from the PBOC and other official sources] and likely a lower bound estimate of the true extent of Chinese overseas lending.” They also noted that “around 50 percent of Chinese

¹⁴⁰ Expressed in constant 2023 U.S. dollars, these overseas loan commitments amount to \$570 billion. According to the 1.0 version of the CLG-Global Dataset, China’s overseas lending commitments between 2000 and 2017 amounted to \$1.51 trillion (in constant 2023 USD) when short term, emergency rescue facilities of the rollover variety are excluded.

¹⁴¹ This debt stock estimate is inclusive of PPG and non-PPG sources of debt.

¹⁴² This figure is expressed in nominal U.S. dollars. However, when it is expressed in constant 2023 U.S. dollars, the figure increases to \$218 billion.

¹⁴³ They selected countries “with an IMF program which require[s] the authorities to disclose all liabilities of the government [...]” (IMF and World Bank 2020: 18).

overseas lending is not captured by official debt statistics” and “[d]espite our best efforts to merge data from multiple sources, we still miss substantial amounts of Chinese overseas lending.”¹⁴⁴

Within a few years, the IMF and the World Bank changed their tune. In November 2021, the World Bank published a report entitled “Debt Transparency in Developing Economies,” in which it cited the work of Sebastian Horn and his colleagues extensively and acknowledged that “[t]he use of confidentiality clauses [...] in debt transaction details is problematic as they [...] leave other lenders and stakeholders in the dark with respect to the true nature and scope of the borrower’s debt portfolio” (Rivetti 2021: 94). Then, in March 2022, the Director of the IMF’s Strategy, Policy, and Review Department and the Chief Economist of the World Bank acknowledged that “many emerging market and developing economies [have] looked beyond the Paris Club of official creditors and borrowed heavily from other governments, particularly China” and “a substantial share of these debts went unrecorded in major databases and remained off the radar of credit-rating firms” (Pazarbasioglu and Reinhart 2022). One year later, the President of the World Bank was asked about China’s overseas lending practices and said “[a]s they go into developing countries, often they have been in the habit of adding nondisclosure clauses to the contract. The contract says, I’m lending to you, the Government of Country X, but this contract can never be shown to anyone. And some of them are written so tightly, they can’t be shown to the IMF or the World Bank [...]. [W]e’re talking about billions and billions of dollars that are flowing with insufficient transparency” (World Bank 2023a).¹⁴⁵

However, at the time of the original debate, there was an unresolved question about why benchmark estimates from China’s State Administration of Foreign Exchange (SAFE)—the foreign exchange management administrative body of the People’s Bank of China (PBOC)—and the BIS suggested a substantially larger overseas lending portfolio than the one documented by Horn et al. (2019, 2021). Aggregate data from

¹⁴⁴ In a more recent publication, Horn et al. (2025: 17) write that “the widespread nature of the hidden debt phenomenon in China’s overseas lending to its many borrowers is, to the best of our knowledge, historically unique in its scale.”

¹⁴⁵ Two years later, the World Bank went a step further and acknowledged that “[t]he IDS system has identified US\$631 billion in previously unreported loan commitments since 2018” and “[n]ewly identified loans were extended in almost equal parts by official creditors and private creditors” (World Bank 2025b: 20).

SAFE on China's International Investment Position (IIP) showed \$637 billion in outstanding overseas lending claims in 2017¹⁴⁶—and this figure increased to nearly \$1 trillion in 2021.¹⁴⁷ The BIS data showed even higher levels of outstanding cross-border credit from China: \$1.9 trillion in 2017, \$2.2 trillion in 2018, \$2.2 trillion in 2019, \$2.4 trillion in 2020, and \$2.6 trillion in 2021 (Parks et al. 2023: 53).¹⁴⁸

These discrepancies between the macro data on lending volumes reported by SAFE and the BIS and the micro, loan-level data from think tanks and research institutions underscore the need for a more comprehensive and transparent accounting of China's overseas lending operations. AidData's CLG-Global Dataset fills this evidentiary gap by systematically tracking cross-border loan commitments from Chinese state-owned creditors over a 24-year period (2000-2023) across all countries, all sectors, all types of borrowing institutions, and all types of credit instruments. These loan-by-loan records confirm what the aggregate BIS data have long implied: that China's overseas loan book is worth more than two trillion dollars rather than hundreds of billions of dollars.

¹⁴⁶ In its replication dataset, Horn et al. (2021) use the BOP data that are published by SAFE to recalculate outstanding cross-border credit from China (\$505 billion) in the same year and quarter (Q4 of 2017). This correction is important because the IIP data, unlike the BOP data, account for valuation changes. BOP accounts are based on transactions (flows) and do not record the holding gains or losses that result from changes in market prices or currency values. If the same correction undertaken by Horn et al. (2021) is applied to the BOP data in subsequent years and quarters, outstanding cross-border credit from China is \$587 billion in Q4 of 2018, \$561 billion in Q4 of 2019, \$697 billion in Q4 of 2020, \$836 billion in Q4 of 2021, \$720 billion in Q4 of 2022, \$684 billion in Q4 of 2023, and \$719 billion in Q4 of 2024.

¹⁴⁷ Horn et al. (2021:9) compared their own estimates of aggregate external debt stocks to China to those published by China's State Administration of Foreign Exchange (SAFE)—the foreign exchange management administrative body of PBOC—and concluded that "despite our best efforts to gather data from as many sources as possible, we capture only about 50–65% of total Chinese overseas loans." However, as we explain in Table 4.1, the IIP and Balance of Payments (BOP) data on outstanding cross-border credit that are published by SAFE also provide an incomplete picture of China's overseas lending activities. They exclude loans from Chinese creditors that are based outside of mainland China, PBOC currency swap borrowings, FDI loans, and intercompany (intra-group) loans. Loans from Chinese creditors that are based outside of mainland China are excluded because the IIP and BOP data are collected on a residency basis rather than nationality basis. Also, under the IIP and BOP reporting directives, loans that qualify as external financial assets exclude FDI loans, intercompany (intra-group) loans, and bilateral currency swap borrowings; these cross-border loans are instead assigned to the "direct investment," "other investment," or "reserve assets" categories of the IIP (IMF 2013; Nozahie 2017).

¹⁴⁸ According to the BIS, outstanding cross-border credit from China climbed to even higher levels in subsequent years: \$2.6 trillion in 2022, \$2.6 trillion in 2023, \$2.7 trillion in 2024, \$2.8 trillion in 2025. The most up-to-date BIS data on outstanding cross-border credit from China can be accessed at https://data.bis.org/topics/LBS/tables-and-dashboards/BIS,LBS_A7.1.0?dimensions=L_PARENT_CTY%3ACN%2CL_MEASURE%3AS&time_period=2025-Q1

The CLG-Global Dataset addresses two major blind spots in the existing empirical literature: who receives official sector credit from China—and where are they located.

At the time of the original debate around the size of China’s overseas lending portfolio, it was not widely understood that China was conducting large-scale overseas lending operations with non-PPG borrowers in both developing and developed countries. Even today, the prevailing assumption is that China is primarily focused on PPG lending. This assumption is implicit in the way that most academic institutions and think tanks collect data.¹⁴⁹ Non-PPG loans are definitionally excluded from three different datasets maintained by Boston University’s Global Development Policy Center and the Inter-American Dialogue: the China’s Overseas Development Finance Database, the Chinese Loans to Latin America and the Caribbean Database, and the Chinese Loans to Africa Database. Similarly, efforts by the World Bank and the IMF to track China’s overseas lending activities definitionally exclude all loans to non-PPG borrowers (IMF and World Bank 2020; World Bank 2021a; Selassie et al. 2025).

Horn et al. (2019, 2021) found that 85% of China’s overseas lending portfolio supports PPG (central government and SOE) borrowers and the remaining 15% supports non-PPG borrowers.¹⁵⁰ However, they also “acknowledge[d] the possibility that flows to [non-PPG borrowers] might be particularly hard to identify” (Horn et al. 2021: 14). The limited data on China’s non-PPG lending operations that did exist at the time, including our own, were incomplete.

The 1.0 version of AidData’s CLG-Global Dataset does not support the popular notion that China’s overseas lending program is primarily focused on PPG operations or that its non-PPG operations are quantitatively insignificant. Quite the opposite: our newly collected data demonstrate that, since the turn of the century, China has extended more official sector credit to non-PPG borrowers than to PPG borrowers. Between 2000 and 2023, total PPG loan commitments from Chinese state-owned creditors to

¹⁴⁹ As Mingey and Kratz (2021) put it “[t]he issue ultimately is one of scope. The [...] focus on policy bank loans obscures changes in China’s lending patterns—whether a shift in the source of loans to emerging market governments from policy commercial banks, or shifts in the destination of loans from governments to private infrastructure vehicles and corporates.”

¹⁵⁰ Horn et al. (2019: 13) also concluded that “the large bulk of China’s state-driven lending goes to public entities, while loans to private entities account for less than 10% of total.”

overseas borrowers amounted to \$1.01 trillion.¹⁵¹ During the same time period, non-PPG loan commitments from Chinese state-owned creditors to overseas borrowers amounted to \$1.09 trillion. For every dollar that Beijing has lent to PPG borrowers, it has lent approximately 1.07 dollars to non-PPG borrowers.¹⁵²



“Since the turn of the century, China has extended more official sector credit to non-PPG borrowers than to PPG borrowers. Between 2000 and 2023, total PPG loan commitments from Chinese state-owned creditors to overseas borrowers amounted to \$1.01 trillion.”

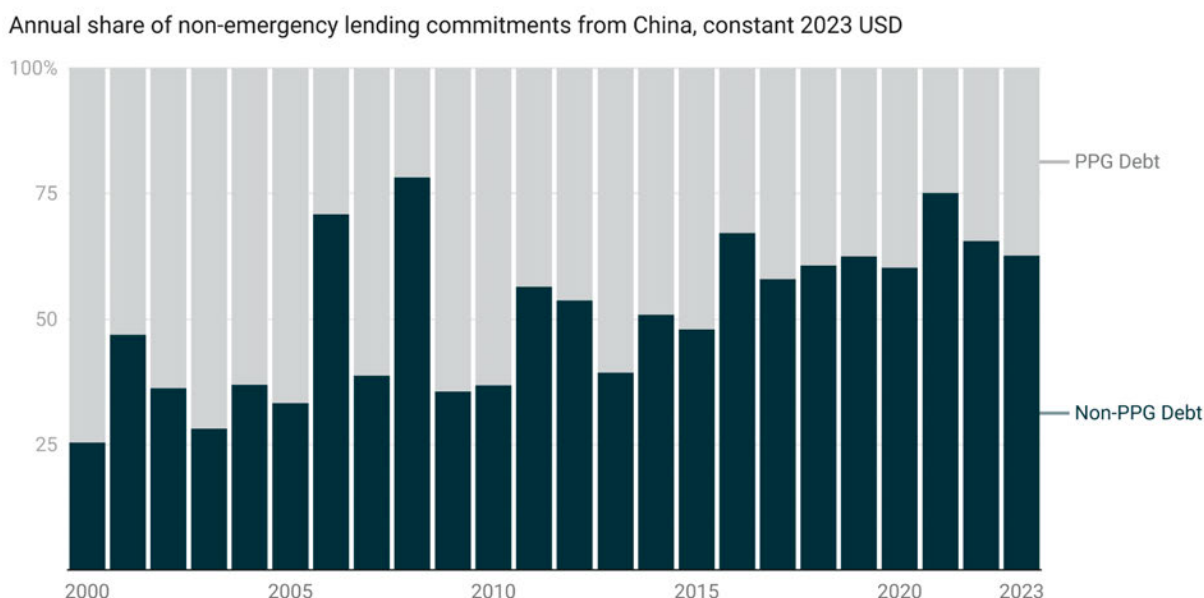
Figure 2.2 also suggests that, over time, Beijing has become less focused on PPG lending and more focused on non-PPG lending. Whereas it directed 61% of its non-emergency lending commitments to PPG borrowers in 2013 (the first year of BRI implementation), this figure declined to 37% by 2023. The share of China’s non-emergency lending portfolio earmarked for non-PPG borrowers increased over the same period—from 39% in 2013 to 63% in 2023.¹⁵³

¹⁵¹ The PPG loan commitment tally drops to \$876.5 billion when emergency rescue loan commitments are excluded.

¹⁵² For every dollar that Beijing has lent to PPG borrowers, it has lent approximately 1.24 dollars to non-PPG borrowers (when emergency rescue loan commitments are excluded).

¹⁵³ However, when China’s emergency rescue lending to PPG borrowers is included in the analysis, a more nuanced picture emerges. The speed and magnitude of the pivot away from PPG lending is sensitive to the inclusion or exclusion of emergency rescue loans of the rollover variety. When such loans are excluded, the same shift from PPG to non-PPG lending is observable, albeit at a slower pace and to a lesser extent (see Figure A5.6 in the Appendix). However, when such loans are included, the shift largely disappears (see Figure A5.7 in the Appendix). For an explanation of how AidData differentiates between emergency rescue loan commitments that do and not include short-term, rollover commitments, see Parks et al. (2023), Parks et al. (2025).

Figure 2.2: China's overseas lending portfolio supporting public and publicly guaranteed (PPG) borrowers vs. non-PPG borrowers



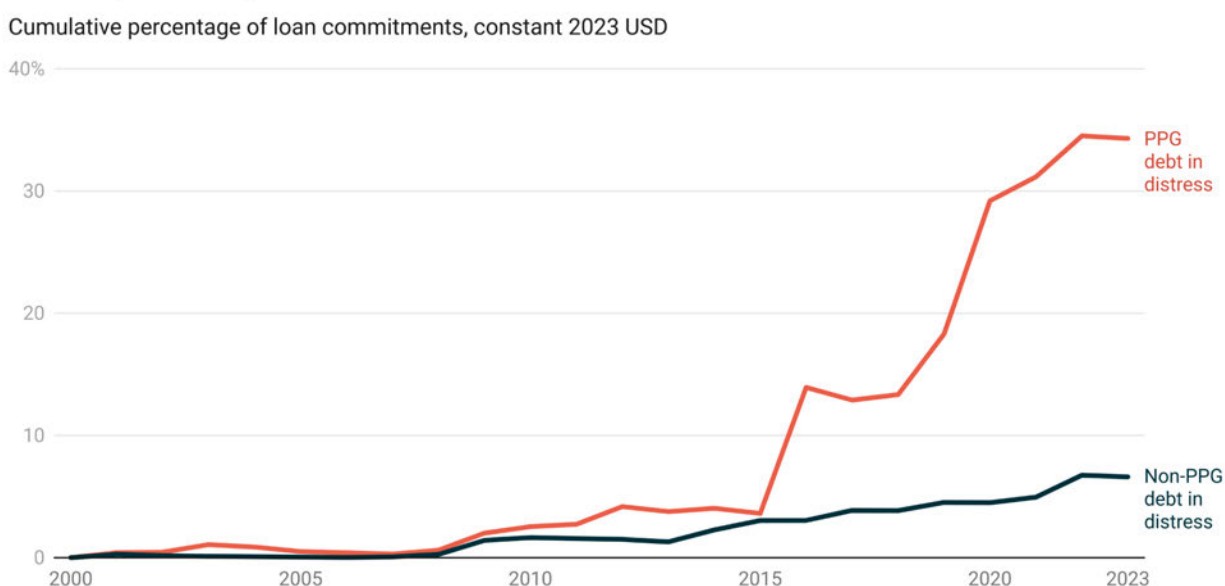
Notes: This figure decomposes China's non-emergency overseas lending portfolio by lending commitments that qualify as public and publicly guaranteed (PPG) debt and those that do not (non-PPG debt) between 2000 and 2023. Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the *Level_of_Public_Liability* field in AidData's CLG-Global 1.0 Dataset.

Beijing's pivot away from the sovereign debt asset class is not entirely surprising. It now has dramatically higher levels of exposure to distressed debt in the PPG segment of its portfolio than the non-PPG segment of its portfolio (see Figure 2.3). This compositional change resulted from a wave of debt distress that swept through its overseas PPG lending operations over the last decade.¹⁵⁴ Prior to 2015, the financially distressed shares of its PPG and non-PPG portfolio segments were modest and comparable—at roughly 3%. However, by 2019, the share of cumulative PPG loan commitments in

¹⁵⁴ Evidence of financial distress at the loan level includes, borrowers accruing principal or interest arrears, defaulting on their repayment obligations, filing for bankruptcy, seeking to restructure the loan repayment schedule, successfully restructuring the loan repayment schedule, or financial underperformance of the underlying revenue-generating asset (for limited recourse project finance transaction). These details were identified using a combination of project narrative descriptions in the 1.0 version of AidData's CLG-Global Dataset as well as arrears and restructuring events identified at the loan level using the 2.0 version of AidData's PPG PPG Loan Performance Dataset. For more details on the Loan Performance Dataset, see Section A4 in the Appendix.

financial distress shot up by a factor of 5. It continued to rise over the next several years—so much so that at least 34% of China’s overseas PPG lending commitments (worth more than \$300 billion) were in financial distress by 2023.¹⁵⁵ Figure 2.3 also suggests that a rational, yield-maximizing manager of China’s overseas loan portfolio would consider non-PPG lending to be a safer bet. Indeed, by 2023, only 7% of China’s overseas lending operations with non-PPG borrowers were in financial distress.

Figure 2.3: Cumulative share of China’s overseas lending portfolio in distress, decomposed by PPG and non-PPG debt



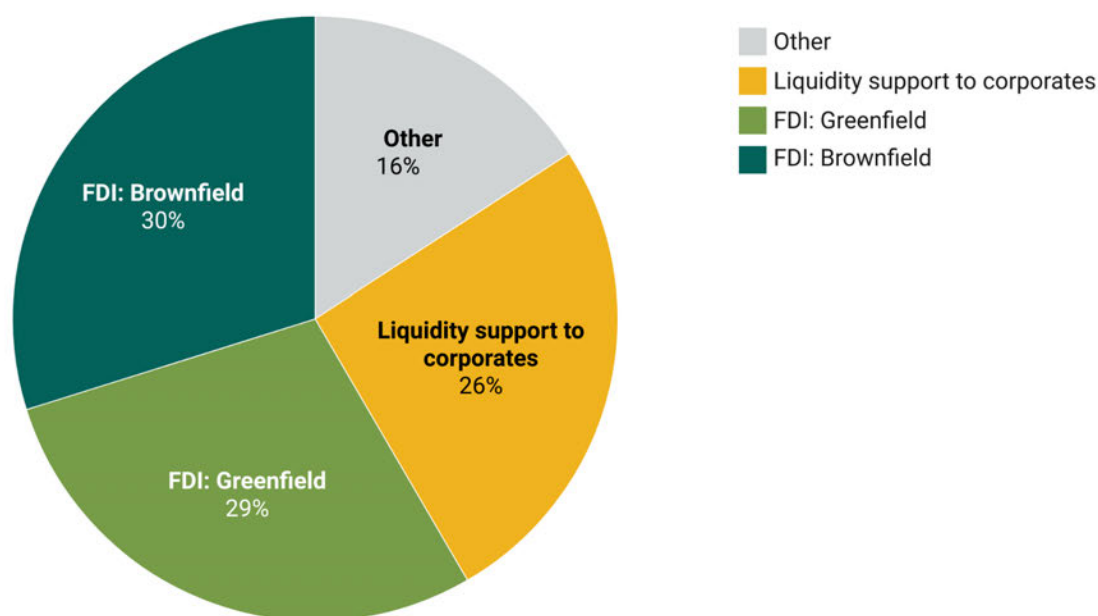
Notes: Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the Level_of_Public_Liability field in AidData’s CLG-Global 1.0 Dataset. Non-PPG loans are those that do not qualify as sources of PPG debt. The onset of distress is recorded in the first year that evidence of distress is identified using the Financial_Distress_Onset_Year variable in the 1.0 version of the CLG-Global Dataset. Evidence of financial distress includes the borrowing institution accruing principal or interest arrears, defaulting on its repayment obligations, filing for bankruptcy, or seeking/securing a debt rescheduling to address a repayment challenge.

Figure 2.4 demonstrates that nearly 60% of China’s overseas lending to non-PPG borrowers is lending for foreign direct investment (FDI) projects and activities.

¹⁵⁵ This is a conservative, lower-bound estimate of the true level of financial distress in China’s overseas loan portfolio, as it is based upon financial distress observations at the individual loan level (where there is a higher risk of detection bias). Higher, alternative estimates—using different methods of measurement—are reported by Parks et al. (2023) and Horn et al. (2023b).

Non-PPG lending facilitates two different types of cross-border investment: brownfield and greenfield FDI. Brownfield FDI loans finance mergers and acquisitions (M&A) and other transactions that expand, rehabilitate, or take ownership stakes in existing assets in overseas jurisdictions.¹⁵⁶ Greenfield FDI loans build new assets in overseas jurisdictions—such as new power plants or manufacturing facilities—rather than modifying or acquiring existing ones.¹⁵⁷ Apart from FDI lending, loans for liquidity support to corporations and other private borrowers (including revolving credit and working capital facilities) account for another 26% of China’s overseas non-PPG lending portfolio.¹⁵⁸

Figure 2.4: Decomposition of China’s non-PPG overseas lending portfolio by purpose



Notes: Non-PPG loans are those that do not qualify as public or publicly guaranteed (PPG) debt. In this figure, China’s non-PPG overseas loans are categorized into four groups based on loan instrument types. See Section A3.6 of the Appendix for details on how loans are classified as FDI loans or liquidity facilities for corporates. All remaining non-PPG loans are assigned to a residual (“other”) category.

¹⁵⁶ 66% of China’s overseas FDI lending portfolio supports borrowers with an ultimate beneficial owner (UBO) in China. The share of Chinese loan-financed cross-border M&A transactions that specifically support a borrower (buyer) with a Chinese UBO is even higher—at 77%.

¹⁵⁷ They often do so via limited-recourse project finance transactions. For more details on how AidData identifies FDI loans and categorizes them as brownfield or greenfield FDI loans, see section A3.6 in the Appendix.

¹⁵⁸ We discuss Beijing’s FDI lending and non-PPG lending activities at greater length in Chapter 3.

Another missing piece of the puzzle is China's lending operations in high-income countries, which are also known as advanced economies (AEs). The conventional wisdom is that these operations are heavily concentrated in emerging market and developing economies (EMDEs). According to Cerutti et al. (2023: 2), "Chinese banks focus relatively more on EMDE borrowers."¹⁵⁹ Horn et al. (2019, 2021) argue that China's capital exports to AEs almost exclusively consist of portfolio (bond) debt and equity investments. However, they also acknowledge that the discrepancy between their (2017) estimate of total outstanding cross-border credit from Chinese creditors (\$400 billion) and the higher (2017) benchmark estimates from PBOC and BIS "might be explained by direct lending to advanced countries, for which no rigorous data collection exists" (Horn et al. 2019: 19).


"Our newly collected data demonstrate that China's overseas lending operations in HICs are very substantial, with cumulative loan commitments reaching \$846 billion by the end of 2023."

Existing sources of loan-level data—including the World Bank's International Debt Statistics (IDS) and Boston University's China's Overseas Development Finance (CODF) Database—only capture China's lending activities in developing countries. Consequently, the nature, scale, and composition of its lending portfolio in the developing world is increasingly well-documented and well-understood. But little is known about the nature, scale, and composition of its portfolio in the developed world. There is no international organization with an official mandate to monitor and disclose the full range of China's cross-border credit operations in HICs at the individual loan level. Chinese banks allow the BIS to publish highly aggregated (global) data on their cross-border credit operations in LICs, MICs, and HICs. However, the data are not made available at the loan-level, the country-level, or even the income bracket level (Avdjiev et al. 2015; Zhou and Cerutti 2018; Cerutti et al. 2023; Casanova et al. 2024).

Our newly collected data demonstrate that China's overseas lending operations in HICs are very substantial, with cumulative loan commitments reaching \$846 billion by the

¹⁵⁹ Cerutti et al. (2023: 8) use confidential, loan-level LBS data to derive estimates of total outstanding credit from Chinese banks to borrowing institutions in AEs (\$488 billion) and EMDEs (\$919 billion) in 2018.

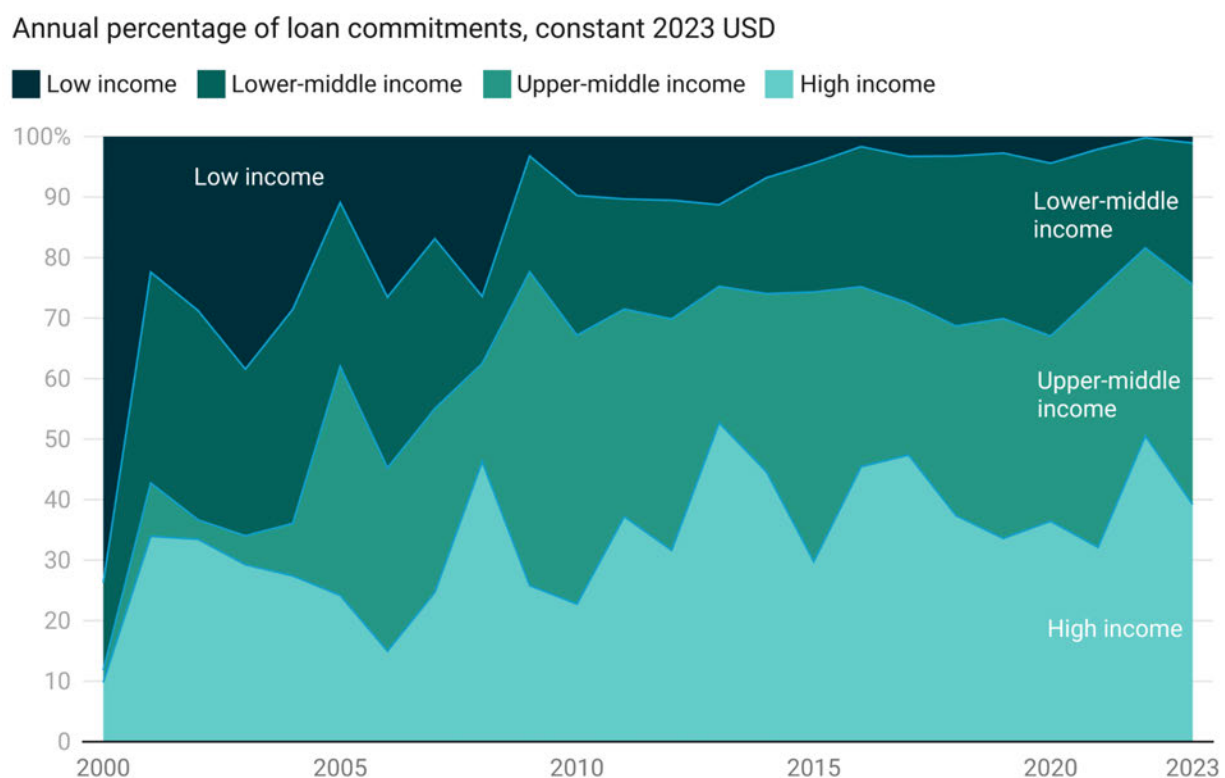
end of 2023.¹⁶⁰ In Figure 2.5, we disaggregate China's overseas lending portfolio between 2000 and 2023 into four cohorts: low income countries (LICs), lower-middle income countries (LMICs), upper-middle income countries (UMICs), and high-income countries (HICs).¹⁶¹ In 2000, only 9.8% of the portfolio supported projects and activities in HICs. However, by 2023, HICs accounted for nearly 40% of the portfolio.¹⁶² In Chapter 3, we also provide evidence that the single largest recipient of official sector credit from China is an HIC and 5 of the top 10 recipients (and 10 of the top 20 recipients) of official sector credit from China are high-income countries.

¹⁶⁰ To be more precise, they cover China's lending operations in a subset of developing countries. The World Bank's IDS data capture Chinese lending operations in 89 countries (from the 119 countries other than China that participate in the DRS). The CODF database captures the lending operations of two Chinese creditors (CDB and China Eximbank) in 99 developing countries. The 1.0 version of the CLG-Global Dataset captures the lending operations of 300 Chinese creditors across 217 low-income, lower-middle income, upper-middle income, and high-income countries. 179 of these 217 countries received at least one loan from a Chinese state-owned creditor between 2000 and 2023.

¹⁶¹ To do so, we rely on the World Bank's annual income bracket designations, as captured in the WB_Income_Group_Host_Country variable of the 1.0 version of the CLG-Global Dataset. The WB_Income_Group_Host_Country variable is assigned based on the Country_of_Activity variable (where the financed project/activity actually takes place). See Figure A5.8 in the Appendix to see the decomposition of China's overseas lending program by OECD income bracket instead of the World Bank's annual income bracket designation.

¹⁶² This trend is also striking because public debate about Beijing's overseas lending portfolio is almost exclusively focused on the developing world. Over the last decade, we have witnessed sustained media speculation and public debate about whether Beijing is engaging in "debt trap diplomacy" in the Global South (Bräutigam 2020).

Figure 2.5: Decomposition of China's overseas lending program by World Bank income bracket



Notes: Each loan commitment is assigned to an income bracket based on the borrower country's World Bank income classification in the year of the commitment. Borrower countries are identified using the *Country_of_Activity* variable (where the financed project/activity actually takes place) from the 1.0 version of AidData's CLG-Global Dataset.

Figure 2.5 shows that, with the passage of time, China has redirected the lion's share of its official sector credit away from less developed countries and towards more developed countries. In 2000, 88% of China's overseas lending portfolio supported LICs and LMICs and 12% supported UMICs and HICs. However, by 2023, a dramatic reorientation of the portfolio had taken place: 24% of China's overseas lending portfolio supported LICs and LMICs and 76% supported UMICs and HICs. Recent graduates from the LMIC bracket to the UMIC bracket (e.g., Vietnam and the Philippines)—and from the UMIC bracket to the HIC bracket (e.g., Russia and Saudi Arabia)—include some of the largest recipients of official sector financing from China. Based on historical rates of GNI per capita growth, it also seems more likely than not

that China's overseas lending portfolio will remain heavily focused on projects and activities in UMICs and HICs (see Figure 2.6).



"By 2023, a dramatic reorientation of the portfolio had taken place: 24% of China's overseas lending portfolio supported LICs and LMICs and 76% supported UMICs and HICs."

Figure 2.6: Country transitions between low-income (LM), upper-middle (UM), and high-income (H) brackets

Country	2000	2005	2010	2015	2020	2024
American Samoa	UM	UM	UM	UM	UM	H
Antigua and Barbuda	UM	H	UM	H	H	H
Argentina	UM	UM	UM	UM	UM	UM
Bahrain	UM	H	H	H	H	H
Barbados	H	UM	H	H	H	H
Bulgaria	LM	LM	UM	UM	UM	H
Chile	UM	UM	UM	H	H	H
Costa Rica	UM	UM	UM	UM	UM	H
Croatia	UM	UM	H	H	H	H
Czech Republic	UM	UM	H	H	H	H
Equatorial Guinea	LM	UM	H	UM	UM	UM
Estonia	UM	UM	H	H	H	H
Guyana	LM	LM	LM	UM	UM	H
Hungary	UM	UM	H	H	H	H
Isle of Man	UM	H	H	H	H	H
Korea	UM	H	H	H	H	H
Latvia	LM	UM	UM	H	H	H
Lithuania	LM	UM	UM	H	H	H
Malta	H	H	H	H	H	H
Mauritius	UM	UM	UM	UM	UM	UM
Nauru	LM	LM	UM	UM	H	H
Northern Mariana Islands	H	UM	H	H	H	H
Oman	UM	UM	H	H	H	H
Palau	UM	UM	UM	UM	H	H
Panama	UM	UM	UM	UM	UM	H
Poland	UM	UM	H	H	H	H
Puerto Rico (U.S.)	UM	H	H	H	H	H
Romania	LM	UM	UM	UM	UM	H
Russian Federation	LM	UM	UM	UM	UM	H
Saudi Arabia	UM	H	H	H	H	H
Seychelles	UM	UM	UM	H	H	H
Slovak Republic	UM	UM	H	H	H	H
St. Kitts and Nevis	UM	UM	UM	H	H	H
Trinidad and Tobago	UM	UM	H	H	H	H
Uruguay	UM	UM	UM	H	H	H
Venezuela	UM	UM	UM	UM	UM	UM

Notes: This figure presents countries that were classified as high-income at some point between 2000 and 2024 based on the World Bank's annual income classifications. Dark green, green, and light blue represent years in which the World Bank assigned countries to the lower-middle, upper-middle, and high-income brackets, respectively. Argentina was classified as high-income in 2014 and 2017, Mauritius in 2019, and Venezuela in 2018—years that do not appear in the figure.

With an expanded lens that captures PPG and non-PPG lending operations in developed and developing countries across every region of the world, the 1.0 version of the CLG-Global Dataset refutes the notion that China's overseas lending has collapsed. The loan-level data tell a different story: annual lending volumes remain robust—still surpassing \$100 billion a year. However, as we explain in Section 2, Chinese state-owned creditors and their borrowers have substantially changed the way that they originate, design, route, and record cross-border loans.

Section 2: Innovations in China's overseas lending portfolio—and why they are harder to track

Over the past decade, China's overseas lending program has undergone a quiet transformation. To more effectively manage risk and limit external scrutiny, Beijing has rewritten its playbook for cross-border lending operations. It has moved away from its "go-to" financing mechanisms and modalities—such as having China Eximbank and CDB bankroll big-ticket infrastructure projects by providing bilateral loans to PPG borrowers. It has pivoted from bilateral to syndicated credit instruments, from policy banks to state-owned commercial banks, from full-recourse sovereign debt transactions to limited-recourse project finance transactions, from dollar-denominated lending to RMB-denominated lending, and from building new infrastructure to bailing out its biggest borrowers with outstanding infrastructure project debts. These course corrections reflect efforts to recalibrate the portfolio in response to changing conditions on the ground, but they have also had the effect of making China's overseas lending portfolio more difficult to track at the individual loan level.


"Yet, at the same time, Beijing has discreetly reengineered its overseas lending portfolio in ways that challenge or circumvent international reporting systems."

The fact that China's cross-border lending operations are becoming more opaque is counterintuitive. There are multiple indications that global debt transparency is improving with the passage of time. The World Bank uses a "Debt Reporting Heatmap" to evaluate three dimensions of debt data disclosure by governments around the world.¹⁶³ It has recorded significant improvements in the availability, timeliness and instrument coverage of debt data since 2020 (World Bank 2025b: 9-11).¹⁶⁴ Similarly, a new Princeton-NYU measure of "the degree to which low- and middle-income country governments are willing and able to report debt and debt-related data to the [DRS]" has documented transparency gains over time (Bau et al. 2025: 1).

Yet, at the same time, Beijing has discreetly reengineered its overseas lending portfolio in ways that challenge or circumvent international reporting systems. There are four key innovations that our newly collected loan-level data reveal about changing nature and composition of China's overseas lending portfolio:

1. Limiting traceability by using shell companies and borrowing institutions that are legally domiciled in offshore jurisdictions—or jurisdictions other than the one where the financed project/activity takes place
2. Channeling loans via Chinese creditors that are not based in mainland China
3. Working through international syndicates
4. Using complex, opaque, and non-standard credit instruments

¹⁶³ The improvements that are documented in the World Bank's Debt Reporting Heatmap are limited to IDA-eligible countries, which primarily consist of LICs.

¹⁶⁴ At the same time, the World Bank has found that "[g]ranular loan-by-loan information on new external debt is scarce. Less than 25 percent of countries provide loan-by-loan information on newly signed debt—including the name of the lender, the principal amount, and the financial terms of new external borrowings. This ratio has been stable over the past five years [...]" (World Bank 2025b: 11).

Trend #1: Limiting traceability by using shell companies and borrowing institutions that are legally domiciled in offshore jurisdictions—or jurisdictions other than the one where the financed project/activity takes place

Over time, Beijing has modified its approach to infrastructure project lending, pivoting from full-recourse sovereign debt transactions to limited-recourse project finance transactions. When an infrastructure project is financed on a limited-recourse basis, the loan that is used to finance the acquisition, construction, and/or maintenance of an infrastructure asset—such as a toll road, a seaport, or an electricity grid—is exclusively repaid with the cash flow generated by the asset (e.g., toll revenue, container fees, or electricity sales), and the creditor either has no claim (“recourse”) or a limited claim to any other assets as a basis for recovering the debt.¹⁶⁵ In a standard limited-recourse infrastructure project finance transaction, a creditor lends to an independent legal entity that is established for the express purpose of developing, owning, and operating a specific infrastructure asset. This entity is called a special purpose vehicle (SPV) because it is only allowed to engage in activities that relate to a specific purpose (project), and it is legally prohibited from incurring debts or obligations that are not related to that purpose (project). This type of transaction structure is attractive to many governments that wish to undertake large-scale infrastructure projects without adding to their stock of publicly and publicly guaranteed (PPG) debt (Malik et al. 2021).

Figure 2.7 provides evidence of a marked shift towards limited-recourse infrastructure project finance transactions over the last decade. In the first full year of BRI implementation (2014), only 17% of China’s cross-border infrastructure project lending was undertaken through SPVs. However, by 2023, this figure soared to 51%.

¹⁶⁵ In such transactions, the lender has recourse to the assets of the special purpose vehicle (SPV) but not its owners.

Figure 2.7: Share of China's infrastructure project lending provided through special purpose vehicles (SPVs)



Notes: Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination.

The conventional wisdom is that SPVs are mostly benign. They are used in limited recourse project finance transactions to align the interests of all parties (lenders, sponsors, and borrower) around a project's success, encourage a balanced allocation of risk between the parties, keep project assets and liabilities off the balance sheets of parent companies (equity holders), and tailor borrowing terms to the unique features of a project (Dewar 2017).

However, there are several reasons why loans to SPVs are more difficult to track than loans that unambiguously qualify as PPG debt (i.e., central government debt, central government-guaranteed debt, debt contracted by sub-sovereign and majority state-owned entities in recipient countries without central government guarantees, and debt contracted by private entities with guarantees from public sector entities other than the central government). First, SPVs usually do not publish audited financial

statements (Rivetti 2021: 69). Second, unless SPVs are backed by government guarantees or majority-owned by public sector institutions in host countries, governments do not need to report them to the World Bank, IMF, or other intergovernmental organizations with public debt surveillance responsibilities (World Bank 2019; Malik et al. 2021; Malik and Parks 2021; Brown 2025).¹⁶⁶ Third, many SPVs loans are shielded from public scrutiny because of expansive confidentiality requirements (Horn et al. 2021; Sanchez-Munoz et al. 2022; Vasquez et al. 2024). Fourth, SPVs are sometimes used as a tool of deception; sovereign borrowers use them to disguise public debts as private debts,¹⁶⁷ while non-sovereign borrowers use them to conceal the identities of their ultimate beneficial owners (UBOs) (Connelly 2021; Rivetti 2021; Lupo-Pasini 2021; Vasquez et al. 2024; Royal Courts of Justice 2024).¹⁶⁸ Fifth, it is not unusual for SPVs to be legally domiciled in jurisdictions other than the jurisdictions where financed projects are taking place. These so-called “offshore” SPV borrowers often fall beyond the reach of oversight bodies in host countries, such as legislative committees and supreme audit institutions (Baker et al. 2016; U.S.-China Economic and Security Review Commission 2017a, 2017b; European Court of Auditors 2020; Sanchez-Munoz et al. 2022). Finally, as we discuss at greater length in Chapter 3, there

¹⁶⁶ In many countries, the fiscal risks posed by SPVs are not adequately monitored or evaluated by finance ministries (IMF 2021; Rivetti 2021; World Bank and IMF 2023). SPV debts are often “off-budget and/or beyond the data collection mandate of the [country’s debt management office]” (Rivetti 2021: 4) and they “can fall through the cracks” (World Bank and IMF 2023: 14). However, developing countries “are increasingly relying on off-budget borrowing using state-owned enterprises (SOEs) and special purpose vehicles (SPVs) [...] whose future obligations governments often find hard to anticipate” (Rivetti 2021: 12).

¹⁶⁷ Mozambique’s Tuna Bond scandal is a case in point. Prinvest (a shipping company) and its Franco-Lebanese owner Iskandar Safa allegedly bribed Manuel Chang, Mozambique’s Minister of Finance, to provide a secret and illegal sovereign guarantee for a \$900 million syndicated loan to an SPV called Proindicus SA (Connelly 2021; Lupo-Pasini 2021). British court records indicate that Proindicus SA—a joint venture of Mozambique’s Ministry of Defense and State Intelligence and Security Service (SISE)—was created to “circumvent the limit on state borrowing that Mozambique had agreed with the IMF” (Royal Courts of Justice 2024: 21). They also document the following communication from Manuel Chang to Iskandar Safa: “As you are already aware, the financing of this project is still constrained by the IMF imposed limitation on the Government of Mozambique to accept commercial credit for commercial projects. Therefore, we have devised an alternative solution whereby an SPV, duly and specifically established to handle this project will be formed, and the Government of Mozambique will rightfully provide the guarantees required for the project to be financed” (Royal Courts of Justice 2024: 21).

¹⁶⁸ In non-PPG cross-border loan transactions, it is not unusual for SPVs to be used to conceal the identities of their UBOs (Sayne 2015; European Parliamentary Research Service 2018; Mascia 2019: 213). Nor is it unusual for SPVs to be legally incorporated in OFCs that are “defined by a lack of UBO disclosure requirements” (Moody’s 2025). The rationale for doing so is that “[t]racing ownership becomes especially difficult once it passes through an offshore jurisdiction where little to no information is available on ownership layers” (Moody’s 2025).

is some evidence that suggests SPVs may be used by foreign investors and lenders to circumvent mechanisms that host countries put in place to screen inbound capital from foreign sources (Mozur and Perlez 2017; Michaels 2020).

“SPVs are sometimes used as a tool of deception; sovereign borrowers use them to disguise public debts as private debts, while non-sovereign borrowers use them to conceal the identities of their ultimate beneficial owners (UBOs).”

Infrastructure project loans that are channeled through SPVs also pose unique public financial management risks (Campos et al. 2006; Bova et al. 2019; Melecky 2021; Malik et al 2021; Malik and Parks 2021).¹⁶⁹ In many cases, government institutions or state-owned entities from host countries hold non-trivial ownership (equity) stakes in SPVs (the borrowing institutions). Consider the following examples:

- In May 2011, CNPCI Finance (UK) Limited provided an EUR 352.8 million loan to Société de Raffinage de N'Djaména (SRN) SA—a special purpose vehicle that is jointly owned by CNPC International Ltd. (60% equity stake) and a Chadian state-owned enterprise called Société des Hydrocarbures du Tchad (SHT) (40% equity stake)—for the N'Djaména Refinery and Pipeline Project.¹⁷⁰
- In May 2017, the Paris Branch of Bank of China provided a \$177.7 million loan to New Silk Road Oil and Gas Company—a special purpose vehicle and joint venture of CNPC (50% equity stake) and an Uzbek state-owned enterprise called Uzbekneftegaz (50% equity stake)—for Phase 1 of the Karakul Gas Field Project in Uzbekistan.¹⁷¹

¹⁶⁹ Participants in the World Bank's DRS are only required to disclose debts that are contracted by “public sector [entities] in which the government holds a fifty percent or more share (whether, or not, the obligation relates to a loan guaranteed by the state)” (World Bank 2019).

¹⁷⁰ The borrower of record (SRN SA) has historically had difficulty repaying its outstanding debts to various Chinese creditors. The World Bank and IMF have classified SRN SA's debts as contingent fiscal liabilities resulting from non-guaranteed SOE debts (World Bank and IMF 2022).

¹⁷¹ Approximately two years later, Uzbekneftegaz breached covenants and triggered cross-default provisions under multiple loan agreements with Chinese state-owned creditors, including CDB, ICBC, and a wholly-owned subsidiary of the Silk Road Fund (JSC “Uzbekneftegaz” 2021: 26).

- In February 2023, China Eximbank provided a \$260 million loan to Asmara Mining Share Company (AMSC)—a special purpose vehicle and joint venture between Sunridge Gold Corporation (60% ownership stake) and the Eritrean National Mining Corporation (40% equity stake)—for the Phase 1A of the Asmara Polymetallic (Copper-Zinc-Gold) Mine Project in Eritrea.¹⁷²

Given that SPVs are usually established as limited liability corporations (LLCs), all shareholders (equity holders) are shielded from legal liability for outstanding SPV debts. If an SPV defaults on its repayment obligations, its shareholders are not legally responsible for assuming responsibilities for those debts—in proportion to their equity stakes or otherwise. However, many public infrastructure projects that are financed via SPVs benefit from implicit or explicit forms of host government liability protection, which can blur the distinction between public debt and private debt.¹⁷³ Government agencies and state-owned entities that hold equity stakes in an SPV may still face public or political pressures to bail out a financially distressed project company if it is considered “too big to fail” (Bova 2019; Parks and Malik 2021; Melecky 2021).¹⁷⁴ Loans to SPVs can also “grant investors claims on government resources in the event of default” (World Bank and IMF 2023: 5). Consequently, the IMF and the World Bank—international organizations with public debt surveillance responsibilities—have called upon their staff to search for “[m]issing information about the terms and conditions of [...] significant contingent fiscal liabilities (such as PPPs or SPVs)” (IMF 2021: 14) and make case-by-case basis determinations “about whether the SPV is truly independent

¹⁷² The Eritrean National Mining Corporation (ENAMCO) is a state-owned company that dominates the mining sector, holding equity stakes in all mining projects in the country. Eritrea—sometimes described as Africa’s North Korea—does not regularly publish official data on its level of public indebtedness, but its public debt-to-GDP ratio is estimated to be 160% (Mitchell 2025).

¹⁷³ Even in high-income countries, these types of off-government balance sheet transactions have a checkered history. Take for example the PPP that was established during the late 1990s to refurbish the London Underground (“Tube”). It underperformed financially and the government eventually had to step into the breach and bail out an SPV that could not manage its debt repayment obligations to the tune of £1.6 billion (Butcher 2012; Schaefer 2018).

¹⁷⁴ In its 2021 *Hidden Debt* publication, the World Bank emphasizes that infrastructure PPPs are especially dependent upon implicit forms of host government liability protection: “even though the government might not contractually promise any guarantees to the private party in the event of a default, given that the government is the ultimate guarantor of public services in most societies, the government might have to bail out the private party or assume the remaining debt and service obligations of the private party to avoid service disruption. This means that when a PPP contract is agreed upon, the government assumes the ultimate insolvency risk” (Melecky 2021: 27).

or if it should be classified as part of the general government” (World Bank and IMF 2023: 5).

To illustrate how infrastructure project lending via SPVs can create opaque sources of public debt exposure, consider the Jakarta-Bandung High Speed Railway Project. In order to work around its public debt ceiling, the Indonesian government attempted to finance this \$5.29 billion project through an off-government balance sheet transaction. It decided to finance the construction of the railway on a PPP basis through a limited-recourse project finance transaction. In May 2017, China Development Bank provided two loans to PT Kereta Cepat Indonesia China (KCIC)—a special purpose vehicle that is jointly owned by Indonesian SOEs (with a 60% equity stake) and Chinese SOEs (with a 40% equity stake)—worth approximately \$4 billion to cover 75% of the originally expected project cost. All of the remaining project costs were supposed to be covered by the shareholders of the SPV via equity contributions. Indonesian President Jokowi signed a decree, prohibiting the use of government funds for the project. However, the total cost of the project eventually ballooned to \$7.3 billion. Then, in October 2021, President Jokowi reversed course, issuing a new decree and authorizing a government bailout of the project.¹⁷⁵ To cover the project’s cost overruns, the Indonesian government injected hundreds of millions of taxpayer dollars into the project by recapitalizing the Indonesian state-owned public railway operator (KAI), which is the majority owner of KCIC.¹⁷⁶ Then, in October 2023, KAI contracted two additional CDB loans worth \$448 million to finance the project’s cost overruns. The Indonesian government provided sovereign guarantees for both of these loans, which highlights the fact that infrastructure PPP projects often require that host governments

¹⁷⁵ At the time of the October 2021 presidential decree, a spokesperson for the Indonesian Ministry of State-Owned Enterprises (SOEs), said that “like it or not, [...] we have to ask the government to participate in funding the project if we want it to be finished on time” (McBeth 2021). Then, in August 2022, Indonesia’s Parliament approved the use of \$275 million of taxpayer funds to facilitate the government bailout of the Jakarta-Bandung High Speed Railway Project in Fiscal Year 2023 (Wijaya 2025).

¹⁷⁶ The Indonesian authorities repeatedly assured taxpayers that they would not be responsible for the debts of KCIC, which was true in a narrow sense: President Jokowi’s decision to authorize the provision of government funding to KCIC did not explicitly state that the SPV could use state funds to repay its outstanding debts to CDB. However, given that money is fungible, the taxpayer-funded bailout of KCIC helped the SPV afloat and allowed for the continued construction of the railway. KCIC could not repay its outstanding debts to the CDB unless the railway was completed and there were sufficient customers willing to pay for its use. Therefore, the injection of Indonesian government funding into the SPV effectively became an indirect (hidden) form of public debt exposure (Malik and Parks 2021).

bear insolvency risk in opaque, indirect, and even surreptitious ways.¹⁷⁷ Unsurprisingly, neither the CDB loans that KCIC contracted in 2017 nor the CDB loans that KAI contracted in 2023 have been disclosed to the World Bank's DRS by the Indonesian authorities as sources of public debt exposure to China (World Bank 2024b).¹⁷⁸

SPVs are also frequently used by Chinese companies to purchase assets in overseas jurisdictions.¹⁷⁹ These types of transactions present a very different type of disclosure problem. "Mystery buyers" often create SPVs that are domiciled in offshore jurisdictions in order to make it more difficult to identify their UBOs (see Sections 3 and 4 of Chapter 3).¹⁸⁰ This approach is commonly taken when regulatory scrutiny is high and buyers want to keep a low profile and avoid controversy in the target country.

Figure A5.12 in the Appendix and Figure 2.8 highlight three other elements of the disclosure problem. The first is that non-PPG loans are generally less transparent than PPG loans.¹⁸¹ The second is that brownfield FDI loans—including but not limited to those that support mergers and acquisitions—are generally less transparent than

¹⁷⁷ As Melecky (2021: 24) puts it, "[i]nfrastructure PPPs are no free lunch. They create liabilities for governments, including contingent (hidden) ones. To share risk appropriately between the public and private parties, governments tend to provide explicit guarantees to the private party, such as revenue or credit guarantees. The government, as the ultimate guarantor of the public infrastructure service, also provides an implicit guarantee to backstop the fiscal and economic consequences of any failures by the partnership.... The rising popularity of PPPs, and thus the increase in the contingent liabilities associated with them, warrant careful management of the fiscal and economic risks they pose. The opacity of financial records, confidentiality of most PPP contracts, and prevalence of cash rather than accrual accounting systems in emerging markets and developing economies hide the fiscal risks for government finances until the contingent liability materializes."

¹⁷⁸ Yet curiously, the Government of Indonesia announced that it was seeking to reschedule KCIC's outstanding debts to CDB in October 2025 (Reuters 2025).

¹⁷⁹ The 1.0 version of AidData's CLG-Global Dataset demonstrates that more than 60% of China's overseas lending commitments through SPVs involve a borrower (buyer) with a Chinese UBO, which is four times the rate observed in the non-SPV segment of China's overseas lending portfolio.

¹⁸⁰ According to a review of China's M&A transactions in Europe that was undertaken by *Wall Street Journal*, "[i]n many of the [transactions], Chinese state influence was effectively hidden by layers of ownership, complex shareholding structures and deals executed via European subsidiaries [...]" (Michaels 2020). Analysis of the IMF's Direct Investment Positions by Counterpart Economy Dataset—formerly known as the Coordinated Direct Investment Survey (CDIS)—also demonstrates that the most significant non-CDIS reporting economies are those where SPVs are highly concentrated, such as the British Virgin Islands, Bermuda, and the Cayman Islands (Angulo and Hiero 2017; Bese Goksu et al. 2022).

¹⁸¹ On average, over a 24-year period of observation (2000-2023), we find 24% more information—and 24% more information from official sources—about China's PPG loan commitments than its non-PPG loan commitments (see Figure A5.12 and Figure 2.8).

greenfield FDI loans.¹⁸² The third is that SPV loans are generally less transparent when the borrowing institutions are legally incorporated in offshore jurisdictions.¹⁸³

Figure 2.8: Discoverability of information about China’s overseas lending portfolio

Weighted average number of official sources per loan record (by constant 2023 USD)

PPG VS. Non-PPG debt	PPG	13	8 Non-PPG
Standard vs. Non-standard credit instrument	Standard	20	9 Non-standard
Bilateral vs. Syndicated	Bilateral	12	8 Syndicated
Infrastructure project Loans vs. Liquidity support facilities	Infrastructure	18	15 Liquidity support
Brownfield vs. Greenfield	Greenfield	15	7 Brownfield
Chinese creditors inside vs. outside mainland China	Inside	11	8 Outside
Onshore vs. offshore SPV borrowers	Onshore	15	10 Offshore

Notes: This figure presents the weighted average number of official sources per loan record in the 1.0 version of AidData’s CLG-Global Dataset. Comparisons are shown across the seven binary dimensions: (i) loans to public and publicly guaranteed (PPG) borrowers versus non-PPG borrowers; (ii) loans to offshore SPVs (i.e., SPV borrowers incorporated in a different jurisdiction than the country where the loan-financed project/activity takes place) versus onshore SPVs; (iii) loans extended from creditors in mainland China versus those routed through overseas affiliates, branches, or subsidiaries of Chinese banks and non-bank institutions; (iv) infrastructure project loans versus liquidity support facilities; (v) standard versus non-standard credit instruments; (vi) brownfield versus greenfield FDI loans; and (vii) bilateral versus syndicated loans. See Section A3.5 in the Appendix for more details on how standard and non-standard credit instruments are defined.

¹⁸² On average, over a 24-year period of observation (2000-2023), we find 30% more information—and 37% more information from official sources—about China’s greenfield FDI loan commitments than its brownfield FDI loan commitments (see Figure A5.12 in the Appendix and Figure 2.8).

¹⁸³ On average, over a 24-year period of observation (2000-2023), we find 9% more information—and 20% more information from official sources—about China’s loan commitments to onshore SPVs than its loan commitments to offshore SPVs (see Figure A5.12 in the Appendix and Figure 2.8). See Box 2a for details on offshore borrowers.

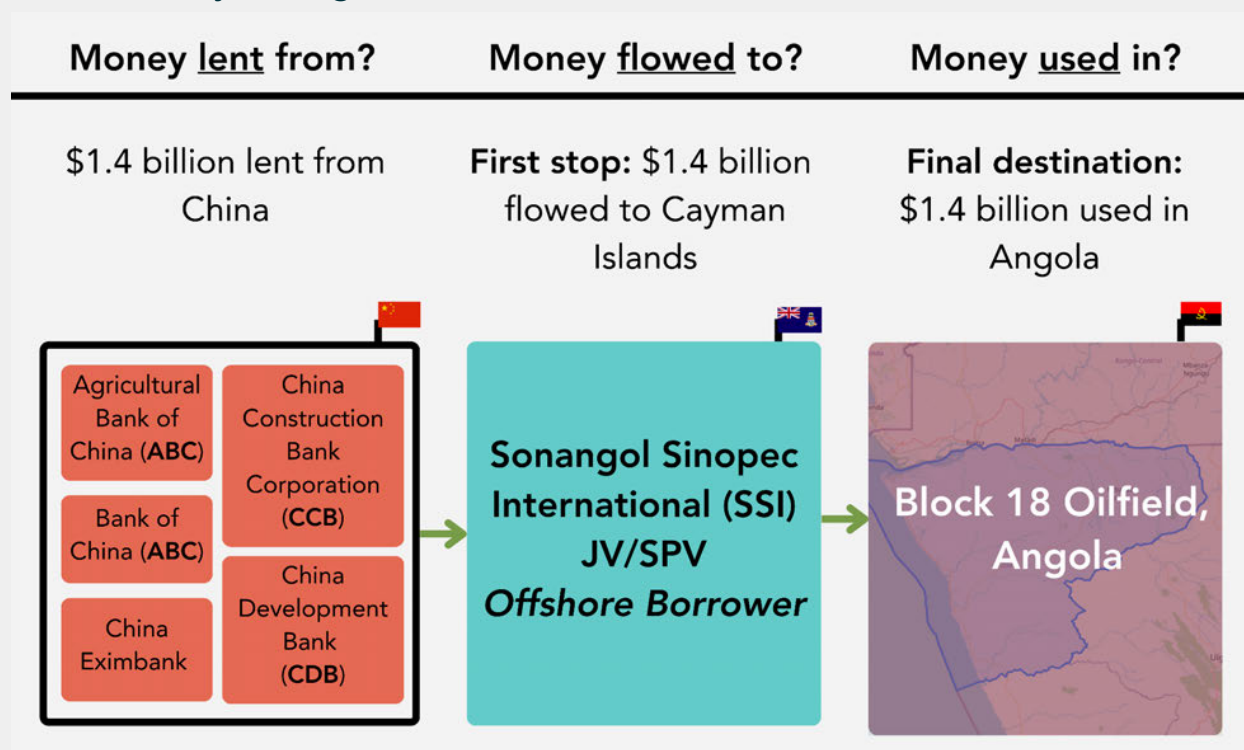
In summary, Beijing is increasingly focused on managing risk through SPVs and off-balance sheet transactions. But the same features that make these arrangements attractive to lenders, borrowers, and investors—limited liability, jurisdictional flexibility, and contractual confidentiality—make them less transparent to the public and more difficult to track through existing international reporting systems.

Box 2a: How has AidData changed the way it collects data to capture “offshore” borrowers?

China’s overseas lending portfolio includes many transactions that support a project or activity in one jurisdiction but rely on a borrowing institution legally domiciled in another jurisdiction—(see Figure A5.3 in the Appendix). From the perspective of the country where the funded project or activity takes place, these can be considered “offshore.” In these cross-border lending arrangements, the jurisdiction where the borrower is incorporated serves as the *first stop* for financing rather than its final destination (see Figure 2.9 for a diagram that visualizes this type of arrangement). The funds are ultimately used in the country where the project or activity takes place, but from the host country’s perspective, the borrowing institution is “offshore”—registered outside its legal and regulatory jurisdiction—rather than “onshore.” Many of these offshore borrowers are SPVs incorporated in jurisdictions classified as offshore financial centers (OFCs).

Chinese banks and companies use entities outside the country where the project or activity takes place (i.e. offshore entities) as conduits to channel capital to the rest of the world. They do so in order to take advantage of more favorable tax, legal, policy, and regulatory environments (Sharman 2012; Wilson 2015; Coppola et al. 2021; Clayton et al. 2023).

Figure 2.9: Example of a lending arrangement with an offshore borrower for an activity in Angola



Notes: In this illustrative case, a syndicate of banks provided a \$1.4 billion loan to Sonangol Sinopec International, a joint venture that is legally incorporated in the Cayman Islands. However, the proceeds of the loan were to be used by the borrower to develop an oil field known as Block 18 located in Angola. The DRA_Country_of_Inc variable in the 1.0 version of AidData's CLG-Global Dataset designates the Cayman Islands as the country where the borrower was legally incorporated. The Country_of_Activity variable in the 1.0 version of AidData's CLG-Global Dataset designates Angola as the country where the loan-financed project/activity took place.

However, the “first stop” in an offshore jurisdiction introduces a significant borrower country classification problem because international reporting systems typically assign loans to the country in which the borrowing institution is legally incorporated rather than by the country in which the loan-financed project/activity takes place.¹⁸⁴ These cross-border routing patterns are also closely linked to financial secrecy: when Chinese lenders use offshore intermediaries, they most often do so through jurisdictions with relatively high levels of financial secrecy (see Figure A5.53 in the Appendix).

¹⁸⁴ See Chapter 4 for a discussion of how reporting according to the borrower residency principle rather than the borrower nationality principle affects the official data recorded in international reporting systems.

To address these challenges, AidData has changed the way that it collects data on China's overseas lending operations. We now assign each loan- and grant-financed project/activity to two jurisdictions. The first jurisdiction captures the country in which the loan- or grant-financed project/activity takes place.¹⁸⁵ The second jurisdiction captures the country in which the borrowing institution (or recipient institution for grants and in-kind donations) is legally incorporated.¹⁸⁶ We provide an empirical illustration of our new data architecture and other related details in Section A3.4 of the Appendix.¹⁸⁷

A major advantage of the CLG-Global Dataset is that it allows users to systematically identify the subset of transactions in China's overseas lending portfolio that support a project or activity in one jurisdiction but rely on a borrowing institution legally domiciled in another jurisdiction. Figure 2.10 and Figure A5.3 in the Appendix demonstrate that such transactions accounted for nearly 20% (\$354 billion)¹⁸⁸ of China's overseas lending portfolio between 2000 and 2023.¹⁸⁹

¹⁸⁵ The corresponding variables in the 1.0 version of AidData's CLG-Global Dataset are `DRA_Country_of_Inc` and `DRA_Country_of_Inc_ISO3`.

¹⁸⁶ The corresponding variables in the 1.0 version of AidData's CLG-Global Dataset are `Country_of_Activity` and `Country_of_Activity_ISO3`.

¹⁸⁷ The 1.0 version of AidData's CLG-Global Dataset also captures the owners—including UBOs and non-UBOs—of borrowing institutions and their countries of origin. It identifies these owners for loan commitment records but not for grant commitment records. The corresponding variables in the Borrower Ownership Records data file are `Parent_Owner`, `Parent_Owner_Nationality`, and `Parent_Owner_Incorporation`.

¹⁸⁸ This summary statistic is drawn from the 1.0 version of AidData's CLG-Global Dataset (see Figure A5.3 in the Appendix).

¹⁸⁹ As we explain in Chapter 4, the BIS does not allow for the identification of these transactions through the LBS data. It categorizes each borrowing institution ("counterparty") on a residency basis and a nationality basis, but disregards where the project or activity financed with the loan is ultimately undertaken.

Figure 2.10: How China routes credit through conduits to final destinations



Notes: This figure maps China's cumulative cross-border loan commitments between 2000 and 2023 from their creditors (left) to their final destination (right). Short-term rollover facilities to refinance maturing debts are excluded from the calculations. For most loans, the borrowing institution is legally incorporated in the same jurisdiction where the financed project/activity takes place, and the credit flow moves directly from the lender to the final destination without intermediation. A smaller share of loans, however, are routed through offshore financial centers (OFCs) or other offshore jurisdictions—where the borrowing institutions are legally domiciled—before reaching their final destinations (where the funded projects/activities take place).

Trend #2: Channeling loans via Chinese creditors that are not based in mainland China

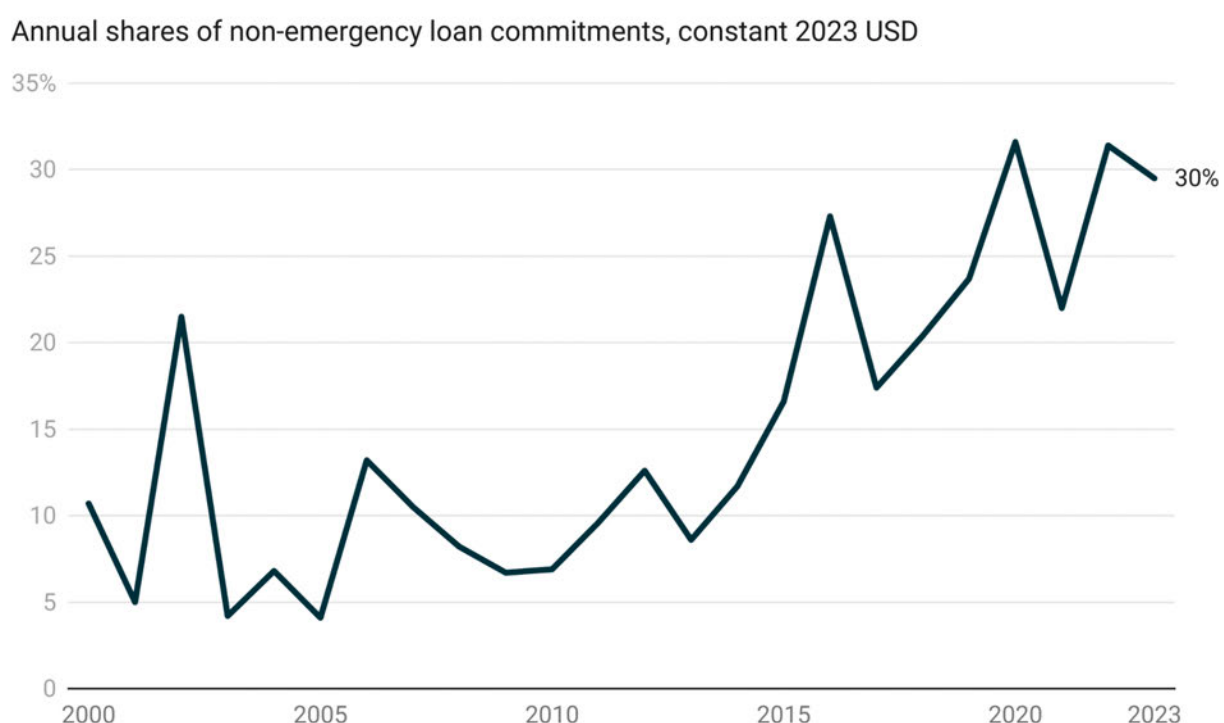
Another increasingly popular practice among Chinese state-owned creditors is to participate in cross-border lending operations through the overseas branches, affiliates, and subsidiaries of bank and nonbank institutions.¹⁹⁰ Our newly collected data demonstrate that China is administering its overseas lending program through 248 affiliates, branches, and subsidiaries in 57 jurisdictions outside of mainland China.¹⁹¹

¹⁹⁰ Cerutti et al. (2021) explain that “foreign affiliates stand behind the global reach of international banks, and they are key to understanding the business. Banks lend across borders with loans booked either from the home country of their headquarters or by their affiliates (branches or subsidiaries) located abroad (either in financial centres or third countries/jurisdictions).”

¹⁹¹ Overseas affiliates of Chinese creditors include subsidiaries (distinct legal entities from the creditor in mainland China) and overseas branches. The 1.0 version of AidData’s CLG-Global Dataset captures each

The annual share of China's cross-border lending provided by the overseas affiliates, branches, and subsidiaries of bank and non-bank institutions increased from 11% in 2000 to 30% in 2023 (see Figure 2.11). At the same, the annual share provided by bank and nonbank institutions in mainland China dropped from 89% in 2000 to 70% in 2023 (see Figure 2.11).

Figure 2.11: Share of China's cross-border lending provided through overseas affiliates and branches



Notes: This figure presents the annual share of China's cross-border lending commitments provided through the overseas affiliates, branches, and subsidiaries of bank and nonbank institutions. Emergency rescue lending commitments are excluded. Source: AidData CLG-Global 1.0.

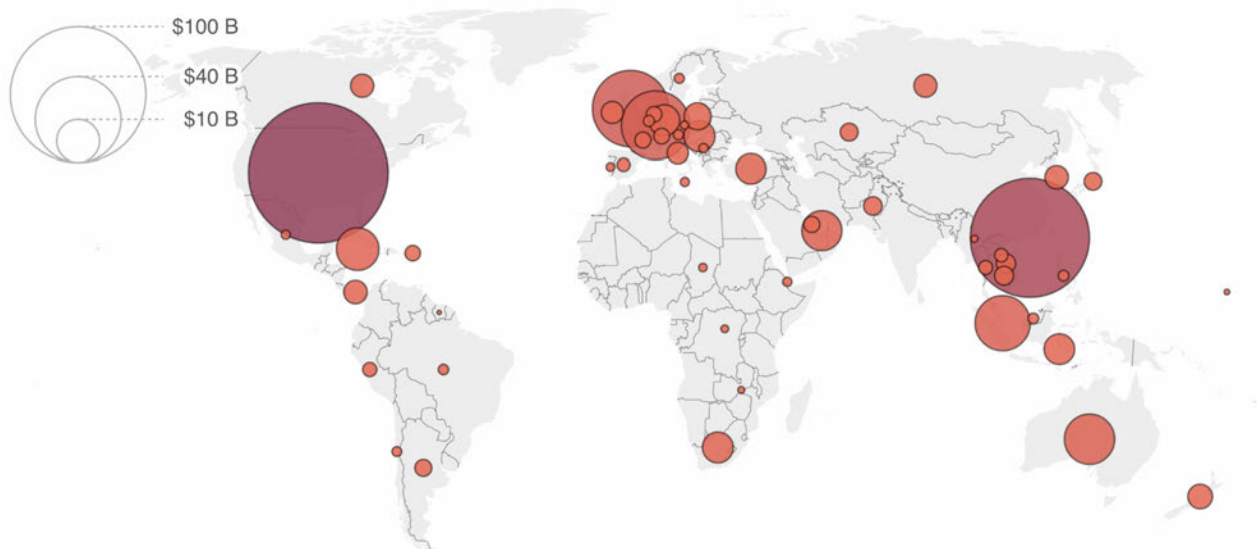
subsidiary as a distinct funding agency, while branches are not captured as distinct funding agencies. The total number of overseas affiliates has been approximated by linking each creditor with the overseas jurisdiction in which it is located, which effectively identifies the unique overseas branch that served as a creditor. However, because the 1.0 version of AidData's CLG-Global Dataset cannot distinguish between multiple branches within the same jurisdiction, 248 overseas affiliates likely represents a modest undercount of the total number of overseas branches providing cross-border credit.

Figure 2.12: Distribution of China's cross-border lending via overseas affiliates, branches, and subsidiaries

Financial commitments provided by branches, affiliates, and subsidiaries located outside mainland China

2023 USD

\$3 M \$106 B



Notes: This map shows the cumulative tally per country of China's cross-border lending commitments provided via overseas affiliates, branches, and subsidiaries of bank and non-bank institutions between 2000 and 2023.

The design features and scope parameters of existing international reporting systems make it difficult to track these loans from Chinese creditors (see Table 4.1). The World Bank's IDS categorizes creditors on a residency basis rather than a nationality basis (World Bank 2000: 9; World Bank 2020b: 3).¹⁹² Therefore, loans from the overseas affiliates and branches of Chinese banks and non-bank institutions are not recorded as loans from Chinese creditors.¹⁹³ While this was not a major source of underreporting at the turn of the century, Figure 2.11 suggests it has become a more significant problem

¹⁹² The IDS data also categorize borrowers on a residency basis rather than a nationality basis (World Bank 2000, 2020b), which can obscure the final destination of the loan if the borrower is legally incorporated in one jurisdiction (i.e., has residency) but the funded project/activity funded takes place in another jurisdiction (see Table 4.1).

¹⁹³ According to the World Bank's description of the rules of the Debtor Reporting System (DRS) that underpin the IDS, "[a]s with the borrower classification, the creditor classification also follows the definitions used in the [System of National Accounts 2008 (SNA 2008)] and the [the Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)] and is based on the criteria of residency not nationality. For example, a loan from Citibank (London) is recorded as a loan from the United Kingdom not the USA where the bank is incorporated" (World Bank 2020b: 3).

over time. Indeed, by 2023, nearly a third (30%) of China’s overseas lending portfolio was channeled through bank and nonbank institutions outside of mainland China.

As we discuss in detail in Chapter 4, the Locational Banking Statistics (LBS) of the BIS do not face the same limitations; they categorize creditors on a residency basis and a nationality basis (Cerutti et al. 2023; Casanova et al. 2024).¹⁹⁴ However, they face a different set of problems. The first and most important problem is that none of the LBS data on the cross-border claims of Chinese banks are made available at the loan-level—or even at the borrower country-level (Zhou and Cerutti 2018; Cerutti et al. 2023; Casanova et al. 2024). The reason why these data are shielded from public scrutiny is that the “reporting authorities classify a significant part of the [detailed] data that they report to the BIS as confidential” (Avdjiev et al. 2015: 56). The second problem is that there are at least 122 Chinese state-owned creditors that participate in cross-border lending operations but only 7 of them—China Development Bank, the Export-Import Bank of China, the Agricultural Development Bank of China, the Industrial and Commercial Bank of China, Bank of China, China Construction Bank, and Agricultural Bank of China—are known to report their cross-border claims to the BIS (Cerutti et al. 2023: 6).¹⁹⁵ The third problem is that a non-trivial percentage of China’s cross-border lending via bank and non-bank institutions outside of mainland China takes place in non-BIS reporting countries (where there are relatively high levels of financial secrecy).¹⁹⁶

¹⁹⁴ One similarity between the LBS and IDS is that they both categorize borrowing institutions on a residency basis rather than a nationality basis. As Cerutti et al. (2023: 3) explain, “[c]onsolidating claims from the perspective of borrower nationality is impossible with the current design of the BIS data. In the LBS, borrowers are only identified by residence (geographical location), while lending banks are defined by both the nationality and residence.”

¹⁹⁵ Our estimate of 122 Chinese state-owned creditors is based upon the total number of “parent” creditors in the 1.0 version of AidData’s CLG-Global Dataset. We exclude all of the overseas branches and affiliates of these creditors from our tally to ensure comparability with the LBS data. We also use the “at least” qualifier because there are almost certainly some Chinese state-owned creditors that participate in cross-border lending operations but are not recorded in the LBS data or Version 1.0 of AidData’s CLG-Global Dataset.

¹⁹⁶ According to the 1.0 version of AidData’s CLG-Global Dataset, 74% of Chinese bank and non-bank institutions outside of mainland China are located in BIS reporting countries. 26% are located in non-BIS reporting countries. In Figure A5.13 in the Appendix, we decompose the share of Chinese cross-border lending via bank and non-bank institutions outside of mainland China into two country cohorts: BIS-reporting countries and non-BIS reporting countries. About a quarter (26%) of China’s overseas lending via bank and non-bank institutions outside of mainland China takes place in non-BIS reporting countries. Figure A5.14 in the Appendix also provides evidence that there are higher levels of financial secrecy in non-BIS reporting countries than BIS reporting countries.

In Figure 2.8 and Figure A5.12 in the Appendix, we measure the discoverability of information about cross-border loans routed through Chinese bank and nonbank institutions outside mainland China and benchmark our estimate against cross-border loans routed through Chinese bank and nonbank institutions inside mainland China. We do so by calculating the weighted average number of official sources (Figure 2.8) and total sources (Figure A5.12) that support these two different cohorts of loan records in the 1.0 version of AidData’s CLG-Global Dataset. On average, we find 36% fewer sources of information—and 43% fewer official sources of information—about the loans routed through the overseas affiliates and branches of Chinese banks and non-bank institutions.

Beijing makes more use of bank and non-bank institutions outside of mainland China in its non-PPG lending operations than its PPG lending operations (see Figure 2.13). In particular, it relies more heavily on its bank branches and its company affiliates in overseas jurisdictions when it undertakes cross-border M&A transactions (see Figure 2.13).¹⁹⁷ Consider for example the £551,656,000 zero-interest shareholder loan that Canyon Bridge Fund I, LP provided to CBFI Investment Limited in November 2017 to facilitate its acquisition of Imagination Technologies Group Limited (a British semiconductor and software design company). The lender (Canyon Bridge Fund I, LP) was a Delaware-incorporated fund managed by Canyon Bridge Capital Partners, LLC, a Cayman Islands-incorporated global private equity buyout fund headquartered in Palo Alto, California.¹⁹⁸ The borrower (CBFI Investment Limited) was an England and Wales-incorporated special purpose vehicle (SPV) and wholly-owned subsidiary of Canyon Bridge International Holding Investment Limited, which is itself a Cayman Islands-incorporated wholly-owned subsidiary of Canyon Bridge Fund I, LP. As such, the borrower is effectively an overseas affiliate of the lender, and both entities share the same ultimate beneficial owner (UBO): China Reform Holdings Corporation, a Chinese state-owned company that is controlled by the State Council (Black 2022; Datenna 2024; UKCT 2024; HM Courts & Tribunals Service 2025) and that seeks to “advance

¹⁹⁷ It does so to support M&A transactions and greenfield FDI projects. An example the latter is the March 2023 participation of the Grand Cayman Branch of Bank of China Limited in a \$975 million syndicated loan agreement with CSP Chancay—a special purpose vehicle that is 60% owned by COSCO SHIPPING Ports, a Hong Kong listed company, and 40% owned by Volcan Compañía Minera S.A.A. (Volcan), a Peruvian listed company—to support Phase 1 of the Chancay Multipurpose Port Terminal Construction Project in Peru.

¹⁹⁸ Canyon Bridge Fund I, LP was eventually redomiciled in the Cayman Islands (UKCT 2024).

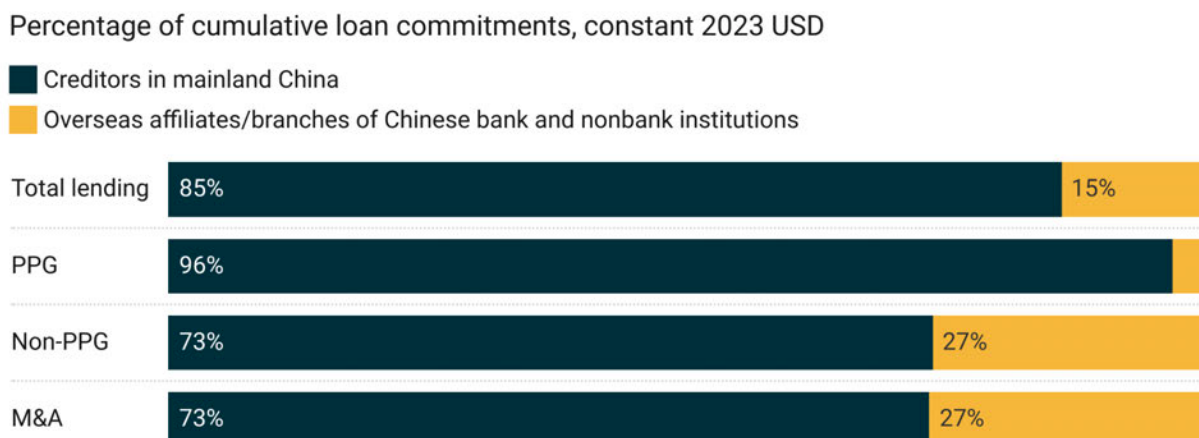
strategic industries critical to the PRC's military modernisation, national security, and technological sovereignty" (UKCT 2024: 6).¹⁹⁹ By most accounts, the sensitivity of this transaction is the reason why neither the lender nor the borrower was legally domiciled in mainland China.²⁰⁰ UK Prime Minister Theresa May defended the acquisition of Imagination Technologies Group Limited on the basis that the acquiring company (Canyon Bridge Fund I, LP) was licensed in the U.S. and regulated by U.S. law (Faulconbridge 2020). However, Canyon Bridge Fund I, LP subsequently redomiciled from the U.S. to the Cayman Islands (UKCT 2024; Faulconbridge 2020), and Datenna (a Dutch open-source business intelligence firm) concluded that "[t]he acquisition [of Imagination Technologies Group Limited] was funneled via the Cayman Islands to prevent rigorous screening by US authorities" (Datenna 2024).²⁰¹

¹⁹⁹ In November 2016, *Reuters* reported that "in a review of about a dozen filings from China's state-run corporate register, [it had] established that the financial investment in Canyon Bridge originates from China's State Council, the top decision-making body of the government" (Baker et al. 2016). It also reported that an annual report of China Reform Holdings Corporation identified the following organizational objective: to "invest in strategic emerging industries related to national security" (Baker et al. 2016).

²⁰⁰ According to Ron Black, who served as the CEO of Imagination Technologies after it was acquired by Canyon Bridge Capital Partners, "Imagination [Technologies] can be considered a significant prize for the Chinese government because essentially all processor companies (CPU and GPU) are in the US or have significant development in the US and therefore controlled by CFIUS. Moreover, as GPUs are used in Artificial Intelligence and Machine Learning, two of the Chinese government's primary areas of focus for global leadership, Imagination [Technologies] can be considered even more important" (Black 2022).

²⁰¹ Elaborating on this point, Datenna explains that "in 2017, CFIUS (Committee on Foreign Investment in the United States) blocked Canyon Bridge from acquiring Lattice [Semiconductor Corporation]. [...] By moving its headquarters from the US to the Cayman Islands, Canyon Bridge would fall out of US jurisdiction" (Datenna 2024).

Figure 2.13: Decomposition of China's overseas lending by creditor jurisdiction, 2000-2023



Notes: This figure decomposes China's cumulative overseas (PPG, non-PPG, and M&A) lending commitments into two cohorts: (i) state-owned creditors in mainland China, and (ii) overseas branches, affiliates, and subsidiaries of Chinese state-owned creditors (including bank and nonbank institutions). Shares are calculated within each category so that they sum to 100% of the total lending portfolio, the total PPG lending portfolio, the total non-PPG lending portfolio, or the total M&A lending portfolio.

Several months prior to the acquisition of Imagination Technologies Group Limited, Canyon Bridge Capital Partners, LLC—another U.S.-incorporated shell company owned by China Venture Capital Fund Corporation Limited via Yitai Capital Limited—sought to acquire Lattice Semiconductor Corporation (a U.S.-based chip maker).²⁰² But the deal was scuttled in September 2017 after it came to light that “[t]he purpose of creating Canyon Bridge [Capital Partners, LLC] was to obscure the source of capital to ‘enhance the possibility’ that the transaction would be approved by [the Committee on Foreign Investment in the United States, or CFIUS]” (Mozur and Perlez 2017).²⁰³ Then, in August

²⁰² The ultimate beneficial owner of Yitai Capital Limited is China Reform Holdings Group, which holds a 35.29% equity stake. The remaining shareholders—China Pacific Insurance (Group) Ltd, CCB Capital Management Company, CCB Trust Co. Ltd, and Shenzhen Investment Holding Company Ltd.—are Chinese state-owned entities. See Chapter 3 for more details.

²⁰³ On December 6, 2016, nearly two dozen members of the U.S. Congress wrote a letter to Jack Lew, the Secretary of the U.S. Treasury, to express their concern about the attempted transaction and the fact that “Lattice is the third largest American producer of Field Programmable Gate Array (FPGA) technologies. FPGA technologies are critical to American military applications, and the purchase of an American FPGA designer and manufacturer by a PRC-affiliated firm could disrupt the military supply chain and possibly lead to a reliance on foreign-sourced technologies for many critical Defense Department programs” (Congress of the United States 2016).

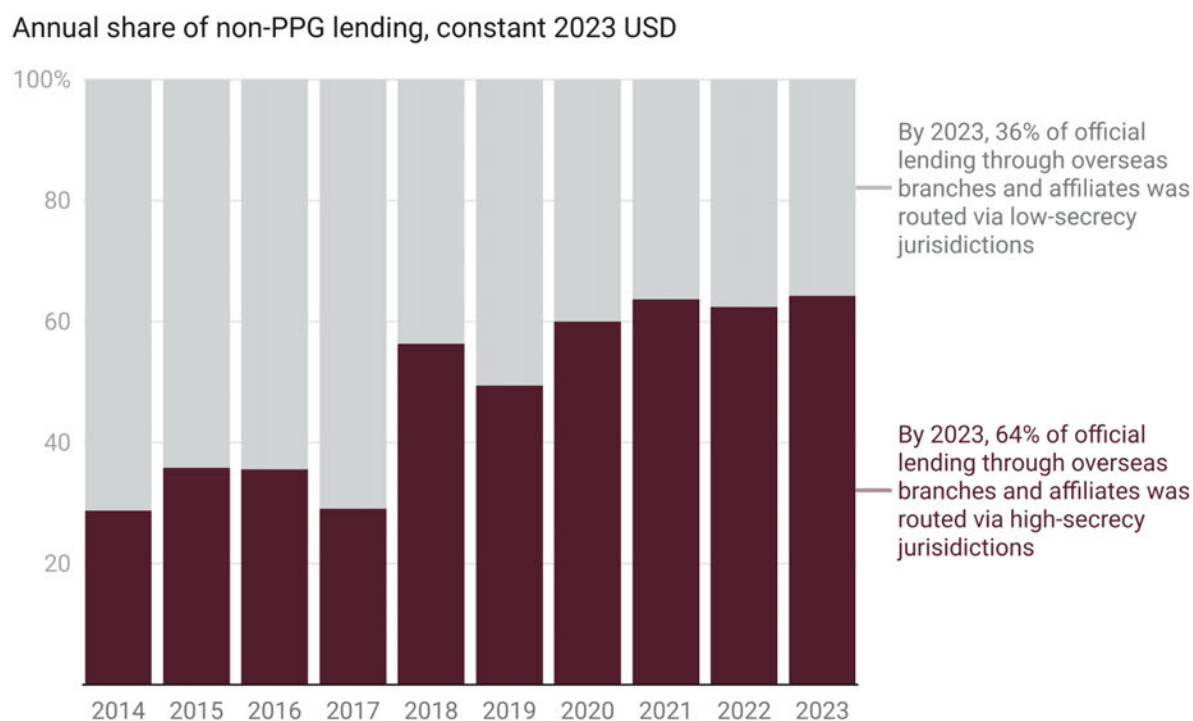
2018, the U.S. Congress passed the Foreign Investment Risk Review Modernization Act (FIRRMA), which gave CFIUS expanded authority to review foreign acquisitions of “critical technologies” (United States Department of the Treasury 2020). Prior to the passage of FIRRMA, “Chinese investments facilitated through U.S. [venture capital] funds allowed Chinese firms to acquire U.S. technology assets without being subjected to the same rigorous regulations and disclosure requirements that are applied to traditional FDI transactions” (O’Connor 2019: 6).²⁰⁴

The “creditor obfuscation” problem is generally getting worse due to the offshoring of Chinese lenders (see Figure 2.8), but it is particularly challenging in the non-PPG portion of the portfolio. In Figure 2.14, we decompose China’s non-PPG lending portfolio that is routed via bank and non-bank institutions outside of mainland China into two cohorts: creditor jurisdictions with relatively high levels of financial secrecy and creditor jurisdictions with relatively low levels of financial secrecy. Since 2014, we have witnessed a marked increase in non-PPG lending via bank branches and company affiliates in overseas jurisdictions with relatively high levels of financial secrecy. By 2023, more than two-thirds of all such lending was routed through overseas jurisdictions with relatively high levels of financial secrecy.²⁰⁵

²⁰⁴ Elaborating on this point, O’Connor (2019: 6) explains that “[venture capital] funds are not typically required to publicly report their investments—neither the source of investments they received nor the target of investments they made.”

²⁰⁵ If one broadens the aperture and decomposes China’s non-PPG lending portfolio across the same two cohorts without restricting the analysis to loans that are routed through bank branches and company affiliates in overseas jurisdictions, a similar but less dramatic shift towards more secretive jurisdictions is observed (see Figure A5.15 in the Appendix).

Figure 2.14: Decomposition of China's non-PPG lending through overseas bank affiliates/branches by financial secrecy of creditor jurisdiction



Notes: The cohort classification is derived from the 2022 Financial Secrecy scores published by the Tax Justice Network. Creditor jurisdictions with scores above the median are designated as having relatively levels of high secrecy and those with scores below the median are designated as having relatively low levels of secrecy. Given that lending through overseas affiliates, branches, and subsidiaries of bank and nonbank institutions became more common after 2013 (see Figure 2.11, this graph focuses on the first full year of BRI implementation and subsequent years. Non-PPG loans are those that do not qualify as public or publicly guaranteed (PPG) debt.

However, Beijing does not only use its vast network of state-owned lenders in overseas jurisdictions to facilitate FDI transactions with non-PPG sources of debt. It also uses Chinese bank branches and company affiliates that are domiciled outside of mainland China to support PPG borrowers. Consider for example the \$1.3 billion loan that ICBC's Karachi Branch provided to the State Bank of Pakistan in March 2023 shore up the country's foreign exchange reserves. The Government of Pakistan did not categorize this loan as a source of public debt to China—or even as a debt to an external creditor (Rana 2023). It instead classified the loan as foreign currency-denominated domestic debt because it was provided by a local branch of a Chinese state-owned bank. Critics characterized this as an accounting gimmick by Pakistan's Ministry of Finance to

understate its true level of public debt exposure to China (Rana 2023).²⁰⁶ However, it is also possible that ICBC routed the loan through the Karachi branch due to the country's sovereign credit rating being downgraded to junk status, which made it more difficult for the Government of Pakistan to obtain commercial loans from external creditors. Niger's newly-established mechanism for sovereign borrowing from China National Petroleum Corporation (CNPC) is another case in point. In April 2024, CNPC-NP Niger—a local subsidiary of CNPC that is legally incorporated in Niger—provided a \$400 million loan through an oil prepayment facility to the Government of Niger for general budgetary purposes and to bolster the defense and security capabilities of the ruling military junta. Here again, the creditor of record is a resident corporation in Niger, so the loan was classified as a source of domestic debt rather than external debt (IMF 2024: 11).²⁰⁷

Beijing's pivot towards more opaque lending arrangements has significant implications for sovereign borrowers because opaque debt is usually more expensive debt (Sengupta 1998; Buchheit 1992; Cady 2005; Glennerster and Shin 2008; Guler et al. 2022).²⁰⁸ Pakistan and Niger's recent borrowings are not exceptional in this regard: the \$1.3 billion loan from ICBC's Karachi Branch carried a 2-year maturity and a nearly 8% all-in interest rate, while the \$400 million CNPC-Niger loan carried a 12 month maturity (extendable to 16 months) and a 7% interest rate. Neither loan came close to meeting the OECD or IMF concessionality thresholds.

Beijing's growing use of bank branches and company affiliates outside of mainland China also highlights the growing complexity of its overseas lending portfolio and the

²⁰⁶ An important issue that falls outside the scope of this report is whether, when, and why Chinese creditors allocate a disproportionate amount of official sector credit to countries with low levels of debt transparency. Cormier (2023) provides evidence that governing elites in non-transparent recipient countries self-select into borrowing relationships with non-transparent creditors to minimize their exposure to political risk and avoid Western conditionality. Brown (2025) provides evidence that developing countries contract hidden debts from China to continue borrowing from international financial institutions without detection or punishment.

²⁰⁷ The loan should also not be identified as a loan from a Chinese creditor under the existing reporting rules of the World Bank's International Debt Statistics (IDS) because finance ministry participants in the Debtor Reporting System (DRS)—so-called "DRS reporters" or "national compilers"—are asked to categorize creditor institutions on a residency basis rather than nationality basis (World Bank 2000: 9; World Bank 2020b: 3)

²⁰⁸ New research also demonstrates that hidden debt revelations increase borrowing costs (Horn et al. 2024).

increasing difficulty of systematically tracking all of its cross-border lending operations. New sources and methods are urgently needed to track these more opaque sources of debt exposure. AidData has begun introducing changes—for example, by searching the annual reports and financial statements of Chinese bank branches and company affiliates in overseas jurisdictions, commercial transaction databases (such as IJGlobal, S&P, TXF, Proximo, and LSEG), collateral registries, and lender counsel and borrower counsel websites—to its Tracking Underreported Financial Flows (TUFF) methodology to reduce the risk that the most opaque loans will go undetected. However, in order to keep pace with the rapidly evolving landscape of Chinese creditors and credit instruments, continued methodological innovation will be essential. In the absence of new sources and methods, it will become increasingly difficult to understand how China's overseas lending portfolio is evolving.


“Beijing’s growing use of bank branches and company affiliates outside of mainland China highlights the growing complexity of its overseas lending portfolio and the increasing difficulty of systematically tracking all of its cross-border lending operations.”

Trend #3: Working through international syndicates

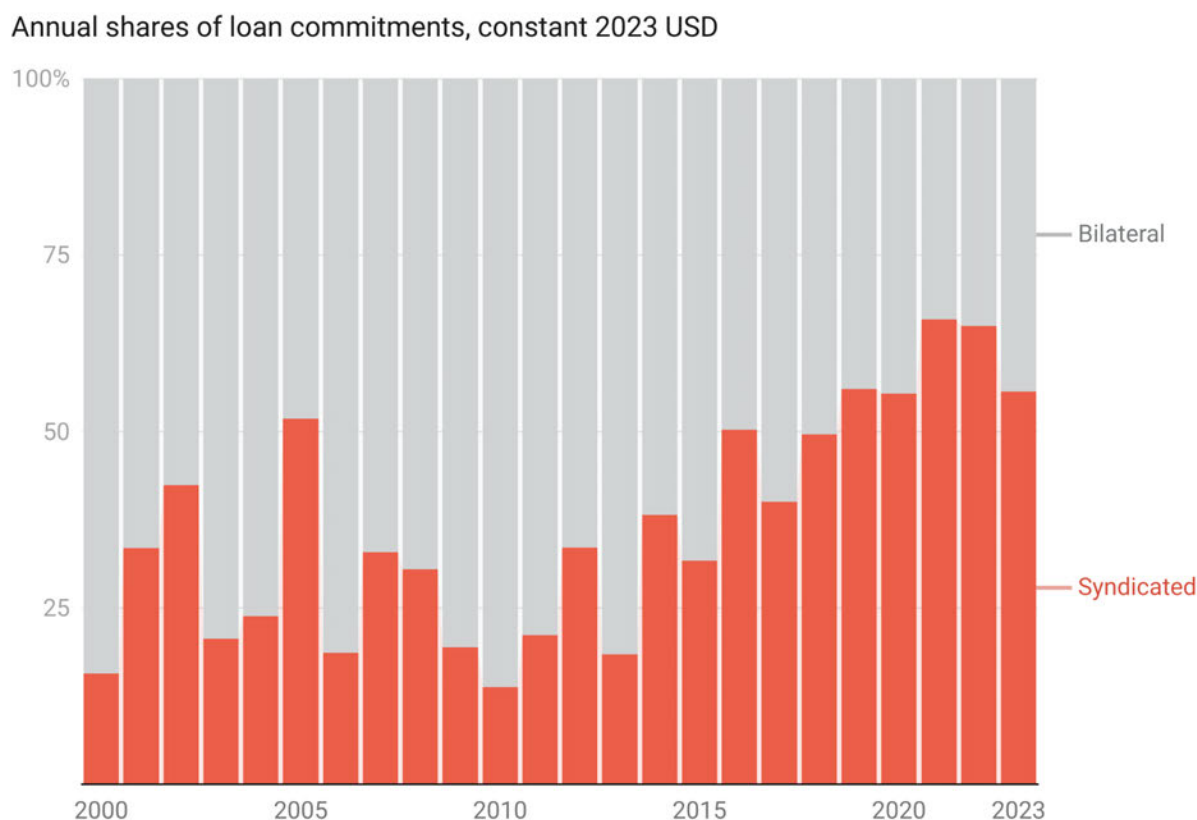
Figure 2.15 provides evidence that, at the turn of the century, China's non-emergency overseas lending program almost exclusively consisted of bilateral loans—i.e., loans issued by a single lender to a single borrower.²⁰⁹ However, over time, Beijing has moved away from this approach, ramping up its use of syndicated loan arrangements.²¹⁰ It began experimenting with this more collaborative way of issuing credit during the pre-BRI period and early BRI period, but over time syndication has become more central to the country's overseas lending strategy. By 2023, 56% of

²⁰⁹ China's emergency rescue loan commitments are provided almost exclusively via bilateral instruments (Horn et al. 2023a, 2023b; Parks et al. 2023). As such, their inclusion in the analysis masks the compositional shift away from bilateral instruments in the non-emergency lending portfolio. The 1.0 version of AidData's CLG-Global Dataset captures emergency loan commitments—excluding short-term “rollover” facilities to refinance maturing debts—worth \$138.5 billion and non-emergency loan commitments worth \$1.96 trillion between 2000 and 2023.

²¹⁰ China's State Administration of Foreign Exchange (SAFE) recently drafted “Measures on the Management of Syndicated Loan Business, which went into effect on November 1, 2024. These policy changes affect onshore and cross-border syndicated loan transactions (Kang 2024; Lam and Xiaoxue 2025).

China's non-emergency overseas lending program consisted of syndicated loan commitments.²¹¹

Figure 2.15: Decomposition of China's non-emergency lending portfolio by channel of delivery



There are many good reasons why Chinese creditors are increasingly motivated to participate in syndicated loans rather than bilateral loans: more financial risk-sharing, better project selection, enhanced vetting of borrowing institutions, and the opportunity to outsource ESG risk management (Parks et al. 2023; Chen and Emery 2025).²¹² However, this shift toward syndication has also had the effect of making it

²¹¹ In Figure A5.16 in the Appendix, we decompose China's overseas *project* lending portfolio into two components: bilateral instruments and syndicated instruments. A similar pattern is observed, with the share of project lending via syndicated instruments reaching 50% in 2023.

²¹² In March 2025, Wang Kang, a Vice President of China Eximbank, argued in *China Finance* magazine that "syndicated structured financing design and innovation can enhance control over repayment cash flows, improve debt repayment certainty, and mitigate market and credit risks. For example, in the Mozambique Area 4 floating liquefied natural gas project supported by the Export-Import Bank of China,

more difficult to track China's overseas lending activities at the individual loan level. As the World Bank explains in a 2021 report entitled *Debt Transparency in Developing Economies*, "syndicated loans are more prone to misreporting or non-disclosure than are Eurobonds because [such] loans are not traded in official markets and are more likely to include confidentiality clauses" (Rivetti 2021: 4).²¹³ The presence of such clauses makes it challenging to identify (a) whether and which Chinese banks have participated in the syndicate, and (b) the size of Chinese bank contributions to the loan.

Syndicated loan contracts usually contain annexes ("schedules") that identify all lenders and the respective financial contributions (La Nación 2020; Musisi 2025; Connelly 2021). By way of illustration, consider the \$85,710,077.90 syndicated loan contract that the Government of Ecuador, Deutsche Bank, and Bank of China Limited signed on March 31, 2015 for the Restoration and Improvement of 3 Highways Project. Schedule 1 in the annex to the loan contract specifies that Bank of China Limited contributed \$59,997,054.53 and Deutsche Bank contributed \$25,713,023.37.²¹⁴ However, this information is exceptionally difficult to obtain in the absence of the syndicated loan contract itself (Gelpern et al. 2023; 2025b).

Another complicating factor is that, in their voluntary disclosures (via financial statements, annual reports, stock exchange filings, bond prospectuses, and public debt reports), borrowers rarely identify all bank and nonbank participants in their syndicated loans. Instead, they typically identify only one creditor—often the syndicate's lead arranger/manager, which is the primary financial institution that negotiates terms and conditions with the borrower and recruits other creditors to participate in the loan.²¹⁵ Consider the following examples:

the syndicate established a tightly controlled, flexible, and organized cash flow waterfall based on the project's capital flows. The borrower was also required to open project revenue supervision accounts and debt service reserve accounts. This ensured the bank's effective control over project cash flows without compromising the borrower's access to funds" (Kang 2025).

²¹³ Horn et al. (2024) provide corroborating evidence. The IMF's Independent Evaluation Officer (IEO) has also flagged concerns about the "increased use of broad confidentiality clauses in non-marketable loan contracts" (IMF IEO 2025: 3).

²¹⁴ This loan contract can be accessed in its entirety via <https://china-contracts.aiddata.org/>.

²¹⁵ Another complicating factor is that shares of syndicated loans can be resold in secondary markets after their initial syndication (Sufi 2007; Aramonte et al. 2022; Parks et al. 2023).

- In a quarterly public debt report, Tanzania's Ministry of Finance identified a \$450 million loan from Standard Chartered Bank for EUR 450 million loan for the Isaka-Mwanza Section (Lot 5) of Standard Gauge Railway Construction Project (The United Republic of Tanzania Ministry of Finance 2024). It did not identify the borrowing as a syndicated loan. Nor did it disclose that five of the seven participants in the syndicated loan were Chinese banks (China CITIC Bank, China Development Bank, China Bohai Bank, China Zheshang Bank, and Industrial Bank).
- In an annual summary of external borrowings, Pakistan's Economic Affairs Division (EAD) disclosed a \$650 million liquidity support facility from Credit Suisse (Government of Pakistan Economic Affairs Division 2018). It did not identify the borrowing as a syndicated loan. Nor did it disclose China Eximbank and ICBC's participation in the syndicated loan.
- In its annual financial statements, Petróleos de Venezuela, S.A. (PDVSA)—a Venezuelan state-owned oil and natural gas company—identified Credit Suisse as the creditor of record for a \$2.2 billion loan for the Puerto La Cruz Refinery Deep Conversion Project (PDVSA 2016). It did not identify the borrowing as a syndicated loan. Nor did it disclose ICBC's participation in the syndicated loan.
- In an annual report, North-West Power Generation Company Limited (NWPGCL)—a state-owned power company in Bangladesh—disclosed the identities of the insurers rather than the financiers of its government-guaranteed loans for Units 2 and 3 of 220 MW Sirajganj Combined Cycle Power Plant Project (NWPGCL 2023). It did not identify either borrowing as a syndicated loan. China Eximbank was not identified as a participant (with Standard Chartered Bank and Siemens Bank) in the \$200.03 million syndicated loan for Unit 2 of 220 MW Sirajganj Combined Cycle Power Plant Project. Nor was Bank of China identified as a participant (with Standard Chartered Bank, Siemens Bank, and Deutsche Pfandbriefbank AG) in the \$196.7 million syndicated loan for Unit 3 of the 220MW Sirajganj Combined Cycle Power Plant Project.

Similarly, when “national compilers” in low-income and middle-income countries report their sources of public debt exposure to the World Bank’s DRS, they are instructed to record a single creditor—the lead manager—for each syndicated loan (World Bank 2000: 9).²¹⁶ If the lead manager of the syndicate happens to be a Chinese creditor, China is identified as the creditor country and the loan is categorized in the IDS as a loan from China.²¹⁷ However, if the lead manager of the syndicate happens to be a non-Chinese creditor, China is not identified as the creditor country and the loan is categorized in the IDS as a loan from a different country of origin. This structural feature of the DRS begs the question of whether Chinese participants in syndicated loans are more or less likely to serve as lead managers.

The 1.0 version of AidData’s CLG-Global Dataset suggests that, over time, it has become less likely that Chinese creditors will serve as the lead managers. The lead manager of a syndicate typically assumes responsibility for the largest portion of the loan—the biggest “ticket size”—in order to show confidence in the transaction and incentivize participation by other lenders (Dennis and Mullineaux 2000; Sufi 2007; Ivashina 2009; Benmelech et al. 2012). However, our newly collected data demonstrate that individual Chinese participants in syndicated cross-border loans have reduced their weighted average ticket sizes over time—from 29% in 2014 to 15% in 2023 (see Figure 2.16). When this figure is recalculated by measuring the collective contributions of all Chinese participants to each syndicate, weighted average ticket sizes decline by 32 percentage points—from 61% in 2014 to 29% in 2023 (see Figure 2.17). The 1.0 version of AidData’s CLG-Global Dataset also provides evidence that a rapidly increasing percentage of such loan syndicates involve non-Chinese members, making it even less likely that Chinese creditors will serve as lead managers (see Figure 2.18).²¹⁸

²¹⁶ Other datasets—including the Chinese Loans to Africa (CLA) Database and the China’s Overseas Development Finance (CODF) Database produced by Boston University’s Global Development Policy Center and the Chinese Loans to Latin America and the Caribbean Database jointly produced by Inter-American Dialogue and Boston University’s Global Development Policy Center—have relatively low levels of syndicated loan coverage (Malik and Parks 2021; Parks et al. 2023). Even those datasets that do capture syndicated loans do not allow for systematic differentiation between bilateral and syndicated loans.

²¹⁷ This is the case because China is identified as the creditor’s country of residency (World Bank 2000: 9).

²¹⁸ In 2014, 47% of China’s syndicated cross-border loans involved non-Chinese participants. By 2023, this figure had increased to 81% (see Figure 2.18). According to the 1.0 version of AidData’s CLG-Global Dataset, the following non-Chinese creditors participated in the largest number of syndicated cross-border debt transactions with Chinese creditors between 2000 and 2023: MUFG Bank, Ltd. (Formerly Bank of Tokyo-Mitsubishi UFJ, Ltd.) [1206 transactions]; Sumitomo Mitsui Banking Corporation

Figure 2.16: Weighted average share contributed by each Chinese creditor to a syndicated loan over time

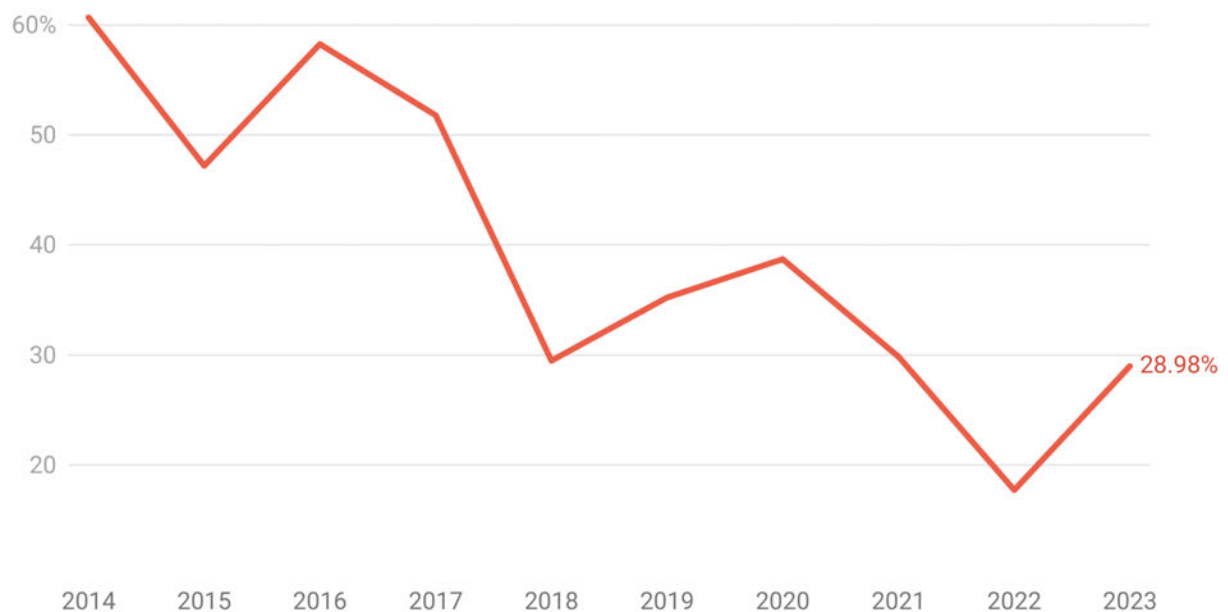


Notes: This figure presents the annual weighted average “ticket share” taken by each individual Chinese participant in a cross-border syndicated loan between 2014 and 2023. In each year, the measure is weighted by the value of each creditor’s contribution to each syndicated loan (expressed in constant 2023 USD) in the 1.0 version of AidData’s CLG-Global Dataset.

(SMBC) [1146 transactions]; BNP Paribas S.A. [1015 transactions]; Citibank, Ltd. [887 transactions]; JPMorgan Chase Bank, N.A. (Chase Bank, formerly the Chase Manhattan Bank) [861 transactions]; Mizuho Bank, Ltd. [846 transactions]; Société Générale S.A. (SocGen or Societe Generale) [811 transactions]; Standard Chartered Bank PLC [709 transactions]; Bank of America [698 transactions]; and Barclays Bank PLC [689 transactions]. For more on how non-Chinese creditors play critical brokerage roles in syndicated cross-border debt transactions with Chinese creditors, see Joosse et al. (2025) and Escobar et al. (2025).

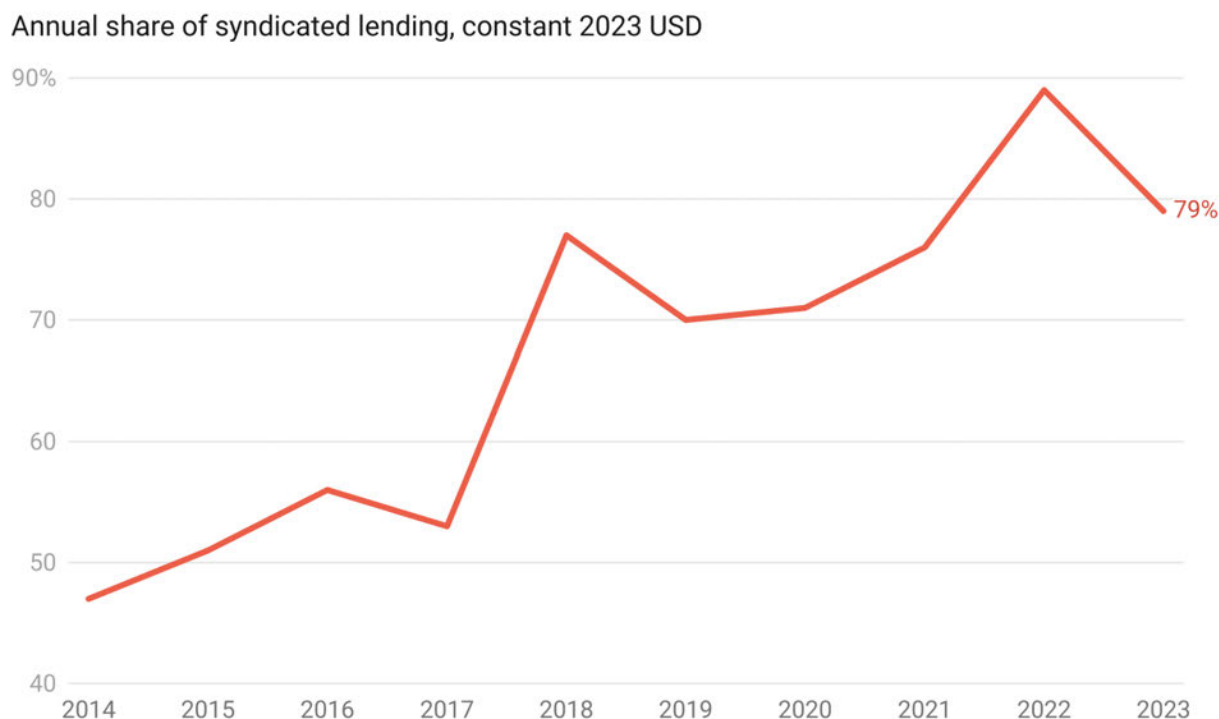
Figure 2.17: Weighted average share contributed by all Chinese creditors to a syndicated loan over time

Annual share of syndicated lending, constant 2023 USD



Notes: For each syndicated loan in the 1.0 version of AidData's CLG-Global Dataset (identified through the `loan_event_id` and `loan_event_tranche` variables), the "ticket shares" of all Chinese participants are summed to obtain the "Chinese share" per loan. The resulting statistic represents the annual weighted average of these loan-level shares, using commitment amounts expressed in constant 2023 USD as weights.

Figure 2.18: Annual share of China’s syndicated lending commitments that involve non-Chinese bank participants



Notes: A syndicated loan is identified as involving a non-Chinese participant when the cofinancing_agencies_type field in the 1.0 version of AidData’s CLG-Global Dataset (i) identifies at least one lender with an “Other” designation or (ii) identifies at least one lender domiciled in the country where the loan-financed project/activity takes place (i.e., not a PRC creditor).

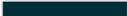
Another fundamental challenge is the discoverability of information about the characteristics of such loans, including their purposes, pricing, and performance. In Figure 2.8, we compare the weighted average number of (official) sources supporting the bilateral loan records and syndicated loan records in the 1.0 version of the CLG-Global Dataset.²¹⁹ Our findings suggest that it is substantially easier to identify publicly available information about China’s bilateral loan commitments than its syndicated loan commitments. On average, over a 24-year period of observation (2000-2023), we find 8.5% more information—and 14.1% more information from official

²¹⁹ These summary statistics capture all of the sources that AidData has identified through the implementation of its Tracking Underreported Financial Flows (TUFF) methodology. See Parks et al. (2025).

sources—about China’s bilateral loan commitments than its syndicated loan commitments.

Trend #4: Using complex, opaque, and non-standard credit instruments

Chinese creditors increasingly use complex, opaque, and non-standard credit instruments. The World Bank and IMF have raised alarm about the recent shift towards these instruments. In a May 2021 guidance note on its Debt Limits Policy (DLP), the IMF encouraged its staff to look for “[s]igns of 'hidden debt' that has not been disclosed due to confidentiality clauses in loan contracts” (IMF 2021: 14).²²⁰ Shortly thereafter, in October 2021, the President of the World Bank announced that “[t]he transparency of data on debt must evolve to keep pace with an ever-changing creditor landscape and with new and increasingly complex debt-like instruments and data requirements” (World Bank 2021c).²²¹


“Chinese creditors increasingly use complex, opaque, and non-standard credit instruments.”

Over time, this problem has grown more severe and the World Bank and IMF have issued more frequent and forceful warnings. In June 2025, the IMF’s General Counsel noted that “countries are increasingly using complex and opaque forms of financing. [...] Because of the novelty and complexity of [new credit] instruments, more debt now remains hidden from policymakers and the public. And often it comes to light too late, during the debt restructuring process” (Liu 2025). At the same time, the World Bank’s Senior Managing Director warned that “[t]oday, debt is more complex, creditors are more diverse, and part of the borrowing takes place off-budget, behind closed doors, and outside the scrutiny of traditional oversight mechanisms” (van Trotsenburg 2025). Echoing this point, the World Bank warned in a June 2025 report calling for “Radical

²²⁰ The IMF’s DLP establishes specific, measurable public debt management conditions that borrower countries are expected to meet in order to receive loan disbursements under their IMF-supported programs (IMF 2021).

²²¹ Elaborating on this point, the World Bank President said that “[w]e are working hard to be able to capture all debt instruments, including external borrowing by state-owned enterprises, central bank deposits, and currency swaps. We are also collecting information on loan guarantees and collateral arrangements” (World Bank 2021c).

(Debt) Transparency” that “countries are increasingly turning to unconventional instruments that are more opaque and harder to monitor” (World Bank 2025b: 6).

However, the World Bank and IMF—international financial institutions (IFIs) that are responsible for monitoring the lending and borrowing practices of their member countries—have been reluctant to name-check China. In a 2021 guidance note, the IMF warned its staff of the need to “contain risks posed by the frequent use by some creditors of non-standard lending instruments and terms” (IMF 2021:18). More recently, the World Bank announced that “[w]hile G7 countries have made notable progress in publishing loan-level data, several large non-G7 bilateral creditors still refrain from publishing their sovereign lending data” (World Bank 2025b: 3).²²²

IFI shareholders have been less reluctant to call out China. U.S. legislators codified the following guidance in the National Defense Authorization Act for Fiscal Year 2021: “it is the policy of the United States to use the voice and vote of the United States at the [each international financial] institution to seek to secure greater transparency with respect to the terms and conditions of financing provided by the government of the People’s Republic of China to any member state of the respective institution that is a recipient of financing from the institution, consistent with the rules and principles of the Paris Club” (United States Department of the Treasury 2024a: 38). They also tasked the U.S. Treasury with submitting an annual report to explain how this policy is being put into practice (United States Department of the Treasury 2024a, 2025). The shareholders of the IFIs have also called for more rigorous surveillance efforts. In October 2024, the U.S. Treasury’s Assistant Secretary for International Finance called upon the IMF to be a “ruthless truth teller” and to “do so even when it is uncomfortable, whether for borrower countries [...] or for their official creditors” (United States Department of the Treasury 2024b).

In Figure 2.19, we evaluate whether China’s overseas lending operations are in fact becoming more opaque and more difficult to track over time because of increasing use of non-standard credit instruments. We do so by creating two cohorts—one that

²²² It also noted that “[r]eporting by the largest non-G7 creditor is typically limited to project descriptions and rarely involves financial terms. In response to these shortcomings, academic institutions have [pieced] together granular financial data (including loan contracts) to help close the gaps” (World Bank 2025b: 21).

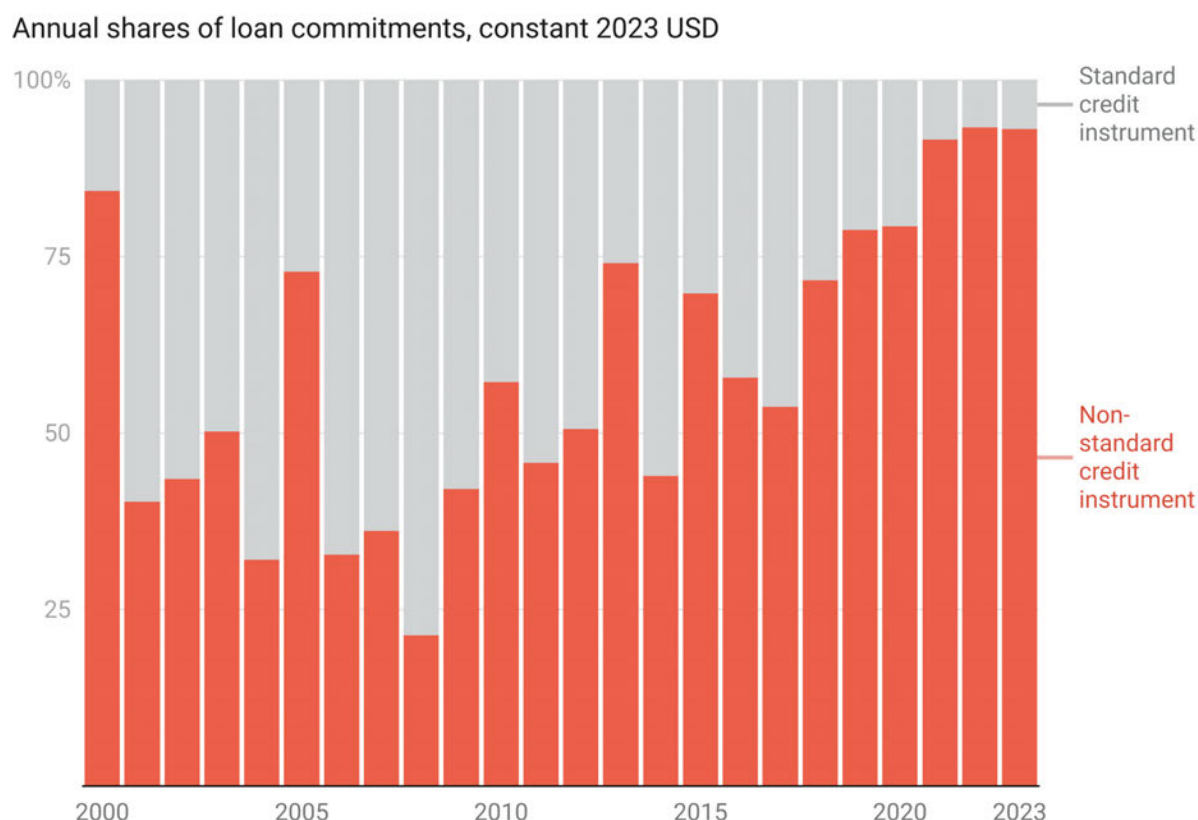
consists of standard credit instruments and another that consists of non-standard credit instruments—and measuring the shares of China’s overseas PPG lending portfolio channeled through such instruments over time.²²³ Our newly collected data demonstrate that there is a major pivot underway from a reasonably well-understood set of credit instruments towards a more exotic set of instruments that is substantially more difficult to track. By 2023, only 7% of China’s overseas PPG lending portfolio was channeled through standard credit instruments and 93% was channeled through non-standard credit instruments.²²⁴ Although this shift is particularly pronounced in the PPG segment of the portfolio, it is also observable in the full portfolio of PPG and non-PPG loans (see Figure A5.17 in the Appendix).²²⁵

²²³ Standard credit instruments include interest free loans, government concessional loans (GCLs), preferential buyer’s credits (PBCs), and export buyer’s credits (Horn et al. 2021: 6; Gelpern et al. 2023: 357-358). Non-standard credit instruments include supplier’s credits, export seller’s credits, deferred payment agreements, EPC+F agreements, drawdowns on foreign currency swap lines, balance of payment (liquidity support facility) loans, pre-export financing (commodity prepayment) facilities, interbank loans, shareholder loans, exploration/development carry agreements, and repurchase (‘repo’) transactions (Rivetti 2021; Horn et al. 2023a, 2023b; World Bank 2023c; Vasquez et al. 2024; World Bank 2025b).

²²⁴ Here we restrict our analysis to PPG loans because the credit instruments that we have categorized as “non-standard” are more commonly observed in the PPG segment of the portfolio than the non-PPG segment of the portfolio.

²²⁵ In 2014, 51% of China’s overseas lending portfolio was channeled through standard credit instruments and 49% was channeled through non-standard credit instruments. However, by 2023, only 7% of China’s overseas lending portfolio was channeled through standard credit instruments and 93% was channeled through non-standard credit instruments (see Figure A5.17 in the Appendix).

Figure 2.19: Decomposition of China's overseas PPG lending portfolio by credit instrument type



Notes: Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the *Level_of_Public_Liability* field in AidData's CLG-Global 1.0 Dataset. See Section A3.5 in the Appendix for details on standard and non-standard credit instrument types.

In Figure 2.20, we take the analysis one step further by calculating the weighted average number of official sources supporting AidData records that capture standard PPG credit instruments and non-standard PPG credit instruments.²²⁶ Over the 24-year period of observation (2000-2023), there are only four years (2000-2003) when official sources disclose more information about non-standard PPG credit instruments than standard PPG credit instruments. In every other year (20 years in total), we find more

²²⁶ We weight these averages by loan commitment values to ensure that the results reflect the relative significance of each loan in the portfolio. When we restrict the analysis to all sources of information, irrespective of whether they have an official sector origin, we obtain similar results (see Figure A5.12 in the Appendix).

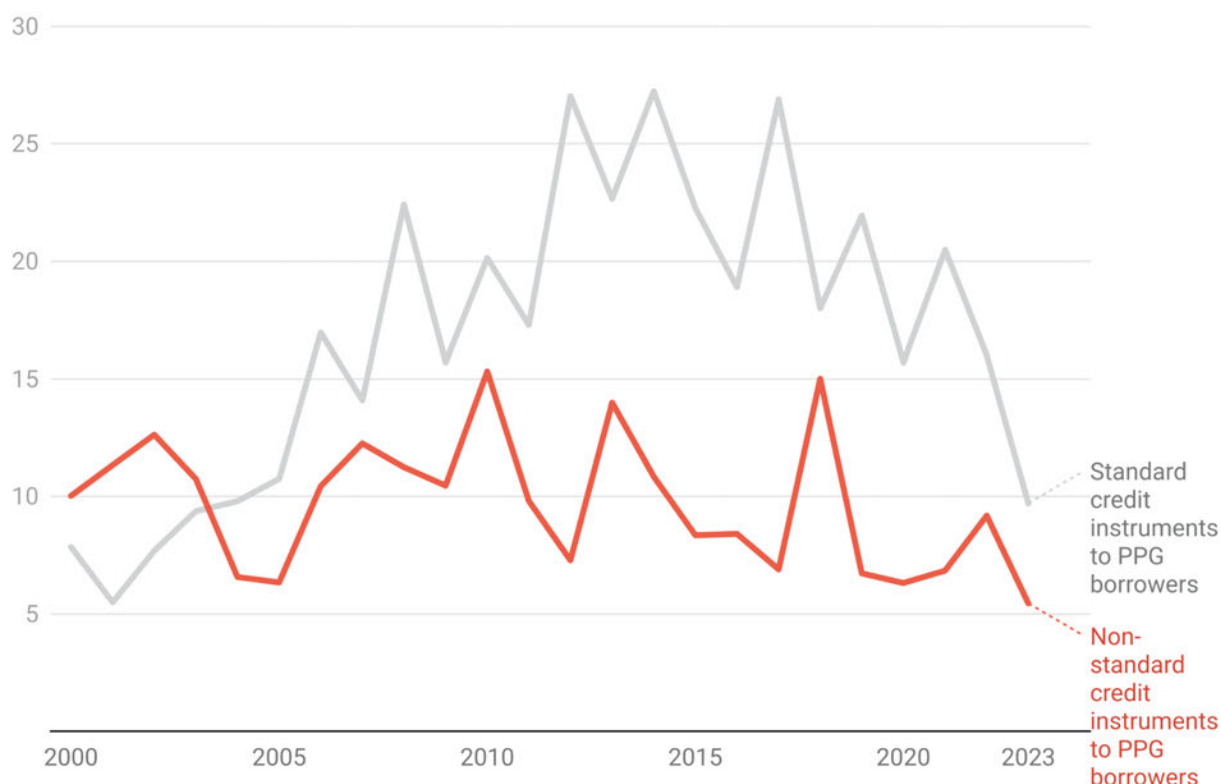
information from official sources about standard PPG credit instruments than non-standard PPG credit instruments. Over the entire period of observation, we find that official sources disclose 74% more information about standard PPG credit instruments than non-standard PPG credit instruments.²²⁷ If we broaden the aperture and measure the average number of official sources supporting AidData records that capture standard and non-standard credit instruments, irrespective of whether they support PPG or non-PPG borrowers, these core findings do not change (see Figure A5.18 in the Appendix).²²⁸ Nor do the findings substantially change if we consider all sources of information rather than official sources of information (see Figure A5.12 in the Appendix).

²²⁷ Between 2000 and 2023, the weighted average number of official sources supporting records in the 1.0 version of the CLG-Global Dataset that capture standard PPG credit instruments was 16.8. The corresponding figure for non-standard PPG credit instruments was 9.68.

²²⁸ Figure A5.18 in the Appendix demonstrates that, between 2000 and 2023, official sources disclosed 79.5% more information about standard credit instruments than non-standard credit instruments.

Figure 2.20: Discoverability of information on China's overseas PPG lending portfolio by credit instrument type

Weighted average number of official sources per PPG loan record (by constant 2023 USD)



Notes: Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the Level_of_Public_Liability field in AidData's CLG-Global 1.0 Dataset. Non-PPG loans are those that do not qualify as sources of PPG debt. See Section A3.5 in the Appendix for more details on how standard and non-standard credit instruments are defined.

A separate, but equally important, shift is taking place in China's overseas lending program: it is becoming less focused on infrastructure projects. Indeed, our newly collected data highlight the importance of not conflating China's flagship, global infrastructure initiative with its overseas lending program. Between 2000 and 2023, Beijing provided an extraordinary amount of credit for infrastructure projects in developed and developing countries (see Figure A5.19 in the Appendix). In total, it provided \$888 billion in loan commitments for overseas infrastructure projects during this 24-year period, of which 87% (\$768 billion) was earmarked for developing

countries and 13% (\$120 billion) was earmarked for developed countries.²²⁹ These commitments accounted for 42% of China's overseas lending portfolio.²³⁰ However, Figure 2.21 provides evidence that, since 2016, a rapidly shrinking proportion of China's overseas lending portfolio has supported infrastructure projects.²³¹ As a share of its total overseas lending commitments, infrastructure project lending commitments fell from 75% in 2010 to 24% in 2023. At the same time, Chinese creditors dramatically ramped up the provision of cross-border credit via liquidity support facilities. As a share of its total overseas lending commitments, lending commitments via liquidity support facilities have steadily increased from 49% in 2010 to 72% in 2023.²³²


“As a share of its total overseas lending commitments, infrastructure project lending commitments fell from 75% in 2010 to 24% in 2023, while Chinese creditors dramatically ramped up the provision of cross-border credit via liquidity support facilities.”

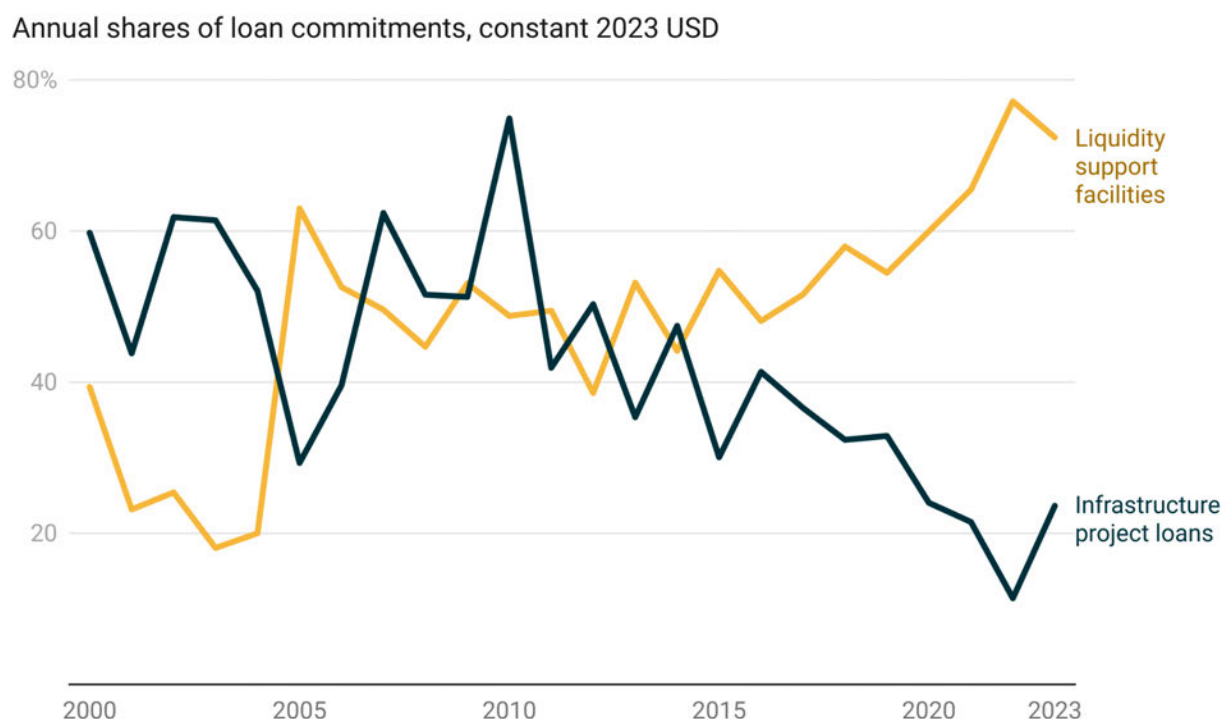
²²⁹ In total, China issued loan commitments worth \$460 billion for overseas infrastructure projects between 2014 and 2023, of which 83% (\$383 billion) was earmarked for developing countries and 17% (\$77 billion) was earmarked for developed countries.

²³⁰ In total, it provided \$601 billion in PPG loan commitments and \$287 billion in non-PPG loan commitments for overseas infrastructure projects during this 24-year period. Infrastructure loan commitments to PPG borrowers accounted for 59% of China's overseas PPG lending portfolio between 2000 and 2023. Infrastructure loan commitments to non-PPG borrowers accounted for 26% of China's overseas non-PPG lending portfolio between 2000 and 2023.

²³¹ Between 2000 and 2023, China provided loan and grant commitments for overseas infrastructure projects worth \$909 billion.

²³² Figure A5.19 in the Appendix presents China's annual lending commitments via infrastructure project loans and liquidity support facilities between 2000 and 2023.

Figure 2.21: Decomposition of China's lending portfolio by credit instrument type



Notes: Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination from AidData's CLG-Global 1.0 Dataset. Liquidity support facilities are identified with any of the following flags (in combination or independently) in AidData's CLG-Global 1.0 Dataset: FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A. These two types of credit instruments are not mutually exclusive, as some infrastructure projects are financed via PxF/commodity prepayment facilities.

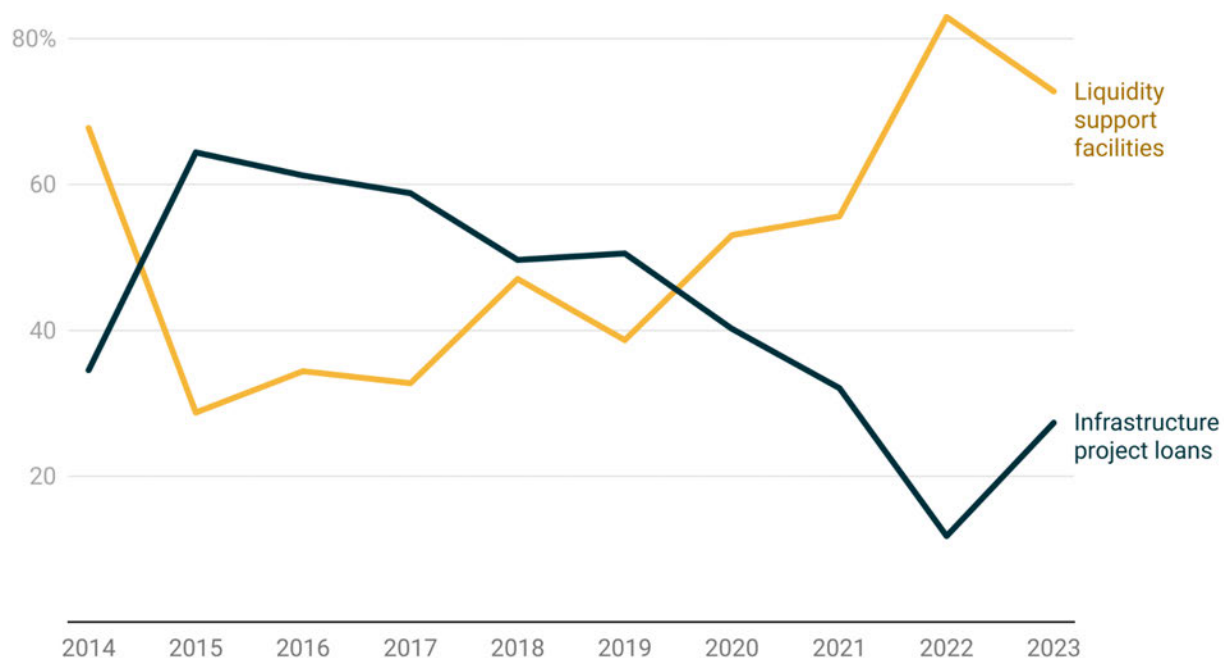
In Figure 2.22, we replicate the analysis for BRI participant countries during the BRI era (2014-2023). A similar pattern is observed: China's infrastructure project lending commitments sharply increased between 2014 and 2015, but then steadily declined (as a share of its total overseas lending commitments) from 64% in 2015 to 27% in 2023.²³³ At the same time, China's provision of credit to BRI participant countries via liquidity

²³³ In Figure A5.20 in the Appendix, rather than presenting portfolio shares, we present China's annual lending volumes to BRI participant countries via infrastructure project facilities and liquidity support facilities. It shows a slightly different pattern: infrastructure project lending steadily increases from 2014 to 2019, but then declines until 2022—before bouncing back to a higher level in 2023. Between 2014 and 2023, China's infrastructure project lending commitments in BRI participant countries amounted to \$249 billion, which represents only 20% of China's entire overseas lending portfolio over the same 10-year period.

support facilities skyrocketed—from 29% in 2015 to 73% in 2023. This empirical pattern is consistent with the notion that China ramped up emergency rescue lending to its biggest Belt and Road borrowers in order to ensure that they were sufficiently liquid to continue servicing their existing infrastructure project debts (Horn et al. 2023a, 2023b).

Figure 2.22: Decomposition of China's lending portfolio in Belt and Road Initiative participating countries by credit instrument type

Annual shares of loan commitments, constant 2023 USD



Notes: Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination from AidData's CLG-Global 1.0 Dataset. Liquidity support facilities are identified with any of the following flags (in combination or independently) from AidData's CLG-Global 1.0 Dataset: FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A. These two types of credit instruments are not mutually exclusive, as some infrastructure projects are financed via PxF/commodity prepayment facilities. BRI participant countries include those countries that have signed MOUs with China to join its Belt and Road Initiative. A country is assigned to the BRI participant cohort in the year when it signed the MOU and every year thereafter.

This pivot away from lending for brick-and-mortar projects has also made it more difficult to track the full range of China's overseas lending activities. Infrastructure projects are highly visible and easy for government auditors, civic monitors, legislative overseers, and the general public to monitor (Muchapondwa et al. 2016; Marx 2018;

Chen 2025; Wellner et al. 2025). It is also difficult for governments to avoid questions about how infrastructure projects were financed (Aamir 2018; Schmitz 2021; McBeth 2021; Latif Dahir 2022; Wijaya 2025). However, liquidity support facilities are less likely to attract media attention or public scrutiny (Muchapondwa et al. 2016). Many of these loans are only discoverable in financial statements, bond prospectuses, stock exchange filings, and the debt information management systems of finance ministries (Horn et al. 2023a; Gelpern et al. 2023, 2025a).

In Figure 2.8, we systematically evaluate the discoverability of information about two major components of Beijing’s overseas lending portfolio: infrastructure project loans and liquidity support facilities. We do so by calculating the weighted average number of (official) sources that support these two different cohorts of loan records in the 1.0 version of AidData’s CLG-Global Dataset.²³⁴ On average, we find 42.5% more sources of information—and 36.6% more official sources of information—about infrastructure project loans than liquidity support facilities.²³⁵

In order to better understand this major change in the composition of China’s overseas (PPG) lending portfolio, we now take a closer look at four complex, opaque, and non-standard credit instruments that have become increasingly popular among Chinese creditors: (1) deferred payment agreements, (2) pre-export finance (PxF) facility agreements, (3) currency swap borrowings, and (4) repurchase agreements.

1. Deferred Payment Agreements with Chinese SOEs: In 2018, a new sovereign borrowing model was pioneered by Sinohydro Corporation Limited (“Sinohydro”)—a Chinese SOE that specializes in hydropower, transportation, and civil engineering projects—in Ghana (Gelpern et al. 2025a). It involved Sinohydro and Ghana’s Ministry of Finance (MOF) signing engineering, procurement and construction (EPC) contracts for road construction projects, in which Sinohydro deferred 85% of the MOF’s payment

²³⁴ We weight these averages by loan commitment values to ensure that our measures accurately characterize the ease of obtaining information about each segment of the loan portfolio in its entirety (i.e., by giving more weight to larger loan commitments that account for a larger share of a given loan portfolio segment).

²³⁵ Between 2000 and 2023, the weighted average number of sources supporting records in the 1.0 version of the CLG-Global Dataset that capture infrastructure project loans was 37.5. The corresponding figure for liquidity support facilities was 15.

obligations over 15 years through deferred payment agreements (DPAs).²³⁶ Sinohydro, in turn, borrowed the deferred payment amounts from China Construction Bank (CCB). Then, under an Accounts Receivable Finance Agreement (ARFA), Sinohydro assigned its rights to payments under the DPAs to CCB, effectively making it the creditor with legal rights to repayment. It was originally envisaged that these debts would be repaid and secured with future revenues from refined bauxite sales, even though Ghana did not yet have any operational bauxite refining plants. Ghana's Parliament therefore passed a law, creating a new SOE—the Ghana Integrated Aluminum Development Corporation (GIADEC)—that would be responsible for generating refined bauxite and using the cash proceeds from refined bauxite sales to make payments for the road construction projects. Ghana's MOF agreed to assume responsibility for the deferred payment obligations under the EPC contracts if these revenues failed to materialize. GIADEC ultimately failed to develop any operational bauxite refining plants. However, for many years, Ghana's MOF refused to acknowledge its repayments obligations to Sinohydro as sources of public debt exposure in its annual public debt report to parliament, its Article IV consultations with the IMF, its disclosures to the World Bank's Debtor Reporting System (DRS), and its Eurobond prospectus.²³⁷ It did not come clean until December 2024—when it disclosed to foreign bondholders that “[r]epayment under the Sinohydro facility was planned to be made via receipts from refined bauxite [...]. Since the initial plan to establish a bauxite processing plant to facilitate the repayment of the loan did not materialise, the Government [of Ghana] has now recognised the transaction as a loan” (Republic of Ghana 2024: II-47). This admission was made in the Government of Ghana's proposal to restructure \$13 billion of outstanding Eurobond debt (an “exchange offer and consent solicitation memorandum”), which is notable because non-disclosure of material facts to investors could have resulted in lawsuits, regulatory penalties, credit rating downgrades, or higher borrowing costs (Bernoth and Wolff 2008; Gelpern et al. 2018; Connelly 2021; Rivetti 2021).

²³⁶ A DPA is a specific type of supplier credit (i.e., vendor financing) agreement. According to a recent IMF survey of public debt disclosure requirements in 60 jurisdictions, “[f]ew countries explicitly include arrears, suppliers credit agreements, and/or assumptions of payment obligations under guaranteed loans in the definition of public debt” (Vasquez et al. 2024: 26).

²³⁷ It told the legislature that its arrangement with Sinohydro “would not add to the debt stock” (Ofori-Atta 2018). The Ghanaian Presidency characterized the arrangement with Sinohydro as “innovative outside the box thinking” (Presidency of the Republic of Ghana 2018).

■

“In 2018, a new sovereign borrowing model was pioneered by Sinohydro Corporation Limited (“Sinohydro”) in Ghana. Other Chinese SOEs are now replicating and scaling the deferred payments agreement (DPA) models in various regions.”

Other Chinese SOEs are now replicating and scaling the DPA models in various regions, including Latin America and the Middle East (Gelpern et al. 2025a). In recent years, Iraq’s Ministry of Finance has borrowed nearly \$7.5 billion from a wide variety of Chinese SOEs through DPAs for at least 15 infrastructure projects.²³⁸ We now know—due to the work of journalists, civic monitors, and legislative overseers—that all of these borrowings are collateralized against oil export receipts. However, at the time when the borrowing arrangement was originally negotiated, Iraq’s parliament could not obtain even basic details about the applicable borrowing terms and conditions.²³⁹ In December 2020, it summoned the Chinese Ambassador to Iraq to provide more information, and he declined their request (Karam 2022). Nor did the Government of Iraq disclose any of these repayment obligations to the World Bank’s DRS.²⁴⁰ Five years later, not much has improved. In a 2025 assessment of Iraq’s progress in meeting its voluntary disclosure commitments, the Extractive Industries Transparency Initiative (EITI) concluded that the Government of Iraq has made “limited disclosures related to an oil-backed loan provided by People’s Republic of China” and has neither

²³⁸ For more on these projects, see Chapter 3.

²³⁹ On May 11, 2018, China Export & Credit Insurance Corporation (Sinosure) and the Ministry of Finance of the Republic of Iraq signed an export credit insurance cooperation framework agreement (contract ID# FA-IRAQ-001). Under the terms of the 20-year agreement, the Ministry of Finance of the Republic of Iraq is authorized to borrow up to \$10 billion—or an equivalent amount in other currencies such as RMB—via subsidiary buyer’s credit facility agreements with PRC banks and/or commercial contracts with deferred payment clauses (i.e. supplier’s credits) with Chinese companies (exporters) for projects in the ‘oil, gas, energy, infrastructure, communications, education, healthcare or electricity sectors’ that are ‘located in the areas in Iraq deemed safe by the Embassy of China and the Government of Iraq.’ All borrowings under the framework agreement must carry maturities that do not exceed 15 years and they must be backed by an approved credit insurance policy from Sinosure. The framework agreement also specifies that the Government of Iraq is responsible for making advance payments worth no less than 15% of the total cost of the underlying commercial contracts supported by the subsidiary buyer’s credits and supplier’s credits. It can be accessed in its entirety via https://docs.aiddata.org/ad4/pdfs/how-china-lends-2/IRQ_2018_001.pdf

²⁴⁰ The Government of Iraq did not disclose any of these PPG repayment obligations to the World Bank’s DRS when it first contracted the debts and it still has not done so. According to the latest IDS data (published in December 2024), the Government of Iraq did not receive any PPG loan commitments or disbursements from official sector or private sector Chinese creditors between 2018 and 2023 (World Bank 2024a).

“disclose[d] the total value of the agreement [...] nor key terms of the loan such as interest rate and loan tenor” (EITI International Secretariat 2025: 56).²⁴¹

Another version of the DPA model (borrowing arrangement) has recently emerged in Nicaragua. After establishing diplomatic ties with the PRC in December 2021, the Government of Nicaragua contracted 14 loans—via DPAs—worth \$1.4 billion with five Chinese SOEs for various public infrastructure projects between 2023 and 2025. All of these loans are based on a common contractual template, despite the fact that the Government of Nicaragua signed 14 different DPAs with a diverse set of Chinese SOE creditors, including China Communications Construction Company Limited (CCCC), CSCEC International Construction Co., Ltd., China CAMC Engineering Co., Ltd. (CAMCE), Zhengzhou Coal Mining Machinery Group Co., Ltd., and China Iconic Technology Company Limited. The DPA instruments diverge from the standard sovereign credit instruments of China’s policy banks (China Eximbank and CDB) in important ways. They have shorter maturities, less generous grace periods, higher interest rates, and larger penalties for missing payments. All of the DPA borrowings, except one, are denominated in RMB and they all require multiple credit enhancements (cash collateral and credit insurance).²⁴² Although the Chinese SOEs use borrowed funds from Chinese state-owned banks (via ARFAs) to lend to the Government of Nicaragua, they remain the “creditors of record.”²⁴³ As such, Nicaragua’s Ministry of Finance does not identify China as one of its bilateral or official sector creditors (Ministerio de Hacienda y Crédito Público de Nicaragua 2024). Nor does it publish disbursements, repayments, or amounts outstanding for the individual loans that it has contracted with Chinese SOEs. It does not even report such data for Chinese SOEs as a group. Rather, it aggregates all of these loans into a large, residual, “black box” category of supplier’s credits and other loans (“proveedores y otros”).

²⁴¹ In July 2025, the IMF flagged a major increase in Iraq’s ring-fenced foreign currency reserves to secure and repay infrastructure project debts to China. It noted a “significant accumulation of deposits [that] reflects the increase in balances of a segregated account where proceeds for oil sales to China are deposited” and that these “funds can only be used to finance specially designated capital spending projects and are not available for financing the general budget deficit” (IMF 2025a: 5).

²⁴² Nearly all of these loans require that borrowers purchase a credit insurance policy from Sinasure and maintain a minimum cash balance in a debt service reserve account (DSRA) that is equivalent to one semi-annual principal and interest payment (Gelpert et al. 2025b).

²⁴³ Nor do Chinese SOEs accept the notion that they are official sector creditors. As such, these debts are exempted from official sector debt restructuring processes (Parks et al. 2023).

2. PxF facilities: Pre-export financing (PxF) facilities—arrangements in which a commodity producer (as a borrower) takes advance payment for commodity exports that it will deliver in the future and repays a commodity importer (as a creditor) with the cash proceeds from its commodity export sales—are notoriously opaque.²⁴⁴ It is common for lenders and borrowers to shield PxF facilities from public scrutiny via confidentiality agreements (e.g. IMF 2020a, 2022, 2023). When the borrowers of record are SOEs, it is also common for finance ministries to deny knowledge of PxF facilities or refuse to acknowledge them as sources of public debt exposure (Villavicencio Valencia 2016; World Bank and IMF 2018; Soares de Oliveira and Vallée 2021; IMF 2023b).²⁴⁵ In some cases, neither the finance ministry nor the SOE will even acknowledge that a PxF facility is a loan (IMF 2017; World Bank and IMF 2018).²⁴⁶ In other cases, an SOE in the borrower country will directly contract the PxF facility and discreetly sign a side agreement with the finance ministry to relinquish the proceeds of the loan to the finance ministry for its discretionary use (World Bank and IMF 2018; El Comercio 2018a, 2018b; Zurita et al. 2020). These types of off-balance sheet transactions are particularly problematic in that they involve guile and obfuscation by the sovereign. As such, when these hidden debts become public, the sovereign's credibility is damaged, which can increase its cost of borrowing or limit its ability to borrow altogether (Lupo-Pasini 2021; Kondo et al. 2024; Horn et al. 2024).

Consider the case of Mongolia's PxF borrowings from NORINCO. Between 2008 and 2019, the country's public debt to GDP ratio skyrocketed from 33% to 75% (IMF 2009; The Government of Mongolia 2025). During this period, it accumulated a particularly high level of public debt exposure to China—more than 30% of GDP when PBOC swap

²⁴⁴ PxF facilities are collateralized debt instruments (IMF 2003; Jones Day 2024; Gelpert et al. 2025a).

²⁴⁵ According to Ricardo Hausmann, the former Director of Harvard's Growth Lab and former Minister of Planning in Venezuela, "[o]ne recent practice used by both China and Russia is to lend against future exports, as in the case of oil in both Ecuador and Venezuela. These arrangements come in two flavors: outrageous and beyond belief. The outrageous version is based on the idea that this debt is not really debt, but just a pre-purchase of oil. This claim is ridiculous, because debt is any obligation you take on today that you commit to repay with your future revenue. Moreover, it is not just any old debt; it is debt collateralized by the future stream of exports, which makes it super-senior debt—more senior than debt from entities with so-called preferred creditor status such as the World Bank and the International Monetary Fund. Not counting it as debt is clearly outrageous" (Hausmann 2019).

²⁴⁶ For example, in 2021, South Sudan contracted a PxF facility worth approximately \$442 million. According to the U.N. Security Council, "[the] facility was not classified as a loan" and "this claim on South Sudanese future oil production was not included in the Government's disclosure of debts, nor in an independent audit of these debts" (United Nations Security Council 2024: 35-36).

debt is included (Malik et al. 2021; Parks et al. 2023). By 2020, Mongolia's Ministry of Finance was facing significant pressure from the IMF to limit its external borrowings (IMF 2020b). However, research and experience suggest that as governments accumulate high levels of public debt exposure, incentives to finance public infrastructure projects in less conventional ways increase (Costello et al. 2017; Gelpert et al. 2025a). Between 2020 and 2022, Erdenes Tavan Tolgoi LLC (ETT)—a Mongolian state-owned mining company—contracted three PxF facilities with NORINCO (a Chinese SOE) worth more than \$1 billion.²⁴⁷ The PxF facilities “are akin to collateralized debt instruments, since the contracted loans are collateralized by future coal export receipts, and the contracts allow for the repayment of the loan with cash or coal” (IMF 2023b: 58).²⁴⁸ They are “not included in Mongolia's public and publicly guaranteed debt stock aggregates at this stage” but pose “contingent liability risks for government debt” (IMF 2023b: 55, 59). The proceeds of the loans are earmarked for the Dornod–Sainshand Oil Pipeline Project, the 477 km Tavantolgoi-Manlai-Khangai Paved Road Construction Project, and the Tavan Tolgoi (TT) Coal Washing Plant Project. According to the IMF, “the contracts were originally protected by secrecy clauses and not submitted to Parliament for approval, nor disclosed to the public” (IMF 2023b: 55). However, in December 2022, allegations of coal theft and embezzlement of coal sales revenue from ETT led to public protests.²⁴⁹ The Government of Mongolia responded by putting a senior finance ministry official in charge of ETT and “pass[ing] an emergency resolution to declassify ETT contracts” and “hir[ing] an international audit firm to look into ETT's operations” (IMF 2023b: 55). ETT's contracts with non-Chinese firms were ultimately declassified. However, NORINCO “denied the authorities' request to disclose the contracts [...] on account of the confidentiality clause” (IMF 2023b: 55).

The Government of Ecuador's off-balance sheet borrowings via PetroEcuador also help to illustrate why PxF facilities often present unique transparency challenges. In January 2016, PetroEcuador (Ecuador's state-owned oil company) signed a \$970 million

²⁴⁷ The lender of record for these transactions was Glory Town Holdings Limited, a wholly-owned subsidiary of NORINCO (a Chinese SOE) that is legally incorporated in Hong Kong.

²⁴⁸ On this point, see also Gelpert et al. (2025a).

²⁴⁹ In December 2022, Mongolia's anti-corruption agency—the Independent Authority Against Corruption (IAAC)—also announced the arrest of 17 individuals who allegedly participated in the theft of ETT coal, including “two former ministers, seven members of Parliament, and several former directors of [ETT]” (Government of Mongolia 2025: 14).

syndicated PxF facility agreement with ICBC, China Eximbank, China Minsheng Banking Corp. Ltd., Deutsche Bank AG, and Société Générale S.A. The loan agreement was classified as “secret” by the borrower at the request of the Chinese lenders (Dirección Nacional de Auditoría de Deuda Pública y Finanzas 2018; La Nación 2020). However, investigative reporters and government oversight institutions later discovered that the loan carried a 5-year maturity and an interest rate of 3-month LIBOR plus a 6.2% margin (Dirección Nacional de Auditoría de Deuda Pública y Finanzas 2018; Zurita et al. 2020; López 2024). They also discovered that the loan was collateralized against crude oil sales from PetroEcuador to PetroChina International under an offtake contract (Dirección Nacional de Auditoría de Deuda Pública y Finanzas 2018; Zurita et al. 2020; López 2024). Then, in September 2017, the General Manager of PetroEcuador announced that the loan agreement had mysteriously vanished from the state-owned oil company’s archives (La Nación 2020). The \$970 million PxF facility was one of four such loans worth approximately \$6 billion that PetroEcuador secured after signing a secret “inter-institutional agreement” with the Ministry of Finance in late 2014. Under the terms of the inter-institutional agreement, PetroEcuador agreed to secure external financing via oil pre-sales for projects and programs designated as priorities by Ecuador’s Ministry of Finance (El Comercio 2018a, 2018b). As part of a conditionality package, the IMF later demanded that PetroEcuador and the Ministry of Finance publish their external debt contracts, including PxF facilities (IMF 2020a, 2021). They largely met the condition, but PetroEcuador later took all of the contracts that it had published offline (La Nación 2020). The \$970 million syndicated PxF facility agreement was never published due to confidentiality restrictions (La Nación 2020).

The secrecy of PetroEcuador’s borrowings via PxF facilities is a longstanding problem. Between 2009 and 2013, it contracted \$7.1 billion of debt through oil prepayment agreements with PetroChina and UNIPPEC. However, these agreements were not made public until 2021.²⁵⁰ For years, the State Comptroller’s Office had called for public disclosure of these agreements. In March 2013, it approved an audit report (DA3-0015-2012), which found that 5 Petroecuador officials sold oil to PetroChina at

²⁵⁰ Shortly thereafter, they vanished from PetroEcuador’s website. However, AidData has identified the contracts through the Wayback Machine: <https://web.archive.org/web/20210727061120/https://sistemasinternos.eppetroecuador.ec:8301/rcp/GC/IComercial/invitaciones/consultaInvitacionesNS.cfm?titulo=%24titulo&anio=2021&tipo=contratos&ejecuta=Buscar>

below-market rates without economic or technical justification. The same report flagged the participation of a company (Taurus) as an intermediary in the shipments and transfers of crude oil acquired by Petrochina to other countries, leaving open the possibility that Petrochina may have been reselling the crude oil at prices higher than those purchased to Petroecuador. It was later revealed—through the Panama Papers—that Enrique Cadena Marín and Jaime Baquerizo Escobar were receiving \$1 commissions for every barrel of oil sold to Petroecuador. These individuals were subsequently convicted in the U.S. on money laundering charges. Under pressure from China, Ecuador's Vice President (Jorge Glas) sent an email in August 2013 to President Rafael Correa and his legal adviser (Alexis Mera) to inform them that the State Comptroller General's audit report would be “cleared up and vanished” (“el informe de Contraloría había sido ‘aclarado y desvanecido’”).²⁵¹ However, DA3-0015-2012 did not actually vanish until March 2016, one month before the Government of Ecuador was supposed to sign a large, oil-backed loan agreement with China Development Bank.²⁵²

3. Currency Swap Borrowings: Currency swap borrowings present another uniquely important challenge. Our data capture \$63.5 billion of PBOC currency swap borrowings (excluding rollovers) with 17 central banks, of which 69% were contracted between 2016 and 2023.²⁵³ However, very few countries voluntarily disclose their PBOC swap borrowings via international reporting systems (see World Bank 2020b for a discussion). The DRS characterizes itself as “the most important single source of verifiable information on the external indebtedness of low- and middle-income countries” (World Bank 2020b: 1). Governments that participate in the World Bank's Debtor Reporting System (DRS) are asked to report their long-term debt repayment obligations to external creditors on an annual basis. Doing so is a requirement of borrowing from the World Bank through its IDA and IBRD windows (World Bank 2020b). Given that

²⁵¹ Jorge Glas was sentenced to six years in prison for his involvement in a separate corruption scandal involving Odebrecht.

²⁵² Pablo Celi, who was the Sub-Comptroller General of Ecuador at the time, was informed that if DA3-0015-2012 remained in the public domain, it could undermine the Government of Ecuador's ability to borrow from China Development Bank in the future (or affect oil presales between PetroEcuador and PetroChina. AidData has recovered a copy of DA3-0015-2012 through the Wayback Machine. It can be accessed in its entirety via <https://web.archive.org/web/20200923172102/https://www.eluniverso.com/sites/default/files/archivos/2016/06/da3-0015-2012.pdf>

²⁵³ When rollovers are included, the tally increases to \$285 billion.

long-term debt is defined in the DRS as debt “with an original contractual or extended maturity of more than one year [...],” a literal interpretation of the prevailing reporting rules is that PBOC swap line borrowings need not be reported to the DRS (World Bank 2000: 4). Nearly all of these borrowings carry *de jure* maturities of one year or less (i.e., they are initially scheduled for repayment in 12 months or less). However, recent research has demonstrated that the *de facto* maturity of the average PBOC swap line borrowing is 3.5 years (Horn et al. (2023a)).²⁵⁴ The World Bank first raised concerns about the underreporting of PBOC swap debt in 2020, questioning whether “currency swap arrangements that represent loans from other central banks are reflected in external debt stocks of low- and middle-income countries” (World Bank 2020a: 13). At that time, it clarified that “[t]he DRS [...] considers one-year [central bank] deposits that are consistently rolled over (de facto) to be long-term debt” (World Bank 2020a: 13). One year later, it announced that one of its top priorities was “incorporating Central Bank deposits and currency swaps lines into the DRS dataset” (World Bank 2021: 29).

This effort to document and disclose more opaque and underreported sources of public debt exposure has yielded some results. Consider for example Argentina’s serial borrowings through its PBOC swap line. In 2023, *Reuters* reported that “[n]either China nor Argentina have released much detail of the swap arrangement or any borrowing under it, so little is known about the [\$19 billion] currency line signed more than a decade ago” (Do Rosario 2023). Mark Sobel—who served as the U.S. representative at the IMF from 2015 to 2018—noted at the time that “[t]he Chinese swaps are highly opaque” (Do Rosario and Strohecker 2023). According to the *South China Morning Post*, “Buenos Aires said the terms of the swap with the PBOC were part of a confidential agreement and could not be made public” (Patrick 2023). Prior to 2024, the Government of Argentina did not acknowledge any long-term swap debt to the PBOC in its annual disclosures to the DRS.²⁵⁵ In total, it acknowledged approximately \$3 billion of public debt exposure to official sector creditors in China (World Bank

²⁵⁴ The source of the gap between the *de jure* and *de facto* maturities is that central banks that borrow from the PBOC frequently see their final maturity dates extended—or they repeatedly receive short-term loans to refinance maturing debts (Horn et al. 2023).

²⁵⁵ At the time, these debts were not included in the DRS because the *de jure* maturities of BCRA’s borrowings through its PBOC swap line fell between 3 and 12 months. However, four years at the World Bank clarified that participants in the DRS should report borrowings with *de facto* maturities of more than one year (even if they carry *de jure* maturities of one year or less), the Government of Argentina acknowledged its swap debt to the PBOC as a long-term, source of public debt exposure to an external creditor (World Bank 2020a: 13).

2023b). However, in late 2024, it revised its previous disclosures and reported a dramatically higher level of public debt exposure to official sector creditors in China: \$12.4 billion in 2015, \$11.8 billion in 2016, \$13.5 billion in 2017, \$22 billion in 2018, \$21 billion in 2019, \$22.9 billion in 2020, \$23.2 billion in 2021, \$21.7 billion in 2022, and \$21.2 billion in 2023 (World Bank 2024c).²⁵⁶ These major changes resulted from the inclusion of one particularly large and opaque source of public debt exposure to China (the central bank's swap debt to PBOC), which had not been previously reported to the DRS for nine consecutive years. Despite ongoing efforts to revise historical errors of omission and collect more complete data on a going forward basis, the vast majority of PBOC swap debt remains unreported to the DRS. Nor do finance ministries in borrowing countries include PBOC swap debt in their annual public debt reports. These omissions are consequential because PBOC swap debt usually accrues interest at a substantially higher rate than BRI infrastructure project debt, which means that refinancing with PBOC swap debt can significantly increase the net present value of a sovereign's stock of outstanding debt to China (Horn et al. 2023a).

4. **Repurchase Agreements:** In 2021, the President of the World Bank warned the international community that “low-income countries are starting to use central-bank repurchases and foreign-currency swaps to support external borrowing rather than as tools of monetary policy. These operations do not show up in government debt statistics, and the databases of international financial institutions do not capture them either” (Rivetti 2021: i). His admonition was largely ignored. Four years later, the World Bank sounded the alarm again, noting that “[t]o alleviate [...] pressures, some countries are turning [...] to more unconventional and often less transparent financing instruments—such as private placements, central bank swaps, collateralized loans, and *overcollateralized repurchase agreements*” (World Bank 2025b: 1, emphasis added).²⁵⁷ It also flagged that “[t]he legal and implementation complexities of such

²⁵⁶ These types of major backward revisions to the IDS data are not usual. Horn et al. (2024) provide evidence that systematic underreporting of public debt is a feature rather than a bug of the IDS. Over all countries and years, they “identify USD 1 trillion in ‘hidden’ sovereign borrowing that is added to [IDS] debt statistics only in hindsight [...]” (Horn et al. 2024: 1). Also see World Bank (2025b: 20).

²⁵⁷ As explained by the World Bank and IMF (2020: 7), “[a] repo agreement involves the sale of securities for cash, at a specific price, with a commitment to repurchase the same or similar securities at a fixed price either on a specified future date or with an open maturity. Other securities—with potentially a much larger face value—are provided as collateral. The economic nature of the transaction is the same as that of collateralized loan because the risks and rewards of ownership of the securities remain with the original owner (security provider).”

instruments [...] can result in situations where even governments themselves are unaware of the extent of their obligations, severely undermining their ability to finance development and increasing debt sustainability risks” (World Bank 2025b: 1).²⁵⁸

Chinese state-owned commercial banks are increasingly involved in overcollateralized repurchase (“repo”) agreements with sovereign borrowers. ICBC and ICBC Standard Bank PLC participated in four separate, \$1 billion repo agreements with the National Bank of Angola between 2016 and 2017; ICBC Standard Bank PLC participated in a \$3.8 billion syndicated repo agreement with the Central Bank of Egypt in 2018; and ICBC Standard Bank PLC participated in a \$237.6 million syndicated repo agreement with the Government of Ecuador in 2019. More recently, Bank of China Limited, ICBC Standard Bank PLC and a group of non-Chinese creditors participated in a \$1 billion syndicated repo agreement with Argentina’s central bank (BCRA) in January 2025 and a \$2 billion syndicated repo agreement in June 2025 with BCRA in January 2025.

The IMF and World Bank have raised questions and concerns about many of these transactions. For example, they have criticized the Government of Ecuador’s syndicated repo agreement with ICBC Standard Bank, Goldman Sachs, and Credit Suisse for “over-collateralizing the amount borrowed with bonds *never included in public debt statistics*” (World Bank and IMF 2023: 16, emphasis added).²⁵⁹ A separate, but related, concern is that this opaque form of sovereign borrowing is particularly expensive. Argentina is a case in point: its repo borrowings carry 2-3 year maturities and 8-9% all-in interest rates.

In Table 2.1, we evaluate whether it is generally true that more opaque sources of Chinese debt are more expensive. Our newly collected data demonstrate that borrowing via non-standard PPG credit instruments comes at a higher price than borrowing via standard PPG credit instruments. Borrowers, on average, end up paying 1.5 additional percentage points of additional interest. They are also granted

²⁵⁸ The same report notes that these “unconventional, opaque debt instruments [...] may fall outside the scope of standard disclosure frameworks [and] introduce nonstandard legal terms, restrict refinancing flexibility, and [...] subordinate other creditors” (World Bank 2025b: 2).

²⁵⁹ The World Bank has criticized Egypt’s \$3.8 billion syndicated repo agreement on very similar grounds (World Bank 2021a: 75). The nub of its concern is that repo agreements are “particularly problematic” when they “use the countries’ own sovereign bonds as collateral, as they may significantly dilute other creditors’ rights in case of default” (World Bank 2025b: 29).

substantially shorter grace periods and maturities. As a result, the concessionality gap between standard and non-standard PPG credit instruments is substantial: nearly 14 percentage points lower for standard PPG credit instruments.²⁶⁰

Table 2.1: Pricing of China’s overseas PPG lending portfolio by credit instrument type, 2000-2023

Averages weighted by loan commitment amounts, constant 2023 USD

Metric	Standard credit instrument	Non-standard credit instrument
Interest rate (%)	3.22	4.79
Grace period (years)	5.27	2.46
Maturity (years)	17.10	6.12
Grant element (IMF, %)	16.21	2.45

Notes: For China’s overseas PPG loan commitments in the 1.0 version of AidData’s CLG-Global Dataset, this table reports weighted average interest rates, grace periods, maturities, and grant elements (using the IMF method) across two cohorts: standard and non-standard credit instruments. For each cohort, the reported statistic is the weighted average of the measure across all eligible loans, using commitment amounts expressed in constant 2023 USD as weights. Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the Level_of_Public_Liability field. See Section A3.5 in the Appendix for more details on how standard and non-standard credit instruments are defined.

Section 3: What have we learned about the scale, scope, and composition of China’s overseas lending program?

In this chapter, we have presented evidence that challenges the conventional wisdom about the scale, scope, and composition of China’s overseas lending program. First, it is vastly larger than anyone previously realized. Second, China is ratcheting up—rather than ratcheting down—its lending commitments to foreign borrowers. Third, with the

²⁶⁰ These findings are broadly consistent with the IMF’s argument that “[t]ransparency safeguards [...] [make] governments less likely to over-borrow or borrow in risky instruments (IMF 2023a: 7).

passage of time, Chinese lenders have redirected a disproportionate share of their cross-border credit to high-income countries and upper middle-income countries, many of which will likely graduate to the high-income bracket in the not-too-distant future. Therefore, it has become increasingly important to track these financial flows to high-income countries. Yet existing international reporting systems are neither designed nor used for this purpose. Fourth, China is pulling back from the full-recourse sovereign debt transactions and piling into the brownfield and greenfield FDI debt transactions, which presents a new set of monitoring and reporting challenges. Fifth, it is becoming more difficult to document the full range of China's cross-border lending operations because of reporting rules that (a) make Chinese creditors look like non-Chinese creditors, (b) allow borrowing institutions to disguise their true identities (in terms of their countries of origin and ultimate beneficial owners), and (c) make it easier for creditors and borrowers to not treat exotic and opaque credit instruments as sources of debt.

Chapter 3: Following the money beyond the Belt and Road

In the previous chapter, we demonstrated with newly collected data that China's overseas lending portfolio is vastly larger than anyone previously understood. The overall size of its lending portfolio has reached \$2.1 trillion, which is two to four times larger than previously published estimates suggest (Horn et al. 2019, 2021; Dreher et al. 2021, 2022; Parks et al. 2023). We also documented that there are relatively few jurisdictions in the world that have not borrowed funds from Chinese state-owned entities: 179 out of 217 jurisdictions received at least one loan commitment from an official sector creditor from China between 2000 and 2023.

In this chapter, we seek to better understand the changing nature and composition of the portfolio by following China's cross-border credit flows to their final destinations. In Section 1, we seek to answer the following questions: Where does the money go—and why? Who are the biggest recipients of Chinese credit—and how is this changing over time? And in what ways are the new recipients different from the old recipients?

In Section 2, we seek to better understand the geographical distribution of Chinese credit, while accounting for the increasingly important role of barriers to entry in host countries. We first document the increase in restrictions on inbound foreign capital over time and across sectors. Then, we track Chinese lending volumes before and after periods of heightened regulatory scrutiny. We also document the ways in which Chinese creditors are responding to changing conditions on the ground in host countries—for example, by channeling funds through SPVs and syndicates to keep a lower profile and avoid stirring controversy.

In Section 3, we explore the global game of “cat and mouse” that has evolved between Beijing and its borrowers. Governments in the developed and developing world are no longer taking a laissez-faire approach and welcoming inbound capital (debt and equity) from China, no questions asked. Increasingly, regulators, auditors, and counterintelligence officials in host countries are more closely scrutinizing Chinese-financed projects and activities via investment screening mechanisms (ISMs).

At the same time, Beijing is more aware than ever that its debt and equity investments in overseas projects have aroused suspicions and provoked national security concerns in host countries. Chinese investors and creditors are responding to this challenge by adopting new techniques to limit scrutiny and circumvent barriers to entry, such as by domiciling borrowing institutions in offshore financial centers, outsourcing public-facing roles to non-Chinese entities, and using stringent confidentiality and non-disclosure agreements, special purpose vehicles (SPVs), shell companies, and opaque and exotic financial instruments.

In Section 4, we seek to identify the sectors and sub-sectors that Beijing is targeting—and why. We also evaluate the extent to which China is focused on sectors and subsectors that host countries have identified as “sensitive” on national security grounds. With a newly developed coding scheme, we crosswalk China’s overseas M&A lending activities to the ten sectors that Beijing prioritized in its MIC2025 policy (described in Chapter 1) and the 17 sectors that host countries have most frequently deemed “sensitive” on national security grounds. We then assess the extent to which China’s cross-border M&A lending operations are aligned with MIC2025 and focused on “sensitive” sectors in host countries. We also evaluate Beijing’s effectiveness in getting overseas mergers and acquisitions approved and decode its playbook for doing so.

Finally, in light of our earlier finding (in Chapter 2) that a rapidly increasing share of China’s overseas lending portfolio supports upper-middle income and high-income countries, we turn our attention in Section 5 to the issue of portfolio coherence. We seek to answer the following question: are the lending policies and practices of Chinese creditors converging or diverging in the developed and developing world?

Our newly collected data provide important clues about the future direction of China’s overseas lending portfolio. For the most part, we find evidence of increasing portfolio coherence, with policies and practices converging in the following areas: more expensive borrowing terms (resulting in lower levels of concessionality), greater reliance on variable interest rates, higher levels of syndication (with participation from Chinese state-owned commercial banks), more lending to non-PPG borrowers, less infrastructure project lending, and greater use of liquidity support facilities. However,

we also find some areas of divergence: China increasingly denominates its loans to LIC and MIC borrowers in yuan and tethers the interest rates of these loans to the Shanghai Interbank Offered Rate (or the Loan Prime Rate set by PBOC), yet it continues to denominate its loans to HIC borrowers in dollars and rely on the corresponding reference rate for greenbacks (the Secured Overnight Financing Rate).

Section 1: Who are the biggest recipients of Chinese credit—and how has this changed over time?

In Map 3.1a below, we identify the top-20 recipients of official sector credit from China over a twenty-four year period of observation (2000-2023). To do so, we first aggregate lending commitments across all official sector creditors in China in constant USD at the recipient country level and then remove all short-term rollover facilities from the tally. Our data demonstrate that the U.S.—a high-income country—is the single largest recipient of official sector credit from China. This finding is both unexpected and counterintuitive. As China’s chief geopolitical rival, the U.S. has spent the better part of the last decade warning other countries of the dangers of accumulating significant debt exposure to China. Washington claims that Beijing is a predatory lender engaging in “debt trap diplomacy” (White House 2018a, 2018b, 2022, 2023; SFRC 2021; HFAC 2024). Indeed, the U.S. government—under the Trump and Biden administrations—has popularized the idea that China ensnares and subordinates foreign borrowers by plying them with easy access to credit for big-ticket infrastructure projects and negotiating contracts that require physical assets—like a seaports, airports, and electricity grids—to be surrendered in the event of default.²⁶¹


“Our data demonstrate that the U.S.—a high-income country—is the single largest recipient of official sector credit from China. This finding is both unexpected and counterintuitive.”

²⁶¹ It has done so in spite of overwhelming evidence that Chinese state-owned lenders prefer to collateralize on liquid assets rather than illiquid, physical assets (Parks et al. 2022; Gelpert et al. 2023, 2025a).

Yet curiously, the U.S. has accepted more credit from Chinese state-owned lenders than any other country in the world: \$201.83 billion in total between 2000 and 2023.²⁶² It has received few loans that qualify as PPG debt (\$3.56 billion for 20 projects and activities).²⁶³ But it has received many loans that qualify as non-PPG debt (\$198.27 billion for 1,635 projects and activities). These non-PPG loans, for the most part, either (a) support brownfield and greenfield FDI projects and activities, or (b) provide liquidity support to corporate borrowers (see Figure A5.10).²⁶⁴ While some of these lending operations in the U.S. have supported the construction of critical infrastructure or enabled Chinese companies to acquire critical technologies from American companies, many are guided by the pursuit of profit rather than the pursuit of geopolitical or geoeconomic advantage.

Map 3.1 presents the geographic distribution of all Chinese grant- and loan-financed projects and activities in the U.S. between 2000 and 2023.²⁶⁵ Chinese state-owned entities have, among other things, helped bankroll the construction of the Rio Grande, Plaquemines, Calcasieu Pass, Port Arthur, Freeport, and Corpus Christi LNG projects in Texas and Louisiana, the Dakota Access Oil Pipeline, the Sur de Texas-Tuxpan Natural Gas Pipeline, the Matterhorn Express Natural Gas Pipeline, the Champlain Hudson

²⁶² In Figure A5.10 in the appendix, we decompose China's portfolio of loan-financed projects and activities in the U.S. into PPG loans, greenfield FDI loans, brownfield FDI loans, and liquidity support facilities for corporations.

²⁶³ The PPG debt captured in the 1.0 version of the CLG-Global Dataset is not the result of direct borrowings by the U.S. federal government. Most of the borrowing institutions are state-owned entities, largely under the control of state or municipal governments, such as the Alaska Housing Finance Corporation or New York's Metropolitan Transportation Authority. Several of these borrowing institutions—for example, those responsible for terminal projects at Los Angeles International Airport and John F. Kennedy International Airport—are conduit borrowers affiliated with subnational governments that on-lent the proceeds to private sector entities. A 2010 loan to General Motors Holding was categorized as PPG debt because, at the time, the U.S. Treasury held a majority stake in the company due to the 2009 bailout of the U.S. automobile industry. The few cases in which a government agency is the borrower of record primarily relate to ICBC's contributions to syndicated liquidity support facilities with the Commonwealth of Massachusetts.

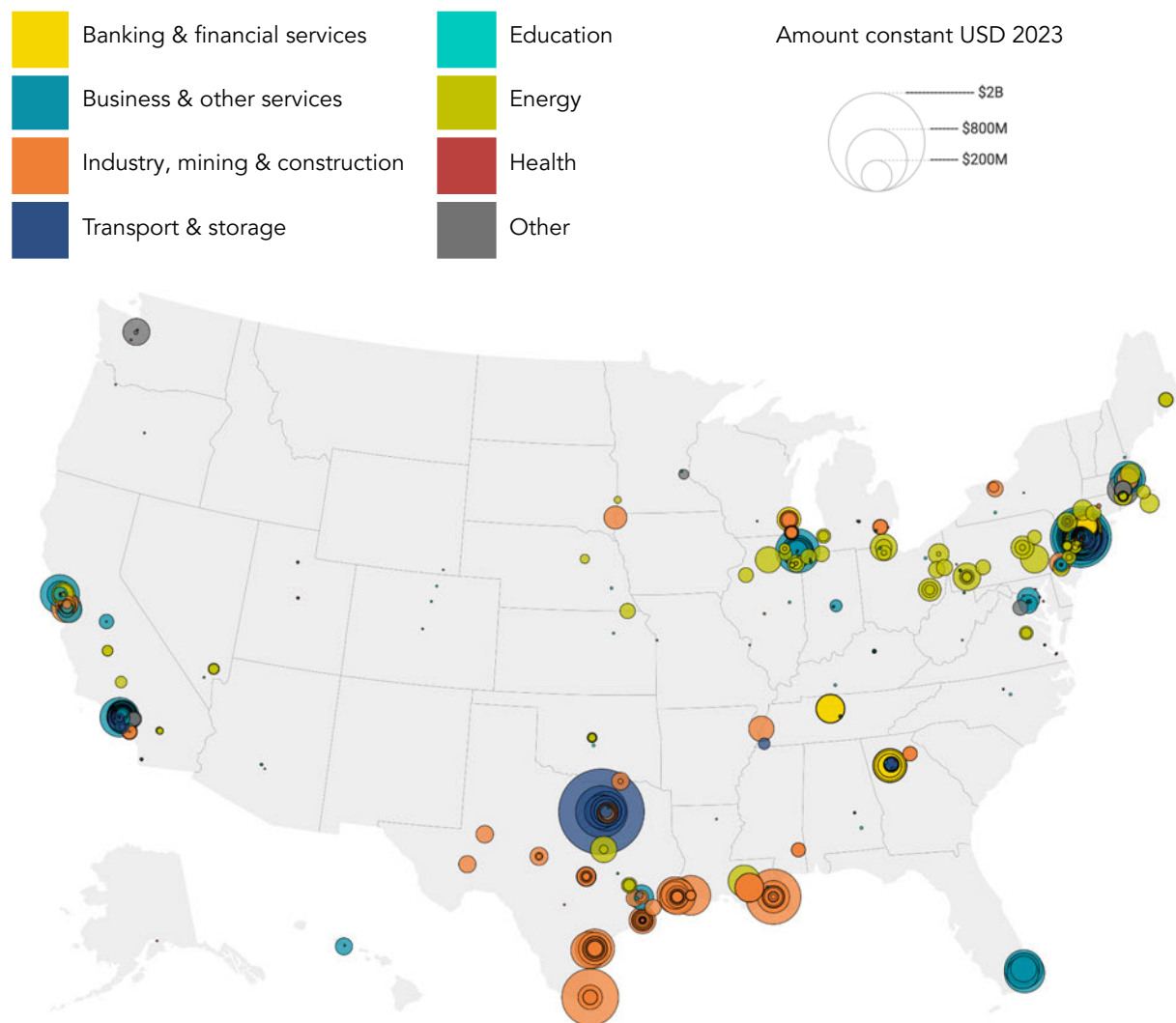
²⁶⁴ Between 2000 and 2023, Chinese state-owned creditors extended loans to U.S. borrowers worth \$27 billion for 209 greenfield FDI projects and activities, \$45 billion for 255 brownfield FDI projects and activities, and \$112 billion for corporate liquidity facilities. The remainder (\$13 billion) supported aircraft acquisition, real estate, and unspecified activities. China's brownfield FDI loans largely provide financing for cross-border mergers and acquisitions (M&A).

²⁶⁵ Map 3.1 adjusts the size of each project/activity based on its financial commitment amount (in constant 2023 USD). In Map A5.1, we provide a different version of the same sector-disaggregated map that does not adjust the size of each project/activity based on its financial commitment amount. In Map A5.2, we provide a map of loan- and grant-financed FDI projects and activities (in which the size of each project/activity is based on its financial commitment amount).

Power Express Transmission Line, data centers in Northern Virginia, and terminals at John F. Kennedy International Airport in New York and Los Angeles International Airport in California. They have also financed the acquisition of high-tech companies, such as OmniVision Technologies, Ingram Micro, Integrated Silicon Solution, Inc., the infrastructure and automotive business of Silicon Labs, IBM's global personal computer business, The Paslin Company, and Complete Genomics, Inc. The U.S. recipients of liquidity support from Chinese state-owned creditors—via working capital and revolving credit facilities—include a wide array of Fortune 500 companies, such as Amazon, AT&T, Verizon, Comcast, Tesla, General Motors, Ford, Boeing, Halliburton, Qualcomm, News Corp., and Disney.²⁶⁶

²⁶⁶ The 1.0 version of AidData's CLG-Global Dataset also demonstrates that two U.S. universities—Harvard University and the Regents of the University of California—have borrowed from Chinese state-owned creditors via liquidity support facilities.

Map 3.1: Locations of Chinese loan- and grant-financed projects and activities in the U.S., 2000-2023



Notes: This figure presents the locations of Chinese loan- and grant-financed projects and activities in the U.S. between 2000 and 2023. Each project/activity location is assigned 3-digit OECD sector codes in the 1.0 version of AidData's CLG-Global Dataset. The "other" category consists of projects and activities assigned to the following OECD sector codes: agriculture, forestry, fishing; communications; emergency response; government and civil society; other multisector; other social infrastructure and services; water supply and sanitation. The size of each centroid is derived from the financial commitment amount (in constant 2023 USD) directed to each project/activity location. Projects and activities with multiple locations (e.g. gas pipelines) are collapsed into a singular representative point using Python.

Contrary to the conventional wisdom, we also find that 10 of the 20 largest destinations for official sector credit from China between 2000 and 2023 were high-income countries (see Figure 3.1a). Several of these countries—such as Russia, Venezuela, and Argentina—either graduated from middle- to high-income status during this period or alternated between income classifications over time. Most others were high-income countries during the entire 24-year period of observation, including Australia, the UK, the U.S., Singapore, Germany, and Switzerland.

Figure 3.1a: Top 20 recipients of official sector credit from China, 2000-2023

■ High-income country ■ Transitional country ■ Low- or middle-income country

Country	Total loan commitments, 2023 USD Billions
 United States	202
 Russia	172
 Australia	130
 Venezuela	106
 Pakistan	74
 Angola	74
 Kazakhstan	64
 Brazil	64
 Indonesia	61
 United Kingdom	60
 Switzerland	41
 Argentina	36
 Singapore	35
 Germany	33
 Turkey	33
 Iran	29
 Malaysia	28
 Vietnam	27
 Ecuador	26
 Saudi Arabia	25

Notes: This table presents the top 20 recipients of official sector loan commitments from China between 2000 and 2023 by country and World Bank income bracket. The totals exclude short-term rollover facilities. Transitional countries are countries that transitioned to a high-income country from a LIC/MIC at any time between 2000 and 2023. Recipient countries are identified using the Country_of_Activity variable (where the financed projects/activities actually takes place) from the 1.0 version of AidData's CLG-Global Dataset.

Figure 3.1b: Top 20 recipients of official sector credit from China, 2018-2023

■ High-income country ■ Transitional country ■ Low- or middle-income country

Country	Total loan commitments, 2023 USD Billions
 United States	103
 Russia	28
 Australia	28
 Pakistan	27
 United Kingdom	22
 Turkey	22
 Saudi Arabia	18
 Indonesia	16
 Bangladesh	14
 Brazil	13
 Singapore	13
 Argentina	12
 Germany	12
 Malaysia	12
 United Arab Emirates	10
 Iraq	9
 Iran	9
 Egypt	9
 Kazakhstan	8
 Nigeria	8

Notes: This table presents the top 20 recipients of official sector loan commitments from China between 2018 and 2023 by country and World Bank income bracket. The totals exclude short-term rollover facilities. Transitional countries are countries that transitioned to a high income country from a LIC/MIC at any time between 2000 and 2023. Recipient countries are identified using the Country_of_Activity variable (where the financed projects/activities actually takes place) from the 1.0 version of AidData's CLG-Global Dataset.

In Figure 3.1b, we narrow the aperture and focus on the top-20 recipients of official sector credit from China between 2018 and 2023. There is a fair degree of stability in the high-income country composition of this alternative tally: eight of the high-income countries that ranked in the top-20 list of recipients between 2000 and 2023 also appear in the top-20 list of recipients between 2018 and 2023.²⁶⁷ However, one additional high-income country appears in the 2018-2023 tally: the United Arab Emirates (UAE).²⁶⁸ This change reflects a broader shift in the regional composition of China's overseas lending portfolio towards the Middle East and North Africa (MENA) region. Whereas only 3 of the 20 countries in the 2000-2023 tally (Turkey, Iran, and Saudi Arabia) are from the MENA region, 6 MENA countries appear in the 2018-2023 tally: Turkey, Iran, Saudi Arabia, Iraq, UAE, and Egypt.²⁶⁹

In Figure 3.2a, we identify the 20 recipient countries that experienced the largest absolute increases in official sector credit from China between 2018 and 2023. Malaysia, Russia, Pakistan, the Philippines, Singapore, Iraq, Botswana, Indonesia, the U.S., and Saudi Arabia sit at the top of the list. There is no one reason why these particular countries have benefited disproportionately from China's overseas lending program in recent years. Indonesia and Botswana have attracted large amounts of Chinese credit for critical mineral investment (FDI) projects involving copper, lithium, and nickel. Russia, Pakistan, and Saudi Arabia have faced public financial management challenges and sought to address challenges by allowing their central banks and finance ministries to borrow large sums through currency swap agreements with the

²⁶⁷ These recipient countries are the U.S, the UK, Australia, Singapore, Saudi Arabia, Germany, and Russia. The two HICs that are among the top 20 recipient countries between 2000 and 2023, but not 2018 to 2023, are Switzerland and Venezuela.

²⁶⁸ In a list of the top-30 recipients of official sector credit from China between 2018 and 2023, two additional HICs appear: France and Italy.

²⁶⁹ There are also preliminary indications that Chinese loan commitments to Middle Eastern borrowers continued to rapidly grow in 2024 and 2025. Chinese bankers have reported that the increasing prominence of Middle East lending is due to the prevalence of economically advantaged, highly creditworthy borrowers with associated profit potential (valuable given the debt burden of many lower- and middle-income countries) and geostrategic importance to China's energy security (Lin 2025). AidData has recently identified multiple high-value loans in Saudi Arabia and the UAE, including (1) a \$420 million China Construction Bank loan in 2024 to state-owned Dubai Aerospace Enterprise (DAE); (2) a \$300 million Bank of China loan in 2025 to DAE; (3) Agricultural Bank of China, Bank of China, and China Construction Bank contributions to a \$3 billion syndicated loan in 2025 to support the NEOM megacity project in Saudi Arabia; (4) at least \$1.21 billion in aggregate commitments from Agricultural Bank of China, ICBC, and Bank of China to a \$5 billion syndicated loan in 2025 for Abu Dhabi's sovereign wealth fund ADQ; and (5) a \$3.75 billion syndicated loan in 2025 from Agricultural Bank of China, Bank of China, and ICBC for the Jafurah shale gas project in Saudi Arabia.

PBOC and liquidity support facilities with China's state-owned policy and commercial banks.²⁷⁰ In the Philippines, Beijing found an eager ally in President Rodrigo Duterte and it agreed to bankroll his "Build, Build, Build" program.²⁷¹

Figure 3.2b below highlights the 20 recipient countries that experienced the largest absolute reductions in official sector credit from China between 2018 and 2023. A number of the countries on this list—including Angola, Ethiopia, Zambia, Ecuador, and Argentina—either defaulted on their sovereign debt obligations to Chinese creditors or sought to restructure such debts after encountering major liquidity or solvency problems. Other countries—such as Australia, the UK, and the Netherlands—introduced more stringent screening mechanisms for inbound foreign capital, which made it more difficult for FDI transactions involving Chinese investors and creditors to get approved.

For greater cross-country comparability, Figures 3.4a and 3.4b below normalizes the average annual change in official sector credit from China between 2018 and 2023 by measuring it as a share of recipient country GDP.²⁷² Several smaller countries—such as Guyana and Madagascar—appear near the top of this list of Beijing's biggest

²⁷⁰ For example, Saudi Arabia received a significant number of syndicated loans with high levels of Chinese bank participation, including an \$11 billion liquidity support facility for its Ministry of Finance that was supported by six Chinese state-owned policy and commercial banks in December 2023. In Pakistan's case, it received \$7.3 billion of rescue lending from CDB, SAFE, and Bank of China in 2023, of which \$4 billion was set to mature in 2024. This package consisted entirely of loans issued in previous years that were rolled over into 2023. These facilities provide a reliable source of liquidity for Pakistan in the aftermath of severe floods and an economic crisis in 2022.

²⁷¹ As we discuss at greater length in Section 2, China Telecom's acquisition of a 40% ownership stake in the country's third-largest telecom provider also paved the way for a 4G/5G network development project, which secured lending commitments worth more than \$4.5 billion from Chinese state-owned creditors.

²⁷² Between 2018 and 2023, several countries severed diplomatic ties with Taipei and established diplomatic ties with Beijing. The Solomon Islands and Nicaragua did so in September 2019 and December 2021, respectively. Beijing responded by showering both countries with large amounts of credit for big-ticket infrastructure projects: Solomon Islands secured a China Eximbank loan for a national broadband infrastructure project and Nicaragua secured a variety of loans from Chinese SOEs for airport and solar power plant projects (see Chapter 4).

borrowers in recent years (see Figure 3.4a).²⁷³ Guyana has a relatively low public-debt-to-GDP ratio (approximately 25%) and has recently borrowed from Chinese state-owned enterprises through non-standard credit instruments (that we discuss at greater length in Chapter 4).²⁷⁴ Iraq appears on the same list.²⁷⁵ It too has a relatively manageable stock of public debt and has chosen to finance the construction and rehabilitation of public infrastructure through non-standard credit instruments with Chinese companies. After signing a \$10 billion, oil-backed framework agreement with Sinosure in May 2018, Baghdad has borrowed extensively through deferred payment agreements worth approximately \$7.5 billion with a variety of Chinese state-owned enterprises for at least 15 infrastructure projects.²⁷⁶ These non-standard credit instruments require the borrowers “double up” on repayment safeguards: they must not only purchase a credit insurance policy from Sinosure but also pledge oil export revenues as a source of cash collateral.

Among those that experienced the largest reductions in official sector credit from China between 2018 and 2023—as a percentage of GDP—were countries facing significant liquidity and solvency challenges and countries with high levels of public

²⁷³ Laos also appears on the list. After falling into severe debt distress between 2020 and 2023, it doubled down on its relationship with Beijing, securing a series of emergency rescue loans from the PBOC and multiple syndicated loans from CDB and China Eximbank for the Vientiane-Vang Vieng Expressway Project (Horn et al. 2023a, 2023b). It also secured debt service deferrals between 2020 and 2024 worth approximately \$2.5 billion and a \$625 million cash infusion from China Southern Power Grid in exchange for a 90% ownership stake in the country's high voltage electricity transmission grid (Barney 2025).

²⁷⁴ The Government of Guyana has borrowed from Chinese state-owned enterprises through the deferred payment agreements (DPAs) that are described at greater length in Chapter 2. For example, in 2022, it contracted an EUR 136.1 million loan (DPA) from China CAMC Engineering Company Limited for a Regional Hospitals Project. In 2025, it also contracted a \$162.6 million loan (DPA) from China Road and Bridge Corporation for Lot 2 of the Palmyra to Moleson Creek Highway Upgrading Project. It is currently seeking to finalize a Chinese loan for the construction of a river bridge that would connect Suriname and Guyana.

²⁷⁵ Figure 3.1b also reinforces the importance of China's strategic pivot towards the Middle East and North Africa: Iraq, Turkey, Saudi Arabia, UAE, Iran, and Egypt all appear on the list of Beijing's biggest borrowers between 2018 and 2023.

²⁷⁶ These projects include the Construction of 1000 Schools Project, the Al-Nasiriyah International Airport Renovation and Expansion Project, the 1260 MW Salah Al-Din Oil-fired Thermal Power Plant Construction Project, Phase 1 of the Block-9 Al-Faihaa Oil Field Central Processing Facility (CPF) Project, the Nasiriyah Oil Depot Construction Project, the Power Stations Reconstruction Project, the 750 MW Solar Power Plant Project, the Baghdad Sewerage Projects, the 100 Bed Hospitals Project, the Al Anbar Combined Cycle Power Plant Completion Project, the Wasit Power Plant Overhaul Project, the Basra Water Pipeline Project, Phase 1 of the North Thermal Power Plant Project, Phase 1 of the Al-Shanafiya Steam Power Plant, and Phase 1 of the Conversion of Simple Gas Turbine Stations Project.

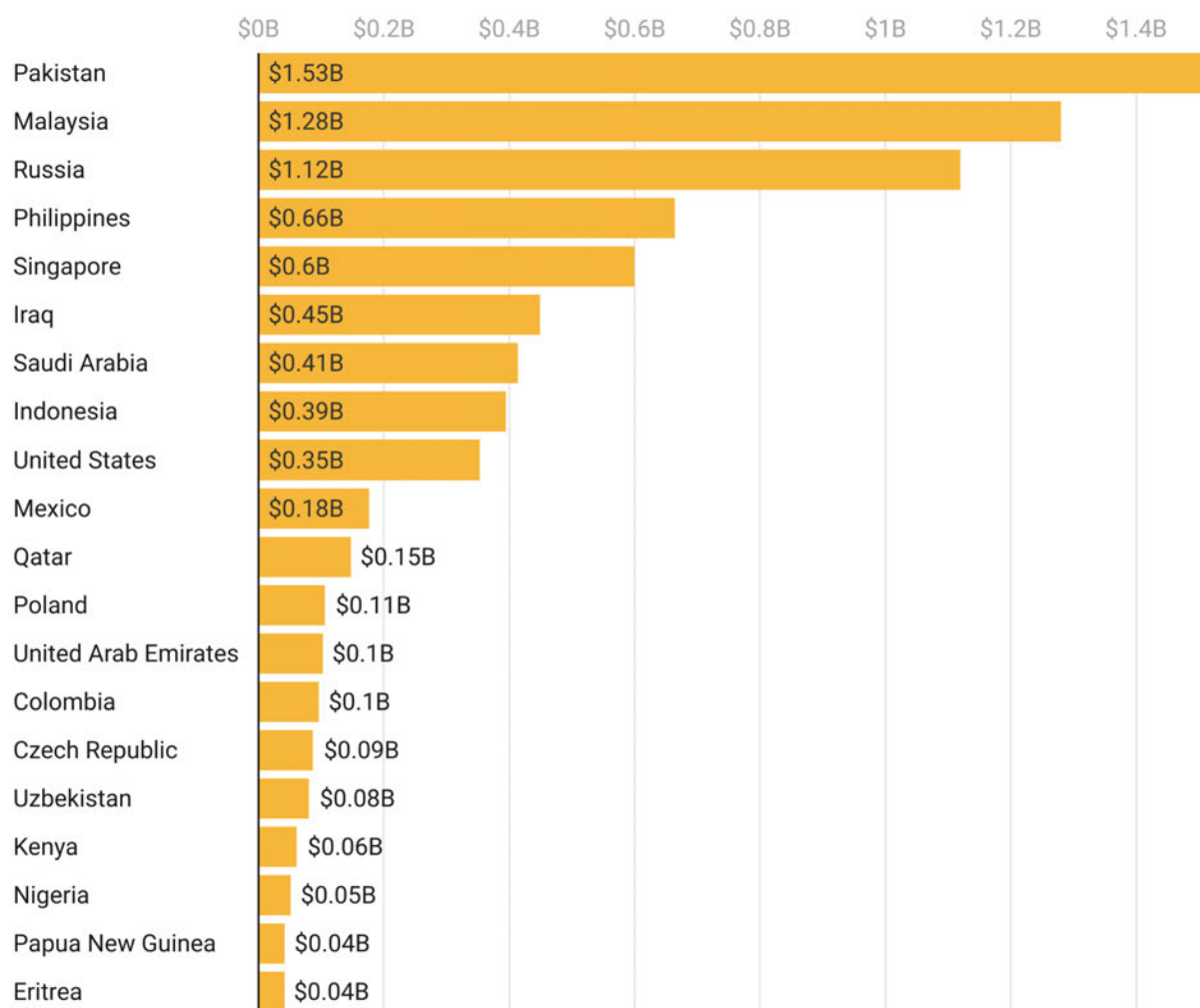
debt exposure to China: Angola, Argentina, Ghana, Ecuador, and Guinea (see Figure 3.4b). The overall PPG segment of China's overseas lending portfolio contracted between 2018 and 2023, but it did so in ways that disproportionately affected sovereign borrowers with insufficient cash on hand to service their outstanding debts to Chinese creditors.²⁷⁷ Angola is a case in point. When oil prices tumbled between 2018 and 2020 and it faced a cash crunch, Chinese state-owned creditors responded by sharply reducing new lending commitments (see Figure 3.3) and temporarily easing the terms of repayment under existing loan agreements.²⁷⁸ Indeed, the "precautionary principle" appears to be playing an increasingly important role in Beijing's efforts to manage repayment risk in its overseas lending operations. Several of its largest state-owned creditors are now following policies or practices that prohibit the issuance of new loans and new disbursements under existing loans in the event of default—and until borrowers resume normal debt service payments (Addis Fortune 2021; The Sunday Times 2025; Ghana News Agency 2023).

²⁷⁷ The sharp contraction in China's overseas PPG lending since 2018 is consistent with the "sudden stop" phenomenon documented in the international finance literature (Calvo 1998; Kaminsky et al. 2004). These episodes occur when outbound cross-border credit flows abruptly stop in response to deteriorating fundamentals, which can make liquidity shortages in borrowing countries more acute. Horn et al. (2025) document the same "sudden stop" phenomenon in China's overseas lending practices.

²⁷⁸ In 2020, CDB and ICBC agreed to defer principal payments under multiple facility agreements with the Government of Angola (Parks et al. 2023: 91).

Figure 3.2a: Countries with the largest increases in official sector loan commitments from China, 2018-2023

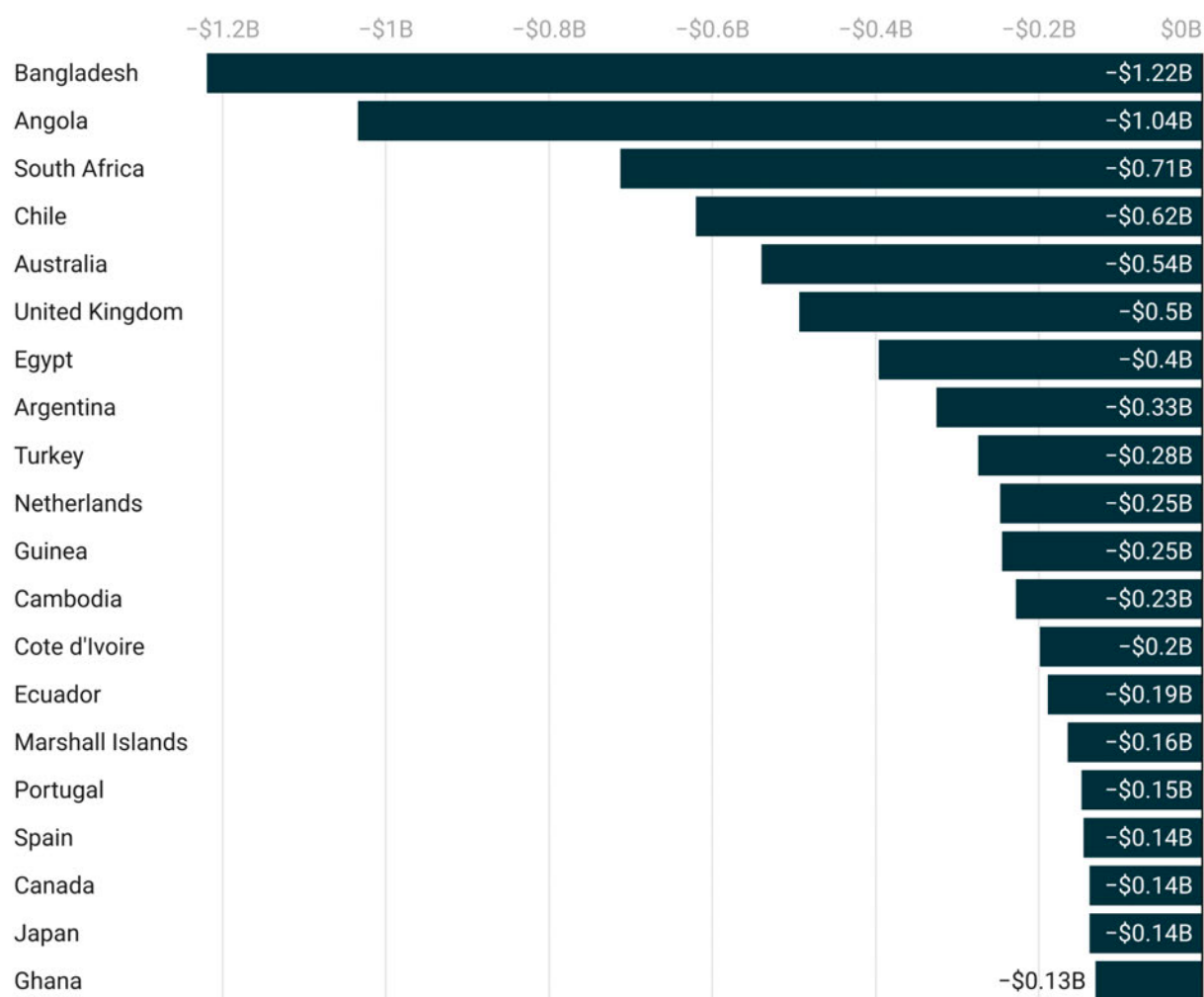
Average annual change, constant 2023 USD



Notes: For each country, the average year-on-year change in loan commitments (excluding short-term rollover facilities) is calculated from 2018 to 2023 in constant 2023 USD. The 20 countries with the largest increases are presented.

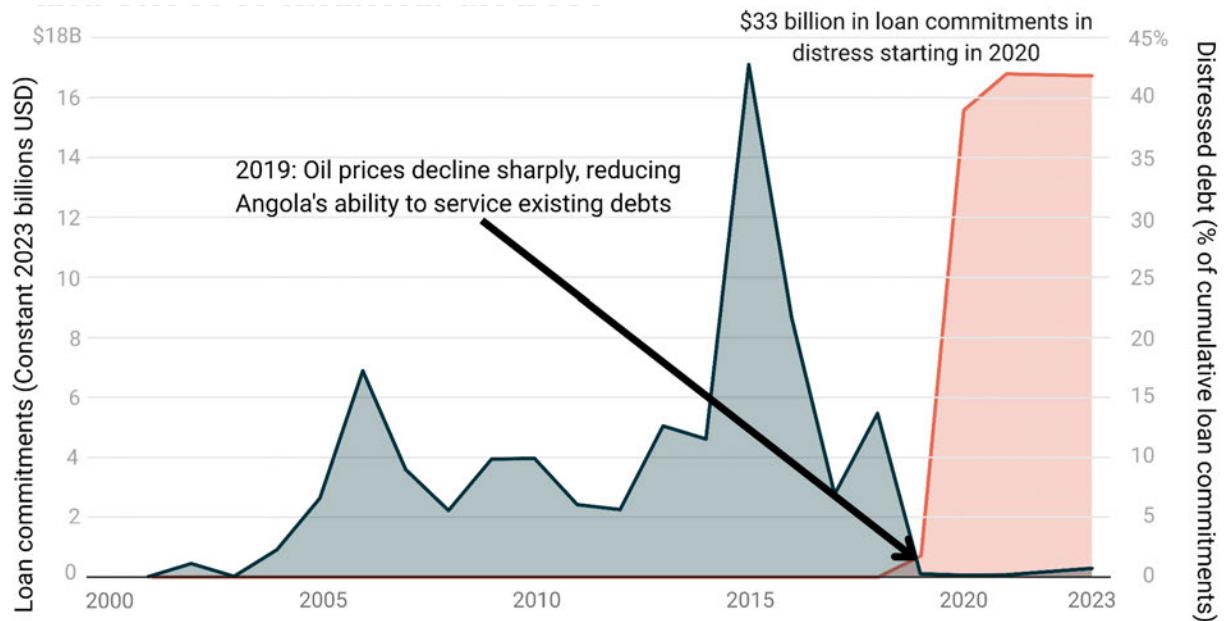
Figure 3.2b: Countries with the largest reductions in official sector loan commitments from China, 2018-2023

Average annual change, constant 2023 USD



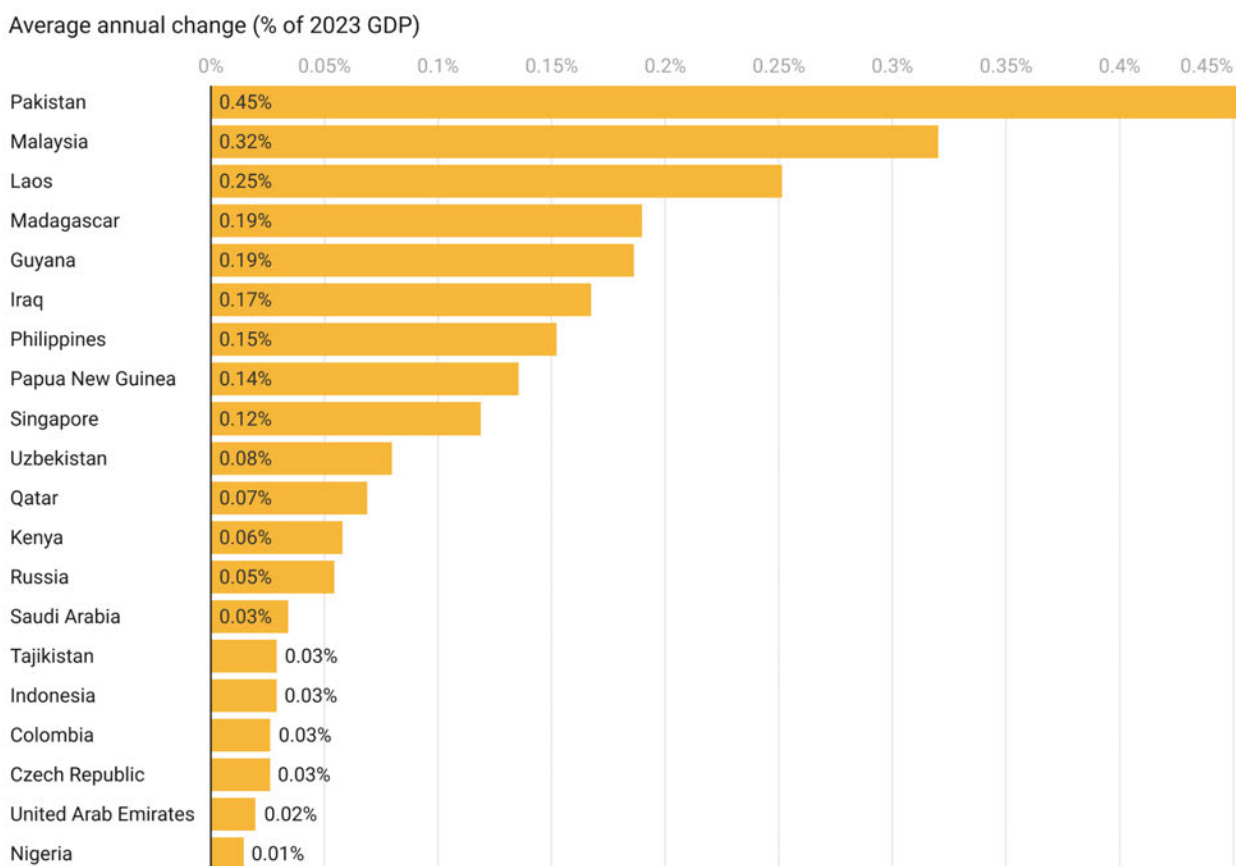
Notes: For each country, the average year-on-year change in loan commitments (excluding short-term rollover facilities) is calculated from 2018 to 2023 in constant 2023 USD. The 20 countries with the largest reductions are presented.

Figure 3.3: Trends in China's official sector lending to Angola and onset of financial distress



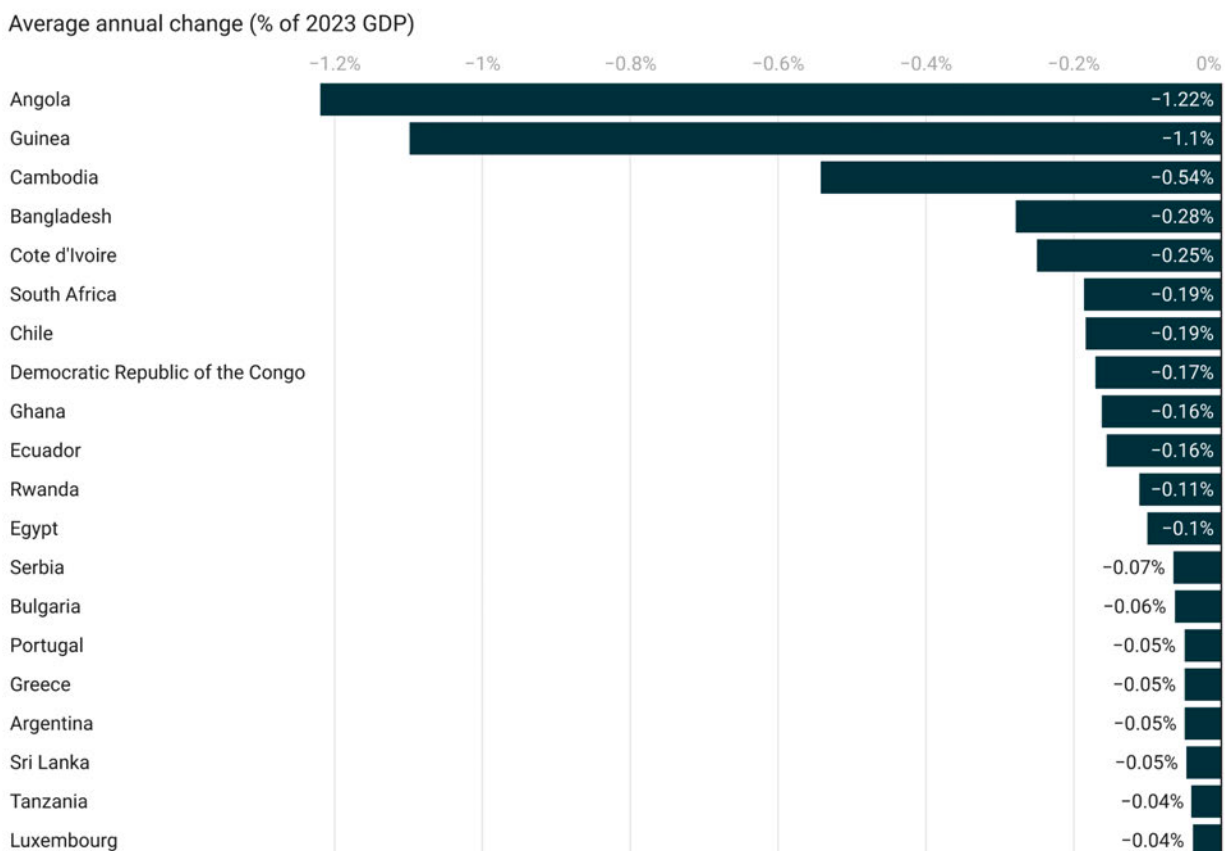
Notes: This figure presents China's official sector loan commitments to Angola between 2000 and 2023 (black line) and the cumulative percentage of its official sector loan commitments to Angola in financial distress (red line). The first data series (black line) corresponds to the left hand y-axis and is expressed in constant billion USD 2023. The second data series (red line) corresponds to the right hand y-axis and is expressed as a percentage of cumulative loan commitments. The onset of financial distress is recorded in the first year that evidence of distress is identified using the *Financial_Distress_Onset_Year* variable in AidData's CLG-Global 1.0 Dataset.

Figure 3.4a: Countries with the largest increases in official sector loan commitments from China, as a % of host country GDP, 2018-2023



Notes: The change is then expressed as a percentage of each country's 2023 GDP. The 20 countries with the largest increases are presented.

Figure 3.4b: Countries with the largest reductions in official sector loan commitments from China, as a % of host country GDP, 2018-2023



Notes: The change is then expressed as a percentage of each country's 2023 GDP. The 20 countries with the largest reductions are presented. The Marshall Islands is an outlying observation that was removed from the figure for legibility's sake. It experienced an average annual reduction of 63% of its 2023 GDP due to a major decline in China's international shipping loans.

Section 2: Recipient countries put "cops on the beat"

In order to explain why some countries have received more official sector credit from China than others, it is becoming increasingly important to consider the stringency of screening mechanisms for inbound foreign capital in recipient countries. These mechanisms, which have quickly gained traction in the developed and developing world, can significantly restrict the flow of cross-border credit for FDI projects and activities. Sarah Bauerle Danzman of Indiana University Bloomington and Sophie Meunier of Princeton University have documented the rapid diffusion of investment

screening mechanisms (ISMs) across the developed world (Bauerle Danzman and Meunier 2023). Their analysis of the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset demonstrates that, since 2007, “almost all ISMs review [FDI] transactions on national security grounds” and “[c]ountries with more FDI [...] from China [...] are [...] more likely to impose new screening regulations” (Bauerle Danzman and Meunier 2023: 3, 8).

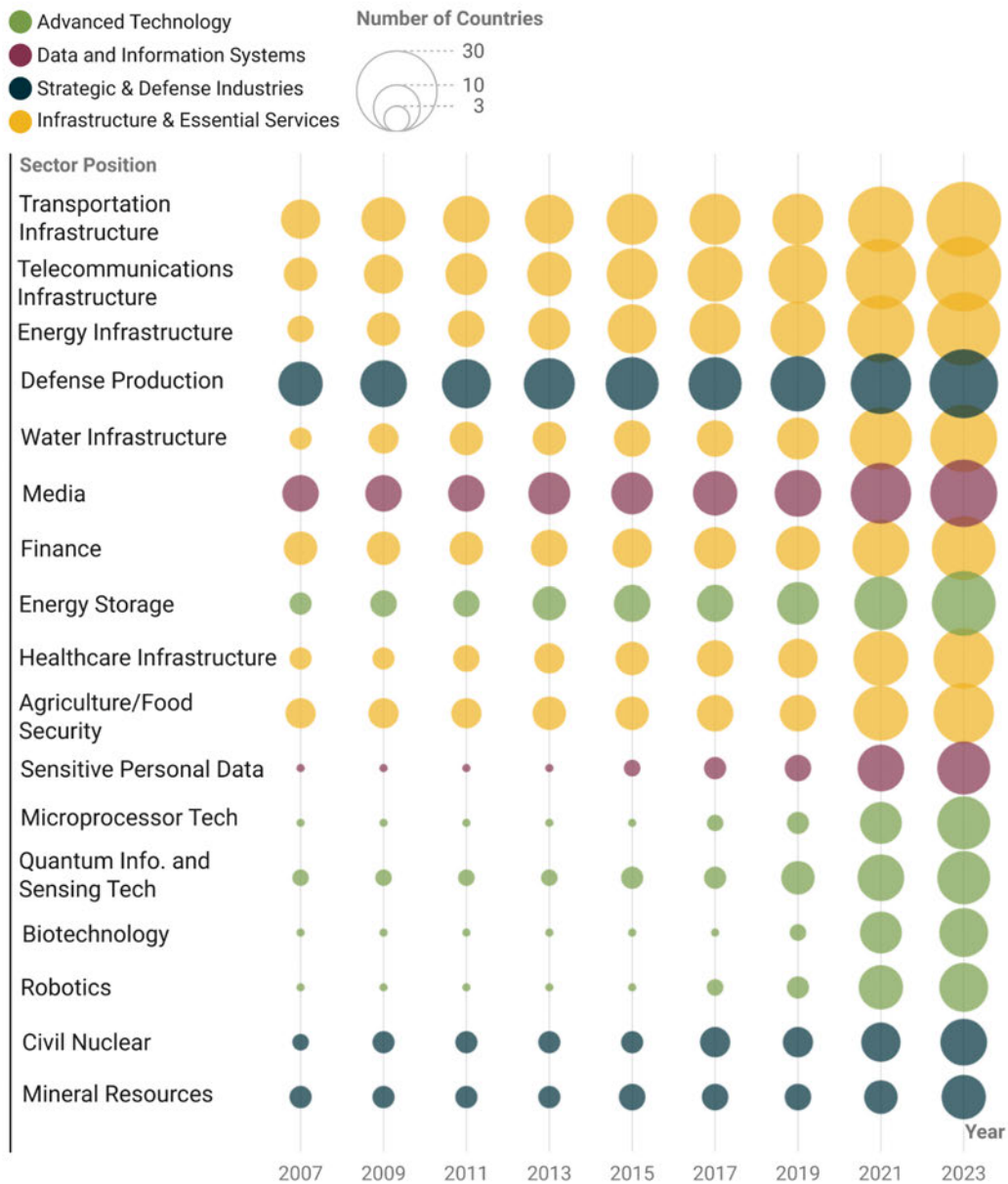
■
“ISMs have rapidly expanded across nearly all sensitive sectors since 2007, but the pace of adoption increased significantly after 2017: by 2023, the highest levels of adoption were concentrated in critical infrastructure sectors.”

In Figure 3.5 below, we draw upon the PRISM dataset to track the staggered rollout of ISMs over time in 17 sectors that developed countries have designated as “sensitive” on national security grounds. ISMs have rapidly expanded across nearly all sensitive sectors since 2007, but the pace of adoption increased significantly after 2017. By 2023, the highest levels of adoption were concentrated in critical infrastructure sectors. Figure 3.5 also demonstrates that the defense production was a more or less consistently regulated sector over the entire period of observation (2007-2023). However, since 2019, screening of high-tech sectors—including microprocessing technology, robotics, biotechnology, quantum information and sensing technology, and sensitive personal data—has rapidly intensified.

In principle, ISMs can be used to approve or disapprove FDI transactions that involve (a) loans to companies that are seeking to purchase majority or minority ownership stakes in existing overseas assets (so-called “brownfield FDI”), and/or (b) loans to special purpose vehicles for limited recourse project finance transactions that involve the construction of new overseas assets (so-called “greenfield FDI”). However, in practice, ISMs are largely focused on brownfield FDI transactions, which often involve the provision of M&A loans (Bauerle Danzman and Meunier 2023; Eichenauer and Wang 2024; Babic and Linsi 2025).²⁷⁹

²⁷⁹ The PRISM dataset tracks ISMs in 23 countries. In 2007, only 6 countries had put in place greenfield FDI screening mechanisms. By 2023, this figure increased to 10 countries (Bauerle Danzman and Meunier 2023).

Figure 3.5: Staggered rollout of sector-specific investment screening mechanisms, 2007-2023



Notes: This figure presents the annual number of countries with investment screening mechanisms (ISMs) in place across 17 sectors between 2007 and 2023. The 17 sectors that are included represent those in which at least 10 countries had adopted an ISM by 2023. This sample selection procedure was implemented by analyzing ISM coverage across 35 sectors in the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023). Colors correspond to thematic groupings of sectors: Advanced Technology, Data and Information Systems, Strategic & Defense Industries, Infrastructure & Essential Services.

Box 3a: The global diffusion of investment screening mechanisms (ISMs)

The United States was one of the first countries to introduce an ISM through the establishment of the Committee on Foreign Investment in the United States (CFIUS), which “is an interagency committee authorized to review certain transactions involving foreign investment in the United States and certain real estate transactions by foreign persons, in order to determine the effect of such transactions on the national security of the United States” (United States Department of Treasury n.d.).²⁸⁰ Since its inception in 1975, CFIUS has seen its authorities expanded on multiple occasions. For example, in 2018, the passage of the Foreign Investment Risk Review Modernization Act (FIRRMA) authorized CFIUS to investigate inbound foreign investments that would typically fall outside of its regulatory reach, such as those that involve real estate and land ownership near sensitive government installations and infrastructure.

CFIUS has become the ISM gold standard, with many countries around the globe adopting similar measures. Shortly after the creation of CFIUS, Australia established a “cross-sectoral review mechanism,” which was later strengthened through legislation in 2017, 2018, and 2020 to strengthen ownership reporting protocols for critical infrastructure, ownership regulations for telecommunications assets, and equity threshold and timeframe specifications from the original (1975) legislation. Like CFIUS, Australia’s Foreign Investment Review Board (FIRB) makes recommendations to the Treasurer on whether to approve or disapprove inbound foreign investments. Most recently, in February 2025, Australia temporarily banned foreign entities from purchasing extant dwellings. It further revised its foreign investment screening process in May 2025.

Canada followed suit by adopting its own ISM—the Investment Canada Act (ICA)—in 1985. However, several other OECD countries did not establish ISMs until the late 2010s and early 2020s. The UK passed the National Security and Investment Act (NSIA) in 2021. However, it did not enter into force until January 2022. Then, in 2025,

²⁸⁰ CFIUS is chaired by the Secretary of the Treasury.

the UK Government announced plans to simplify its rules related to foreign investment screening, reducing red tape in its screening and notification process, while also adding semiconductors and critical minerals to its list of sensitive investment areas (UK Government 2025). In 2019, the European Union—through the European Parliament and the European Council—passed “Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union.” However, the legislation did not enter into force until October 2020. It requires that EU member states adopt their own ISMs, and by 2025, 24 out of 27 member states did so (Deloitte 2025).

According to the United Nations Conference on Trade and Development (UNCTAD), 37 countries around the globe had adopted an ISM by 2023—and the vast majority of these countries are in the developed world (UNCTAD 2023).

In Figure 3.6 below, we measure average annual cross-border M&A (a form of brownfield FDI) lending commitments from Chinese state-owned creditors before and after the introduction of ISM-strengthening policy measures in 15 developed countries.²⁸¹ In 13 of the 15 countries, we see a substantial reduction in official sector credit from China after the screening mechanisms for inbound foreign capital are strengthened.²⁸² The U.S. and Australia—the two largest developed country recipients of official sector credit from China—witnessed 62% and 73% reductions, respectively,

²⁸¹ See Section A3.8 and Table A3.1A in the Appendix for additional details on how the PRISM dataset is used to identify “sensitive sectors” and Investment Screening Mechanism (ISM) strengthening policy measures.

²⁸² In Figure 3.6, we measure the timing of exposure to a more stringent screening mechanism for inbound foreign capital by identifying the most recent adoption of an ISM-strengthening measure (defined as an expansion in the ISM's coverage to three or more additional sectors). In Figure A5.21 in the Appendix, we replicate this analysis but with an alternative way of measuring exposure to a more stringent screening mechanism for inbound foreign capital: the earliest adoption of an ISM-strengthening measure (defined as an expansion in the ISM's coverage to three or more additional sectors). Our findings are largely unchanged when we use this alternative approach.

after strengthening their ISM mechanisms in 2020 and 2022.²⁸³ In Section A3.9 of the Appendix, we conduct a similar analysis of Chinese loan-financed M&A activities in the U.S. before and after FIRRMA went into effect that is sector-specific and we obtain similar results. However, these before-and-after comparisons should not be interpreted as the causal effects of ISM stringency on cross-border M&A lending volumes from China. Causality may also run in the opposite direction, with the receipt of Chinese M&A loans leading to the introduction of more stringent ISMs.²⁸⁴



“ In 13 of the 15 countries, AidData saw a substantial reduction in official sector credit from China after the screening mechanisms for inbound foreign capital are strengthened.”

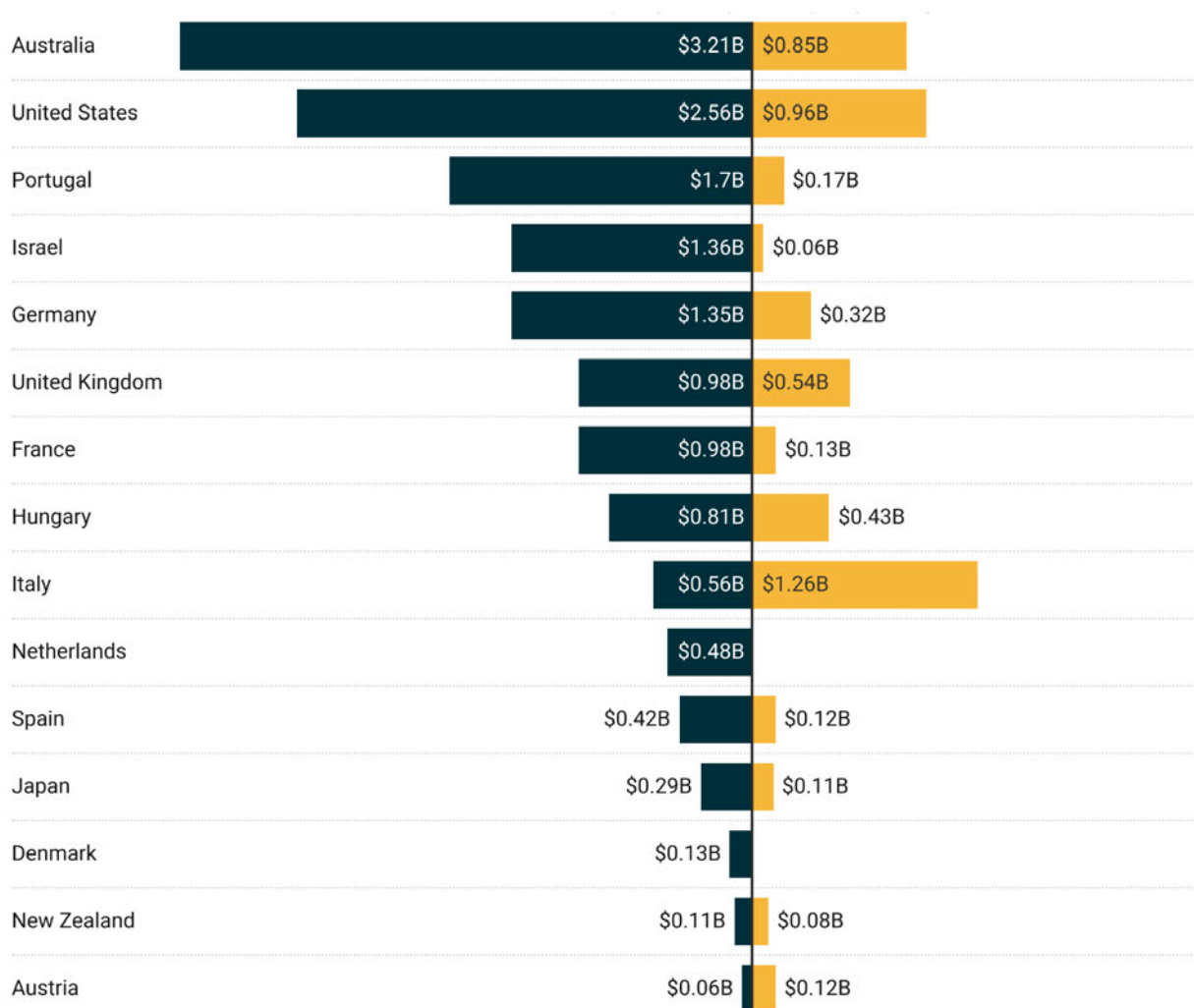
²⁸³ After the U.S. Congress passed the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA) in August 2018, the U.S. Treasury developed a final set of regulations to implement FIRRMA that went into effect in February 2020. FIRRMA extended CFIUS's jurisdiction beyond transactions that could result in foreign control of a U.S. business to also include non-controlling investments in U.S. businesses that “produce, design, test, manufacture, fabricate, or develop one or more critical technologies; own, operate, manufacture, supply, or service critical infrastructure; or maintain or collect sensitive personal data of U.S. citizens that may be exploited in a manner that threatens national security” (United States Department of the Treasury 2020). In April 2022, Australia reformed the approval rules of its Foreign Investment Review Board (FIRB) by, among other things, expanding the “moneylending” exemption for acquiring security interests over Australian assets (that relieved many foreign lenders from the need to obtain FIRB approval) and increasing the ownership threshold for acquisitions of equity stakes in unlisted Australian land entities and Australian media businesses (Commonwealth of Australia 2022; Rae et al. 2022).

²⁸⁴ See Eichenauer and Wang (2024) for evidence on the causal effects of ISMs on cross-border M&A transactions.

Figure 3.6: China's cross-border M&A lending commitments before and after the adoption of ISM-strengthening measures, 2007-2023

Annual average loan commitments in each time period, constant 2023 USD.

■ Pre-policy average ■ Post-policy average



Notes: See Section A3.8 of the Appendix for details on how the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023) is used to identify ISM strengthening measures. For countries that adopted ISM strengthening measures multiple times during the 17-year period, the pre- and post-policy averages are based on the most recent instance of an ISM-strengthening measure.

China's greenfield FDI lending commitments also represent an important part of its overseas lending portfolio (see Figures A5.22 and A5.23 in the Appendix).²⁸⁵ Yet relatively few ISMs seek to restrict inbound greenfield FDI (Bauerle Danzman and Meunier 2023; Eichenauer and Wang 2024; Babic and Linsi 2025), which implies that the loans which facilitate such investments are more likely to be approved.²⁸⁶ Consistent with this expectation, we observe substantially smaller reductions in China's overseas greenfield FDI lending volumes after the introduction of more robust screening mechanisms for inbound foreign capital. Figure 3.7 measures average annual greenfield FDI lending commitments from Chinese state-owned creditors before and after the introduction of ISM-strengthening policy measures in the same set of countries. It shows a post-policy reduction in Chinese greenfield FDI lending commitments of only 30%, which is substantially lower than the 66% post-policy reduction in Chinese M&A lending commitments (in Figure 3.6). It is also noteworthy that the U.S. and Australia—two of China's largest official sector lending recipients—saw very small reductions after strengthening their ISM mechanisms in 2020 and 2022: 25% and 7%, respectively (see Figure 3.7).²⁸⁷

²⁸⁵ Figure A5.22 in the Appendix demonstrates that 51% of China's cross-border FDI lending commitments supported greenfield investment activities between 2000 and 2023. Figure A5.23 in the Appendix shows that, between 2000 and 2023, the lion's share of China's cross-border greenfield FDI lending commitments (66%) supported low-income and middle-income countries, while a smaller share (34%) supported high-income countries.

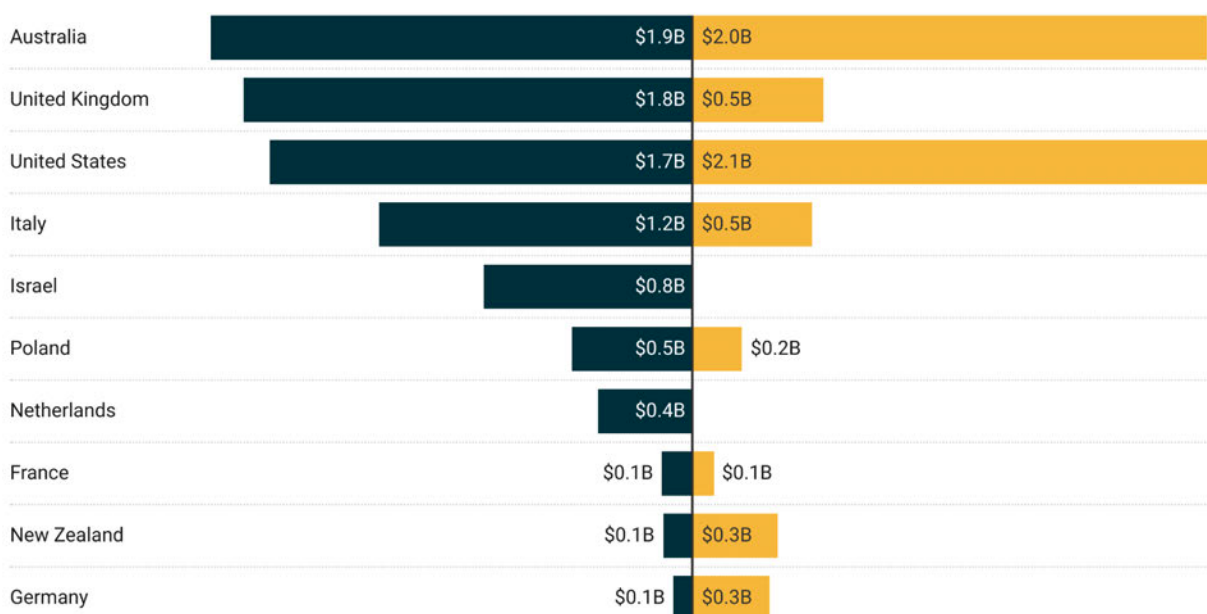
²⁸⁶ The PRISM dataset identifies only 10 countries that had greenfield FDI screening mechanisms in place as of 2023: Australia, Canada, Denmark, Hungary, Japan, Mexico, New Zealand, South Korea, Slovenia, and Sweden. It also identifies two countries—Finland and Spain—that have dismantled their greenfield FDI screening mechanisms (Bauerle Danzman and Meunier 2023).

²⁸⁷ In Figure 3.7, we measure the timing of exposure to a more stringent screening mechanism for inbound foreign capital by identifying the most recent adoption of an ISM-strengthening measure (defined as an expansion in the ISM's coverage to four or more additional sectors). In Figure A5.24 in the Appendix, we replicate this analysis but identify the earliest adoption of an ISM-strengthening measure (defined as an expansion in the ISM's coverage to four or more additional sectors) during the time period. Our findings are largely unchanged when we use this alternative approach.

Figure 3.7: China's cross-border greenfield FDI lending commitments before and after the adoption of ISM-strengthening measures, 2007-2023

Annual average loan commitments in each time period, constant 2023 USD

■ Pre-policy average ■ Post-policy average



Notes: See Section A3.8 of the Appendix for details on how the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023) is used to identify ISM strengthening measures. For countries that adopted ISM strengthening measures multiple times during the 17-year period, the pre- and post-policy averages are based on the most recent instance of an ISM-strengthening measure.

To date, screening mechanisms for inbound foreign capital have primarily governed the distribution of Chinese credit over space and time in the developed world. However, in the future, such mechanisms will likely play an important role in the developing world. Consider the case of the Philippines.²⁸⁸ In March 2022, it passed a law and a set of implementing rules and regulations that empower the president to block foreign investments in “strategic industries,” including military or defense-related industries, cyber infrastructure, and pipeline transportation.²⁸⁹ The president was also granted

²⁸⁸ India and Mexico have also recently taken steps to introduce or strengthen their ISMs to more effectively account for national security considerations (Patel 2023; Capin-Gally and González Melo 2024).

²⁸⁹ The law then entered into force in April 2023 (Yuen Yee 2024).

authority to prohibit foreign investments in certain “public services,” including rail, freight, power, water, oil and telecommunications services.

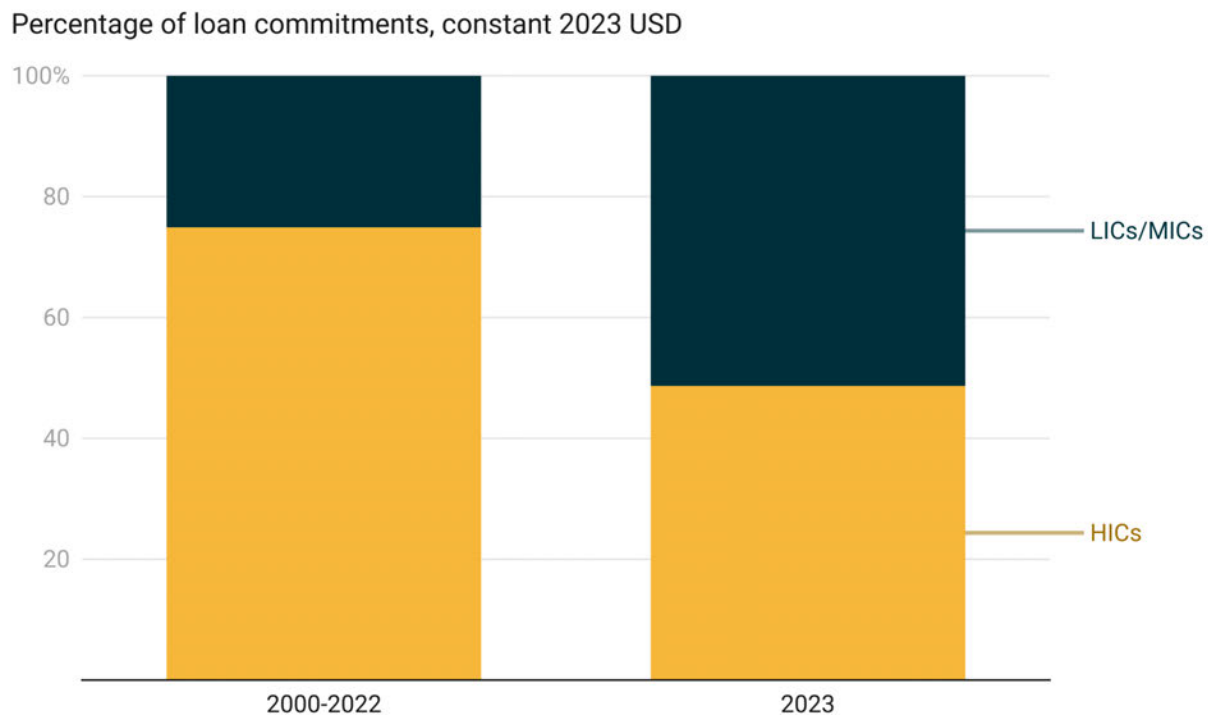
According to William Yuen Yee of the OECD, “[n]ational security concerns, including risks posed by Chinese state-owned investments, motivated the Philippines to adopt its screening mechanisms” (Yuen Yee 2024). China Telecom’s 2018 acquisition of a 40% ownership stake case of Dito Telecommunity Corporation—the country’s third-largest telecom provider with approximately 14 million subscribers—was a major focus of congressional debate in the run-up to the passage of the law (The Senate of the Philippines 2021). Senator Grace Poe, one of the law’s key sponsors, told her colleagues that China Telecom, a Chinese state-owned company, was able to complete the M&A transaction because “there was no law yet prohibiting state-owned companies from owning critical infrastructure businesses in the Philippines” (The Senate of the Philippines 2021). The acquisition unlocked large amounts of credit from Chinese state-owned banks. Between 2020 and 2023, Dito Telecommunity Corporation secured loan commitments worth more than \$4.5 billion from 9 Chinese state-owned creditors for three different phases of a 4G/5G telecommunications network project.


“Chinese creditors have traditionally focused their cross-border M&A activities in the industrialized world. However, that is no longer the case.”

The changing practices and priorities of Chinese creditors may also increase the perceived need for ISMs in the developing world. Chinese creditors have traditionally focused their cross-border M&A activities in the industrialized world. However, that is no longer the case. In 2023, more than 51% of China’s cross-border M&A lending commitments supported transactions involving mergers and acquisitions in the developing world (see Figure 3.8).²⁹⁰ By comparison, only 25% of China’s cross-border M&A lending commitments supported such transactions in the developing world between 2000 and 2022.

²⁹⁰ For example, the largest M&A loan commitment in 2023 was made by Top Create Resources Limited, a subsidiary of China Minmetals Non-ferrous Metals Company Limited. It provided a \$2 billion USD shareholder term loan facility to MMG Limited (MMG) to facilitate its acquisition of the Khoemacau Copper Mine in Botswana. Another case in point is the syndicated M&A loan worth approximately \$1.246 billion from China Eximbank, ICBC, and CDB to Baowu Resources Company Limited for the acquisition of a 49% stake in the Simandou Iron Mine Project and related infrastructure in Guinea.

Figure 3.8: China's cross-border M&A lending portfolio in the Global North and Global South



Notes: Income brackets are based on World Bank classifications.

Section 3: A global game of “cat and mouse”

Governments in the developed and developing world are no longer taking a laissez-faire approach, welcoming inbound capital (debt and equity) from China without asking questions about the “hidden hand” of the PRC party-state (Stein 2016; Higgins 2017; Michaels 2020; Bauerle Danzman and Meunier 2023; Custer et al. 2024; Yuen Yee 2024). They are increasingly putting “cops on the beat.” Regulators, auditors, and counterintelligence officials in host countries are more closely scrutinizing Chinese-financed projects and activities, including those that involve critical infrastructure and potential “dual use” facilities like seaports and telecommunication networks (European Court of Auditors 2020; ODNI 2023; van Gerven 2024; Prompers et al. 2023; Olsthoorn 2024; Kok 2025). They are also paying more attention to the China’s ability to access or own overseas assets (like cargo cranes and scanners at border posts) and properties (like gardens, farms, offices, hotels, apartment complexes,

and factories) that could facilitate the collection of sensitive information through electronic eavesdropping or other means (Rosenberg 2015; Higgins 2017; O'Keefe and Viswanatha 2018; Bo Lillis 2022; Hunter 2023; Volz 2024; Thome 2025).²⁹¹

At the same time, Beijing is more aware than ever that its debt and equity investments in overseas projects have aroused suspicions and provoked national security concerns in host countries. Chinese investors and creditors are responding to this challenge by adopting new techniques to limit scrutiny and circumvent barriers to entry.²⁹² These measures include the use of stringent confidentiality and non-disclosure agreements, domiciling borrowing institutions in offshore financial centers (like Bermuda, the British Virgin Islands, and the Cayman Islands), outsourcing public-facing roles to non-Chinese entities, and the use of opaque and exotic financial instruments that are less likely to appear in audited financial statements, stock exchange filings, and bond prospectuses (Baker et al. 2016; Mozur and Perlez 2017; Financial Times 2017; Brown and Singh 2018; Michaels 2020; UKCT 2024; Black 2022; Gelpert 2023, 2025, 2025b).

■
“Our newly collected data demonstrate that Chinese lenders rely more heavily on SPVs in jurisdictions where they face higher levels of policy, legal, and regulatory scrutiny.”

Another way that Chinese state-owned entities have tried to keep a lower profile is by using shell companies, which make detection of Chinese ownership and involvement less likely (Baker et al. 2016; U.S.-China Economic and Security Review Commission 2017a, 2017b; Swanson 2017; Damgaard et al. 2019; Sisk 2020; European Court of

²⁹¹ See Box 3c for more details.

²⁹² According to the U.S.-China Economic and Security Review Commission, “Chinese firms are becoming more sophisticated in their attempts to circumvent CFIUS reviews and other U.S. investment regulations. Some Chinese companies may take advantage of the voluntary nature of the CFIUS process to avoid scrutiny. For example, in November 2015, the Chinese investment firm Fosun International acquired Wright USA, a liability insurance provider to senior U.S. officials at the Central Intelligence Agency and Federal Bureau of Investigation, without notifying CFIUS. It was not until a month after the acquisition was complete that CFIUS expressed concern about the purchase and began reviewing the deal to determine whether it had granted Chinese agencies access to the personal information of tens of thousands of U.S. intelligence and counterterrorism officials” (U.S.-China Economic and Security Review Commission 2017b: 83).

Auditors 2020; Michaels 2020; Braw 2023; ODNI 2023).²⁹³ In Figure 3.9, we track the percentages of China's overseas lending portfolio that are routed via special purpose vehicles (SPVs) in two different country cohorts: those with and without relatively stringent screening mechanisms for inbound foreign capital. Our newly collected data demonstrate that Chinese lenders rely more heavily on SPVs in jurisdictions where they face higher levels of policy, legal, and regulatory scrutiny. If one restricts the analysis to China's overseas M&A lending portfolio, the same basic finding holds (see Figure A5.25 in the Appendix). Figure 3.9 also demonstrates that the use of SPVs became more popular in countries with more stringent screening mechanisms after Beijing adopted the MIC2025 policy in 2015.

Figure 3.9: China's overseas lending portfolio via SPVs in countries with relatively strong and weak ISMs



Notes: This figure decomposes China's cross-border loan commitments through special purpose vehicles (SPVs) into two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs), and (ii) countries with

²⁹³ Chinese investors and lenders may very well take such actions without direction from Beijing. Concerns about regulatory scrutiny may encourage such entities to independently downplay their origins in order to protect their investments.

relatively weak ISMs. The cohort classification is derived from the “screening of foreign investment” subcomponent score of the OECD’s 2023 FDI Regulatory Restrictiveness Index (OECD 2024b), with country scores above the median categorized as relatively strong ISMs and country scores below the median as relatively weak ISMs.

Our newly collected data also suggest that China’s use of *offshore* SPVs to facilitate cross-border M&A transactions is a feature rather than a bug (see Figure 3.10). Nearly two-thirds (66%) of China’s cross-border M&A lending via SPVs is conducted through offshore borrowers and buyers (i.e., legal entities incorporated in a jurisdiction other than the jurisdiction where merger or acquisition target resides). China also makes extensive use of offshore SPVs when it is seeking to get mergers and acquisitions approved in sectors that host countries have deemed as “sensitive” on national security grounds (see Figure A5.35 in the Appendix).²⁹⁴

Figure 3.10: China’s cross-border M&A lending to offshore and onshore SPV borrowers, 2000-2023

Share of cumulative M&A loan commitments, constant 2023 USD



Notes: Offshore SPVs represent SPV borrowers that are incorporated in a jurisdiction other than the jurisdiction where merger or acquisition target resides. Onshore SPVs are those that are legally incorporated in the same jurisdiction where the merger or acquisition target resides.

These empirical patterns are consistent with a popular claim among regulators, auditors, and counterintelligence officials in host (recipient) countries: that Chinese lenders and investors attempt to evade detection or circumvent screening processes in host countries by funneling money through special purpose vehicles—in particular, those that are legally domiciled in offshore financial centers or tax havens with opaque ownership structures (e.g., Mozur and Perlez 2017; U.S.-China Economic and Security

²⁹⁴ We discuss this issue at greater length in Section 2.

Review Commission 2017a, 2017b; Michaels 2020; European Court of Auditors 2020; Datenna 2024).²⁹⁵

“China makes extensive use of offshore SPVs when it is seeking to get mergers and acquisitions approved in sectors that host countries have deemed as “sensitive” on national security grounds.”

Consider for example China’s State Council attempt to acquire Lattice Semiconductor Corporation (a U.S.-based chip maker) through a shell company—called Canyon Bridge Capital Partners—for \$1.3 billion. This deal was ultimately canceled after it was revealed that “[t]he purpose of creating Canyon Bridge [Capital Partners] was to obscure the source of capital to ‘enhance the possibility’ that the transaction would be approved by [the Committee on Foreign Investment in the United States, or CFIUS]” (Mozur and Perlez 2017).²⁹⁶ Shortly thereafter, the U.S. Congress passed a law—the Foreign Investment Risk Review Modernization Act (FIRRMA) of 2018—that extends the authority of CFIUS over any cross-border transaction with a “structure [...] designed or intended to evade or circumvent the application [of the law]” (Gafni 2021). In response, the U.S. Treasury stepped up its efforts to identify the UBOs of mystery buyers, including onshore and offshore SPVs with opaque ownership structures (United States Department of the Treasury 2020, 2021).²⁹⁷

²⁹⁵ These findings are consistent with a broader empirical literature on how shell companies are used to conceal the ultimate beneficial owners of such companies (Findley et al. 2014, 2015; Allred et al. 2017; European Parliamentary Research Service 2018; Andersen et al. 2022).

²⁹⁶ On December 6, 2016, nearly two dozen members of the U.S. Congress wrote a letter to Jack Lew, the Secretary of the U.S. Treasury, to express their concern that “this transaction [...] appears to be directly affiliated with the government of the People’s Republic of China (PRC), and further appears to be a legal construction intended to obfuscate the involvement of numerous PRC state-owned enterprises [...]” (Congress of the United States 2016).

²⁹⁷ In May 2023, Paul Rosen, the Assistant Secretary for Investment Security at the U.S. Treasury was asked a question at a congressional hearing about “Chinese money moving into the United States.” He responded that “[f]rom a CFIUS perspective, it is a critical issue and goes to sort of issues of ultimate beneficial ownership and participation in these funds. One of the things that we are redoubling our efforts on is to look behind the investors, really digging in. Not just looking at general partners but who are the limited partners? What is the information about the limited partners? How much information do they get? And so when it comes to these kinds of investment funds, really doing the diligence to not just look at the deal structure but who is behind it, and not being satisfied with just a shell company, understanding who is actually doing the investment” (Congress of the United States 2023).

However, prior to the passage of FIRRMA, it was substantially easier for Chinese state-owned creditors to bankroll the M&A activities of Chinese investors in sensitive U.S. sectors via offshore shell companies. Fosun International Limited's acquisition of an 80% ownership stake in Ironshore Inc. is a case in point. In May 2015, four Chinese state-owned banks—Bank of China, ICBC, Agricultural Bank of China, and Bank of Communications—provided a \$1.2 billion syndicated loan to the Chinese multinational conglomerate through Mettlesome Investments (Cayman) III Limited, a special purpose vehicle that is legally incorporated in the Cayman Islands.²⁹⁸ The borrower used the proceeds of the loan to purchase an 80% ownership stake in Ironshore Inc., a Bermuda-headquartered and Cayman Islands-incorporated company that for nearly three decades sold liability insurance to U.S. government officials at the Central Intelligence Agency (CIA) and Federal Bureau of Investigation (FBI) through an American subsidiary known as Wright USA.²⁹⁹ The acquisition was completed in November 2015 without any advance notification to or review by CFIUS (Roumeliotis 2016).³⁰⁰ However, concerns later emerged that Fosun International Limited had effectively circumvented Washington's screening process for inbound foreign capital and the acquisition "gave Chinese spy agencies a pipeline into the names, job titles, addresses and phone numbers of tens of thousands of American intelligence and

²⁹⁸ Mettlesome Investments (Cayman) III Limited is a Cayman Islands-incorporated special purpose vehicle that is wholly-owned by Mettlesome Investments (Cayman) I Limited, another Cayman Islands-incorporated special purpose vehicle that is a wholly-owned subsidiary of Hong Kong-incorporated Ultimate Oasis Limited, which in turn is a wholly-owned subsidiary of Hong Kong-incorporated Fosun Capital Holdings Limited, which in turn is a wholly-owned subsidiary of Hong Kong-incorporated Fosun International Limited, which is a Chinese multinational conglomerate holding company that is listed on the Stock Exchange of Hong Kong but headquartered in Shanghai. Fosun International Limited is a subsidiary of Hong Kong-incorporated Fosun Holdings Limited, which is a wholly-owned subsidiary of the British Virgin Islands-incorporated Fosun International Holdings Limited, which in turn is owned by the three founders of the company: Guo Guangchang, Liang Xinjun and Wang Qunbin (who own 64.45%, 24.44% and 11.11% equity stakes, respectively).

²⁹⁹ According to Stein (2016), Wright USA's "niche insurance business is little known outside U.S. intelligence circles. In 2008, *The New York Times* described how the company, founded in 1965 by a former FBI agent, had become a financial lifeline for CIA and other officials who came under fire for their conduct in office and needed expensive legal help. Its clients then included former CIA Director George Tenet; Scott Muller, the agency's former general counsel; John Rizzo, acting general counsel during the George W. Bush administration; and José Rodríguez, the CIA operations chief who in 2005 ordered the destruction of CIA videotapes of the harsh interrogation of two Al-Qaeda operatives."

³⁰⁰ CFIUS has authority to conduct national security reviews of "notified transactions" (cross-border deals that are voluntarily submitted by parties) and "non-notified transactions" (cross-border deals that are not voluntarily submitted by parties). Fosun International Limited's acquisition of Ironshore Inc. was a non-notified transaction. According to the U.S. Treasury, "[t]ransactions that are identified through the non-notified process are often among the most complicated that CFIUS considers" (United States Department of the Treasury 2024c).

counterterrorism officials—many working undercover—going back decades” (Stein 2016). CFIUS launched a post-acquisition review in December 2015 and Fosun International Limited ultimately divested from Wright USA in September 2016. However, questions about a potentially far-reaching security breach continued to swirl for years after the divestiture (USCC 2019).

A similar outcome was observed in the UK prior to the introduction of the National Security and Investment Act (NSIA)—a screening mechanism for inbound foreign capital that serves as the UK’s version of CFIUS.³⁰¹ In November 2017, Canyon Bridge Capital Partners successfully acquired Imagination Technologies Group PLC—a British semiconductor and software design company that “specialises in designing graphics processing units (GPUs), which are important for graphics applications (such as gaming, 3D rendering, and video editing) but also for artificial intelligence (AI), machine learning, and autonomous vehicle navigation”—for £548.9 million without much difficulty (UKCT 2024: 6).³⁰² It did so by providing a zero-interest, £551.6 million shareholder (intercompany) loan on the same day to a England and Wales-incorporated shell company (special purpose vehicle) called CBFI Investment Limited. The ultimate beneficial owner(s) of CBFI Investment Limited was difficult for UK regulators to identify because of a complex ownership chain that runs through shell companies incorporated

³⁰¹ According to the former CEO of Imagination Technologies, “[a]fter failing to acquire Lattice Semiconductor, Canyon Bridge [Capital Partners] turned its focus to the UK which had less rigorous and strict acquisition rules than the US” (Black 2022). Indeed, the UK did not put in place a national security-focused investment screening mechanism until several years after Canyon Bridge Capital Partners acquired Imagination Technologies. It did so after the passage of FIRRMA and under pressure from the U.S. and other allies. After the UK’s National Security and Investment Bill was published on November 11, 2020, the National Security and Investment Act (NSIA) 2021 was passed on April 29, 2021. However, the NSIA did not go into effect until January 4, 2022.

³⁰² According to UK court records, Imagination Technologies Group PLC “sell[s] licences to use their goods or services (Graphics Processing Units and Central Processing Units) to electronics firms and chip manufacturers to produce microchips, which are in turn used in a variety of technology based consumer goods, including vehicles, mobile phones, gaming and other technology controlled items. They can also be used in chips used in military weapons” (HM Courts & Tribunals Service 2025: 5).

in foreign jurisdictions (Baker et al. 2016; UKCT 2024; Datenna 2024).³⁰³ However, it eventually came to light that the ultimate beneficial owner of Canyon Bridge Capital Partners is an entity owned by China's State Council that is "substantially invested in the PRC's military-industrial complex and has stakes in the main contractors for the PRC's navy, air force, space programme, and army [...] [as well as] minority stakes in PRC companies involved in the development of AI for military use and of autonomous weapons systems and combat drones, and in a chip design company that works with the Chinese military" (UKCT 2024: 6).³⁰⁴ Canyon Bridge Capital Partners also placed the M&A transaction beyond the regulatory reach of CFIUS by separating its U.S. subsidiary (MIPS) and selling it to a U.S.-based venture capital fund (Gafni 2021). Box 3b below provides additional information about this case.

³⁰³ CBFI Investment Limited is a wholly-owned subsidiary of Canyon Bridge International Holding Investment Limited, which is a shell company that is legally incorporated in the Cayman Islands. Canyon Bridge International Holding Investment Limited is a wholly-owned subsidiary of Canyon Bridge Fund I, LP (CBFI), a Delaware-incorporated fund managed by Canyon Bridge Capital Partners, LLC, which is a Cayman Islands-incorporated global private equity buyout fund headquartered in Palo Alto, California (1% stake) but majority owned by Yitai Capital Limited (99% stake). Prior to the acquisition of Imagination Technologies, Yitai Capital was described in London Stock Exchange (LSE) filings as a "Chinese state-owned enterprise" (Black 2022). Yitai Capital is a Hong Kong-incorporated firm wholly owned by China Venture Capital Fund Corporation Limited, a China-incorporated firm jointly owned by China Reform Holdings Corporation (35.29% stake) and a consortium of Chinese state-owned entities consisting of China Pacific Insurance (Group) Co., Ltd., CCB Capital Management Co., Ltd., CCB Trust Co., Ltd., and Shenzhen Investment Holding Company Ltd. (collectively holding a 64.71% stake). The ultimate beneficial owner or owners of a company are widely considered to be the persons or entities that holds 25% or more of its shares or controls more than 25% of its voting rights. As such, China Reform Holdings Corporation is considered to be the ultimate beneficial owner of CBFI Investment Limited (Black 2022; Datenna 2024; UKCT 2024; HM Courts & Tribunals Service 2025).

³⁰⁴ In November 2016, *Reuters* also reported that an annual report of China Reform Holdings Corporation identified the following organizational objective: to "invest in strategic emerging industries related to national security" (Baker et al. 2016).

Box 3b: Beijing's alleged asset-stripping of Imagination Technologies

In November 2017, Canyon Bridge Capital Partners—a U.S.-incorporated shell company controlled by multiple Chinese state-owned entities, including China Reform Holdings Group—acquired a British semiconductor and software design company called Imagination Technologies Group PLC (“Imagination Technologies”) for £548.9 million. Imagination Technologies specializes in designing and licensing semiconductor intellectual property (IP) for graphics, artificial intelligence (AI), and computing. Rather than selling its graphics processing units (GPUs) to consumers, it licenses the technology to manufacturers who produce the final chips. The company is “regarded as a jewel of the UK’s technology industry” (Burgis 2024).

Prior to the November 2017 acquisition, Canyon Bridge Capital Partners assured the UK authorities that Imagination Technologies would remain in the UK and never be redomiciled in China (Courea 2021; Burgis 2024; UKCT 2024). The ultimate beneficial owner of Canyon Bridge Capital Partners—China Reform Holdings Corporation—is a company owned by China’s State Council that seeks to “invest in strategic emerging industries related to national security” (Baker et al. 2016). In the run-up to the acquisition of Imagination Technologies, it described itself as a “passive investor” (Kleinman 2020; Fildes 2020).³⁰⁵ Dr. Ron Black, a veteran of the U.S. and British semiconductor and technology industry, was appointed as the CEO of Imagination Technologies in December 2018 to provide further reassurance to UK stakeholders. He initially characterized China Reform Holdings Corporation as a “limited partner” (Fildes 2020; Black 2022; HM Courts & Tribunals Service 2025).

However, in April 2020, a major controversy erupted when Dr. Black resigned in protest from his position as the CEO alongside the company’s Chief Technical Officer (CTO) and Chief Product Officer (CPO). In his resignation letter to the Imagination Technologies’ Board of Directors, Dr. Black wrote that “[the Executive Management Board] and I are very worried that being controlled by the Chinese government will be fatal for the company” (HM Courts & Tribunals Service 2025: 34). Steve Evans, the

³⁰⁵ According to UKCT (2024: 6), China Reform Holdings Corporation seeks to “advance strategic industries critical to the PRC’s military modernisation, national security, and technological sovereignty.”

company's CPO, wrote in his resignation letter that "I will not be part of a company that is effectively controlled by the Chinese government" (Jack 2020; Gkritsi 2020).

This wave of resignations followed a tumultuous period at the company between January 2019 and February 2020. Shortly after being hired, Dr. Black "was called to meet China Reform [Holdings Corporation] representatives at a late-night meeting at a Beijing tea house in March 2019" (Titcomb 2024). In a sworn witness statement for legal proceedings before His Majesty's (HM) Courts and Tribunals Service, Dr. Black disclosed that Lining Wang, an executive of China Reform Holdings Corporation, "told me privately that I (meaning Imagination) should stop working through Canyon Bridge and report directly to China Reform, and begin to transfer Imagination's technology to China, using the company's British engineers to train new Chinese engineers, and then to lay off the British engineers to reduce cost" (Titcomb 2024).³⁰⁶ According to newly disclosed court records, "[f]rom this point onwards [Dr. Black] believed that [China Reform Holdings Corporation] was not merely a passive investor [...]" (HM Courts & Tribunals Service 2025: 8).

Then, in December 2019, Dr. Black learned that an effort was afoot to appoint four representatives from China Reform Holdings Corporation to the Board of Imagination Technologies. On February 6, 2020, Dr. Black pushed back, writing a letter to Canyon Bridge International Holding Investment Limited in which he conveyed his concern "that to allow [China Reform Holdings Corporation] to place directors on the Board of [Imagination Technologies] would allow the Chinese government to take control of a UK company and would lead to the company being removed to China" (HM Courts & Tribunals Service 2025: 30). He also warned "that if the technical knowledge of the products [of Imagination Technologies] were handed to the Chinese government, this could be dangerous, as they have military application. It would also allow the Chinese government to add to the product, potentially with bug software or spy software" (HM Courts & Tribunals Service 2025: 28). In March 2020, Dr. Black set up a meeting with Ian Ley, the Technical Director of GCHQ (the UK's signals intelligence and security

³⁰⁶ According to newly disclosed court records, "[Dr. Black] reported [...] that during the meeting [Lining Wang] had suggested to him that if [Imagination Technologies] were to transfer its technology and redomicile to China, [Dr. Black] personally, could make a lot of money. [Dr. Black] interpreted this as a bribe and reported it to the Directors of [Imagination Technologies]" (HM Courts & Tribunals Service 2025: 8).

agency), “to discuss whether the Chinese control of [Imagination Technologies] would pose a national security risk” (HM Courts & Tribunals Service 2025: 13). Levy reportedly told him that “this would be a problem for the UK government” (Burgis 2024).

Following the departure of Dr. Black and the CTO and CPO, industry media sources reported that several key elements of the first GPU developed by Moore Threads Technology Co. Ltd. (摩尔线程) —a Chinese company that designs GPUs for AI and other applications—“had been lifted from Imagination’s [intellectual property] via an unannounced deal” (UKCT 2024: 16).³⁰⁷ The same sources reported that “at least two other Chinese companies had enjoyed similar arrangements in other unannounced deals” (UKCT 2024: 16).

Then, in December 2024, *The Guardian* published a bombshell report in which two former high-ranking employees of Imagination Technologies revealed that two of “China’s premier AI chip designers,” Moore Threads Technology Co. Ltd. and Shanghai Biren Intelligent Technology Co., Ltd. (壁仞科技), received “architectural licenses” from Imagination Technologies—before they were blacklisted by the U.S. Department of Commerce in October 2023 for developing chips that “can be used to provide artificial intelligence capabilities to further development of weapons of mass destruction, advanced weapons systems and hi-tech surveillance applications that create national security concerns” (Burgis 2024).³⁰⁸ At the same time, an anonymous whistleblower (using the pseudonym “Howard”) came forward and revealed that his former employer had “entered into unusual agreements to transfer its core assets to PRC companies” (UKCT 2024: 6).³⁰⁹ The whistleblower—who worked at Imagination Technologies after the resignation of Dr. Black and had “deep, high-level knowledge of [the company’s] business model, technical capabilities, staff, and customers”—said that multiple Chinese GPU companies, including Moore Threads Technology Co. Ltd. and Shanghai Biren Intelligent Technology Co., Ltd., benefited from such agreements during the

³⁰⁷ Moore Threads was founded in 2020 by Zhang Jianzhong, a former Nvidia executive.

³⁰⁸ According to reporting by *The Guardian*, “[u]nder the plan, Imagination’s top engineers were to give their Chinese counterparts ‘a proper step-by-step getting to know how you develop the GPU’ over two years from around 2021, said [one] former insider [...]. The second former insider also departed before any Chinese engineers had received full training but said it was ‘very difficult to deny that [technology transfer] was an obvious outcome of doing architectural licenses in that way’” (Burgis 2024).

³⁰⁹ As Burgis (2024) explains, “[b]ecause these licences allow the customer to request modifications to the [GPU] designs, Imagination [Technologies] reveals some of the process by which its engineers arrived—over many years—at the intricate blueprints.”

latter half of 2020 and 2021 (UKCT 2024: 14).³¹⁰ He also revealed that the Imagination Technologies “laid the foundations for [its] redundancy by training up Chinese staff at Chinese companies,” which led him to the conclusion that “Imagination [Technologies] would close down after this knowledge transfer” (UKCT 2024: 14-15).³¹¹

Consistent with the “buy it, strip it, and sell it” strategy that is described in Chapter 1, Canyon Bridge Capital Partners announced that it was putting Imagination Technologies up for sale in January 2025 (Field 2025).

■
“Beijing’s party-state has become more adept at navigating transactional obstacles in overseas markets.”

Over time, Beijing’s party-state has become more adept at navigating transactional obstacles in overseas markets. According to a 2018 report published by the Defense Innovation Unit Experimental (DIUx), “[m]any U.S. law firms have built a practice in advising Chinese companies on how to structure deals to increase the likelihood of CFIUS approval for transactions. Consulting organizations have also built a practice in structuring mitigation agreements that will be more likely to gain CFIUS approval” (Brown and Singh 2018: 21). Meanwhile, many Chinese firms operating in overseas markets have “gone native,” hiring citizens of host countries at every level, gaining expertise, credibility, and contextual knowledge to advance their interests (King &

³¹⁰ Howard was “involved in the design of so-called ‘architectural license’ agreements” and has disclosed that they each had three parts: “First were the standard deliverables as offered by Imagination in its normal licensing business, that is, parts of Imagination’s regular inventory, including support and documentation. [...] The second part [...] consisted of a set number of man-hours, typically over a multi-year period, with Imagination’s most senior hardware and software architects. This, then, was ‘knowledge transfer’. It was a process whereby Imagination’s top technical staff taught and transferred their unique knowledge to customers in China, in effect handing over Imagination’s *core assets* to potential competitors. [...] The third part consisted of creating new documentation on Imagination’s core assets specifically for the purpose of ‘knowledge transfer’ to these Chinese customers. This documentation explained in full detail the fundamental features of Imagination’s design IP—as opposed to documentation explaining how to use the standard products in Imagination’s *inventory*.” (UKCT 2024: 14).

³¹¹ According to Burgis (2024), “[t]wo former senior Imagination [Technologies] insiders claim that ‘knowledge transfer programmes’ accompanying the licences were so comprehensive that they risked the Chinese companies learning how to replicate Imagination’s expertise. One believed that the information provided meant Imagination may ‘have given [the Chinese companies] the capability to make the technology.’”

Wood Mallesons 2013; Shandong Provincial Department of Commerce 2012).³¹²

Shortly before it purchased Imagination Technologies Group PLC, Canyon Bridge Capital Partners brought Ray Bingham, a seasoned technology executive from Silicon Valley, onboard as a partner (Baker 2017). Bingham, who later became the CEO and Executive Chairman of Imagination Technologies Group PLC, served as the “public face” of Canyon Bridge Capital Partners to British and American regulators. Seeking to allay fears in the run-up to the acquisition of Imagination Technologies Group PLC, he told the *Financial Times* in September 2017 that the Chinese owners of Canyon Bridge Capital Partners have “no decision-making authority over what we invest in, how we manage it or the disposition of those assets ultimately [...]. This investment [in Imagination Technologies Group PLC] is managed entirely by an American private equity fund” (Financial Times 2017).³¹³

³¹² Other tactics to minimize publicity include confidentiality and non-disclosure agreements, tight-lipped press policies, and outsourcing of public-facing roles to non-Chinese entities.

³¹³ Another case in point: in 2020, Peter Mandelson—a member of the British House of Lords and former Director of Communications (“spin doctor”) for the UK Labour Party—was hired as a lobbyist to help Canyon Bridge Capital Partners “reassure UK stakeholders” after China Reform Holdings Corporation unsuccessfully attempted to seize control of the Board of the Directors of Imagination Technologies Group PLC (UKCT 2024: 21).

Box 3c: Is China bankrolling overseas projects that present national security risks?

There are longstanding concerns about China's party-state seeking to acquire and leverage commercial and cultural assets that are physically proximate to sites of military and intelligence significance for intelligence-gathering purposes. Policymakers, journalists, and think tanks researchers have raised questions about whether Beijing is minimizing scrutiny of dual-use facilities by regulators and counterintelligence officials by acquiring and developing properties that, in a vacuum, pose no national security risks (e.g., gardens, farms, offices, hotels, apartment complexes, factories) but are located near places of national security importance.³¹⁴ Physical proximity to such sites could allow Chinese government agencies to intercept electronic signals, and thus eavesdrop on highly sensitive communications.

Several cases in the U.S. and Australia illustrate the nature of these concerns. In January 2023, the Assistant Secretary of the U.S. Air Force warned that a proposal by Fufeng Group—a Chinese privately-owned firm—to build a corn milling processing plant 12 miles from Grand Forks Air Force Base in North Dakota presented “a significant threat to national security with both near- and long-term risks” (Hunter 2023). The military installation hosts a space networking center and highly sensitive drone technology; Air Force officials have argued that the seemingly innocuous agricultural processing facility would allow Beijing's party-state to passively monitor and intercept signals being transmitted from the base.

In another case, the Chinese Government offered in 2016 to provide a \$62 million grant for the design and construction of a “National China Garden” on a 12-acre parcel of land in northeast Washington D.C., just two miles from the U.S. Capitol Building. The PRC claimed at the time that it hoped that the garden and its 70-foot tall pagoda would serve as a powerful symbol of U.S.-China relations in the same manner as the cherry blossoms gifted by Japan. Construction was originally scheduled to begin in summer 2017. However, U.S. officials quietly cancelled the project before construction after discovering that the location and design of the garden might allow for signals

³¹⁴ Places of national security importance include airports, seaports, military bases, government offices, and intelligence assets.

intelligence collection in the heart of the nation's capital (Higgins 2017; O'Keefe and Viswanatha 2018; Bo Lillis 2022).³¹⁵

According to counterintelligence officials in Washington, PRC-financed hotels and office buildings visited by politicians and policymakers represent another set of “soft targets” for intelligence-gathering. The Waldorf Astoria Hotel in New York City is a case in point (Rosenberg 2015; Harris 2018; Bradsher and Stevenson 2018). According to the New York Times, “[f]or decades, the [U.S.] president and hundreds of other American officials have descended on the Waldorf each September for the [U.N.] General Assembly, securing whole floors for meetings. The Waldorf is among the world's best known hotels, and its guests regularly include celebrities and world leaders. Every Chinese leader has stayed there since Mr. Deng first visited the United States in 1974. An apartment on the 42nd floor of the hotel's Waldorf Towers has served as the official residence of the United States ambassador to the United Nations for more than 50 years.” However, after Anbang Insurance Group (a Chinese entity with close ties to the PRC party-state but an opaque ownership structure) financed the acquisition of the hotel, the U.S. government decided to send its senior officials elsewhere.

Questions have also been raised about whether Beijing's overseas portfolio of seaport projects has become a global network of “listening posts.” In June 2018, The New York Times ran a story on the Chinese loan-financed construction of Hambantota seaport in Sri Lanka. The story quotes Nihal Rodrigo, a former Sri Lankan foreign secretary and Sri Lankan ambassador to China, as saying “that discussions with Chinese officials at the time made it clear that intelligence sharing was an integral, if not public, part of the deal” (Abi-Habib 2018).³¹⁶

Similar concerns have been raised by Washington's allies. In February 2009, China Minmetals Non-Ferrous Metals Co. Ltd—a company under China Minmetals Corporation, a major Chinese state-owned metals and minerals company directly

³¹⁵ For more details, see National Capital Planning Commission (2016a, 2017b). Specifically, U.S. officials were concerned that Chinese officials sought to build a 70-foot tall pagoda in the garden with Chinese artisans using materials shipped to the United States in diplomatic pouches, which U.S. Customs and Border Protection are prohibited from examining (Bo Lillis 2022).

³¹⁶ Also, see Manson (2016), Hudson et al. (2023), Strobel et al. (2023), and Volz (2024).

owned and supervised by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC)—agreed to acquire 100% of the shares of a financially troubled Australian mining company called OZ Minerals Limited for A\$2.6 billion, using debt from CDB and Bank of China. OZ Minerals owned a number of zinc, lead, copper, and gold mining assets in Australia, Laos, and Canada, but its flagship asset was its Prominent Hill copper-gold mine in South Australia, within the Woomera Prohibited Area, a weapons testing range operated by the Royal Australian Air Force that has tested British and American weapons (FitzGerald 2009; Freed 2009). Then, in March 2009, the Treasurer of Australia announced the acquisition would be blocked on national security grounds, to the shock of shareholders of OZ Minerals. The management of OZ Minerals had downplayed any difficulty in securing approval for the acquisition because of Prominent Hill’s inclusion, and the news threatened to scuttle the entire acquisition. Woomera offered a “unique and sensitive contribution to Australia’s national [defense]” and the presence of a PRC central state-owned enterprise operating within its confines endangered it (Swan 2009). Minmetals opted to submit another bid to meet the requirements of the Australian government; instead of acquiring all of OZ Minerals, it would acquire the majority of assets, excluding Prominent Hill and a small cluster of other assets, for A\$1.75 billion. The revised bid was accepted and then completed in June 2009, with Prominent Hill remaining under control of a substantially smaller—but still Australian—OZ Minerals.

In Chapter 2, we provide evidence that China has ratcheted down its use of bilateral lending instruments and ratcheted up its use of syndicated loan instruments. We now turn to the question of whether China might use syndicated lending instruments to circumvent barriers to entry and/or evade detection in host countries—especially when it expects that the project or activity in question may arouse suspicions or provoke concerns.

■

“Chinese creditors rely more heavily on syndicated lending instruments in jurisdictions where they face higher levels of policy, legal, and regulatory scrutiny. Syndication also became more popular in countries with more stringent screening mechanisms after Beijing adopted the MIC2025 policy in 2015.”

In Figure 3.11, we track the percentages of China's cross-border lending portfolio that are provided via syndication across two different country cohorts over time: those with more and those with less stringent screening mechanisms for inbound foreign capital. Figure A5.26 in the Appendix provides the same decomposition for China's cross-border M&A FDI lending portfolio. It shows the same basic pattern: Chinese creditors rely more heavily on syndicated lending instruments in jurisdictions where they face higher levels of policy, legal, and regulatory scrutiny. It also demonstrates that syndication became more popular in countries with more stringent screening mechanisms after Beijing adopted the MIC2025 policy in 2015.

Figure 3.11: China's overseas lending portfolio via syndication in countries with relatively strong and weak ISMs



Notes: The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024b), with country scores above the median categorized as relatively strong ISMs and country scores below the median as relatively weak ISMs.

The notion that it is easier to fly "beneath the radar" with syndicated lending arrangements is not new. In December 2004, Lenovo Group revealed plans to purchase

IBM's global personal computer division for \$1.25 billion. As part of this deal, Lenovo secured the right to use the IBM brand for five years and acquired permanent ownership of the "Think" trademark. By May 2005, Lenovo's parent company, Legend Group, arranged a \$600 million bridge loan from a consortium of 20 banks across Asia, Europe, and the U.S., including the Industrial and Commercial Bank of China (ICBC), to support the acquisition. To avoid drawing attention to the sensitive deal, Lenovo opted for financing from an international bank syndicate rather than relying on the China Eximbank, a state-owned policy bank. However, soon after completing the purchase, Lenovo refinanced the syndicated loan with a loan from China Eximbank. According to Chunning (2009: 181), "due to the sensitivity of the IBM acquisition and the possibility of a public relations problem," Lenovo Group Limited chose to initially borrow funds from an international bank syndicate rather than China Eximbank (a state-owned policy bank).³¹⁷

Yet, as ISMs have become more prevalent and stringent, Chinese companies have taken more proactive steps to avoid arousing concerns in the foreign jurisdictions where they seek to make investments. Indeed, bilateral loans from Chinese state-owned creditors and syndicated loans that only involve Chinese state-owned creditors have fallen out of favor among Beijing-based law firms that advise Chinese investors on how to get cross-border FDI transactions approved. Such loans are often seen as evidence of the hidden hand of Beijing's party-state (Garnaut 2010; Aldred 2015a, 2015b; Mozur and Ewing 2016; Mozur and Perlez 2017). Syndicated loans that involve a mix of Western bank and Chinese bank participants are less likely to arouse

³¹⁷ Several years later, a major commercial law firm that works with Chinese banks on cross-border M&A transactions offered the following counsel to would-be foreign acquirers of U.S. companies: "[f]oreign acquirers should consider a variety of potential transaction structures, especially those involving strategically or politically sensitive transactions. Transaction structures that may be helpful in certain circumstances include investments that do not result in controlling interest, minority investments, or joint ventures, but may provide the right to acquire a larger stake or control later; partnering with a U.S. company or management, or collaborating with U.S. financiers or co-investors (e.g., private equity); and using a majority or partially majority-owned U.S.-based acquisition company with several U.S. citizens on its board and an influential U.S. citizen as a non-executive chairman" (King & Wood Mallesons 2013).

such concerns.³¹⁸ King & Wood Mallesons—a commercial law firm with a major presence in the Asia-Pacific region—counsels its Chinese clients to consider “collaborating with U.S. financiers or co-investors” if they wish to get “strategically or politically sensitive [M&A] transactions” approved in the U.S. (King & Wood Mallesons 2013).

In Figure A5.27 in the Appendix, we see that it is relatively rare for Beijing’s syndicated overseas lending commitments—and its syndicated overseas lending commitments that support FDI and brownfield M&A transactions—to only involve Chinese state-owned bank participants in countries with relatively stringent screening mechanisms for inbound foreign capital. In such settings, Beijing relies heavily upon syndicated loan arrangements with Chinese and non-Chinese bank participants.³¹⁹ Yet interestingly, Figure A5.28 in the Appendix shows that Beijing does not rely as heavily on syndicated loans with non-Chinese bank participants in countries with relatively weak screening mechanisms for inbound foreign capital.


“Between 2000 and 2023, only 31% of China’s bilateral FDI lending commitments supported countries with relatively strong ISMs.”

Beijing is evidently less concerned about pre-empting criticism in foreign jurisdictions where it faces lower levels of policy, legal, and regulatory scrutiny. Figure A5.29 in the Appendix demonstrates that Chinese state-owned creditors are far more likely to use bilateral FDI lending instruments in countries with relatively weak screening

³¹⁸ Beijing initially adopted an overtly “patriotic lending” approach, in which its overseas acquisitions were exclusively financed by Chinese state-owned entities. This strategy backfired in a high-profile case, prompting a “post mortem” by the State Council (Sydney Morning Herald 2010). Course corrections soon followed. In 2015, a Chinese consortium consisting of Hua Capital Management, CITIC Capital, and Goldstone Investment announced its plans to purchase OmniVision Technologies, a U.S.-listed technology company that builds powerful compact cameras for portable devices and state-of-the-art image sensors. Bank of America was initially involved in organizing the cross-border M&A transaction, but Bank of China and China Merchants Bank ultimately provided a \$1.9 billion syndicated loan—without any participation from non-Chinese banks—to facilitate the acquisition (DebtWire 2015a). Western banks that were “bumped off” syndicated loans for Chinese acquisitions of overseas assets raised concerns about the hidden hand of China’s party-state (DebtWire 2015a, DebtWire 2015b). Chinese state-owned banks were subsequently advised to take a lower-profile approach and enter into heterogeneous syndicates with Chinese and non-Chinese bank participants (King & Wood Mallesons 2013; Clifford Chance 2016).

³¹⁹ This is true when it provides cross-border loans to facilitate FDI transactions. However, it is also true when it provides cross-border loans that do not involve FDI transactions (see Figure 5.27).

mechanisms for inbound foreign capital. Between 2000 and 2023, only 31% of China's bilateral FDI lending commitments supported countries with relatively strong ISMs. The remaining 69% supported countries with relatively weak ISMs.

Section 4: Tracking China's overseas lending activities across and within sectors

We now turn our attention to the question of which sectors and sub-sectors are being prioritized by Beijing—and why. In this section, we also assess the extent to which China is focused on sectors that host countries have identified as “sensitive” on national security grounds. With newly collected data on success and failure of cross-border M&A transactions bankrolled by Chinese state-owned creditors, we decode Beijing's playbook for getting overseas mergers and acquisitions approved in “sensitive” sectors.

“Transportation, energy, industry, mining, and construction accounted for the bulk (72%) of China's overseas lending portfolio between 2000 and 2023.”

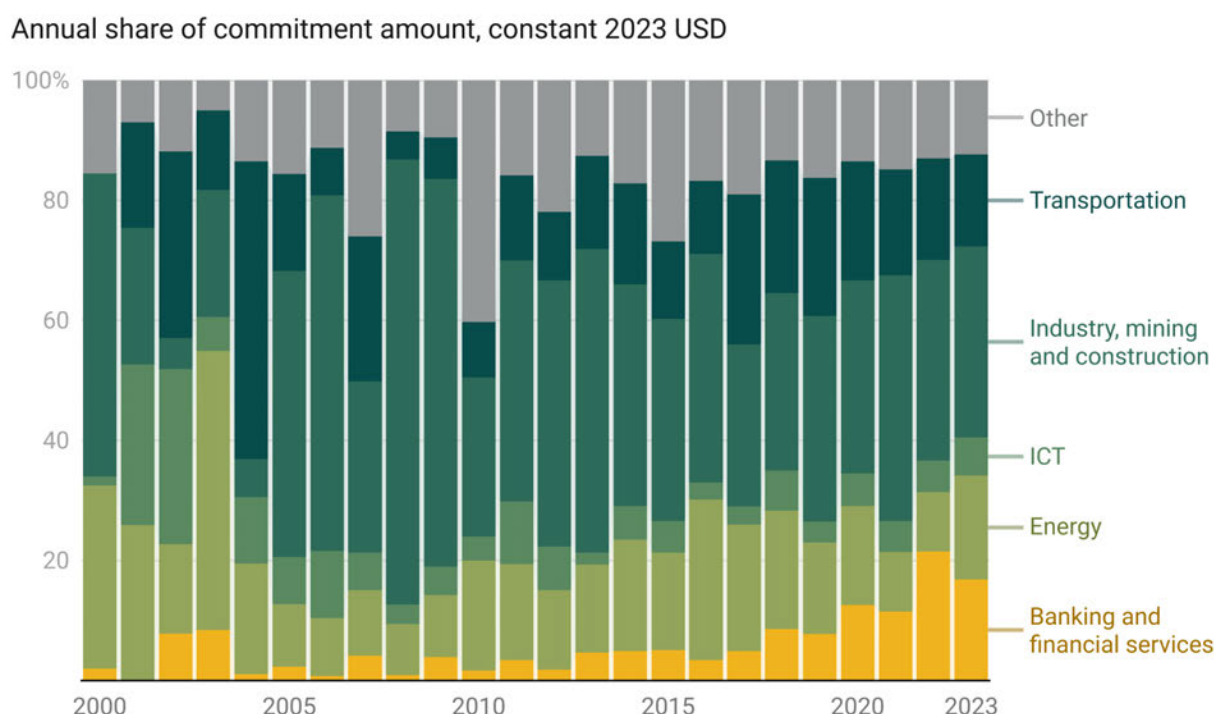
We begin by decomposing China's overseas lending portfolio into five major sectoral categories: (1) energy, (2) transportation, (3) information and communications technology (ICT), (4) banking and financial services, and (5) industry, mining, and construction.³²⁰ Figure 3.11 demonstrates that three of these categories—transportation, energy, and industry, mining, and construction—accounted for the bulk (72%) of the portfolio between 2000 and 2023.³²¹ These sectoral priorities have remained relatively consistent over time. They were in place before and after the

³²⁰ We also include a sixth, residual (“Other”) category for all projects and activities that are assigned to one of the following OECD sectoral groupings (codes) in the 1.0 version of AidData's CLG-Global Dataset: education (110), health (120), population policies/programs and reproductive health (130), water supply and sanitation (140), government and civil society (150), other social infrastructure and services (160), business and other services (250), agriculture, forestry, and fishing (310), trade and tourism (330), general environmental protection (410), women in development (420), other multisector (430), general budget support (510), developmental food aid/food security assistance (520), non-food commodity assistance (530), action relating to debt (600), emergency response (700), support to NGOs and government organizations (920), and unallocated/unspecified (998).

³²¹ Figure 3.12 excludes emergency rescue loan commitments. In Figure A5.30 in the Appendix, we replicate Figure 3.12 but include emergency rescue loan commitments, which reveals a somewhat different pattern.

introduction of the BRI, which suggests that China’s flagship, global infrastructure initiative was an extension and expansion of the “Going Out” strategy that was adopted by Jiang Zemin in 1999 and reaffirmed by Hu Jintao during his time in office (2002-2012).³²²

Figure 3.12: Sectoral decomposition of China’s overseas non-emergency lending portfolio



Notes: This chart excludes emergency rescue lending commitments (see Figure A5.30 for a replication of this chart that includes emergency lending). Sector classifications are based on the 3-digit OECD sector codes in the 1.0 version of AidData’s CLG-Global Dataset. The energy, transportation, information and communications technology (ICT), banking and financial services, and industry, mining, and construction sectors correspond to the following 3-digit OECD sector codes: 230, 210, 220, 240, and 320. The residual (“other”) category captures all of the remaining 3-digit OECD sector codes.

Yet our newly collected data provide evidence of significant changes *within* sectors. Consider China’s overseas lending operations in the transportation sector. Official

³²² As we noted in Chapter 1, one of Beijing’s goals under the “Going Out” strategy was to address the challenge of industrial overproduction at home. It sought to overcome this challenge by contractually obligating overseas borrowers to import infrastructure project inputs—like steel, iron, glass, aluminum, and cement—from Chinese state-owned firms (Dreher et al. 2022; Bluhm et al. 2025).

sector credit for the construction, expansion, and rehabilitation of international roads and railways has declined in recent years—from 69% of transportation sector lending in 2019 to 30% in 2023. However, Beijing has doubled down on the construction, expansion, and rehabilitation of international seaports and airports. The percentage of transportation sector lending that China earmarked for the “air and water” subsector increased from 28% in 2019 to 63% in 2023.³²³

“Official sector credit for international roads and railways has declined from 69% in 2019 to 30% in 2023, however, credit for the “air and water” subsector increased from 28% in 2019 to 63% in 2023.”

These changes in the composition of the portfolio have tracked closely with official policy directives in Beijing. In 2017, Xi Jinping called for the development of an “Air Silk Road” that would consist of aviation route networks, air transport agreements, and civil aviation infrastructure cooperation (China Ministry of Foreign Affairs 2017).³²⁴ Then, in 2019 and 2020, China’s Ministry of Transport reaffirmed the government’s 2015

³²³ A flurry of loan commitments for airport and seaport projects were issued between 2019 and 2023. In 2019, CDB provided a \$629 million USD loan for Phase I of the Lekki Deep Water Port Project in Nigeria. The loan was made to Lekki Port LFTZ Enterprise Limited (LPLEL), a special purpose vehicle and joint venture of the Lagos State Government (20% equity stake), the Nigerian Ports Authority (5% equity stake), and Lekki Port Investment Holding Inc. (75% equity stake), which is itself jointly owned by China Harbour Engineering Company Ltd (52.5% indirect equity stake in LPLEL) and Tolaram (22.5% indirect equity stake in LPLEL), for Phase I, which had a total cost of \$1.043 billion USD. Then, in 2021 ICBC contributed \$3 billion USD to a six-lender \$7.15 billion USD syndicate for Turkey’s New Istanbul Airport Refinancing Project. The next year, BOC and ICBC each contributed to multiple tranches of the \$6.63 billion USD syndicated financing for Phase 1A of the John F. Kennedy International Airport New Terminal One Public-Private Partnership (PPP) Project. This came after an agreement signed in June 2020 by a syndicate of 11 lenders—including the New York Branch of BOC—for airport expansion works was cancelled in September 2020 by stakeholders due to market volatilities and feasibility questions. Then, in 2023, Hakan Energy Company—a consortium of Chinese state-owned entities—signed an EUR 2.5 billion oil-for-infrastructure loan (EPCF) agreement for Phase 2 of the Imam Khomeini International Airport (IKA) Expansion Project. The purpose of Phase 2 is the construction of a new (second) terminal in Tehran’s IKA, located across 410,000 hectares of land south of the airport. Also in 2023, Bank of China (as well as its Hong Kong and Shanghai Branches), China Bank of Communications (BoCom or BoComm), Shanghai Rural Commercial Bank Co., Ltd. (SRCB), and the private sector China Minsheng Banking Corp Ltd (CMBC), extended a \$975 million USD term facility for Phase 1 of Chancay Multipurpose Port Terminal Construction Project in Peru. Following the financing, Chancay Port came under scrutiny for its strategic location and its operations management.

³²⁴ Figure A5.31 in the Appendix demonstrates that Chinese loan commitments for air transport in particular have sharply increased since Xi Jinping’s 2017 call to expand the “Air Silk Road.” In that year, air transport projects accounted for 14.7% of China’s total transport sector lending. By 2023, the share had risen to 52.6%.

commitment to the “Maritime Silk Road” and the continued development of international seaports and shipping lines (China Ministry of Transportation 2019, 2020; Wooley et al. 2023).³²⁵ Initially focused on the “near seas” in its regional neighborhood, Beijing later announced in a Military Strategy White Paper that the PLA Navy would “gradually shift its focus from ‘offshore waters defense’ to the combination of ‘offshore waters defense’ with ‘open seas protection’,” expanding its maritime activities to the far seas (China State Council 2015).

China’s financial support for international seaport and airport projects is focused on both civilian and military uses (Kardon and Leutert 2022; Wooley et al. 2023; Martin et al. 2025).³²⁶ In June 2023, the *Washington Post* obtained leaked documents from the Pentagon that indicate the PLA has plans to “build a global military network that includes at least five overseas bases and 10 logistical support sites by 2030” under a project codenamed “Project 141” (Hudson et al. 2023). This disclosure came on the heels of *Wall Street Journal* reporting in November 2021 that a secret Chinese military facility was being constructed at Khalifa Port, a deepwater facility in Abu Dhabi that lies along Beijing’s Maritime Silk Road (Lubold et al. 2021).³²⁷ The alleged military buildup in the United Arab Emirates took place after the completion of a seemingly benign, limited recourse project finance transaction with a Chinese state-owned creditor. In 2018, Bank of China contributed \$65.4 million to a \$260 million syndicated loan to facilitate the construction of a second container terminal (known as “KPCT 2”) at the

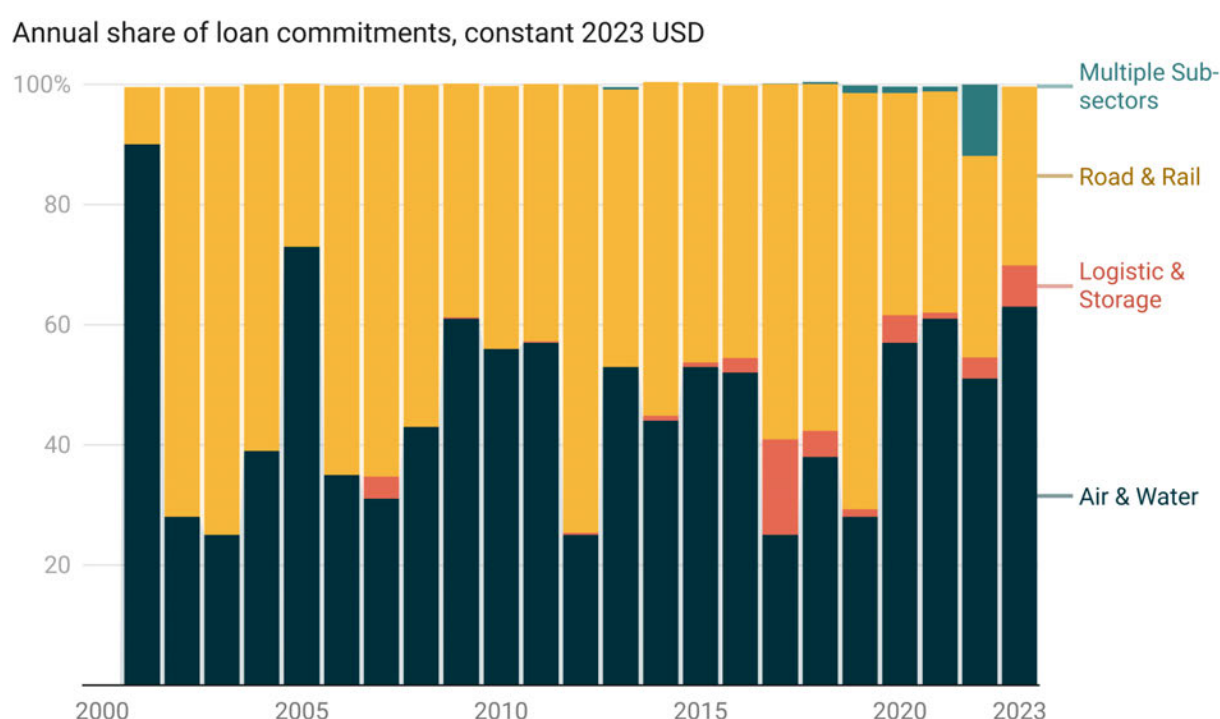
³²⁵ In 2015, China’s State Council released an action plan for the BRI, which called upon the Chinese government to “push forward port infrastructure construction, build smooth land-water transportation channels, and advance port cooperation,” while also “[expanding and building] platforms and mechanisms for comprehensive civil aviation cooperation, and quicken[ing] our pace in improving aviation infrastructure” to boost regional and global connectivity and trade facilitation (China State Council 2015).

³²⁶ The 1.0 version of AidData’s CLG-Global Dataset only captures grant and loan commitments for civilian airport and seaport projects. However, some of the facilities that are being constructed, expanded or rehabilitated have dual use capabilities (Kardon and Leutert 2022; Wooley et al. 2023).

³²⁷ Initially, COSCO Shipping Ports, through wholly-owned subsidiary COSCO Shipping Ports (Abu Dhabi), held a 90% stake in CSP Abu Dhabi Terminal L.L.C., jointly-owned with Abu Dhabi Ports Company, when the terminal was inaugurated in 2018 (Abu Dhabi Ports 2018). In November 2019, Qingdao Port International acquired a 33% stake in COSCO Shipping Ports (Abu Dhabi), and thus, an indirect 30% equity stake in the Khalifa port terminal (Si 2019). In its 2020 annual report, COSCO Shipping Ports Ltd. reported a share interest reduction from 90% the year prior to 40% in 2020, a 50% decline in its stake at the terminal, a greater decline than simply the minority stake sale to Qingdao Port (COSCO Shipping Ports Ltd. 2020). At this time, it remains unknown if there was a second sale of shares by COSCO in COSCO Shipping Ports (Abu Dhabi) or a new sale of a portion of CSP Abu Dhabi Terminal, or an internal dilution or reorganization between COSCO, Qingdao, and AD Ports.

deepwater port.³²⁸ CSP Abu Dhabi—the special purpose vehicle responsible for the construction of the container terminal—is majority-owned by COSCO Shipping Ports (Abu Dhabi), which in turn is a wholly-owned subsidiary of a Chinese SOE (COSCO Shipping Ports) whose UBO is the State Council.³²⁹ It holds a 35-year concession 35-year concession with Abu Dhabi Ports to operate KPCT 2.

Figure 3.13: Decomposition of China’s overseas lending portfolio in the transportation sector



Notes: This figure decomposes China’s cross-border transport sector lending portfolio into 3 subsectors: (i) road and rail, (ii) air and water, and (iii) logistics and storage. A fourth category “multiple subsectors” captures records that span two or more of these subsectors.

³²⁸ In 2016 and 2017, China Eximbank and ICBC provided loans worth \$425 million for the construction of the Dolareh Multipurpose Port and the Damerjog Livestock Export Terminal in Djibouti. Shortly thereafter, the PLA opened its first overseas base on a plot of land that is physically adjacent to its Dolareh Multipurpose Port.

³²⁹ COSCO Shipping Ports Ltd. is 71.55% owned by COSCO Shipping Holdings Co. Ltd., which in turn is 43.92% owned by China COSCO Shipping Corporation and 56.08% owned by public shareholders. China COSCO Shipping Corporation is the result of the merger of two SOEs under SASAC in 2016, China Ocean Shipping Corporation and China Shipping Group Company. China COSCO Shipping Corporation remains listed under SASAC’s directory.

Similarly, the 1.0 version of AidData's CLG-Global Dataset provides evidence that change is afoot within the energy sector. Figure 3.14 decomposes China's cross-border energy sector lending portfolio and it provides evidence of a shift from non-renewable to renewable sources of energy. With the passage of time, Beijing has ratcheted up its support for hydroelectric, nuclear, solar, wind, and geothermal energy projects, while ratcheting down its support for coal-fired, oil-fired, and natural gas-fired power plant projects.³³⁰

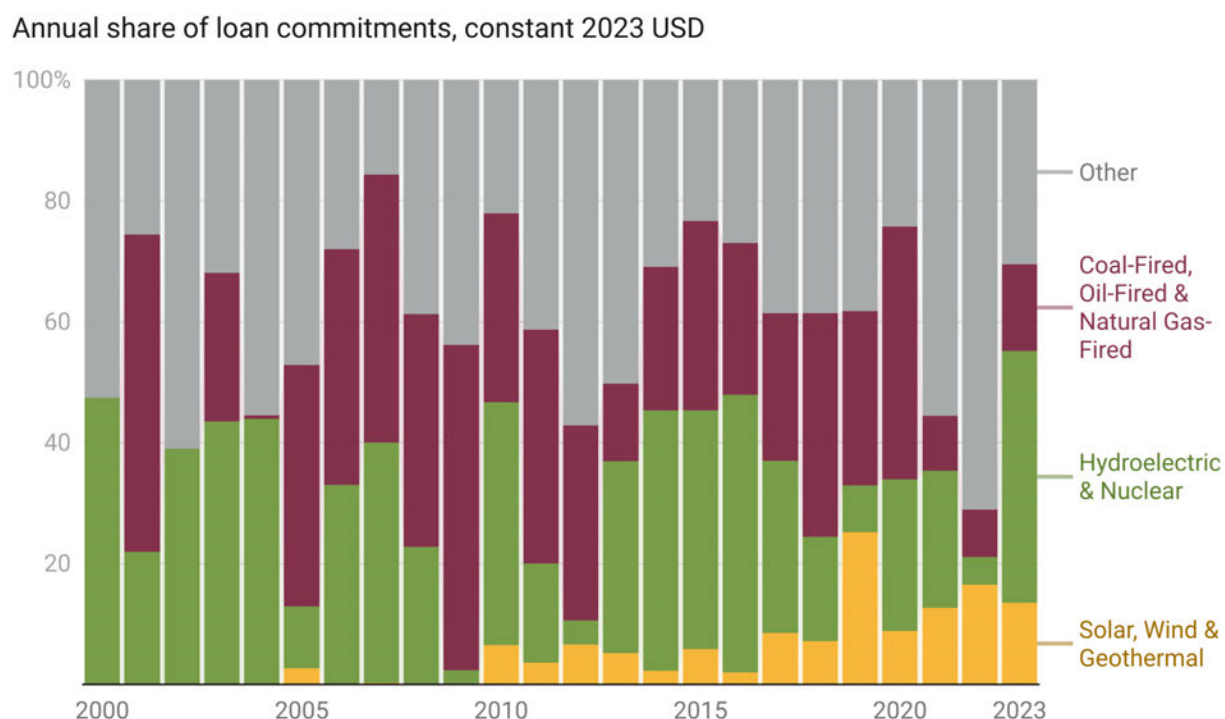
"Beijing has ratcheted up its support for hydroelectric, nuclear, solar, wind, and geothermal energy projects, while ratcheting down its support for coal-fired, oil-fired, and natural gas-fired power plant projects."

These compositional changes in Beijing's energy sector lending portfolio followed an announcement by Xi Jinping at the United Nations General Assembly in 2021 that China would "step up support for other developing countries in developing green and low-carbon energy," and "not build new coal-fired power projects abroad" (China Ministry of Foreign Affairs 2021).³³¹ Between 2021 and 2023, Chinese state-owned creditors approved 233 loan commitments worth \$12.7 billion for renewable energy projects in 33 countries, including the 510 MW Batang Toru Hydropower Plant Construction Project in Indonesia, the 64 MW Ranomafana Hydropower Plant Construction Project in Madagascar, the 159.9 MW Dabar Hydroelectric Power Plant Construction Project in Bosnia and Herzegovina, the 66 MW Cox's Bazar Wind Farm Project in Bangladesh, the 1.35 GW Kalyon Karapınar Solar Power Plant Project in Turkey, the 25 MW Donsin Solar Power Plant Construction Project in Burkina Faso, the 800 MW Vineyard Wind 1 Offshore Wind Farm Project in the U.S., the 756 MW Golden Plains Wind Farm Project in Australia, the 100 MW Kaposvár Solar Power Plant Construction Project in Hungary, the 3.6 GW Dogger Bank Wind Farm Project in the UK, and the 1.5 GW Hollandse Kust Zuid Offshore Wind Farm Project in the Netherlands.

³³⁰ See Figure A5.32 in the Appendix for a detailed breakdown of China's energy sector lending portfolio.

³³¹ This shift—from non-renewable energy to renewable energy—is also consistent with China's domestic decarbonization goals, which include reaching peak carbon emissions by 2030 and carbon neutrality by 2060 (China State Council 2021a; China State Council 2021b).

Figure 3.14: Decomposition of China's overseas lending portfolio in the energy sector



Notes: This figure decomposes China's cross-border energy sector lending portfolio into 4 subsectors using the *Energy_Source* variable from the 1.0 version of the CLG-Global Dataset. It collapses the "solar," "wind," and "geothermal" subsectors into a single category, the "hydroelectric" and "nuclear" subsectors into a single category, the "coal-fired," "oil-fired," and the "natural gas-fired" subsectors into a single category. All other subsectors (energy sources) are assigned to a residual ("other") category.

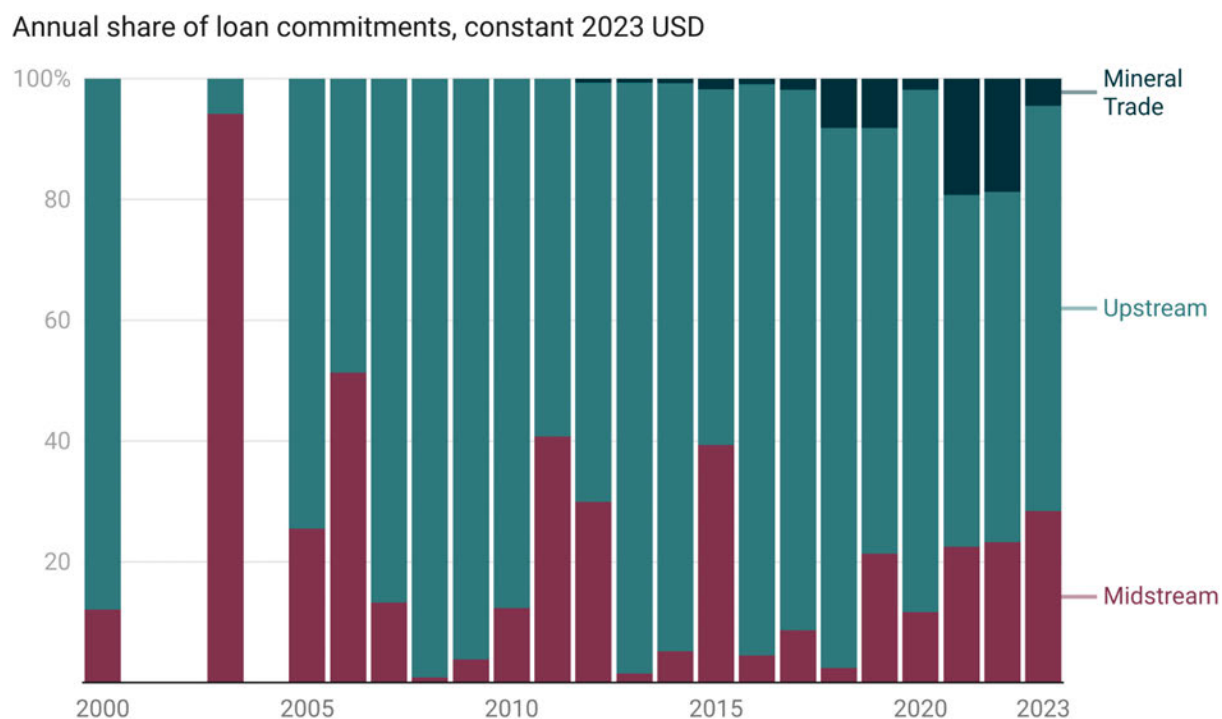
China is also gradually recalibrating its approach to overseas lending for critical mineral operations. For many years, it prioritized upstream extraction activities rather than midstream (processing) activities (Escobar et al. 2025). However, Figure 3.15 provides evidence that Beijing is increasingly focused on shoring up the midstream segment of its critical mineral supply chain and providing support to metals and minerals trading

companies, such as Traxys and Mercuria.³³² The 1.0 version of AidData’s CLG-Global Dataset demonstrates that Beijing has doubled down on mineral processing operations in Indonesia, a country that holds nearly a quarter of the world’s nickel reserves—a mineral input needed for the production of electric vehicle batteries (Custer et al. 2025). Between 2021 and 2023, Chinese state-owned creditors approved 110 loan commitments worth \$14 billion for overseas critical mineral operations, including the Bor Copper and Gold Mine Project in Serbia, the Huayou Nickel and Cobalt Project in Indonesia, the Mardie Salt and Potash Mine Project in Australia, the Antamina Copper Zinc Mine Project in Peru, and the Asmara Polymetallic (Copper-Zinc-Gold) Mine Project in Eritrea.


“Beijing is increasingly focused on shoring up the midstream segment of its critical mineral supply chain and providing support to metals and minerals trading companies, such as Traxys and Mercuria.”

³³² We categorize a mineral as “critical” if it appears on either the European Union’s 2023 (fifth) list of critical raw materials or the August 2025 draft list of critical minerals published by the U.S. Geological Survey (USGS). Critical minerals that have received relatively high levels of official sector credit from China include copper, cobalt, nickel, aluminum, and silver. Critical minerals considered to be “high” risk by the USGS that have received relatively little official sector credit from China include gallium, germanium, magnesium, tungsten, rhodium, and rare earth elements (such as samarium, lutetium, terbium). See Table A5.1 in the Appendix for more information about China’s official sector lending volumes for various critical mineral operations in developed and developing countries between 2000 and 2023.

Figure 3.15: Decomposition of China's overseas critical mineral lending portfolio by supply chain segment



Notes: This figure decomposes China's cross-border loan commitments for critical mineral operations across three supply chain segments: (i) upstream (mineral extraction), (ii) midstream (mineral processing), and (iii) mineral trade (support to metals and minerals trading firms).

Box 3d: How AidData measures the policy alignment, national security sensitivity, and success of China's cross-border merger and acquisition (M&A) lending operations

We have developed four new measures to better understand several features of China's cross-border merger and acquisition (M&A) lending operations: (1) transaction outcome, (2) buyer origin, (3) sector sensitivity, and (4) alignment with the MIC2025 policy.

We first identified all loans from Chinese state-owned creditors that directly or indirectly financed cross-border M&A transactions from 2000 to 2023 in the 1.0 version of the CLG-Global Dataset. We did so by identifying all loan records where the M&A field is set to "Yes," which indicates that a loan financed the borrower's acquisition of an equity stake in another company or facilitated the consolidation of multiple companies.

We then identified whether each cross-border M&A transaction was successfully completed. For each M&A loan record, we reviewed the corresponding narrative in the description field of the 1.0 version of the CLG-Global Dataset for evidence that the transaction was "completed," "approved," "failed," "blocked," "terminated," or "abandoned." In cases when these descriptions were inconclusive, we consulted press releases, stock exchange filings, bond prospectuses, annual reports, financial statements and other open-source materials to verify whether and when ownership of the target entity was transferred. Transactions that reached legal and financial closure were coded as "successful," while those blocked, withdrawn, or terminated before closure were coded as "unsuccessful." If the approval process was still underway or the loan supported a refinancing of a loan for a previous merger or acquisition, the outcome of the transaction was coded as "NA." In order to capture those transactions that were completed and those that were not completed, all M&A loan records were coded, regardless of their status designations in the dataset (i.e., pledge of financial support without reaching formal commitment, formal commitment, formal commitment under implementation, financial commitment that was subsequently suspended or cancelled).

Additionally, to identify if the buyer was from Greater China (mainland China, Hong Kong, or Macau), we reviewed the acquiring firm's name, registration, and ownership structure, as reported in the description field of the dataset. Given that many firms in mainland China use Hong Kong or Macau subsidiaries to conduct overseas acquisitions, we classified companies registered in these jurisdictions as part of Greater China. However, we did not classify Taiwan-based companies as part of Greater China because the former exercises significant autonomy from the mainland. We also consulted AidData's *parent organization structure* fields, which trace each borrowing institution's ownership chain to the top level (i.e., the ultimate owner or owners), in cases when the description field lacked sufficient detail.³³³ The acquiring firm was coded as Chinese if any entity within the ownership chain is from Greater China.

To identify whether each transaction occurred in a *sensitive sector*, we undertook a two-step process. First, we drew upon the PRISM dataset (Bauerle Danzman and Meunier 2023) to identify potentially sensitive sectors. The PRISM dataset measures the timing of the adoption of ISMs across 35 sectors in 38 OECD countries between 2007 and 2023.³³⁴ We then cross-walked all of the cross-border M&A loan records from the 1.0 version of the CLG-Global Dataset to one of the 35 PRISM sectors based on the sector of the acquisition target. M&A loan records that did not correspond to a PRISM sector were designated as "non-sensitive." Second, to isolate the subset of sectors that OECD countries have most frequently designated as "sensitive" on national security grounds, we distinguished between sectors that are "broadly defined sensitive" and "strictly defined sensitive." Given that OECD countries have designated some or all of these sectors as "sensitive" on national security grounds at different points in time, we coded all M&A loans in one of the 35 PRISM sectors as "broadly defined sensitive." However, to identify a list of "strictly defined sensitive" sectors, we generated a sector-by-sector count of the number of countries in the PRISM dataset that had ISMs

³³³ In the "Borrower Owners" tab of the 1.0 version of AidData's CLG-Global Dataset, the Parent Owner, Parent Owner Type, Parent Owner Channel and Parent Owner Percentage fields allow one to identify each organization's ownership structure and the breakdown of all UBOs of the direct receiving agency (borrowing institution).

³³⁴ The PRISM dataset covers 37 sectors, including "Controlled Dual-use" and "Critical Supplies"; however, Bauerle Danzman and Meunier (2023) note that it is difficult to crosswalk these two sectors to the European Union's Statistical Classification of Economic Activities (NACE) rev. 2, which they use to define which activities fall within and outside the parameters of a given sector. As such, AidData only assigns M&A loan records from the 1.0 version of the CLG-Global Dataset to 35 of the 37 sectors in the PRISM dataset.

in place between 2007 and 2023. We then designated a sector as “strictly defined sensitive” if 10 or more countries from the 23-country sample specifically screened inbound foreign investment in that sector at any point over the 17-year period.

This empirical rule of thumb anchors our measure of sector sensitivity in cross-national regulatory practice rather than case-by-case determinations. The 17 *strictly defined sensitive* sectors include defense production, transportation infrastructure, energy infrastructure, water infrastructure, telecommunication infrastructure, media, energy storage, healthcare infrastructure, media, agricultural/food security, finance, quantum information and sensing technology, microprocessing technology, sensitive personal data, biotechnology, robotics, civil nuclear and mineral resources.

Finally, we assessed the alignment of each cross-border M&A transaction with Beijing’s *Made in China 2025 (MIC2025)* policy, but only for the subset of transactions involving buyers from Greater China. Cross-border M&A loans supporting buyers from outside Greater China were excluded, as they could not plausibly advance the MIC2025 goal of helping China achieve 70% self-sufficiency in 10 high-tech industries by 2025. In order to determine if a cross-border M&A transaction (with a buyer from Greater China) was aligned with the MIC2025 policy, we evaluated whether it targeted one of ten priority industries under MIC2025: new generation information technology, high-end CNC machine tools and robots, aerospace equipment, marine engineering and high-tech ships, advanced rail transit equipment, energy-saving and new-energy vehicles, electric power equipment, agricultural equipment, new materials, and biomedicine and high-performance medical devices.³³⁵ Transactions in these industries were coded as aligned with the MIC2025 policy with “yes” designations. Otherwise, they were assigned “no” designations.

There are also important changes underway in China’s cross-border M&A lending operations. However, before considering the latest changes, it is important that we begin with some basic empirical facts about the nature and composition of this portfolio segment, as documented in the 1.0 version of AidData’s CLG-Global

³³⁵ To refine our classifications, we consulted Rhodium Group’s “Was Made in China 2025 Successful?” report and the Chinese Academy of Engineering’s 中国制造2025 重点领域技术路线图 (Technology Roadmap for Key Fields for Made in China 2025) to identify specific technologies within each category (Boullenois et al. 2025, Chinese Academy of Engineering 2015).

Dataset.³³⁶ Between 2000 and 2023, Chinese state-owned lenders extended \$335 billion of credit for mergers and acquisitions in 78 countries, including 4 low-income countries, 38 middle-income countries, and 36 high-income countries.³³⁷ Our newly collected data identify the following characteristics of China's cross-border M&A lending portfolio during this 24-year period:

- 80% supported buyers from Greater China (mainland China, Hong Kong, and Macau), while 20% supported buyers outside of Greater China.
- 66% supported mergers and acquisitions in countries with relatively weak screening mechanisms for inbound foreign capital, while 22% supported mergers and acquisitions in countries with relatively strong screening mechanisms for inbound foreign capital.³³⁸
- 74% supported mergers and acquisitions in high-income countries, while 26% supported mergers and acquisitions in low-income and middle-income countries.
- 86% supported transactions in sectors that host countries have deemed as "sensitive" on national security grounds, while 14% did not.³³⁹

³³⁶ As we discuss at greater length in Box 4a in Chapter 4, all of China's cross-border (M&A and non-M&A) lending transactions that involve "round tripping" are excluded from the 1.0 version of AidData's CLG-Global Dataset.

³³⁷ The 1.0 version of AidData's CLG-Global Dataset also captures cross-border M&A transactions backed by Chinese state-owned creditors that were attempted but unsuccessfully completed. These transactions include those that were blocked, aborted, or unwound. The corresponding records in the 1.0 version of AidData's CLG-Global Dataset have "status" designations of Pipeline: Pledge, Cancelled, and Suspended. They capture 58 M&A loans worth \$125.9 billion for transactions in 9 sensitive sectors and 5 non-sensitive sectors across 15 countries. AidData has previously faced criticism for publishing data on (i) loan (and grant) commitments from official sector institutions in China that were subsequently suspended or canceled, and (ii) pledges of financial support from official sector institutions in China that never reached the formal approval (loan or grant commitment) stage. However, we maintain that it is important to systematically track blocked, aborted, and unwound transactions. Shielding these transactions from public scrutiny leaves analysts and decision-makers with an incomplete picture of China's overseas (M&A and non-M&A) lending portfolio. It also limits opportunities to learn from failure. Users of the CLG-Global Dataset should keep in mind that suspended, cancelled, and pledged transactions can be excluded by turning the Recommended_for_Aggregates filter on or included by turning the same filter off.

³³⁸ The remaining 12% represent M&A loan commitments to countries for which there are no OECD data on ISM stringency.

³³⁹ To generate these summary statistics, we rely on the "strictly defined sensitive" variable that is described in Box 3d. This variable categorizes all loan commitments that do not meet the "strictly

- 33% supported transactions in sectors aligned with Beijing’s MIC2025 policy, while 67% did not.
- 73% resulted in successful mergers or acquisitions, while 27% did not.

The portfolio has evolved in consequential ways with the passage of time. 2015 marked a major turning point: the share of China’s cross-border M&A lending portfolio aligned with the MIC2025 policy nearly doubled between 2000-2014 and 2015-2023 (see Figure 3.17). Additionally, after Beijing announced the policy, the vast majority (75%) of its cross-border M&A lending commitments were channeled to jurisdictions with relatively weak screening mechanisms for inbound foreign capital (see Figure A5.33 in the Appendix). In the preceding fifteen year period (2000-2014), only 64% of China’s cross-border M&A lending commitments were channeled to such jurisdictions.³⁴⁰

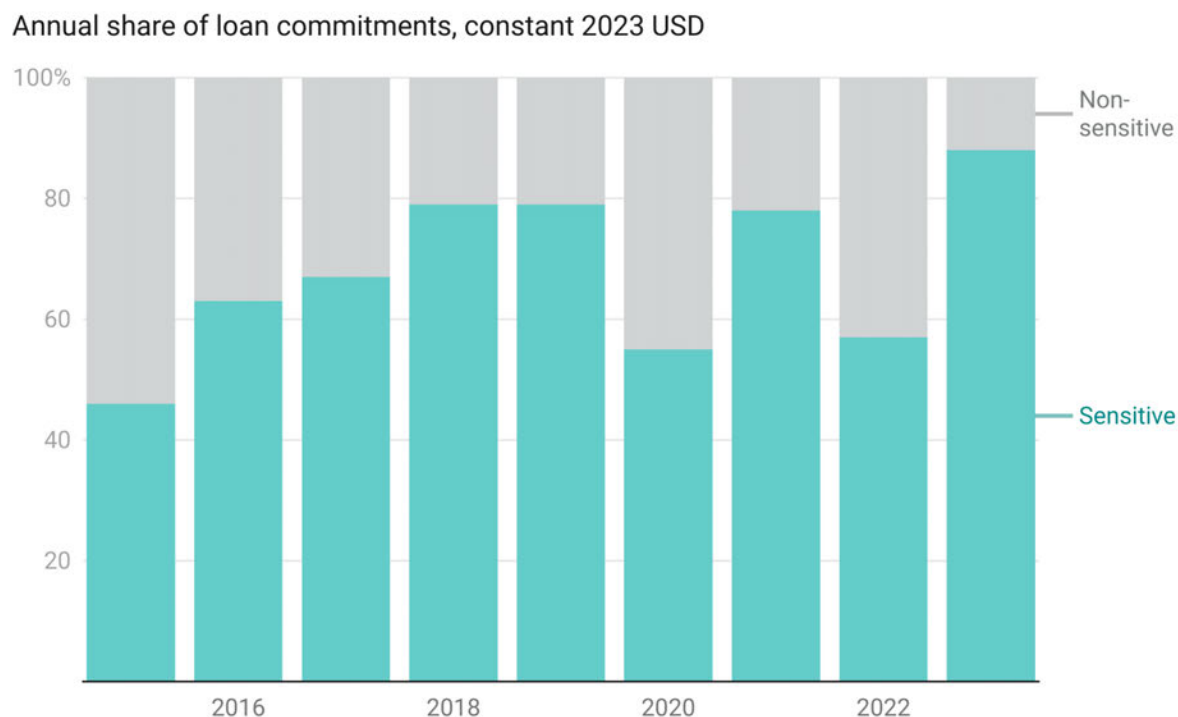
“In 2015, only 46% of China’s cross-border M&A lending portfolio supported transactions in “sensitive sectors.” However, by 2023, this figure reached 88%.”

Another remarkable shift took place after the adoption of the MIC2025 policy: China more aggressively pursued mergers and acquisition in sectors that host countries have deemed as “sensitive” on national security grounds. In 2015, only 46% of China’s cross-border M&A lending portfolio supported transactions in “sensitive sectors,” such as microprocessing technology, robotics, biotechnology, quantum information and sensing technology, and defense production (see Figure 3.16). However, by 2023, this figure reached 88%.

defined sensitive” criteria—including those given “non-sensitive” and “broadly defined sensitive” designations—as “non-sensitive.” In the remainder of this report, all other figures and summary statistics on China’s cross-border M&A lending in “sensitive” sectors rely on the same variable.

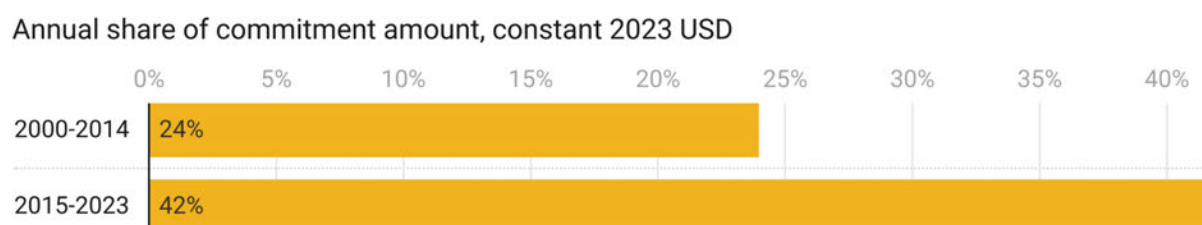
³⁴⁰ In Figure A5.34 in the Appendix, we replicate Figure A5.36 but restrict our analysis to China’s cross-border M&A lending commitments in sensitive sectors. Between 2000 and 2014, we find that 57% of its cross-border M&A lending commitments in sensitive sectors were channeled to jurisdictions with relatively weak screening mechanisms for inbound foreign capital. Between 2015 and 2023, this figure increased to 80%.

Figure 3.16: Decomposition of China's cross-border M&A lending portfolio by sensitive and non-sensitive sectors



Notes: Sectors that host countries have designated as "sensitive" (strictly defined) on national security grounds are identified based upon the measurement criteria described in Box 3d. All other sectors are categorized as "non-sensitive."

Figure 3.17: China's cross-border M&A lending portfolio by MIC2025 alignment before and after adoption of MIC2025 policy



Notes: This figure decomposes China's cross-border M&A loan commitments that are aligned with the Made in China 2025 (MIC2025) policy across two time periods: 2000-2014 and 2015-2023. It does so in order to measure differences before and after the adoption of the policy. MIC2025 policy alignment is based upon the measurement criteria described in Box 3d.

We also see evidence that Beijing pursued a “fly beneath the radar” strategy in sensitive sectors between 2015 and 2023. Prior to 2015, 79% of its cross-border M&A lending in sensitive sectors was undertaken via bilateral lending instruments and 21% was undertaken via syndicated lending instruments (see Figure 3.18). However, between 2015 and 2023, Beijing took a lower profile approach: only 27% of its cross-border M&A lending in sensitive sectors was undertaken via bilateral channels, while 73% was undertaken via syndication. Beijing also doubled down on the use of SPVs after the adoption of MIC2025. Prior to 2015, only 45% of its cross-border M&A lending in sensitive sectors took place through SPVs (see Figure A5.36 in the Appendix). However, between 2015 and 2023, this figure rose by 16 percentage points—to 61%.³⁴¹ Figure A5.35 in the Appendix also demonstrates that the vast majority (72%) of China’s cross-border M&A lending to SPVs in sensitive sectors took place through borrowing institutions in offshore jurisdictions. These findings are consistent with the results that we report in Section 3 on Beijing’s use of (offshore) SPVs and syndicated lending instruments in high-stakes settings.

Figure 3.18: China’s cross-border M&A lending in sensitive sectors by type of lending instrument, 2000-2023



Notes: The decomposition is presented over two different time periods—2000-2014 (“Pre-2015”) and 2015-2023 (“Post-2015”)—in order to measure differences before and after the adoption of the Made in China 2025 (MIC2025) policy. Sectors that host countries have designated as “sensitive” (strictly defined) on national security grounds are identified based upon the measurement criteria described in Box 3d.

³⁴¹ In Figure A5.35, we decompose China’s cross-border M&A lending portfolio in sensitive sectors via SPVs. Over the entire 24-year period of observation (2000-2023), we find that nearly three-quarters (72%) of this portfolio segment is routed through borrowing institutions in offshore jurisdictions, while the remaining 28% is routed through onshore borrowers.

Our newly collected data also demonstrate that Beijing’s playbook for getting overseas mergers and acquisitions approved has proven remarkably successful. The long-run, average success rate is 81% and it has increased over time—in both developed and developing countries. Prior to the adoption of MIC2025 in 2015, the average success rate was 72% (see Figure 3.20). However, between 2015 and 2023, it increased to 90%.³⁴² Beijing has also proven increasingly adept at getting cross-border mergers and acquisitions approved in sensitive sectors (see Figure 3.21).³⁴³ Figure 3.19 suggests that it has done so by focusing its efforts in developing countries and in countries with relatively weak screening mechanisms for inbound foreign capital.³⁴⁴ It also suggests that Beijing’s use of SPVs to facilitate cross-border M&A transactions in sensitive sectors has proven more successful than its use of syndicated lending instruments.³⁴⁵

“Our newly collected data also demonstrate that Beijing’s playbook for getting overseas mergers and acquisitions approved has proven remarkably successful, with an average long-run, average success rate of 81%.”

Beijing’s ongoing pivot from the developed to developing world is also observable if one analyzes the share of its cross-border M&A loan portfolio in high-income countries that supports borrowers (buyers) with an ultimate beneficial owner (UBO) in China.³⁴⁶ In the first five years after the adoption of the MIC20125 policy (2015-2019), this ratio fluctuated between 55% and 85%. However, between 2021 and 2022, it fell sharply to

³⁴² Big-ticket transactions in China’s cross-border M&A lending portfolio are less likely to reach completion. 85% percent of China’s unsuccessful cross-border M&A lending (by commitment value) involves lending commitments worth \$5 billion or more.

³⁴³ The long-run, average success rate in sensitive sectors is 80% and it too has increased over time. Prior to the adoption of MIC2025 in 2015, the average success rate in sensitive sectors was 68%. By 2023, it reached 100% (see Figure 3.19).

³⁴⁴ There is substantial, but not perfect, overlap between these two country cohorts. ISMs are substantially less well-developed in LICs and MICs, but they do not exclusively exist in high-income jurisdictions. For more on this issue, see Section 2.

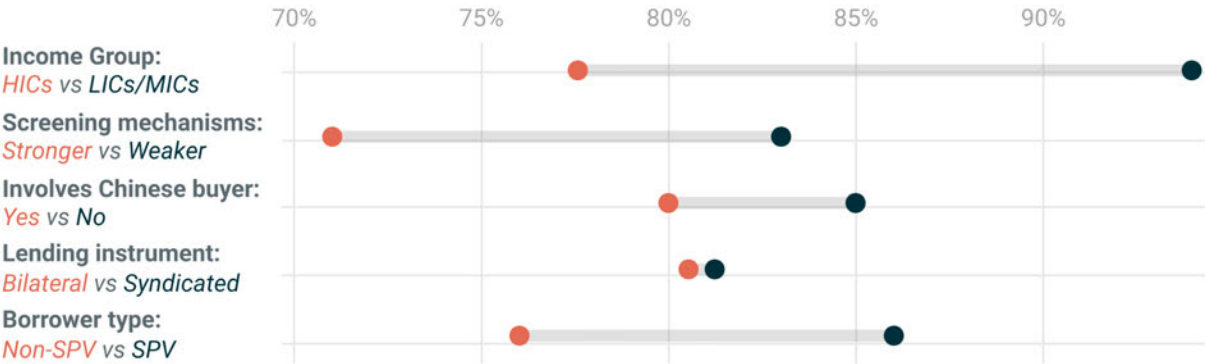
³⁴⁵ In Figure A5.37 in the Appendix, we replicate the analysis from Figure 3.19 but across sensitive sectors only.

³⁴⁶ The 1.0 version of the CLG-Global Dataset identifies all ultimate beneficial owners (UBOs) for each borrower in the dataset according to the TUFF methodology, see Parks et al. (2025). Ultimate beneficial ownership is traced through disclosed shareholding structures, parent–subsidiary linkages, and public filings to determine whether an entity is ultimately owned or controlled by Chinese individuals or legal persons. In the 1.0 version of the CLG-Global Dataset, the “Chinese_Group_UBO” field identifies all loan records that involve at least one UBO based in China, Hong Kong, or Macau. This approach ensures that offshore or intermediary registrations (e.g., in Hong Kong or Macau) do not obscure Chinese group-level control of the entity.

10–12%. By 2023, it bottomed out at zero. Yet interestingly, a similar shift is not visible in middle-income countries (where ISMs remain weak or non-existent). In fact, in 2023, total cross-border M&A lending from Chinese state-owned creditors to this group of countries increased more than fourfold—and Chinese participation remained strong (85% of all Chinese loan-financed M&A transactions in middle-income countries involving a borrower with a Chinese UBO).

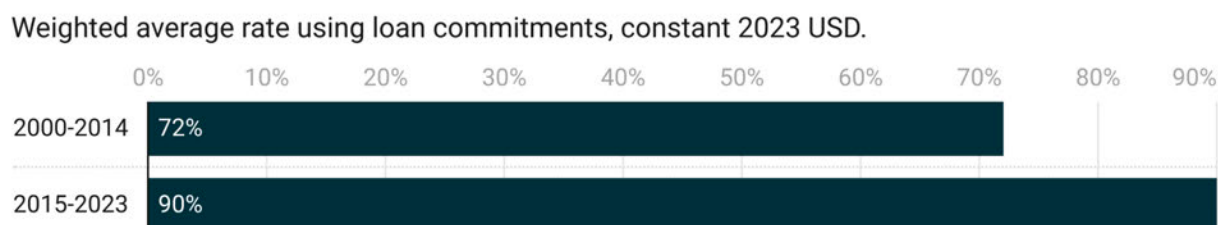
Figure 3.19: China’s cross-border M&A lending success rates by cohort

Share of loan commitments, constant 2023 USD



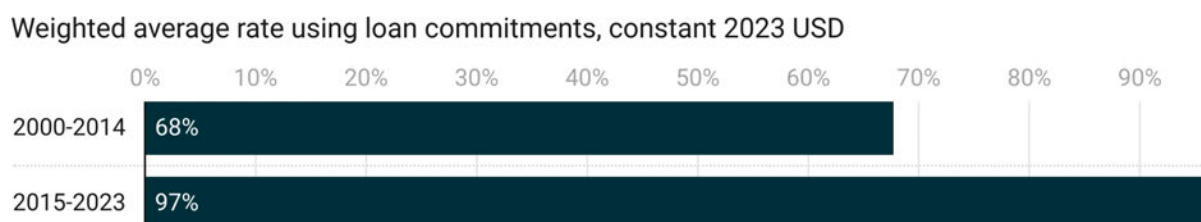
Notes: The success of each loan-financed cross-border M&A transaction is identified based upon the measurement criteria described in Box 3d. Chinese buyer means a buyer of a company or entity from mainland China, Hong Kong and Macau. All cross-border M&A loan records are included regardless of their recorded status in AidData’s CLG-Global 1.0 dataset, whether pledged, formally committed, under implementation, suspended, or cancelled.

Figure 3.20: Weighted average success rate in China's cross-border M&A lending portfolio, before and after adoption of MIC2025 policy



Notes: This figure presents the weighted average success rate of China's cross-border M&A loan commitments across two time periods: 2000-2014 and 2015-2023. It does so in order to measure differences before and after the adoption of the Made in China 2025 (MIC2025) policy. The success of each cross-border M&A transaction is identified based upon the measurement criteria described in Box 3d. All M&A loan records are included regardless of their recorded status in AidData's CLG-Global 1.0 dataset, whether pledged, formally committed, under implementation, suspended, or cancelled.

Figure 3.21: Weighted average cross-border M&A success rate in sensitive sectors, before and after adoption of MIC2025 policy



Notes: This figure presents the weighted average success rate of China's cross-border M&A loan commitments in sensitive sectors across two time periods: 2000-2014 and 2015-2023. It does so in order to measure differences before and after the adoption of the Made in China 2025 (MIC2025) policy. The success of each cross-border M&A transaction is identified based upon the measurement criteria described in Box 3d. Sectors that host countries have designated as "sensitive" on national security grounds are also identified based upon the measurement criteria described in Box 3d. All M&A loan records are included regardless of their recorded status in AidData's CLG-Global 1.0 dataset, whether pledged, formally committed, under implementation, suspended, or cancelled.

Section 5: Looking ahead: Are we entering a period of convergence or divergence?

Wayne Gretzky, a former professional ice hockey player, is often credited with saying that one should “go to where the puck is going, not where it has been.” This metaphor is particularly apropos for G7 and OECD countries that are seeking to more effectively compete with China. However, it is difficult to gauge how Beijing’s overseas lending operations are evolving—and likely to evolve in the future—in the absence of a mountaintop view of the entire portfolio in the developed and developing world.

The comprehensive scope of AidData’s CLG-Global Dataset makes it useful for pinpointing where China’s lending practices are converging and diverging in the developed and developing world. As such, it may provide some useful clues about the future direction of China’s overseas lending portfolio.

In this section, we evaluate portfolio coherence by measuring the extent to which China’s cross-border lending practices are converging or diverging in seven areas:

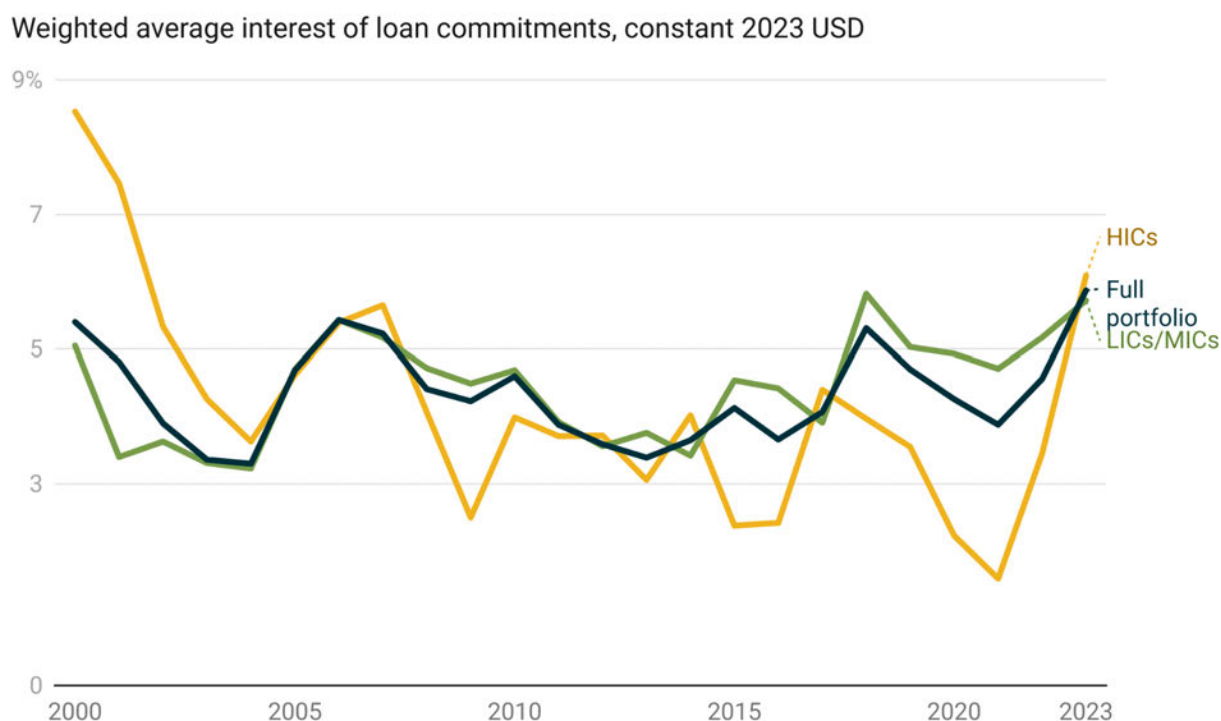
- the borrowing terms of loans, including their interest rates, maturities, grace periods, and grant elements;
- the use of credit enhancements, including collateral, credit insurance, and third-party repayment guarantees;
- the use of bilateral and syndicated lending instruments;
- the use of PPG and non-PPG lending instruments;
- the use of (infrastructure) project lending facilities and liquidity support facilities;
- the channeling of credit through different types of lending institutions; and
- the currencies in which loans are denominated.

■
“Countries face an increasing cost of borrowing from China: Beijing charged borrowers in developed and developing countries a nearly 6% interest rate by 2023.”

We begin by evaluating the borrowing terms of China’s cross-border lending operations in the developed world and the developing world. In Figure 3.22, we measure the weighted average interest rate of official sector lending from China across two country cohorts: LICs/MICs and HICs. In 2000, at the beginning of our period of study, there were major differences in Beijing’s loan pricing practices across developed and developing countries. On average, China charged borrowers in developed countries an 8.53% interest rate and borrowers in developing countries an 5.04% interest rate. However, by 2023, there was virtually no difference across the two cohorts. Beijing charged borrowers in developed and developing countries a nearly 6% interest rate.³⁴⁷

³⁴⁷ More specifically, our newly collected data demonstrate that Beijing charged borrowers in LICs and MICs a 5.7% interest rate and borrowers in HICs a 6.1% interest rate in 2023 (see Figure 3.22). Our data also provide evidence of convergence over time in China's use of variable interest rates in developed and developing countries (see Figure 3.23).

Figure 3.22: Weighted average interest rate of China's overseas lending portfolio



Notes: Interest rates are measured as of the date of financial commitment. For loans with variable rate structures, AidData calculates the all-in rate at the time of the commitment by summing the applicable base reference rate and the margin (spread) specified in the loan agreement.

The increasing cost of borrowing from China has tracked closely with another change that has taken place over time: the transition from lending at fixed interest rates to variable interest rates. In 2000, China mostly lent to borrowers in HICs at variable interest rates and it mostly lent to borrowers in LICs/MICs at fixed interest rates.³⁴⁸ By 2023, nearly two-thirds of China's lending to both cohorts of countries—LICs/MICs and HICs—was based on variable interest rates (see Figure 3.23). However, there is a major difference in the base (reference) rates that Chinese creditors are using in the

³⁴⁸ For loans with variable interest rates, AidData calculates the all-in interest rate on the date of financial commitment by summing the applicable base rate and the margin (spread) specified in the loan agreement. The base rate reflects the reference rate in effect at the time of the signing of the loan agreement (e.g., LIBOR, SOFR, EURIBOR, or SHIBOR), and the margin represents the fixed number of basis points added by the lender. This approach ensures comparability across loans and provides a consistent measure of the initial cost of borrowing.

developed and developing world: whereas new lending operations in LICs and MICs are increasingly denominated in RMB and tethered to the Shanghai Interbank Offered Rate (SHIBOR), new lending operations in HICs remain mostly dollar-denominated and tethered to the Secured Overnight Financing Rate (SOFR) (see Figures 3.31 and 3.32, as well as Figures A5.39 and A5.40 in the Appendix).³⁴⁹

Figure 3.23: Share of Chinese lending using variable interest rates

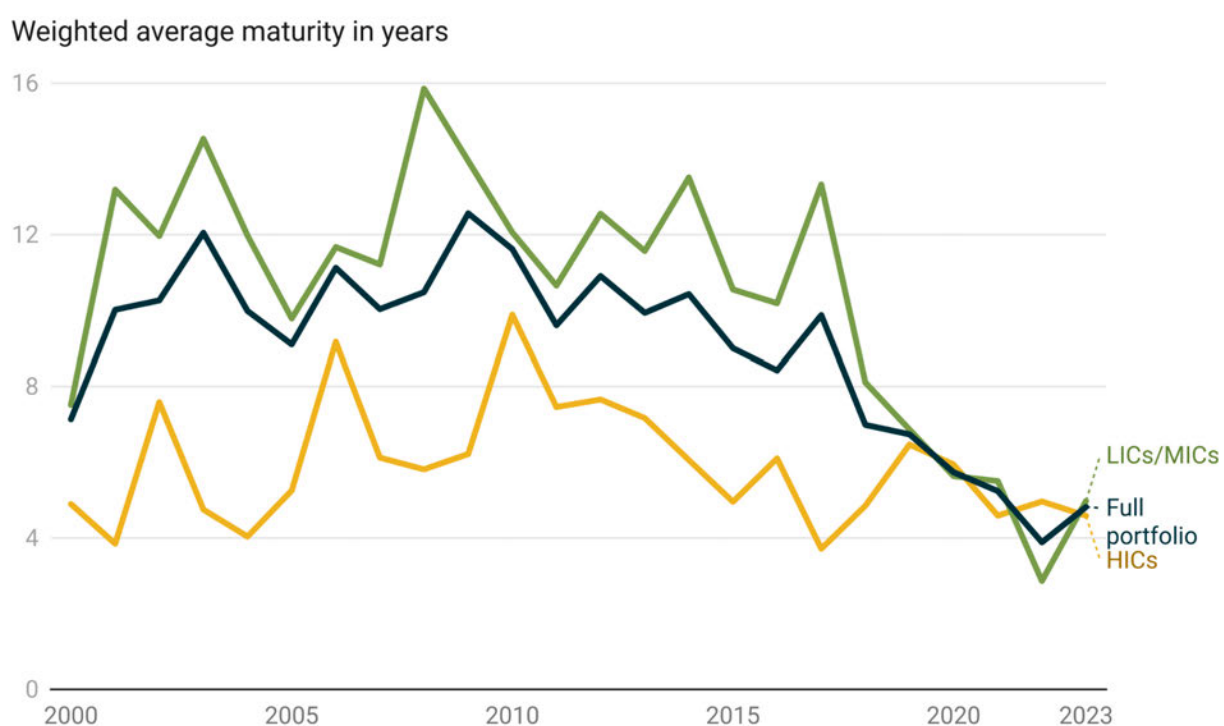


Consistent with a shift toward more expensive borrowing terms, Figure 3.24 provides evidence that the weighted average repayment period (maturity) has converged in developed and developing countries over time. In LICs and MICs, it declined from 7.52 years in 2000 to 4.98 years in 2023, thereby coming into close alignment with the weighted average repayment period in HICs (4.59 years in 2023). The weighted average grant element—a summary measure of financial concessionality that varies from 0% (the lowest level of concessionality) to 100% (the highest level of concessionality)—also converged below 2.5% in developed and developing countries

³⁴⁹ In loan agreements that were signed 2024 and 2025, we have also identified evidence of variable interest rates increasingly being tethered to the Loan Prime Rate (LPR) set by PBOC (Gelper et al. 2025b).

in 2023 (see Figure 3.25).³⁵⁰ This is a striking departure from past practice. Between 2000 and 2013, the weighted annual average grant element in LICs and MICs was 16.4%. Also, as Figure 3.26 demonstrates, the share of China's lending to LICs and MICs that met or exceeded the IMF's traditional (35%) grant element threshold of concessionality declined sharply between 2000 and 2023—from 10.4% to 1.5%. This compositional change has brought China's lending practices in the developing world and developed world into closer alignment.³⁵¹

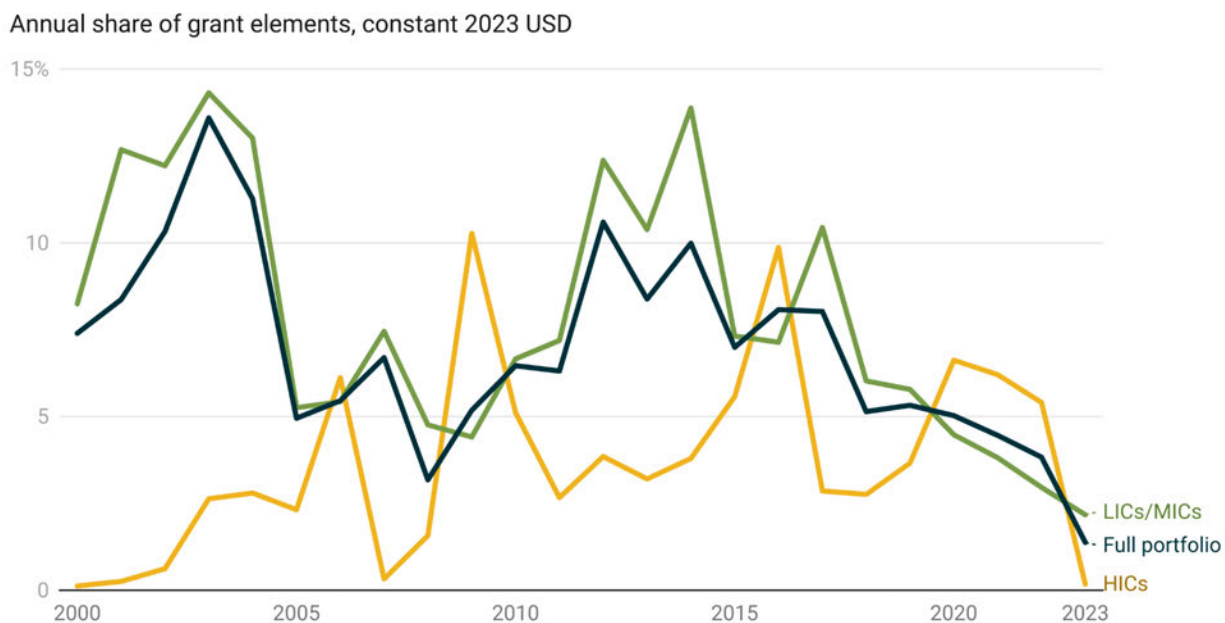
Figure 3.24: Weighted average maturity of China's overseas lending portfolio



³⁵⁰ In 2023, the weighted average grant element of China's official sector lending was 2.17% in LICs and MICs was 0.17% in HICs.

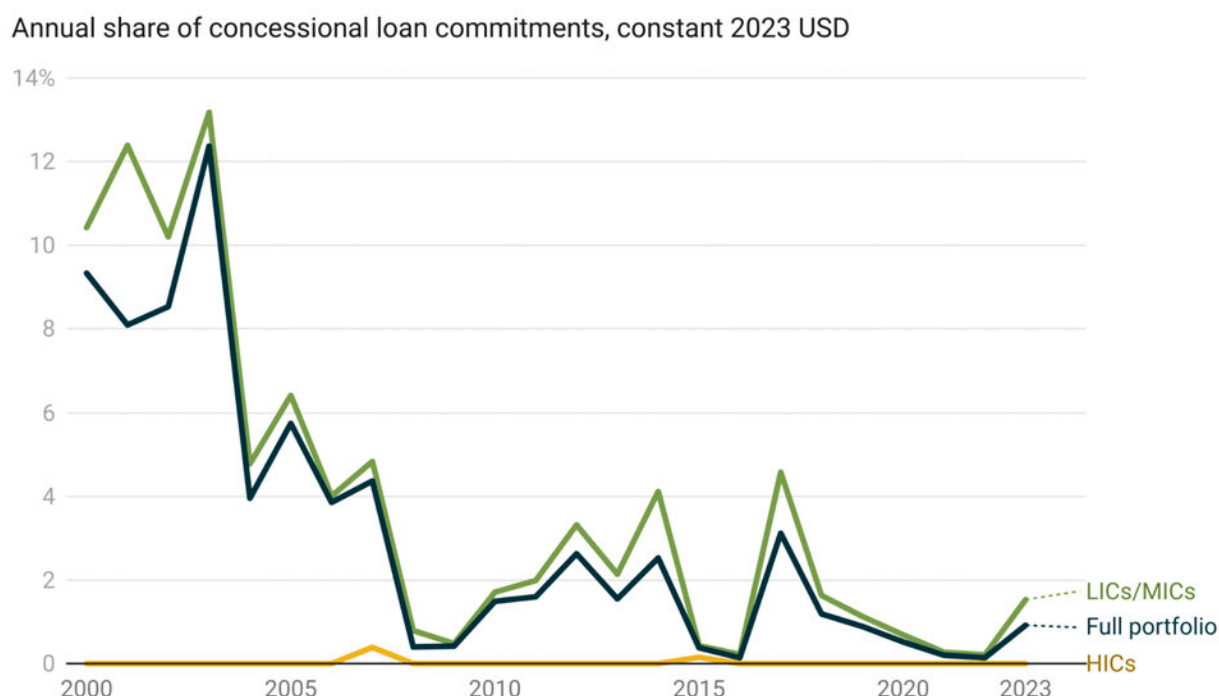
³⁵¹ Between 2000 and 2023, only 0.01% of China's lending to HICs met or exceeded the IMF's traditional (35%) grant element threshold of concessionality (see Figure 3.26).

Figure 3.25: Weighted average grant element of China's overseas lending portfolio



Notes: The IMF's grant element calculator, which relies upon a unified 5% discount rate for all countries, is used.

Figure 3.26: Share of Chinese lending provided on concessional terms



Notes: Concessionalities are measured on a loan-by-loan basis with the IMF's grant element calculator, which uses a unified 5% discount rate for all countries. Consistent with IMF policy, all loans with grant elements equal to or greater than 35% are designated as concessional loans.

In recent years, we have also witnessed some degree of convergence in China's use of collateral as a repayment safeguard. In Figure 3.27 below, we track the percentage of China's official sector lending that is supported by collateral in the developing world and the developed world. In 2023, there was a 14 percentage point gap between the collateralized share of China's lending portfolio in HICs and the collateralized share of its lending portfolio in LICs/MICs. However, in 2000, the difference between these two cohorts was 23.1 percentage points.³⁵²

³⁵² The same level of convergence is not observed when currency swap borrowings and BOP loans are included in the analysis (see Figure A5.41 in the Appendix). However, for consistency with Gelper et al. (2025a), we exclude these loans from our analysis in Figure 3.27.

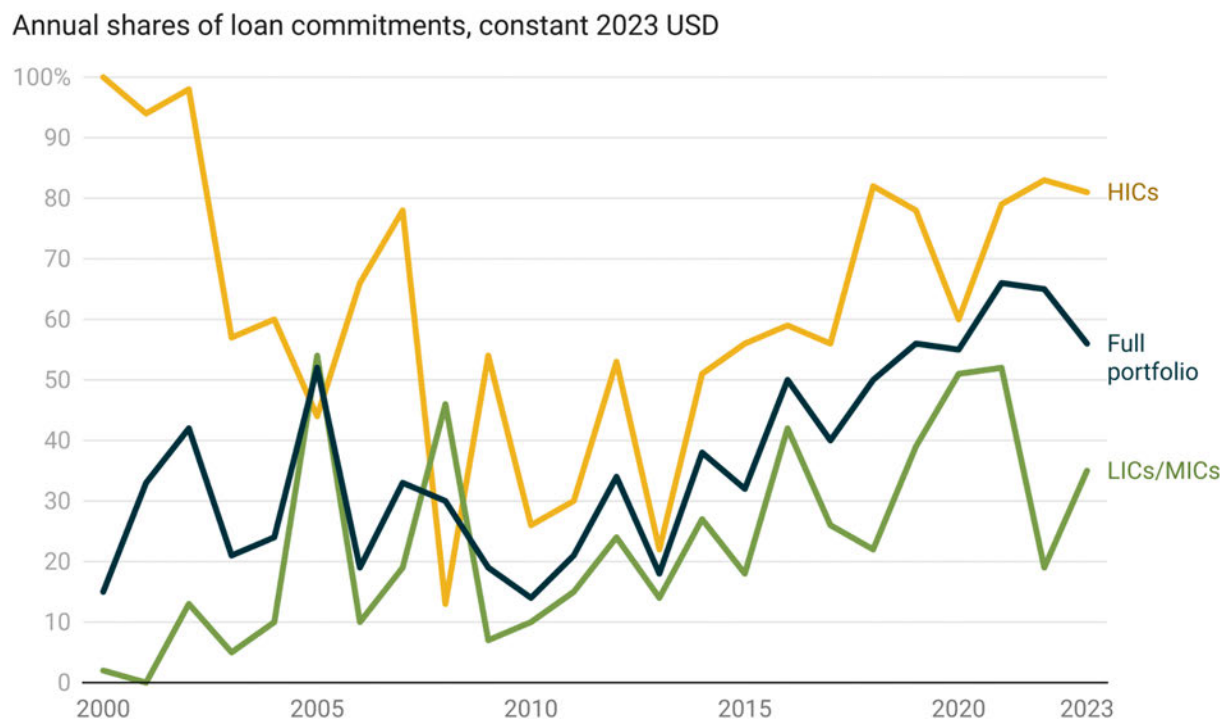
Figure 3.27: Annual share of Chinese non-emergency overseas lending that is collateralized



Over time, we have also witnessed some degree of convergence in China's use of syndicated loan instruments—and disuse of bilateral loan instruments—in the developing world and developed world. In 2000, 100% of China's overseas lending to HICs but only 2% of its overseas lending to LICs/MICs was provided via syndicated loan instruments. However, over our twenty-four year period of study, this percentage point gap dropped from 98% in 2000 to 46% in 2023.³⁵³ At the same time, Beijing's bilateral lending instruments have increasingly fallen out of favor in the developed and developing world (see Figure A5.43 in the Appendix).

³⁵³ Whereas 81% of China's lending to HICs was provided via syndication in 2023, 35% of its lending to LICs/MICs was provided via syndication in the same year (see Figure 3.28).

Figure 3.28: Share of Chinese lending provided via syndication, excluding rescue lending



Our data also show a clear trend of Beijing moving away from PPG lending instruments in LICs and MICs. Figure 3.29 below shows a steady increase in the share of China's lending to LICs and MICs via non-PPG lending instruments over time—from 14% in 2000 to 44% in 2023. This trend is bringing China's lending practices in the developing world into closer alignment with its lending practices in the developed world. In 2000, there was a massive difference (an 86 percentage point gap) between the non-PPG share of China's lending portfolio in HICs and the non-PPG share of its lending portfolio in LICs/MICs. However, by 2023, the gap had shrunk to 41 percentage points. A separate, but related, area of convergence is FDI lending. According to Figure A5.44 in the Appendix, the share of China's lending to LICs and MICs that supports FDI projects and activities (19.4%) is now roughly on par with the corresponding share of its lending to HICs (20.0%). The percentage point difference between these two shares was vast (26 percentage points) at the turn of the century, but it narrowed to only 0.6 percentage points in 2023.

Figure 3.29: Chinese non-emergency overseas lending to non-PPG borrowers



Notes: This figure shows the annual share of China's non-emergency lending portfolio (in constant 2023 USD) between 2000 and 2023 that qualify as public and publicly guaranteed (PPG) debt. These shares are reported for three groups: (i) high-income countries (HICs), (ii) low and middle-income countries (LICs/MICs), and (iii) LICs, MICs, and HICs.

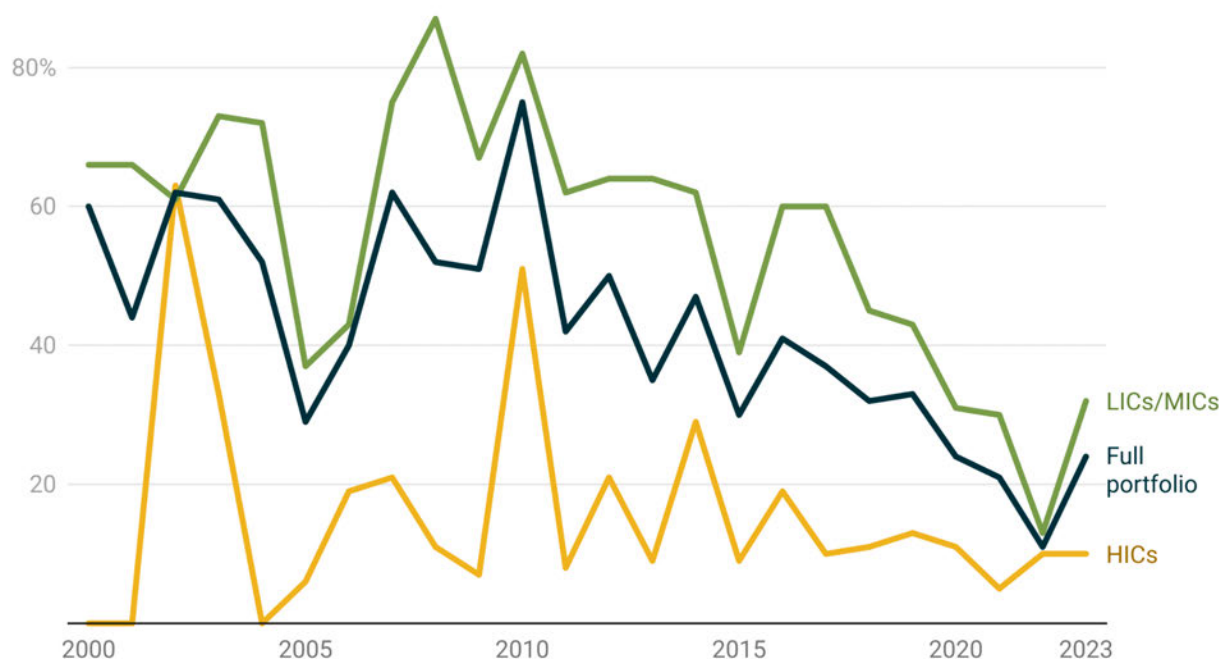
Another surprising area of convergence is the infrastructure orientation of China's overseas lending portfolio. In 2000, there was a yawning gap—a 66 percentage point difference—between the share of China's overseas lending supporting infrastructure projects in developing countries and the corresponding share in developed countries (see Figure 3.30). 66% of China's lending to LICs and MICs supported infrastructure projects and none (0%) of its lending to HICs supported infrastructure projects. However, by 2023, this percentage point difference dwindled to 23%, which reflects the fact that China's overseas lending program is becoming less BRI-centric in developed and developing countries and its lending practices around the globe are converging with the passage of time.

■
“China’s overseas lending program is becoming less BRI-centric in developed and developing countries: there was only a 23% difference in China’s infrastructure lending to LICs and MICs versus to HICs, compared to 66% in 2000.”

Figures A5.46 and A5.47 in the Appendix help explain this pivot away from infrastructure project lending. They demonstrate that, over time, Beijing has redirected state credit to liquidity support facilities for borrowers in the Global North and the Global South. While this constitutes further evidence of convergence, our data also indicate Beijing is targeting different types of borrowers across the developed world and developing world. The primary recipients of liquidity support facilities in the developing world are PPG borrowers and the primary recipients of liquidity support facilities in the developed world are non-PPG borrowers.

Figure 3.30: China's overseas lending earmarked for infrastructure projects

Annual shares of loan commitments, constant 2023 USD



In Figures A5.48 and A5.49 in the Appendix, we decompose China's overseas lending portfolio by creditor category in the developed and developing world. There are major differences across these two cohorts. On average, between 2000 and 2023, Beijing channeled 67% of its annual lending commitments to HICs through its state-owned commercial banks. By contrast, it channeled 18% of its annual lending commitments to LICs and MICs through its state-owned commercial banks over the same period of time. On average, between 2000 and 2023, Beijing channeled 12% of its annual lending commitments to LICs and MICs through PBOC. Yet it channeled only 3% of its annual lending commitments to HICs through PBOC during this 24-year period.

"In 2023, Beijing routed more official sector credit to the developing world through its state-owned commercial banks than its state-owned policy banks."

Yet we still see some evidence of convergence. The policy banks (China Eximbank and CDB) account for a shrinking proportion of China's annual lending commitments in

both developed and developing countries. Also, Figure A5.49 in the Appendix demonstrates that in 2023 a larger proportion of Chinese lending to LICs and MICs was provided through the country's state-owned commercial banks, which are the same banks responsible for the bulk of China's lending to HICs (see Figure A5.48 in the Appendix). Indeed, in 2023, Beijing routed more official sector credit to the developing world through its state-owned commercial banks than its state-owned policy banks.³⁵⁴

One area where we find clear evidence of *divergence* is in the way that Beijing denominates its overseas loan commitments. In Figure A5.52 in the Appendix, we decompose China's overseas lending portfolio by currency of denomination. It shows that the dollar's importance has steadily declined and the renminbi's importance has steadily increased in China's overseas lending portfolio.³⁵⁵ However, it also masks significant differences across the LIC/MIC and HIC segments of the portfolio. Figures 3.31 and 3.32 provide evidence that China has prioritized a pivot towards renminbi-denominated lending and away from dollar-denominated lending in the developing world but not the developed world. Between 2013 and 2023, the share of China's new, dollar-denominated lending commitments to LICs and MICs plunged from 91% to 39%. At the same time, China dramatically increased new, renminbi-denominated lending commitments to LICs and MICs—from 7% in 2013 to 52% in 2023. Yet most of its lending commitments to the developed world remain dollar-denominated. Figure 3.30 shows a modest increase in renminbi-denominated lending and a modest decline in dollar-denominated lending to HICs, but this compositional shift is far less substantial than the one that is observed in LICs and MICs.

³⁵⁴ Figures A5.51 and A.5.50 in the Appendix decompose China's overseas lending portfolio by creditor category in the developed and developing world, respectively. However, unlike Figures A5.48 and Figure A5.49 in the Appendix, they do so by volumes rather than shares.

³⁵⁵ In this regard, the evidence we present is consistent with the results that are presented in DeMarco and Walker (2025).

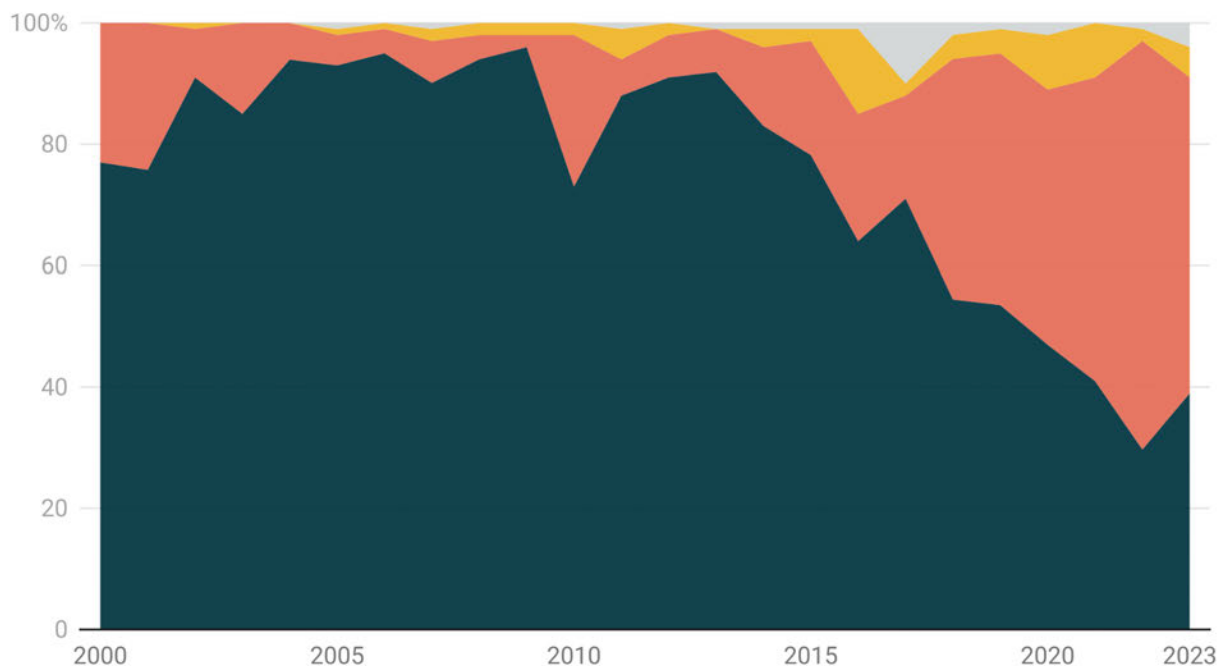
“Beijing is better-positioned to push the RMB internationalization agenda in the Global South than the Global North. China is an international lender of first resort—and last resort—that many developing countries cannot afford to alienate or antagonize.”

This source of divergence may reflect the fact that Beijing is better-positioned to push the RMB internationalization agenda in the Global South than the Global North. China is an international lender of first resort—and last resort—that many developing countries cannot afford to alienate or antagonize. However, it does not have nearly as much leverage vis-à-vis developed countries.

Figure 3.31: Composition of China’s overseas lending portfolio by currency denomination in low- and middle-income countries

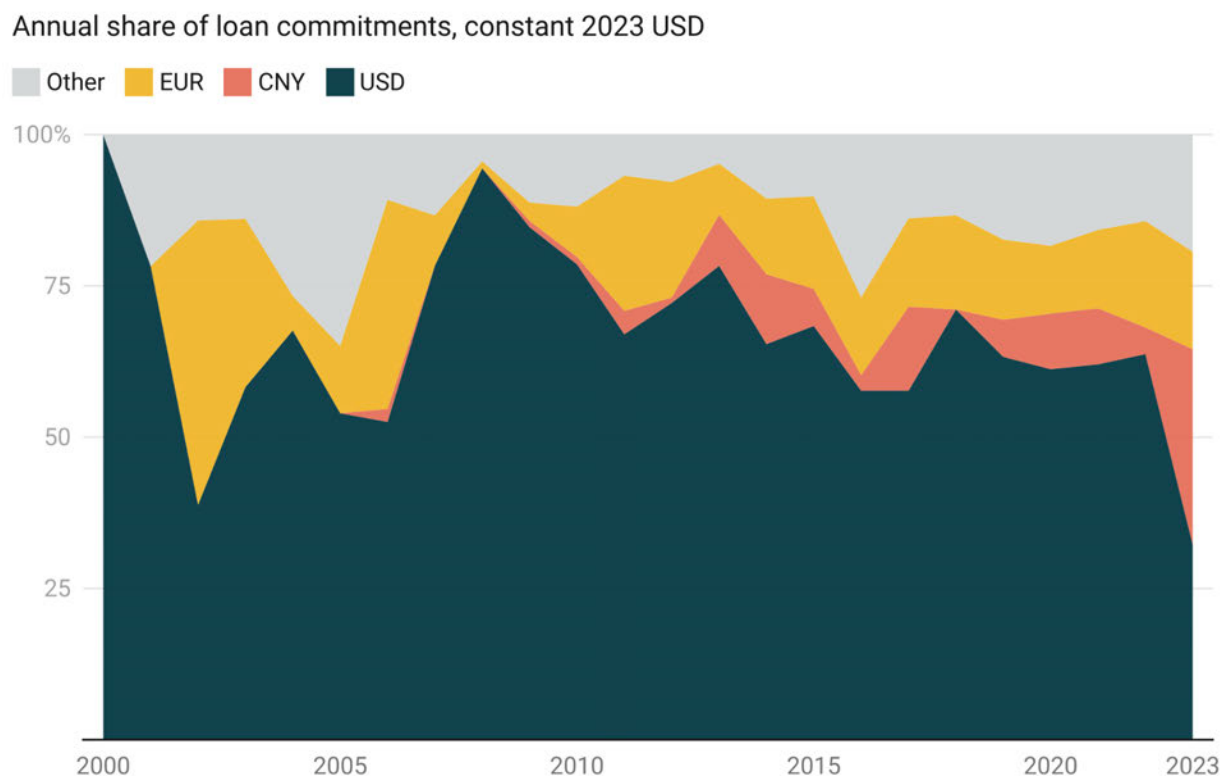
Annual share of loan commitments, constant 2023 USD

Other EUR CNY USD



Notes: The “Other” category includes all currencies of denomination other than EUR, CNY, or USD.

Figure 3.32: Composition of China's overseas lending portfolio by currency denomination in high-income countries



Notes: The "Other" category includes all currencies of denomination other than EUR, CNY, or USD.

Section 6: Conclusion

China's overseas lending portfolio is truly vast—and it is undergoing a period of rapid transformation that is neither well-documented nor well-understood. Existing international reporting systems have shed some light on isolated components of the portfolio, but none of them provide a complete picture. Nor do any of these systems—including the Debtor Reporting System of the World Bank, the Locational Banking Statistics of the BIS, and the Direct Investment Positions by Counterpart Economy Dataset of the IMF—publish the detailed, loan-by-loan data that are required to understand the changing nature of China's lending priorities and practices. Indeed, almost none of the analysis that is provided in this report would have been possible with the data made available by international reporting systems.

Independently of the performance of international reporting systems, we have documented that China’s overseas lending (and grant-giving) portfolio is becoming increasingly opaque. It is substantially more difficult to identify credible sources of information about fastest growing segments of the portfolio, including syndicated loans, non-PPG loans, and liquidity support facilities.

To address these ongoing challenges, we intend to carry forward the “open research” tradition of the interdisciplinary group of social scientists who developed the Tracking Underreported Financial Flows (TUFF) methodology.³⁵⁶ Despite incentives to put AidData’s CLG-LMIC, CLG-HIC, and CLG-Global datasets behind a paywall and withhold their release until peer-reviewed academic journal publication, we are committed to the principle that these datasets should be treated as public goods rather than private goods. Our hope is that timely and regular publication of these uniquely granular and comprehensive sources of data will have a knowledge multiplier effect and facilitate evidence-based decision-making.

³⁵⁶ Over the last thirteen years, AidData has worked in close collaboration with an international network of social scientists—from Harvard University, Heidelberg University, the University of Göttingen, the University of Cape Town, the University of Hong Kong, Georgetown University, Brigham Young University, the Center for Global Development, the Peterson Institute for International Economics, and the Kiel Institute for the World Economy—to assemble the CLG-LMIC, CLG-HIC and CLG-Global datasets (as well as various predecessor datasets) by implementing various iterations of the TUFF methodology (Strange et al. 2013, 2017; Muchapondwa et al. 2016; Dreher et al. 2018, 2019, 2021, 2022; Custer et al. 2021; Malik et al. 2021; Gelpert et al. 2023, 2025a, 2025b; Horn et al. 2023a, 2023b; Parks et al. 2022, 2023; Asmus-Bluhm et al. 2024; Franz et al. 2024; Goodman et al. 2024; Wellner et al. 2025; Bluhm et al. 2025; Parks et al. (2025). Participation in this “open research” tradition has required that we expose our sources, methods, data, and analysis to independent review and replication. Dreher et al. (2022) provide an extended discussion of how participation and non-participation in this tradition has shaped research on China’s overseas lending and grant-giving activities. Also, see Wooley (2023).

Chapter 4: Macro vs. micro—reconciling top-down and bottom-up data on China’s overseas lending activities

The 1.0 version of AidData’s CLG-Global Dataset is uniquely comprehensive in scope. It covers all countries, all sectors, and all sources and types of lending from government and state-owned institutions in China.³⁵⁷ It is also uniquely granular in that it provides loan-by-loan data on the year and calendar day of each financing commitment, the commitment amount and currency of denomination, the applicable borrowing terms (interest rate, maturity, grace period, commitment fee, management fee, insurance premium, default/penalty interest rate), and the use of credit enhancements (third-party repayment guarantees, credit insurance, and collateral).

However, it is not the only source of information about China’s overseas lending operations. The World Bank, the IMF, and the Bank of International Settlement (BIS) also collect data on the cross-border lending activities of Chinese and non-Chinese creditors. The information that they collect is based on voluntary disclosures from creditors or borrowers—and each international reporting system faces a unique set of constraints and challenges related to (a) levels of participation, (b) the extent to which participants comply with official reporting directives, (c) the ways in which lenders, borrowers, and credit instruments are classified, and (d) the scope parameters of the data collection effort.

A more fundamental challenge is that none of these international reporting systems make any loan-level data publicly available. They are all subject to strict confidentiality rules and restrictions.

At the same time, the macrodata that are published by the BIS, the World Bank, and the IMF provide a useful basis for benchmarking and cross-validating the microdata

³⁵⁷ In total, it captures 11,542 cross-border loan commitments between 300 official sector creditors in China and 4,330 borrowing institutions for projects and activities in 23 sectors and 179 countries over a 24-year period (2000-2023). 48% (3,983) of these loan commitments qualify as PPG debt, while the remaining 52% (7,559) qualify as non-PPG debt. 60% (5,618) of these loan commitments support borrowers in LICs and MICs, while 40% (5,822) support borrowers in HICs.

that are published by AidData. These independently-generated sources of data make it easier to pinpoint the types of Chinese loans that are most likely—and least likely—to be recorded in existing international reporting systems.

Section 1: What does voluntary creditor reporting tell us about the scale of China’s overseas lending portfolio?

In Chapter 2, we demonstrated with newly collected data that China’s overseas lending portfolio is vastly larger than we previously understood—and that it is expanding rather than shrinking.³⁵⁸ We also documented that there are relatively few jurisdictions in the world that have not borrowed funds from Chinese state-owned entities: 179 out of 217 jurisdictions received at least one loan commitment from an official sector creditor in China between 2000 and 2023.

Yet various think tanks, research institutions and intergovernmental organizations have published estimates that tell a very different story. The conventional wisdom is that China has extended loan commitments worth \$300 to \$500 billion to approximately 100 countries since the turn of the century—and dramatically scaled back the provision of cross-border credit in recent years (Gallagher and Ray 2020; Hwang et al. 2022; Moses et al. 2023; Myers and Ray 2023; Ray 2023; Ray et al. 2025a, 2025b; World Bank 2024c, 2024d).³⁵⁹

³⁵⁸ In November 2023, AidData published the 3.0 version of the GCDF dataset, which captured loan commitments worth \$1.2 trillion from Chinese state-owned creditors to borrowing institutions in 134 low-income and middle-income countries (Custer et al. 2023; Parks et al. 2023). However, the geographic scope parameters of the dataset included all (165) low-income and middle-income countries, which means that 31 of these countries did not receive any loan commitments from Chinese state-owned creditors during the period of observation (2000-2021).

³⁵⁹ These figures are based on lending commitment data for a limited number of creditors, borrowing institutions, recipient countries, (PPG) credit instruments, and years (Parks et al. 2023). In 2023, Eric Olander, co-founder of the China-Global South Project (CGSP), summarized the state of expert opinion in the following manner: “[t]here was a time when Chinese lending to developing countries rivaled the World Bank” but “[t]hose days are now long gone as Chinese overseas development lending has been on a steady downward trajectory” (Olander 2023). Similarly, Elliot Wilson of *Euromoney* magazine said in 2022 that “Chinese overseas lending to the developing world has collapsed” (Wilson 2022). However, the evidence that journalists, commentators, and researchers have used to support their claims is primarily based on the overseas PPG lending commitments of two creditors (CDB and China Eximbank) in a limited set (96-119) of low-income and middle-income countries. For an extended discussion of this issue, see Parks et al. (2023).

The 1.0 version of AidData's CLG-Global Dataset challenges this popular narrative. It captures cross-border loan commitments from Chinese state-owned creditors between 2000 and 2023 worth \$2.1 trillion—with annual volumes still exceeding \$100 billion in recent years.³⁶⁰

To cross-validate the lending estimates derived from the 1.0 version of AidData's CLG-Global Dataset, we turn our attention to an independently generated source of data that can be used for benchmarking purposes: the Locational Banking Statistics (LBS) of the BIS.

The BIS is an intergovernmental body with formal cross-border credit surveillance responsibilities. Using data that are voluntarily reported by central banks around the globe, it keeps watch over the outstanding claims (assets) and liabilities of internationally active banks on counterparties in over 200 countries.³⁶¹ The LBS is widely considered to be the most comprehensive source of information about the cross-border assets and liabilities of banks worldwide. China began reporting to the LBS in late 2016, becoming one of nearly 50 creditor jurisdictions that share quarterly banking data with the intergovernmental body (SAFE 2016; BIS 2016).³⁶² Although not every Chinese bank discloses its cross-border assets and liabilities to the BIS via SAFE, seven of China's largest international lenders do, including China Development Bank, the Export-Import Bank of China, the Agricultural Development Bank of China, the Industrial and Commercial Bank of China, Bank of China, China Construction Bank, and the Agricultural Bank of China (Cerutti et al. 2023: 6). Each of these Chinese state-owned banks report their cross-border claims—i.e., outstanding amounts under loans that they issued to borrowers outside mainland China—to the BIS via SAFE on a quarterly basis.

³⁶⁰ During the same time period, it captures \$1.014 trillion in PPG loan commitments from Chinese state-owned creditors to 179 countries, which is roughly twice as large as the estimates published by the World Bank in its International Debt Statistics and Boston University's Global Development Policy Center in its China's Overseas Development Finance Database. The World Bank and Boston University's Global Development Policy Center captures Chinese PPG loan commitments in 119 countries and 99 countries, respectively, through the International Debt Statistics and China's Overseas Development Finance Database.

³⁶¹ Banks that participate in cross-border lending operations do not directly supply data to the BIS. Instead, a "central authority" in the reporting country (typically the central bank) collects these data from resident banks and then transmits the data to the BIS (BIS 2012).

³⁶² When SAFE began reporting to the BIS in December 2016, it agreed to provide retrospective data for 2015 and 2016 and then provide quarterly data on a going forward basis.

The LBS data from SAFE are subject to a far-reaching set of confidentiality requirements (Avdjiev et al. 2015; Zhou and Cerutti 2018; Cerutti et al. 2023; Casanova et al. 2024). The data are not published on a loan-by-loan basis. Nor are they disclosed at the counterparty (borrower country) level. However, the highly aggregated LBS data that are made available to the public—on total outstanding credit from Chinese banks to overseas borrowers from 2015 to present—still represent the most comprehensive and authoritative source of information on the overseas exposures of the country's internationally active banks.

“As of 2023, the BIS recorded roughly \$2.6 trillion in outstanding cross-border credit from seven Chinese state-owned banks that report to the LBS—a cumulative estimate that is broadly consistent with AidData’s own tally.”

AidData provides microdata on China’s overseas lending portfolio. It tracks the country’s cross-border lending operations from the “bottom up” and makes all of its data public on a loan-by-loan basis. The BIS provides macrodata on China’s overseas lending portfolio. It tracks China’s cross-border lending operations from the “top down” and makes the LBS data public at high levels of aggregation. Yet these two independently generated sources of data paint a remarkably similar picture: Chinese banks have become international lenders on a truly massive scale. As of 2023, the BIS recorded roughly \$2.6 trillion in outstanding cross-border credit from seven Chinese state-owned banks that report to the LBS—a cumulative estimate that is broadly consistent with AidData’s own tally (after expunging the “roundtripping” flows described in Box 4a, which are included in the LBS data but excluded from the 1.0 version of the CLG-Global Dataset).³⁶³

³⁶³ According to Casanova et al. (2024), the aggregate LBS statistics of the BIS include “backflows,” which are defined as the cross-border claims of a bank’s foreign affiliates on borrowers in their home country (e.g., loans from the overseas affiliates of Chinese banks to resident borrowers in mainland China). These claims are derived from intragroup financing arrangements rather than lending arrangements with resident borrowers outside of mainland China. Yet they are classified in the LBS as claims resulting from cross-border credit flows. In their analysis of the cross-border lending activities of Chinese banks, Casanova et al. (2024: 8) exclude approximately \$500 billion in “large cross-border claims by foreign affiliates on home (China) country,” which they later characterize as “backflows” (Casanova et al. 2024: 9). The data used to calculate backflows, which represent a form of round-tripping that the 1.0 version of the 1.0 version of AidData’s CLG-Global Dataset specifically excludes (see Box 4a), does not appear to have been made public.

Nevertheless, there are some important scope parameter differences between the LBS data and the 1.0 version of the CLG-Global Dataset. The first difference is the measurement itself: the BIS reports outstanding cross-border credit at the time of reporting, while AidData reports the cumulative value of cross-border loan commitments since 2000. The second difference is creditor coverage: AidData tracks the overseas lending activities of all Chinese state-owned creditors, while the BIS tracks the overseas lending activities of seven, internationally active Chinese banks.³⁶⁴ The third difference is that the BIS does not track loans issued by Chinese bank branches and company affiliates that are domiciled outside of mainland China in non BIS-reporting countries. However, AidData includes these loans in the CLG-Global Dataset.³⁶⁵

In Figure 4.1, we draw upon our newly collected loan-level data to estimate aggregate overseas lending volumes for the seven Chinese creditors that are known to report to the BIS.³⁶⁶ The blue segment captures our tally of all cross-border loan commitments from the parent creditors (headquartered in mainland China) as well as their foreign affiliates in BIS reporting countries. Over a 24-year period of analysis (2000-2023), the cumulative stock of overseas lending commitments from Chinese creditors that report to the BIS is \$1.71 trillion. The yellow segment in Figure 4.1 captures all additional cross-border loan commitments from Chinese creditors that are not known to report to the BIS. This tally includes commitments from 122 parent creditors and 149 of their foreign affiliates. It also includes commitments from the foreign affiliates of China Development Bank, the Export-Import Bank of China, the Agricultural Development

³⁶⁴ In total, AidData tracks the activities of 300 Chinese state-owned creditors (see Table 4.1 for more details). AidData follows the OECD definition of official sector lending, which is broader than the one used by the World Bank, the IMF, and the Paris Club, in that it encompasses loans from China's policy banks (China Eximbank and China Development Bank), state-owned commercial banks (Bank of China, ICBC, China Construction Bank), state-owned enterprises (PetroChina, Sinohydro, China Machinery Engineering Corporation), and government agencies (People's Bank of China). See Parks et al. (2023) and Gelpert et al. (2025a) for more details.

³⁶⁵ The LBS data from BIS and the 1.0 version of AidData's CLG-Global dataset account for lending through the foreign affiliates of Chinese creditors, but the LBS data capture lending from 7 Chinese creditors through affiliates in 46 foreign jurisdictions while AidData captures lending from 47 Chinese creditors through affiliates in 56 foreign jurisdictions. When mainland China is included in the tally, there are 47 BIS-reporting countries (Casanova et al. 2024).

³⁶⁶ A limitation of the LBS data from the BIS is that it does not cover loans issued by Chinese bank branches and company affiliates that are domiciled outside of mainland China (in non BIS-reporting countries). These loans are covered by the 1.0 version of AidData's CLG-Global 1.0 Dataset (see Table 4.1).

Bank of China, the Industrial and Commercial Bank of China, Bank of China, China Construction Bank, and Agricultural Bank of China that are *not* located in BIS reporting countries.³⁶⁷

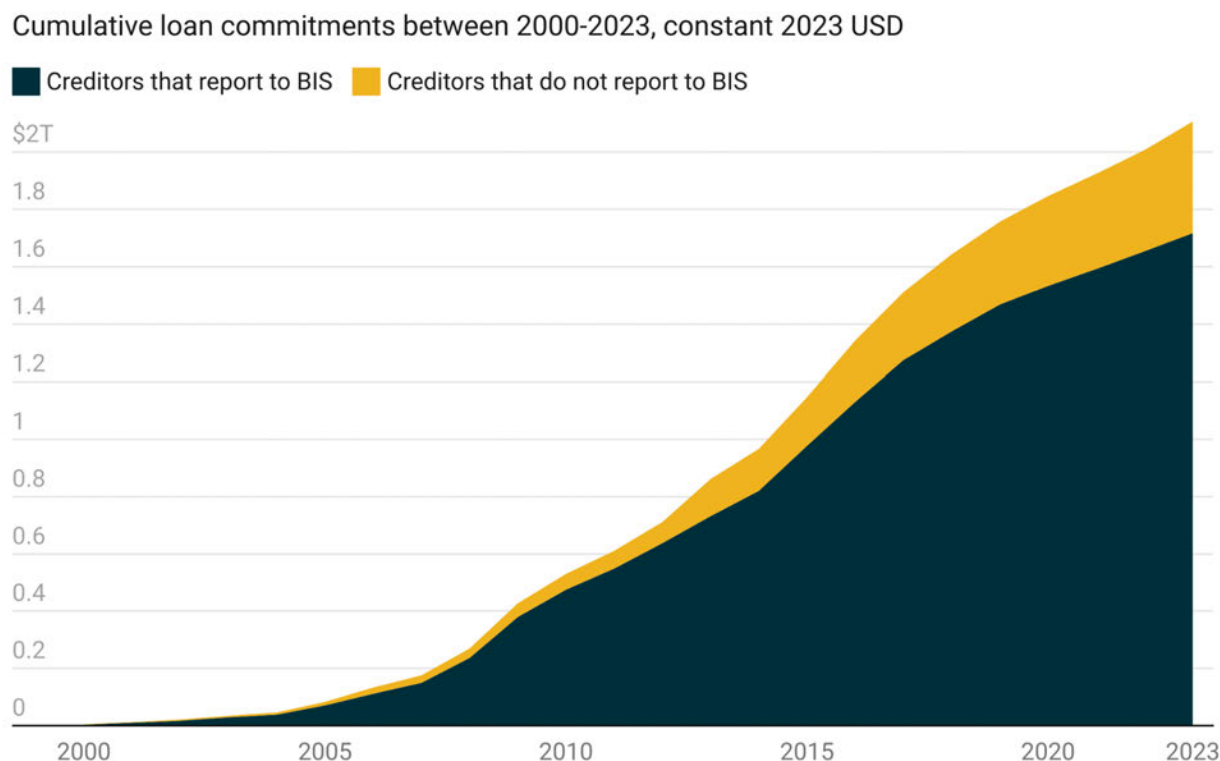
The cumulative stock of overseas lending commitments from Chinese creditors that do not report to the BIS is \$389.6 billion.³⁶⁸ These commitments represent the segments of China's overseas lending portfolio that fall outside the BIS's field of vision.

However, our analysis suggests that AidData's bottom-up reporting system and the BIS's top-down reporting system are largely capturing the same set of cross-border loans. Given that more than 80% of the lending commitments in the 1.0 version of AidData's CLG-Global Dataset fall within the scope of the BIS reporting system, the microdata (loan-level records) from AidData appear to be tracking most of the same cross-border credit operations that the BIS publishes via macrodata.

³⁶⁷ See Table A6.2 in the Appendix for additional details on BIS-reporting countries and Chinese creditor counts and lending volumes in countries that report to the BIS and those that do not report to the BIS.

³⁶⁸ Horn et al. (2021: 30) also provide evidence of some underreporting to the BIS.

Figure 4.1: China’s cumulative lending portfolio, according to BIS reporting status of creditors



Notes: This figure excludes short-term, emergency rescue rollover facilities from the tally of financial commitments. See Section A3.7 in the Appendix for more information on how the two cohorts are defined.

Another commonality between the LBS data from the BIS and the 1.0 version of AidData’s CLG-Global Dataset is that they both shed light on a poorly understood but important feature of China’s overseas lending portfolio: the role of offshore financial centers (OFCs). An empirical puzzle—that has perplexed analysts for years—is why the LBS data show nearly \$800 billion of cross-border credit from Chinese lenders targeted to OFCs (Parks et al. 2023: 53).³⁶⁹ Why would nearly one-third of China’s reported cross-border credit be directed to jurisdictions like the Cayman Islands, Bermuda, or

³⁶⁹ Parks et al. (2023: 53) estimate that 30.33% of China’s overseas lending portfolio (\$798 billion of \$2.63 trillion in nominal USD) was directed to OFC borrowers in 2021. To do so, they rely on LBS data and methods and estimates reported in Cerutti et al. (2023).

the British Virgin Islands?³⁷⁰ These are not places where China has undertaken projects on a scale commensurate with such volumes of financing.

The answer to this question begins with a recognition that OFCs are usually the *first stop* in a cross-border lending operation rather than the *final destination*. China's overseas lending portfolio includes many transactions that support a project or activity in one jurisdiction but rely on a borrowing institution legally domiciled in another jurisdiction (see Figure A5.3 in the Appendix and Box 2a in Chapter 2).


“Offshore financial centers are usually the first stop in a cross-border lending operation rather than the final destination.”

Such transactions are not possible to identify in the LBS data because banks in BIS reporting countries record the destinations of their debt claims based on the legal jurisdictions where their borrowing institutions reside.³⁷¹ As Cerutti et al. (2023: 3) explain, “[c]onsolidating claims from the perspective of borrower nationality is impossible with the current design of the BIS data. In the LBS, borrowers are only identified by residence (geographical location) [...]” Stated differently, the LBS data are organized according to the jurisdiction where a borrower is legally domiciled, which may differ from the jurisdiction where the financed project/activity took place and/or the “nationality” of the borrower.³⁷² This reporting convention not only inflates the size of China's reported exposures to offshore financial centers (OFCs), but also obscures the true geographic distribution of China's cross-border lending operations.³⁷³

In the 1.0 version of AidData's CLG-Global Dataset, the cumulative tally of China's cross-border lending commitments to borrowing institutions in OFCs is only \$175.2

³⁷⁰ According to Horn et al. (2019: 57), “two thirds of total Chinese bank lending to [emerging market economies] is channeled through [OFCs] and foreign affiliates of Chinese banks” and that “[t]hese offshore flows are often hardest to track.” More generally, on China's use of OFCs, see Coppola et al. (2021) and Clayton et al. (2023).

³⁷¹ To be more precise, the LBS data assign such transactions to the jurisdictions where borrowing institutions are legally incorporated (Cerutti et al. 2023).

³⁷² The nationality of a borrowing institution refers to the country of origin of the borrowing institution's owner(s) or UBO(s).

³⁷³ It also makes comparisons between the LBS data and other sources of data on China's cross-border lending activities difficult.

billion (in nominal USD), which represents less than one-quarter (22%) of an LBS-derived estimate.³⁷⁴ The most likely explanation for this discrepancy is “round-tripping.” As we explain at greater length in Box 4a, many cross-border loans from China involve financial flows to borrowing institutions in OFCs that ultimately return to support projects and activities in mainland China, Hong Kong or Macau. Such loans fall outside the scope parameters of AidData’s CLG-Global dataset, but within the scope parameters of the LBS data from the BIS (Beer et al. 2019).

³⁷⁴ Leveraging the work of Cerutti et al. (2023) and LBS data, Parks et al. (2023) estimate that 30.33% of total outstanding cross-border credit from Chinese banks supports borrowing institutions in offshore financial centers. Given that the LBS records \$2.565 trillion (in nominal USD) in 2023 in total outstanding cross-border credit from Chinese banks, a reasonable estimate of total outstanding credit from Chinese banks to offshore financial centers in 2023 is \$778 billion (in nominal USD).

Box 4a: What does it mean to say that cross-border credit from China is “round-tripping”?

“Round-tripping” is a popular practice among Chinese companies that involves transferring capital from mainland China to an offshore jurisdiction with a more favorable tax, legal, or regulatory regime. Offshore companies subsequently transfer the capital back to mainland China to support “foreign” direct investment projects and activities (Pinsent Masons LLP 2011; Sharman 2012; Wilson 2015; Sass and Fértő forthcoming).³⁷⁵

In 2005, SAFE issued Circular 75, which made it easier for Chinese companies to establish overseas SPVs for round-trip investments and for Chinese subsidiaries to avoid mainland China’s profit repatriation tax by allowing them to make dividend payments and other distributions to offshore parent companies (Wilmer Cutler Pickering Hale and Dorr LLP 2005). Then, in 2014, SAFE issued Circular 29 and Circular 37, which (a) made it easier to route debt financing via offshore SPVs, (b) allowed Chinese companies to pledge assets in mainland China as collateral for offshore loans to their overseas subsidiaries or parents without SAFE approval, and (c) streamlined the process of conducting cross-border M&A transactions via SPVs (Jones Day 2014). SAFE made these policy changes to simplify cross-border financial transactions and turbocharge implementation of Beijing’s “Going Out” policy.

To illustrate how cross-border loans from Chinese state-owned banks facilitate roundtrip investments, consider the privatization of 58.com Inc.—a Cayman Islands-incorporated online classified ads marketplace operator headquartered in China—by a consortium of investors consisting of Warburg Pincus, General Atlantic, Ocean Link, and 58.com’s chairman.³⁷⁶ The purpose of the transaction was to facilitate

³⁷⁵ Alternatively, the capital may return for reinvestment into Macau or Hong Kong. AidData excludes all cases of round-tripping—to and from mainland China, Macau, and Hong Kong—from the 1.0 version of the CLG-Global Dataset. See Parks et al. (2025).

³⁷⁶ Other examples include an RMB 15 billion loan from Bank of China to a Cayman Islands-incorporated SPV (Isola Castle Ltd) to support Royal Golden Eagle’s acquisition of Vinda International Holdings Limited (a Chinese company that specializes in the production of tissue paper and personal care products), a \$900 million syndicated loan from China Merchants Bank and Wing Lung Bank to a Cayman Islands-incorporated SPV (Perfect Peony Holding Company Limited) to support the privatization of Perfect World (a Chinese online game developer), and HK\$2.17 billion of debt financing facilities from China Merchants Bank Co., Ltd. to Optical Alpha Limited and Optical Beta Limited (BVI-incorporated

investment *inside mainland China*. It was supported by a Chinese state-owned bank (Shanghai Pudong Development Bank) that provided M&A loans (a \$2 billion senior term loan facility and two cash bridge facilities worth \$1.5 billion) to an SPV in an offshore financial center (Cayman Islands) owned by the consortium. The SPV used the loan proceeds to partially finance the total estimated cost (\$5.85 billion) of the acquisition.³⁷⁷

Round-tripping's true scale is staggeringly large. According to Qian et al. (2025), 70% of the financial flows to mainland China that are categorized as inbound FDI debt and equity actually represent round-tripping transactions.³⁷⁸ However, the 1.0 version of AidData's CLG-Global Dataset does not track round-tripping. It exclusively tracks flows ultimately destined for jurisdictions other than mainland China, Macau, and Hong Kong.³⁷⁹ It *does* capture loans to offshore vehicles of Chinese companies, but only when they ultimately support jurisdictions outside of "Greater China."

SPVs) for the privatization of O-Net Technologies (Group) Limited (a Chinese company that supplies optical communication devices and modules across Asia, North America and Europe).

³⁷⁷ See SEC filings at

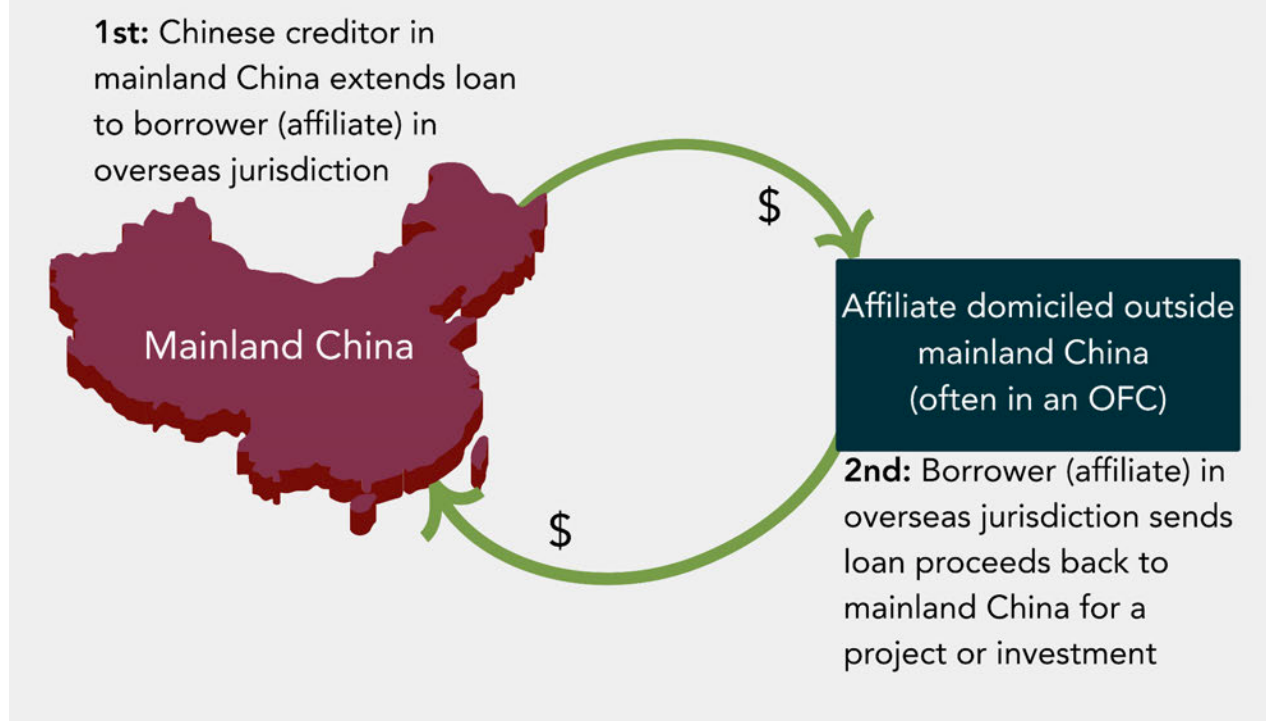
https://www.sec.gov/Archives/edgar/data/1525494/000110465920085821/tm2024650d1_ex99-a1.htm and

https://www.sec.gov/Archives/edgar/data/1525494/000110465920091704/tm2026132d1_ex99-a1.htm

³⁷⁸ Between 2000 and 2023, China received \$4.1 trillion in financial flows that were officially categorized as inbound FDI (World Bank 2025a).

³⁷⁹ The 1.0 version of AidData's CLG-Global Dataset also excludes all official sector financial flows to the Republic of China (Taiwan).

Figure 4.2: Roundtripping



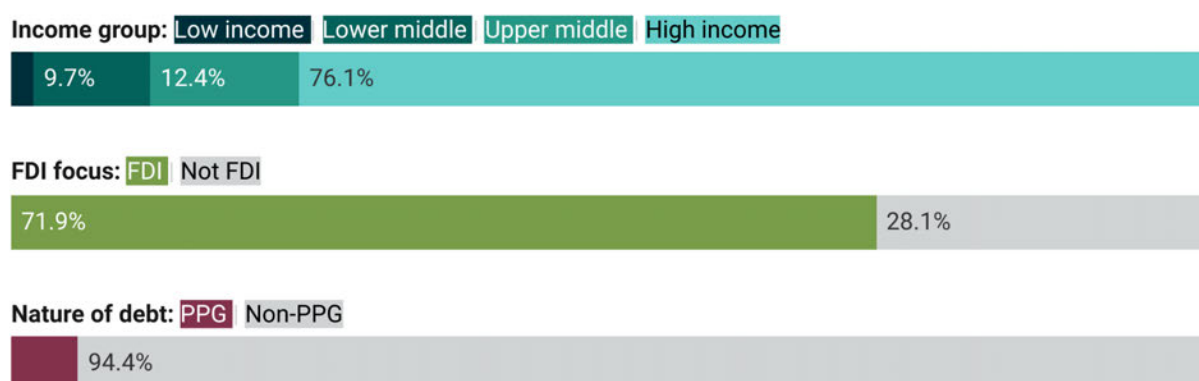
With the 1.0 version of the CLG-Global Dataset, one can identify several stylized empirical facts about China's official sector lending commitments to borrowing institutions that are legally incorporated in OFCs, such as Bermuda, the British Virgin Islands, and the Cayman Islands (see Figure 4.3). First, such commitments almost exclusively support non-PPG borrowers. Second, they are primarily designed to facilitate greenfield and brownfield FDI projects and activities. Third, the funds that pass through borrowing institutions in OFCs typically transit onward to support projects and activities in upper-middle income or high-income countries.³⁸⁰ Between 2000 and 2023, 11.6% of China's official sector lending to OFCs transited onward to low-income and lower-middle income countries while 88.4% transited onward to upper-middle income and high-income countries. Therefore, our interpretation of the evidentiary record is that most of the lending to OFC borrowers that Chinese banks have reported

³⁸⁰ The 1.0 version of AidData's CLG-Global Dataset makes it possible to track the onward transmission of China's official financial flows from their OFC transit points to their final destinations in developing or developed countries. This distinction is based on two key variables in the 1.0 version of the CLG-Global Dataset: *Country_of_Activity* and *DRA_Country_of_Inc*. The *DRA_Country_of_Inc* variable identifies the legal jurisdiction where the borrowing institution is incorporated (often in an offshore financial center), while the *Country_of_Activity* variable identifies the country where the financed project or activity physically takes place.

to the BIS either represent loans that (a) support China’s outbound FDI to the industrialized world, or (b) facilitate round-trip investments in mainland China, Hong Kong, or Macau.

Figure 4.3: China’s overseas lending portfolio channeled via offshore financial centers, 2000-2023

Percentage of total loan commitments by the following category, constant 2023 USD



Notes: This figure shows the composition of China’s cumulative overseas loan portfolio (in constant 2023 USD) between 2000 and 2023 that was channeled through borrowing institutions incorporated in offshore financial centers (OFCs). The OFC lending portfolio is disaggregated by (i) the World Bank’s income classification (low, lower middle, upper middle, or high income) in the year of loan commitment based on the country where the funded project/activity took place; (ii) whether the loan supported an FDI or non-FDI project/activity; and (iii) whether the loan supported a PPG or non-PPG borrower. Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the Level_of_Public_Liability field in AidData’s CLG-Global 1.0 Dataset. Non-PPG loans are those that do not qualify as sources of PPG debt. Shares are calculated within each category so that they sum to 100% of the OFC lending portfolio.

Section 2: What does voluntary debtor reporting tell us about the scale of China’s overseas lending portfolio?

The voluntary disclosures of borrowing countries do not paint a substantially more complete picture than the voluntary disclosures of Chinese creditors (detailed in the Section 2). Debtor-reported data—including the PPG lending data from the World Bank’s Debtor Reporting System (DRS) and the non-PPG (FDI) lending data from the IMF’s Direct Investment Positions by Counterpart Economy Dataset—are not disclosed at the individual loan level. They are published at higher levels of aggregation—such as

creditor country-debtor country pairs (“dyads”)—because World Bank and IMF member states have designated the more granular data that they report to these institutions as confidential (Angulo and Hiero 2017; Tin Yu To and Agarwal 2023). In this section, we seek to identify new insights about China’s overseas lending portfolio by benchmarking these debtor-reported data sources against the 1.0 version of AidData’s CLG-Global Dataset.

Section 2.1: Voluntary debtor reporting on China’s overseas PPG lending portfolio

Since 1951, the World Bank’s DRS has served as the primary mechanism through which sovereign borrowers voluntarily disclose their PPG repayment obligations to external creditors.³⁸¹ AidData’s cumulative tally of China’s lending commitments to PPG borrowing institutions in low-income, middle-income, and high-income countries is \$1.01 trillion (in constant 2023), which is approximately 117% larger than the cumulative tally recorded in the DRS over the same 24-year period.³⁸²

In Figure 4.4, we present (in blue) cumulative PPG loan commitments from Chinese creditors between 2000 and 2023, as captured by the “national compilers” that report

³⁸¹ DRS reporting is “compulsory for all World Bank borrowing countries” (World Bank 2025b: 20). However, we characterize DRS reporting as voluntary because countries need not report their loan-level PPG debts to the DRS if they do not wish to borrow from the World Bank. Also, many countries borrow from the World Bank but systematically underreport their PPG debts to the DRS (Horn et al. 2021, 2024; Gelpert et al. 2025a). In Section 2 of Chapter 2, we discuss several cases of systematic underreporting of PPG debt to the DRS—in Ghana, Iraq, Nicaragua, Argentina, and Indonesia.

³⁸² This 24-year tally, which amounts to \$890 billion in nominal USD, excludes lending commitments of the rollover variety. Nearly all of these borrowings, which are used to refinance maturing debts, carry de jure maturities of one year or less (i.e., they are initially scheduled for repayment in 12 months or less). However, it is not unusual for financially-distressed sovereigns to receive short-term emergency rescue loans from the same Chinese creditor in a series of consecutive years. These rollover loans come in two varieties: (1) those that reach their original contractual maturity dates and secure final maturity date extensions; and (2) those that are repaid on their original contractual maturity dates and reissued (with similar or different face values and borrowing terms) and assigned new maturity dates. Unfortunately, among serial recipients of short-term emergency rescue loans, it is seldom possible—with publicly available sources of information—to differentiate between those who had their final maturity dates extended and those who fully repaid on their original contractual maturity dates but were reissued new loans. Rollover loans present an overcounting risk because they straddle a fine line between new lending commitments and maturity extensions of existing lending commitments. This risk is particularly relevant to estimations of the cumulative stock of lending commitments from China (Parks et al. 2023).

to the DRS.³⁸³ The red segment of the stacked line graph captures additional PPG loan commitments (on a cumulative basis) from Chinese creditors that are captured by the 1.0 version of AidData's CLG-Global Dataset, but not recorded or attributed to Chinese creditors by the "national compilers" that report to the DRS.³⁸⁴ The yellow segment of the stacked line graph captures additional PPG loan commitments (on a cumulative basis) from Chinese creditors to 50 countries that do not participate in the DRS.³⁸⁵

In total, AidData captures approximately \$547 billion of PPG loan commitments from Chinese creditors that are not recorded in the DRS or not attributed to Chinese creditors in the DRS. 63% of these loan commitments were discovered by AidData in countries that do not participate in the DRS, while the remaining 37% represent loan commitments to DRS participant countries that the "national compilers" did not report to the DRS or did not attribute to Chinese creditors.³⁸⁶

³⁸³ In general, we prefer to report China's overseas lending commitments in constant 2023 USD. However, since the DRS data are recorded in nominal USD, an apples-to-apples comparison with the 1.0 version of AidData's CLG-Global Dataset requires use of nominal USD.

³⁸⁴ A limitation of the DRS is that it does not distinguish between PPG loan commitments from the People's Republic of China (PRC) and the Republic of China (ROC). Instead, all PPG loan commitments from the PRC and the ROC are treated as loan commitments from "China" (Malik and Parks 2021; Parks et al. 2023). To account for this feature of the DRS, Figure 4.4 excludes all loan commitments from "Chinese" creditors that 12 borrower countries reported to the DRS during the years when they maintained diplomatic relations with the ROC (Taiwan). Five of these countries only reported loan commitments in years that they also maintained a diplomatic relationship with Taiwan: Belize, Eswatini, Guatemala, São Tomé and Príncipe, and St. Vincent and the Grenadines. Therefore, all of the commitments reported by these countries in the DRS are excluded from analysis. Another seven borrowers reported loan commitments from China in the DRS in years when they did and in years when they did not recognize Taiwan. For these countries, we only exclude the loan commitments reported to DRS in the years when the countries recognized Taiwan: Burkina Faso, Costa Rica, Dominica, Dominican Republic, El Salvador, Honduras, and Nicaragua.. There are 11 additional borrower countries that maintained diplomatic relations with Taiwan at various points in time between 2000 and 2023, but did not report any PPG loan commitments from "Chinese" creditors to the DRS during these specific years. As such, there was no need to formally exclude these country-year observations from any measures of aggregate Chinese PPG loan commitments. These countries include Chad, The Gambia, Grenada, Haiti, Liberia, Malawi, North Macedonia, Paraguay, Senegal, the Solomon Islands, and St. Lucia.

³⁸⁵ In Figure A5.54 in the Appendix, we conduct a separate, but related, exercise. We isolate the PPG loan records in the 1.0 version of the CLG-Global Dataset and divide them into two groups: countries that report to the DRS and countries that do not report to the DRS. Over our 24-year period of analysis (2000-2023), the cumulative stock of Chinese PPG lending commitments in countries that report to the DRS (the blue segment of the stacked line graph) is \$400 billion. The yellow segment of the stacked line graph captures the cumulative stock of Chinese PPG lending commitments in countries that do not report to the DRS, which amounts to \$492.5 billion.

³⁸⁶ There are two years (2005 and 2006) when the DRS records slightly higher aggregate PPG loan commitments from Chinese creditors than the 1.0 version of AidData's CLG-Global Dataset (\$44.7 billion and \$53.5 billion rather than \$36.6 billion and \$49.3 billion). In these two years, Figure 4.4 records the DRS estimates of aggregate PPG loan commitments from Chinese creditors.

■
“AidData captures approximately \$547 billion of PPG loan commitments from Chinese creditors that are not recorded in the World Bank’s DRS or not attributed to Chinese creditors in the DRS.”

There are five reasons why AidData’s tally of PPG lending commitments is substantially larger than the IDS tally.

1. There are only 119 countries (other than China) that participate in the DRS, which artificially restricts the number of countries with PPG debt exposure to Chinese creditors that the World Bank is able to monitor.³⁸⁷ The DRS does not provide coverage for low-income or middle-income countries that choose not to borrow from the World Bank’s concessional lending window (IDA) or non-concessional and semi-concessional window (IBRD).³⁸⁸ Nor does it provide any coverage of high-income countries. Its limited geographical coverage is consequential because there are 50 additional countries that contracted PPG loans from Chinese creditors between 2000 and 2023.³⁸⁹ It is also consequential because the countries that do not participate—or inconsistently participate—in the DRS are among China’s largest sovereign borrowers.³⁹⁰
2. Even countries that do participate in the DRS systematically underreport their PPG debts to Chinese and non-Chinese creditors (Horn et al. 2024). Approximately 50% of China’s official lending commitments to PPG borrowers are not reported by recipient countries to the World Bank through the DRS (Horn et al. 2021: 16).
3. Given that the DRS categorizes creditor institutions on a residency basis rather than nationality basis (World Bank 2000: 9; World Bank 2020b: 3), it does not

³⁸⁷ This total excludes China itself since we are focused on China’s outbound loan commitments.

³⁸⁸ According to World Bank (2021d: 1), the “Debtor Reporting System (DRS) is the most detailed single source of verifiable information on the external indebtedness of low- and middle-income countries. All countries that borrow from IBRD or IDA agree to report, annually, loan-by-loan on stocks and flows for long-term external debt owed by a public agency or a private agency with a public guarantee [...]”

³⁸⁹ This summary statistic is drawn from the 1.0 version of AidData’s CLG-Global Dataset, which is based upon systematic collection of all PPG (and non-PPG) loan commitments in 217 countries and territories.

³⁹⁰ A non-exhaustive list of these sovereign borrowers includes Russia, Venezuela, Malaysia, Saudi Arabia, the UAE, Singapore, Hungary, South Sudan, Cuba, Equatorial Guinea, Oman, Poland, and Trinidad and Tobago.

classify PPG loans from Chinese bank branches and company affiliates that are domiciled outside of mainland China as PPG loans from Chinese creditors (see Section 2 of Chapter 2 for more on this trend in China's cross-border lending operations). Nor does it consistently attribute to Chinese creditors the individual contributions of Chinese banks and nonbank institutions to syndicated loans.³⁹¹

4. Given that the DRS categorizes borrowing institutions on a residency basis rather than nationality basis (World Bank 2000: 9; World Bank 2020b: 3),³⁹² it does not capture loans for projects/activities in the borrowing country that are routed through legal entities in jurisdictions other than the borrowing country (see Figure A5.3 in the Appendix).³⁹³
5. The DRS has limited coverage of PPG debts contracted by SOEs and majority state-owned SPVs without government guarantees. The World Bank itself acknowledges that “[b]y far the most significant omission in DRS reports relates to borrowing by state-owned enterprises on their own account, without [the] benefit of a government guarantee” (World Bank 2019).

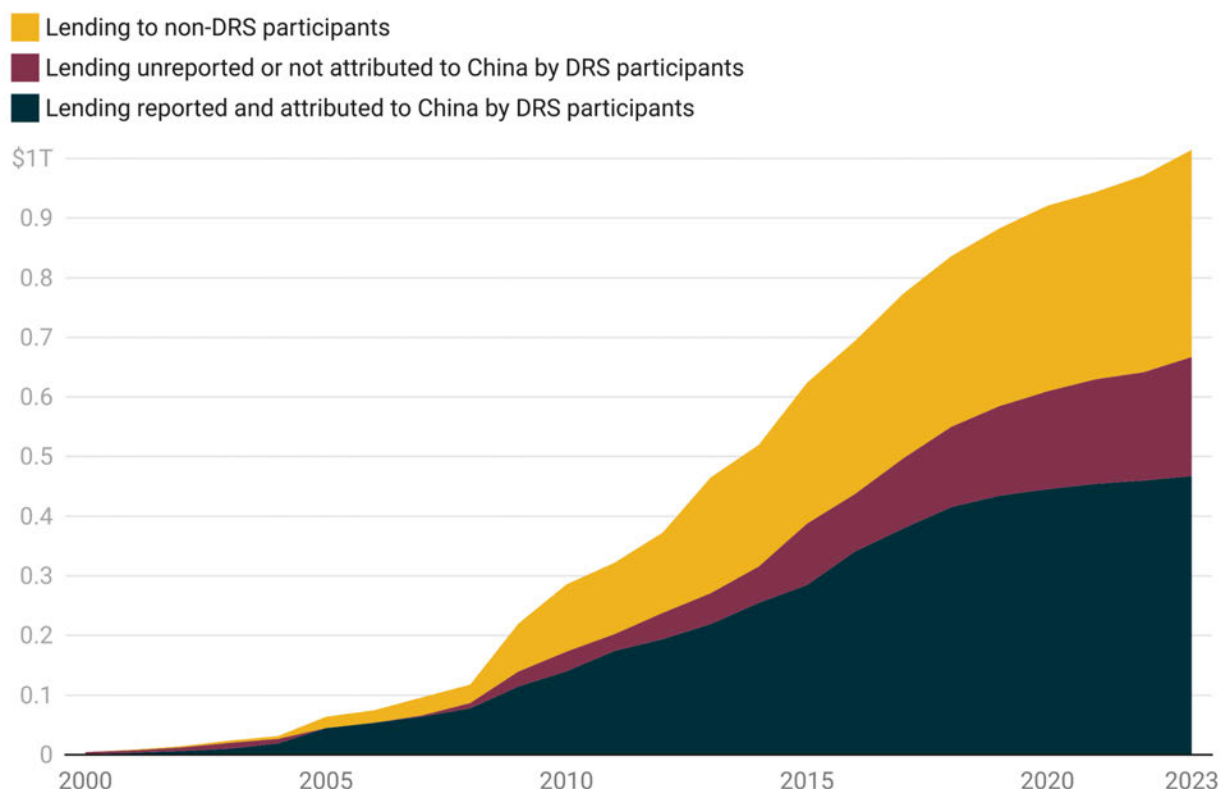
³⁹¹ Instead, it assigns the full value of each syndicated loan commitment to a single member of the syndicate: the lead manager. A creditor country determination is then made on the basis of the residency of the syndicate's lead manager. See Section 2 of Chapter 2 (Trend #3) for more details.

³⁹² Other sources of data on China's overseas lending operations—including the Chinese Loans to Africa (CLA) Database and the China's Overseas Development Finance (CODF) Database produced by Boston University's Global Development Policy Center and the Chinese Loans to Latin America and the Caribbean Database jointly produced by Inter-American Dialogue and Boston University's Global Development Policy Center—also either implicitly or explicitly categorize borrowing institutions on a residency basis rather than nationality basis.

³⁹³ By way of illustration, Venezuela's state-owned oil company (PDVSA) has contracted loans with Chinese state-owned creditors via borrowing entities that are legally incorporated in the Netherlands. This is not unusual: nearly 20% (\$354 billion) of China's overseas lending portfolio involves transactions that support a project or activity in one jurisdiction but rely on a borrowing institution legally domiciled in another jurisdiction (see Figure A5.3 in the Appendix). Figure A5.14 in the Appendix demonstrates that most of these lending operations, particularly those that involve PPG borrowers, are routed through borrowing entities that are legally incorporated in jurisdictions with relatively high levels of financial secrecy. In the 1.0 version of AidData's CLG-Global Dataset, \$36.8 billion in PPG loan commitments were routed through a jurisdiction other than the jurisdiction where the financed project/activity took place. These transactions account for roughly 3.6% of China's cumulative PPG lending between 2000 and 2023.

Figure 4.4: China's overseas PPG lending portfolio by World Bank DRS reporting status of debtor countries

Cumulative PPG loan commitments captured in CLG-Global 1.0, constant 2023 USD



Notes: This figure compares China's cumulative PPG lending commitments between 2000 and 2023 (in constant 2023 USD) across three categories. It excludes short-term rollover facilities to refinance maturing debts. The blue segment represents "private" and "official" lending from Chinese creditors, as recorded in the World Bank's Debtor Reporting System (DRS) by 114 reporting countries (in the 2024 IDS data (that were initially published in December 2024 and later updated in February 2025)). PPG loan commitments from "private" and "official" creditors are included because nearly all creditors that the DRS assigns to these categories are classified as "official" creditors by AidData (Horn et al. 2021: 15). PPG loan commitments are excluded from DRS-reporting countries in all years when they maintained diplomatic relations with the ROC. The red segment represents additional PPG loan commitments identified in the 1.0 version of AidData's CLG-Global Dataset for the same 114 DRS-reporting countries over the same 24-year period. These commitments were not recorded or attributed to Chinese creditors by the "national compilers" that report to the DRS. The yellow segment represents additional PPG loan commitments captured by the 1.0 version of AidData's CLG-Global Dataset in countries that do not report to the DRS.

A more fundamental limitation is that the DRS does not record the individual lending commitments of Chinese (or non-Chinese) creditors to non-PPG borrowers.³⁹⁴ The 1.0 version of AidData's CLG-Global Dataset demonstrates that such commitments accounted for 52% of China's overseas lending portfolio (\$1.09 trillion) between 2000 and 2023.

Section 2.2: Voluntary debtor reporting on China's overseas non-PPG (FDI) lending portfolio

In order to gauge whether the single largest segment of China's non-PPG overseas lending portfolio (FDI lending) is adequately captured through the existing international reporting system, we now turn our attention to the primary mechanism through which countries report inbound FDI debt from mainland China: the IMF's Direct Investment Positions by Counterpart Economy Dataset (formerly known as the Coordinated Direct Investment Survey or CDIS).

The number of countries that voluntarily disclose inbound FDI debt by source country to the IMF varies from year to year (IMF 2025b).³⁹⁵ However, in a given year, the number of countries reporting non-zero amounts of inbound FDI debt *from mainland China* to the IMF has never exceeded 67.³⁹⁶ The 1.0 version of AidData's CLG-Global Dataset, which is not constrained by which countries choose to participate in a given international reporting system, captures Chinese FDI lending commitments to 121 countries. This discrepancy begs the question of whether and to what extent Chinese FDI debt transactions are underreported to the IMF.

³⁹⁴ According to the DRS reporting directives, loans that qualify as private non-guaranteed (PNG) debt should be "reported only on a consolidated basis, with no breakdown by creditor country, and information regarding commitments is not requested. The data on private debt are reported in aggregate form, not on a loan-by-loan basis" (World Bank 2000: 25).

³⁹⁵ This summary statistic is drawn from IMF (2025b). The IMF previously characterized CDIS as "an IMF-led worldwide coordinated exercise to collect data on direct investment positions. The purpose of the CDIS is to improve the quality of direct investment position statistics in the international investment position (IIP) and the availability of these statistics by [the] immediate counterpart economy. The CDIS supports the objective of developing from-whom-to-whom cross border data on direct investment positions [...]" (IMF 2025c: 1).

³⁹⁶ In a given year, the number of countries reporting zero or non-zero amounts of inbound FDI debt from mainland China to the IMF has never exceeded 73.

The IMF's Direct Investment Positions by Counterpart Economy Dataset provides a bilateral measure of gross liabilities for inward direct investment positions via debt instruments between 2009 and 2023.³⁹⁷ This measure captures all outstanding debt obligations owed by resident companies to foreign direct investors from mainland China. The 1.0 version of AidData's CLG-Global Dataset provides a similar but not identical measure: the cumulative stock of China's outbound FDI loan commitments.³⁹⁸

According to Figure A5.58, the IMF's measure increases from \$76 billion in 2009 to \$351 billion in 2023.³⁹⁹ AidData's measure increases from \$161 billion in 2009 to \$403 billion in 2023, if one only includes those loans within their originally scheduled repayment periods in the cumulative tally (see Figure A5.58).

There are several factors that may explain why AidData's measure is consistently higher over the fifteen-year period of observation.⁴⁰⁰ One is the fact that a limited number of countries voluntarily disclose their inbound FDI debt data to the IMF on a bilateral basis (IMF 2025b). Some of the countries that do not report inbound sources of FDI to the IMF also happen to be major recipients of Chinese FDI. Consider Australia. The IMF's Direct Investment Positions by Counterpart Economy Dataset does not identify it as having received any inbound flows of Chinese FDI debt or equity. Yet the 1.0 version of AidData's CLG-Global Dataset identifies Australia as the largest recipient of Chinese FDI lending in the world, with its cumulative Chinese FDI lending commitments reaching \$106.9 billion (in constant 2023 USD).⁴⁰¹ Approximately \$41.3 billion of these cumulative FDI lending commitments were still in their originally scheduled repayment

³⁹⁷ FDI consists of two primary components, which are counted as either assets or liabilities in a country's International Investment Position (IIP): equity capital and debt investments (including intercompany loans, debt securities, and trade credits).

³⁹⁸ For more details, see Figure A5.58 in the Appendix.

³⁹⁹ AidData's estimates are also considerably higher than those published by SAFE, which publishes IIP data on China's *outward* direct investment positions via debt instruments (as an external financial asset under the "direct investment" category and "debt instruments" subcategory). Its 2023 tally is \$354 billion (SAFE 2025). When one recalculates the tally with BOP data from SAFE to expunge the effect of valuation changes using the Horn et al. (2021) approach, it increases to \$390 billion. See Table 4.1 for more information on the differences between the IIP and BOP data from SAFE and the CLG-Global Dataset.

⁴⁰⁰ Despite significant differences in their overall (global) volumes, these two, independently-generated measures are highly correlated (0.6) at the country level.

⁴⁰¹ According to the 1.0 version of AidData's CLG-Global Dataset, Australia is the second largest recipient of Chinese non-PPG lending commitments in the world. The five largest recipients of Chinese FDI lending commitments between 2000 and 2023 were Australia, the U.S., Russia, Kazakhstan, and the UK

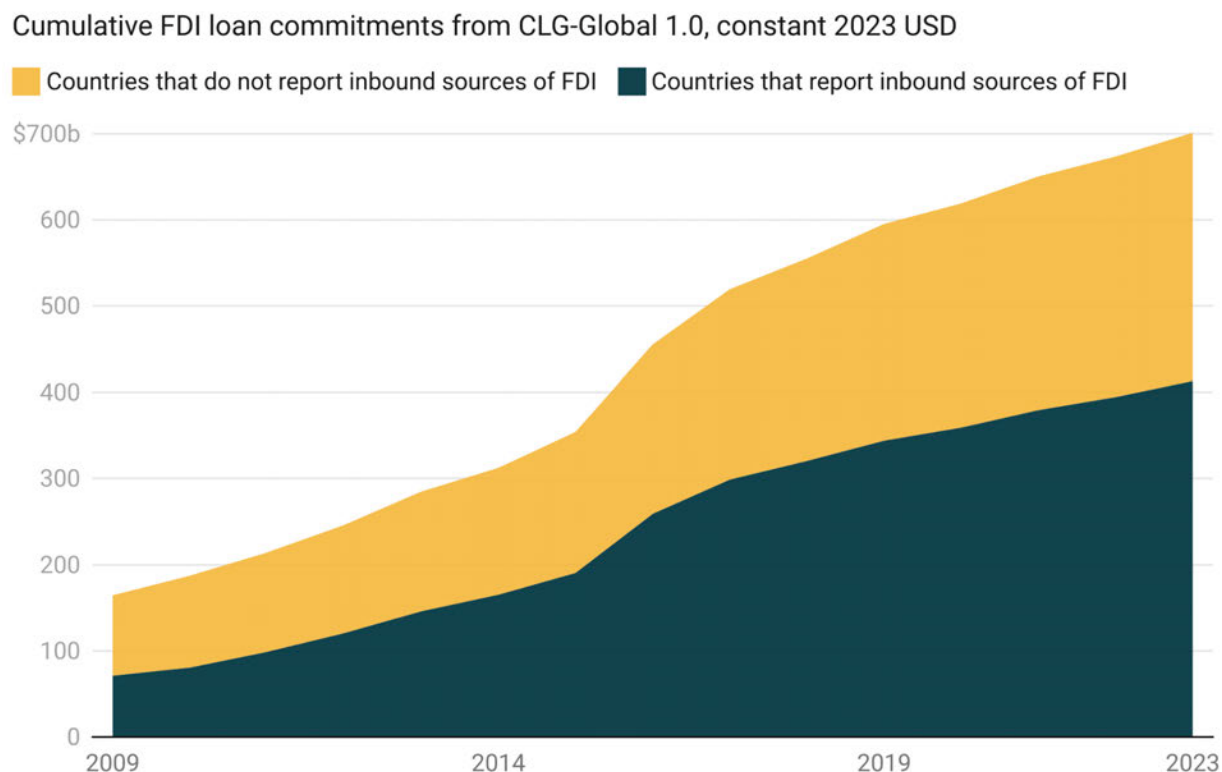
periods as of 2023.⁴⁰² None of these commitments to Australia or the resulting FDI debt stock are included in the IMF's dataset.

In Figure 4.5, we draw upon the 1.0 version of the CLG-Global Dataset to compare Chinese FDI lending volumes from two cohorts: those countries that report and those that do not report inbound FDI debt on a bilateral basis to the IMF. The blue segment captures our tally of cumulative cross-border FDI loan commitments between 2009 and 2023 in countries that report to the IMF. The yellow segment captures our tally of cumulative cross-border FDI loan commitments between 2009 and 2023 in countries that do not report to the IMF. A non-trivial and growing proportion of China's outbound FDI lending portfolio supports investments in countries that do not report to the IMF.⁴⁰³

⁴⁰² The 1.0 version of AidData's CLG-Global Dataset identifies Australia's cumulative Chinese FDI lending commitments (that were still in their originally scheduled repayment periods) that amount to \$38.4 billion nominal USD in 2023. Additionally, the tally of all Chinese FDI lending commitments between 2000 and 2023 in nominal USD to Australia is \$90.3 billion.

⁴⁰³ By 2023, 41% of China's cumulative outbound FDI loan commitments supported investments in countries that do not report to the IMF's Direct Investment Positions by Counterpart Economy Dataset (see Figure 4.5). See Figure A5.59 in the Appendix for a replication of Figure 4.5 using nominal USD.

Figure 4.5: China's foreign direct investment (FDI) lending portfolio by IMF inbound FDI reporting status, 2009-2023



Notes: This figure represents cumulative Chinese FDI loan commitments (measured in constant 2023 USD) between 2009 and 2023 in the 1.0 version of AidData's CLG-Global dataset. It is disaggregated into two cohorts: (1) countries that report inbound sources of FDI to the IMF's Direct Investment Positions by Counterpart Economy Dataset, and (2) countries that do not. See Section A3.6 of the Appendix for details on how loans are classified as FDI.

However, the blue segment is a lower-bound, conservative estimate of the true level of underreporting—and/or non-attribution to Chinese creditors. Here's why: even the countries that report to the IMF do not necessarily report *all* inbound sources of FDI debt from China (Angulo and Hierro 2017; Das and Biswas 2023). The IMF's reporting directives require categorization of lenders and borrowers on a residency basis rather than a nationality basis (see Table 4.1), which means that Chinese FDI loans are effectively undetectable if they are (i) issued by a creditor from mainland China that is legally incorporated outside of mainland China; and/or (ii) routed to a borrowing institution that is legally incorporated in a jurisdiction other than the jurisdiction where the FDI project/activity that takes place.

In Figures 4.7 and 4.8, we compare AidData’s 2023 country-level estimates of the cumulative stock of inbound FDI lending commitments from China (still in their originally scheduled repayment periods) and the IMF’s 2023 country-level estimates of outstanding FDI debt to China. The AidData estimates in Figure 4.6 are based on the jurisdictions where Chinese FDI loan-financed projects and activities are ultimately undertaken, while the AidData estimates in Figure 4.7 are based on the jurisdictions where the borrowing institutions are legally incorporated.

“The widest gap between AidData and IMF estimates appears in the United States—likely driven by the fact that much of China’s FDI into the U.S. takes a detour through offshore financial hubs before reaching its final destination”

Several striking patterns emerge. In Figure 4.6, we observe the widest gap between AidData and IMF estimates in the United States, which likely reflects the fact that much of China’s FDI into the U.S. takes a detour through offshore financial centers before reaching its final destination (Sutherland et al. 2019; Hanemann et al. 2018; U.S.-China Economic and Security Review Commission 2017; and Committee on Foreign Investment in the United States 2025).⁴⁰⁴ Whereas AidData is able to capture the full range of Chinese loans that support onshore and offshore borrowing institutions for FDI projects and activities that take place within the U.S., the IMF is not able to do so because it exclusively classifies inbound FDI data according to the residency principle: Chinese FDI debt and equity routed through offshore borrowing institutions is effectively invisible in the IMF’s Direct Investment Positions by Counterpart Economy Dataset because it is exclusively assigned to the jurisdictions where borrowing institutions are legally incorporated. Figure 4.7, which reorganizes the data according to the jurisdictions where borrowing institutions are legally incorporated, nicely illustrates this point: the IMF data do not record any outstanding Chinese FDI debt in several, major offshore financial centers (including Bermuda, the Cayman Islands, and

⁴⁰⁴ The 2024 CFIUS Annual Report clarifies that, under Executive Order 13936 on Hong Kong Normalization, any transaction involving an acquirer from Hong Kong is classified as originating from China. This reinforces the point that Chinese investment in the United States is frequently routed through offshore or intermediary jurisdictions such as Hong Kong.

the British Virgin Islands), while AidData identifies large volumes of Chinese FDI debt in these “pass-through” jurisdictions.⁴⁰⁵

The IMF’s categorization of creditors on a residency basis also makes Chinese FDI debt look like non-Chinese FDI debt.⁴⁰⁶ By way of illustration, consider the Chinese loan that financed the acquisition of Imagination Technologies Group PLC (a British semiconductor and software design company), which we discuss at greater length in Section 2 and Chapter 3. The lender of record in this non-PPG (FDI) debt transaction was a Delaware-incorporated shell company: Canyon Bridge Fund I, LP. Under IMF reporting rules, the UK was responsible for classifying the zero-interest, £551.6 million shareholder (intercompany) loan from Canyon Bridge Fund I, LP to CBFI Investment Limited—an England and Wales-incorporated SPV—as a source of inbound FDI debt from the U.S. The reporting directives of the IMF disregard the fact that the ultimate beneficial owner of Canyon Bridge Fund I, LP is a Chinese state-owned enterprise (China Reform Holdings Group), which is ultimately accountable to China’s State Council.⁴⁰⁷

⁴⁰⁵ Many offshore financial centers where SPVs are heavily concentrated—including Bermuda, the Cayman Islands, and the British Virgin Islands—have elected not to participate in the IMF’s Direct Investment Positions by Counterpart Economy Dataset (Angulo and Hierro 2017: 20; Bese Goksu et al. 2022).

⁴⁰⁶ Likewise, the IMF’s categorization of investors on a residency basis makes Chinese FDI equity look like non-Chinese FDI equity.

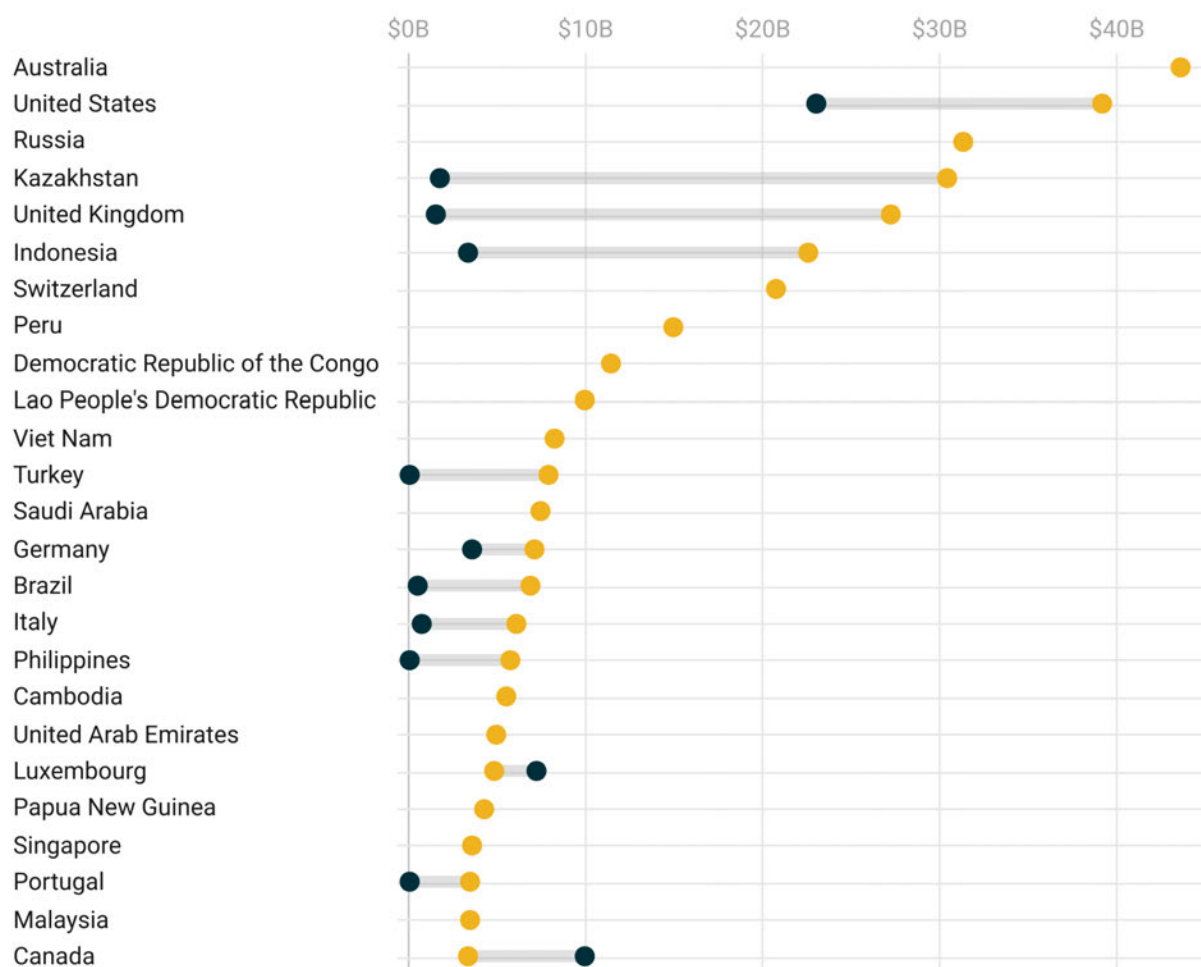
⁴⁰⁷ Consistent with the idea that categorization of creditors on a nationality basis rather than a residency basis allows for the identification of otherwise undiscoverable sources of Chinese FDI debt, there is a large gap in the UK between the levels of Chinese FDI debt recorded by AidData and the IMF (see Figures 4.7 and 4.8).

Figure 4.6: Comparison of 2023 China's foreign direct investment (FDI) lending to recipient countries by source

FDI Loan commitments, constant 2023 USD

● CLG-Global: Cumulative FDI loan commitments in repayment in 2023

● IMF: 2023 reported FDI debt positions

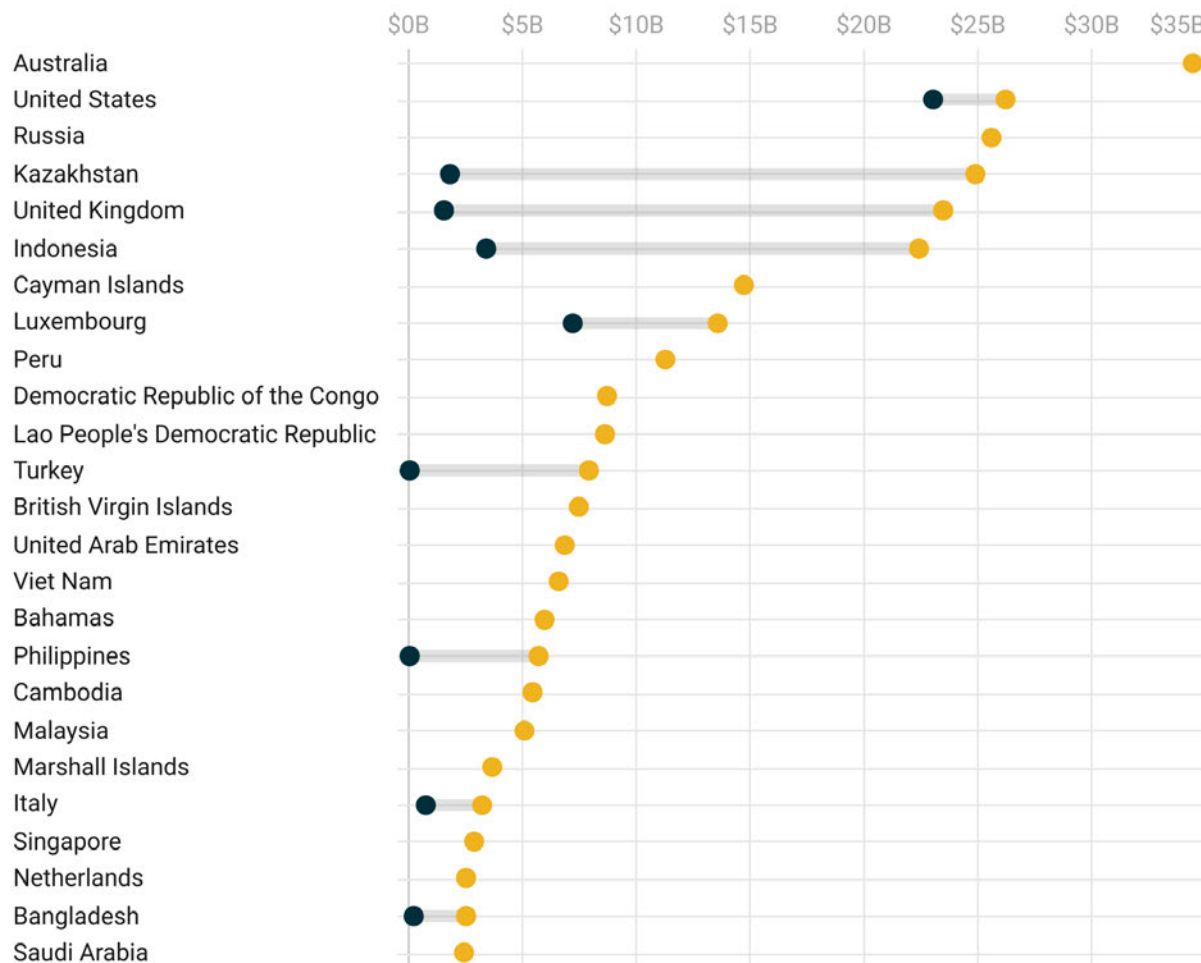


Notes: This figure compares the estimated stock of Chinese FDI in 2023 from two data sources: the IMF's Direct Investment Positions by Counterpart Economy Dataset and the 1.0 version of AidData's CLG-Global Dataset. The estimates are reported in constant 2023 USD and organized according to the countries where the investments take place. The IMF series is limited to "Inward," "Direct investment," "Debt instruments," "Liabilities (gross), All entities," "Reported official data," and "All countries, excluding China, Hong Kong SAR, and Macau SAR." The counterpart country is restricted to mainland China. We exclude data "derived using counterparty information" since they are derived by IMF staff rather than voluntarily disclosed by reporting countries. The AidData series captures an estimate of cumulative Chinese FDI loan commitments (still in their originally scheduled repayment periods) in 2023. See Section A3.6 of the Appendix for more details on how AidData classifies FDI loans.

Figure 4.7: Comparison of 2023 China's direct investment (FDI) lending to recipient countries by source

FDI Loan commitments, constant 2023 USD

- CLG-Global: Cumulative FDI loan commitments in repayment in 2023
- IMF: 2023 reported FDI debt positions



Notes: This figure compares the estimated stock of Chinese FDI in 2023 from two data sources: the IMF's Direct Investment Positions by Counterpart Economy Dataset and the 1.0 version of AidData's CLG-Global Dataset. The estimates are reported in constant 2023 USD and organized according to the countries where the borrowers are legally incorporated. The IMF series is limited to "Inward," "Direct investment," "Debt instruments," "Liabilities (gross), All entities," "Reported official data," and "All countries, excluding China, Hong Kong SAR, and Macau SAR." The counterpart country is restricted to mainland China. We exclude data "derived using counterparty information" since they are derived by IMF staff rather than voluntarily disclosed by reporting countries. The AidData series captures an estimate of cumulative Chinese FDI loan commitments (still in their originally scheduled repayment periods) in 2023. See Section A3.6 of the Appendix for more details on how AidData classifies FDI loans.

Section 3: What have we learned about international reporting systems?

In this chapter, we have demonstrated that non-trivial segments of China's overseas lending portfolio are not recorded—or not classified as cross-border credit from China—in existing international reporting systems. These lending operations are worth hundreds of billions of dollars.

Our findings suggest that approximately 54% of China's overseas PPG lending is either not recorded or not classified as overseas PPG lending from China in the World Bank's Debtor Reporting System. We also estimate that as much as 41% of China's overseas FDI lending is either not recorded or not classified as overseas FDI lending from China in the IMF's Direct Investment Positions by Counterpart Economy Dataset (formerly known as CDIS).

Among existing international reporting systems, the Locational Banking Statistics of the BIS provide the broadest coverage of China's cross-border lending operations. The BIS captures PPG and non-PPG loans, loans to developed and developing countries, and loans from Chinese creditors that are domiciled inside and outside of mainland China. It also tracks loans that are routed through OFCs. It does, however, have limitations (summarized in Table 4.1). Although it does a better job than any other international reporting system of revealing the true scale of China's overseas lending portfolio, it does not allow for easy differentiation between those cross-border lending operations that support projects and activities in mainland China (via roundtripping transactions) and those that support projects and activities outside mainland China. Nor does it capture currency swap borrowings or loans from Chinese creditors in non-BIS reporting countries.

Ultimately, the loan-by-loan data in international reporting systems have little utility to anyone other than the custodians of these systems. These data remain subject to strict confidentiality rules and restrictions, which limits the types of analysis that can be undertaken and the types of insights that can be gleaned.

On a going forward basis, we will seek to fill this evidentiary gap. AidData's CLG-Global Dataset covers the full range of China's overseas lending operations and we are committed to the principle that all of the data should be made available at the individual loan level.

Table 4.1: Comparison of AidData’s CLG-Global 1.0 Dataset and Official Data Sources⁴⁰⁸

Features of the Locational Banking Statistics (LBS) of the BIS	Features of AidData’s CLG-Global 1.0 Dataset
• No disclosure of loan-level or borrower country- level data • 7 Chinese banks are known to report to the BIS • No coverage of non-bank Chinese creditors • No coverage of PBOC swap borrowings, supplier credits, or loans from government agencies (e.g., MOFCOM) • Only 47 BIS reporting countries; cross-border loans extended by Chinese bank affiliates located in non-BIS reporting countries cannot be allocated to their respective parent banks • Lending institutions are categorized on both a nationality basis and on a residency basis • Borrowing institutions are categorized on a residency basis rather than a nationality basis • Totals include so-called “backflows”—loans from the overseas affiliates of Chinese banks to borrowers in mainland China • Covers a 10-year period (2015-2024)	• Full disclosure of loan-level data • Covers 300 Chinese creditors, including 98 banks and 202 non-bank creditors • Covers a wide array of credit instruments, including those that are systematically underreported elsewhere (e.g., PBOC currency swap borrowings, supplier credits, loans from government agencies) • Captures cross-border loans in all (47) BIS reporting countries as well as 110 Chinese bank affiliates in 26 non-BIS reporting countries • Lending institutions are categorized on both a nationality basis and on a residency basis • Borrowing institutions are categorized on a residency basis and a nationality basis • Expunges all form of round-tripping, including backflows from Chinese banks’ overseas affiliates to borrowers in mainland China • Covers a 24-year period (2000-2023)
Features of SAFE’s International Investment Position (IIP) and Balance of Payments ⁴⁰⁹	Features of AidData’s CLG-Global Dataset
• No disclosure of loan-level or borrower country- level data • Covers a 15-year period (2011-2025) • Categorizes creditors on a residency basis rather than nationality basis, so no coverage of Chinese creditors that are based outside of mainland China • Does not cover PBOC swap borrowings • Does not categorize FDI loans as loans	• Full disclosure of loan-level data • Covers a 24-year period (2000-2023) • Covers 300 creditors total, including 169 creditors exclusively extending credit from mainland China, 114 creditors based exclusively in an overseas affiliate, and 17 creditors that lent both via an overseas affiliate and mainland China. • Covers PBOC swap borrowings

⁴⁰⁸ In addition to official sources of data that capture China’s cross-border lending operations, Boston University’s China’s Overseas Development Finance (CODF) Database tracks loans to 99 low- and middle-income countries over a 14-year (2008-2021) period. However, it only covers loans that qualify as PPG debt from two of China’s official sector creditors (CDB and China Eximbank). Further, it has limited coverage of CDB and China Eximbank’s participation in syndicated lending and does not provide data on borrowing terms.

⁴⁰⁹ According to the International Investment Position (IIP) reporting directives, loans that qualify as external financial assets (category 4.3) exclude FDI loans, intercompany (intra-group) and bilateral currency swap borrowings. These cross-border loans are instead assigned to the “direct investment,” “other investment,” or “reserve assets” categories of the IIP (IMF 2013; Nozahie 2017).

• Does not categorize intercompany (intra-group) loans as loans	• Covers FDI loans • Covers intercompany (intra-group) loans
Features of the International Debt Statistics (IDS) of the World Bank	Features of AidData's CLG-Global Dataset
• Disclosure of borrower country-level data; no disclosure of loan-level data • Only covers loans that qualify as PPG debt • Systematic underreporting of loans that qualify as PPG debt by DRS reporters (finance ministries) • Inconsistent definitions of "official" and "private" Chinese creditors⁴¹⁰ • Limited to 119 low-income and middle-income countries that borrow from the World Bank and participate in its Debtor Reporting System (DRS) • Limited/inconsistent coverage of non-standard credit instrument coverage (e.g. PBOC swap borrowings, repo transactions, DPAs, PxF facilities) • Categorizes borrowing institutions on a residency basis rather than nationality basis. • Categorizes creditor institutions on a residency basis rather than nationality basis • Residency determinations for syndicated loans solely based on the identity of the "lead manager"; therefore, individual contributions of Chinese banks and nonbank institutions to syndicated loans are not consistently attributed to "China" • PRC and ROC creditors are grouped together as loans from "China" • Covers a 54-year period (1970-2023)	• Full disclosure of loan-level data • Covers loans that qualify PPG and non-PPG debt, including those that are systematically underreported • Covers 300 Chinese creditors and applies a consistent definition of "official" and "private" creditors • Covers 217 low-income, middle-income, and high-income borrower countries • Expanded/consistent coverage of non-standard credit instrument coverage (e.g. PBOC swap borrowings, repo transactions, DPAs, PxF facilities, syndicated loans) • Categorizes borrowing institutions on a nationality basis and a residency basis • Categorizes creditor institutions on a nationality basis and a residency basis; covers 300 creditors total, including 169 creditors exclusively extending credit from mainland China, 114 creditors based exclusively in an overseas affiliate, and 17 creditors that lent both via an overseas affiliate and mainland China. • Covers PRC but not ROC creditors • Covers a 24-year period (2000-2023)
Features of the IMF's Direct Investment Positions by Counterpart Economy Dataset	Features of AidData's CLG-Global Dataset
• Disclosure of borrower country-level data; no disclosure of loan-level data • Only captures FDI debt • Only 92-122 borrower countries voluntarily disclose their data to the IMF, depending on the year • Categorizes borrowing institutions on a residency basis	• Full disclosure of loan-level data • Covers loans that do and do not qualify as FDI debt • Covers 217 borrower countries • Categorizes borrowing institutions on a

⁴¹⁰ In the IDS data, some DRS reporting countries categorize CDB as a "private" Chinese creditor, while others categorize it as an "official" Chinese creditor. For example, the Government of Turkmenistan has recorded its CDB borrowings as loans from an "official" Chinese creditor and the Government of Angola has recorded its CDB borrowings as loans from a "private" Chinese creditor (World Bank 2023d, 2023e).

rather than nationality basis. • Categorizes creditors on a residency basis rather than nationality basis; therefore, loans from Chinese creditors that are based outside of mainland China are not attributed to China • Covers a 15-year period (2009-2023)	nationality basis and a residency basis • Categorizes creditor institutions on a nationality basis and a residency basis; covers 300 creditors total, including 169 creditors exclusively extending credit from mainland China, 114 creditors based exclusively in an overseas affiliate, and 17 creditors that lent both via an overseas affiliate and mainland China. • Covers a 24-year period (2000-2023)
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Appendix

This appendix provides methodological details, definitions, and supplementary materials that support the analyses presented in [Chasing China: Learning to Play by Beijing's Global Lending Rules](#). It documents the data sources, measures, and methods used to identify, classify, and evaluate China's lending and grant-giving operations worldwide. It also provides a supplementary set of figures, tables, and maps that support Chapters 1 through 4 of the main report.

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Section A1: Dataset overview, updates, and replication

The CLG Global 1.0 dataset represents a major advancement in AidData’s ongoing effort to provide comprehensive and granular data on China’s lending and grant-giving operations around the globe.

We developed the CLG Global 1.0 dataset using the 4.0 version of AidData’s Tracking Underreported Financial Flows (TUFF) methodology (Parks et al. 2025). The methodology codifies a systematic, transparent, and replicable set of procedures that facilitate the collection of information about aid and credit from official sector donors and lenders who do not publish comprehensive or detailed information about their overseas activities. It does so by synthesizing and standardizing vast amounts of unstructured, open-source information published by governments, intergovernmental organizations, companies, nongovernmental organizations, journalists, and research institutions.

A1.1: Evolution of the TUFF methodology

AidData first introduced the TUFF methodology in April 2013 to systematically track Chinese government-financed development projects in Africa (Strange et al. 2013). We subsequently refined and expanded the methodology to cover all regions of the developing world, releasing major revisions in 2015, 2017, and 2018 (Muchapondwa et al. 2016; BenYishay et al. 2016; Strange et al. 2017; Bluhm et al. 2018; Dreher et al. 2018, 2019, 2021, 2022). These methodological advances were chronicled in *Banking on Beijing: The Aims and Impacts of China’s Overseas Development Program* (Dreher et al. 2022).

We re-engineered the TUFF methodology in 2021 and 2023 to support the creation of the 2.0 and 3.0 version of AidData’s Global Chinese Development Finance (GCDF) Dataset (Custer et al. 2021, 2023). These methodological adjustments improved our ability to capture the terms and conditions of Chinese lending, the timing and location

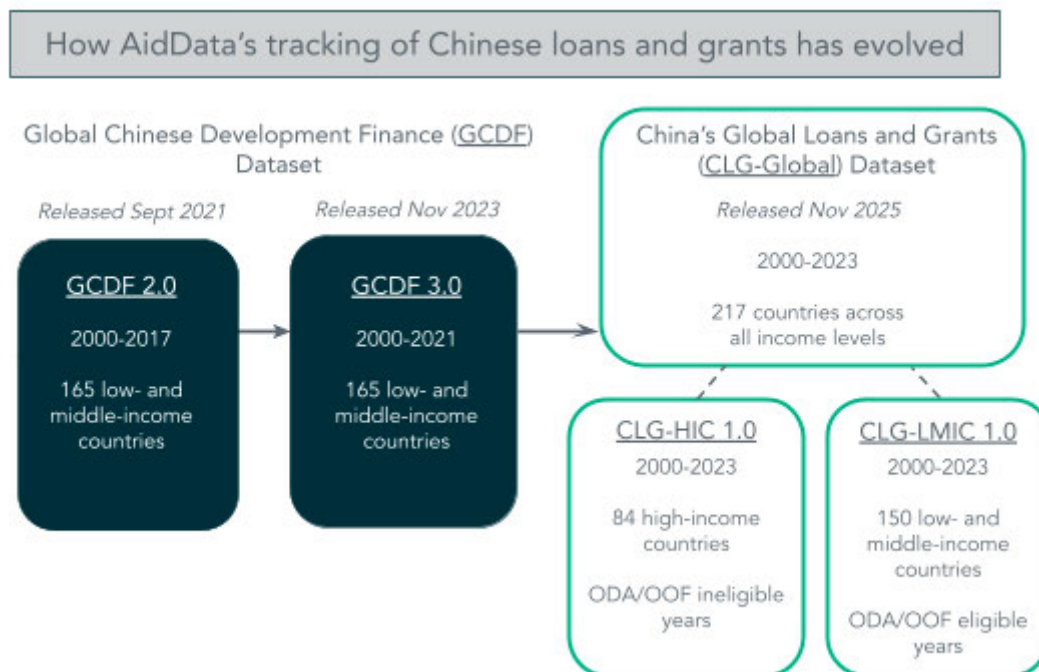
of project implementation, and the diversity of instruments used by official sector creditors.

The latest (4.0) version of the TUFF methodology underpins three datasets: the 1.0 version of the China's Loans and Grants to Low- and Middle-Income Countries (CLG-LMIC) dataset, the 1.0 version of the China's Loans and Grants to High-Income Countries (CLG-HIC) dataset, and the 1.0 version of the China's Global Loans and Grants (CLG-Global) Dataset.

A1.2: Scope and coverage

Historically, we use the TUFF methodology to track official financial flows from China to countries and territories that have been designated as low- and middle-income at any point during the observation period, as determined by the Organization for Economic Cooperation and Development (OECD). We have now expanded the methodology to also include high-income countries and territories, enabling comprehensive coverage of all loans and grants from Chinese state-owned entities for projects and activities in the developing and developed world.

The CLG-HIC 1.0 Dataset captures 9,764 projects and activities in 72 high-income countries supported by grant and loan commitments worth \$943 billion (in constant 2023 USD) between January 1, 2000 and December 31, 2023. The CLG-LMIC 1.0 Dataset captures 23,816 projects and activities in 142 low-income and middle-income countries supported by grant and loan commitments worth \$1.22 trillion (in constant 2023 USD) between January 1, 2000 and December 31, 2023. Together, these two fully interoperable datasets provide global coverage of China's overseas loan and grant commitments. However, for those seeking a unified view of China's official financial flows across ODA-eligible and non-ODA-eligible countries, we have produced an integrated data file: the CLG-Global 1.0 Dataset.



The Flow Class field provides the backbone for distinguishing between different types of official financial flows (loan and grant commitments) from China. It is a key determinant of whether a record appears in the CLG-LMIC 1.0 dataset or CLG-HIC 1.0 dataset. Drawing on the OECD-DAC framework, AidData assigns each record to one of four categories: ODA, OOF, Vague (ODA or OOF), or Official Flows to Ineligible Countries (OFIC). Flows classified as ODA, OOF, or Vague (ODA or OOF) represent official financial flows to low- and middle-income countries, as defined by the OECD-DAC. ODA and OOF follow OECD-DAC criteria for eligibility and concessionality, while official financial flows to low- and middle-income countries that cannot be reliably categorized due to missing information are designated as Vague (ODA or OOF). The fourth category, OFIC, captures official financial flows (loan and grant commitments) to countries that the OECD-DAC defines as ineligible for ODA and OOF, such as high-income countries, G7 members, or those ascending to the EU. Grant and loan commitments that are assigned to the OFIC category fall outside the OECD-DAC reporting framework, but they still represent official financial flows from China. As such, the CLG-LMIC 1.0 dataset exclusively consists of records that qualify as ODA, OOF, or Vague (ODA or OOF), while CLG-HIC 1.0 dataset exclusively consists of records that qualify as OFIC.

A1.3: Major methodological enhancements in TUFF 4.0

The 4.0 version of the TUFF methodology introduces several major improvements to data coverage, structure, and functionality to reflect the evolving nature of China's overseas lending and grant-giving portfolio (Parks et al. 2025).

1. **Expanded Geographic Coverage:** To better capture complex cross-border financial relationships, we have introduced two separate geographic fields: (a) `Country_of_Activity`, representing where the project or activity physically takes place; and (b) `DRA_Country_of_Inc`, representing the country where the direct receiving agency (DRA) is legally incorporated. The dataset also features a new marker to identify whether the DRA is located in an *offshore financial center (OFC)*. This enhancement allows users to isolate flows channeled through OFCs and analyze intermediary jurisdictions.
2. **Lending from Overseas Branches and Subsidiaries:** We have introduced a new marker, `Lending_from_Overseas_Branch_or_Subsiidiary`, that identifies loans extended by Chinese state-owned institutions operating outside mainland China. An additional field, `Overseas_Jurisdiction`, records the location of these institutions.
3. **Ultimate Beneficial Ownership (UBO) Coverage:** China's loan-financed projects and activities generate financial gains and losses. In order to identify the entities that experience these gains and losses, we have collected detailed data on the UBOs ("ultimate parent owners") of all borrowing institutions ("direct receiving agencies"). These data are contained in the accompanying *Borrower Ownership Data File*, which includes 32 variables capturing shareholding percentages, countries of origin, countries of legal incorporation, institution types, and related credit enhancements.
4. **New Variables for Loan-Level Analysis:** Given the increasing prevalence of syndicated lending, the dataset introduces unique Loan Event IDs to identify all Chinese creditor contributions to a shared syndicated loan. These IDs, together with new fields such as `Loan_Tranche`, `Loan_Event_Description`, and

Total_Syndicated_Loan_Value, allow users to aggregate and analyze lending activity at the loan event level.

5. **Expanded Credit Instrument Coverage:** The dataset increases the number of credit instrument types from 23 to 29, adding new categories for commodity-backed loans, shareholder loans, repurchase transactions, exploration/development “carry” loans, and FDI loans. We have also separated the previous “FXSL/BOP” marker into two distinct variables for borrowings via foreign exchange swap lines (FXSL) and balance of payments (BOP) loans.
6. **Enhanced Coverage of Borrowing Terms:** To better capture interest rate structures, the single “Interest Rate” variable has been replaced with six fields: Interest_Rate_Type, Fixed_Interest_Rate, Reference_Rate, Loan_Tenor, Margin_on_Reference_Rate, and Interest_at_T0. This structure provides greater precision and flexibility for analyzing loan terms, particularly for variable-rate instruments.
7. **Identification of Original Agreements:** A new Original_Agreement_Marker identifies the records in the dataset that are supported by original agreements, such as loan contracts and escrow account agreements. Associated fields record the agreement’s title, source, and URL, along with categorical tags to help users locate and review primary sources.
8. **Identification of Debt Restructuring Linkages:** We have added new fields that link debt restructuring events with the loans affected by those events.
9. **Funding Agency Parent Categorization:** We now identify the parent organizations of all funding agencies, enabling aggregation by major institutional families (e.g., main state-owned bank or state-owned company parent names, as well as aggregations for PRC Central Government, PRC Subnational Government, PRC Central Bank, PRC Public University, or State-Owned Enterprise).

The CLG Global 1.0 dataset reflects AidData’s continued commitment to methodological rigor, transparency, and global coverage.

A1.4: How does AidData capture borrower ownership?

AidData's new Borrower Ownership feature marks a major step forward in understanding the beneficiaries of China's overseas lending program. Building on earlier GCDF datasets that documented individual borrowing institutions, the CLG-Global 1.0 dataset systematically links each borrowing institution to its ultimate parent owners—whether public or private sector, host country, Chinese, or third-country entities, and whether majority- or minority-owned. This enhancement to the dataset provides, for the first time, a comprehensive view of the ownership structures that underpin borrowing institutions, thereby enabling analysis of who stands to benefit or lose from China's overseas lending portfolio.

Ownership information is critical to understanding influence and risk. By identifying the equity stakes that parent owners (UBOs) hold in borrowing institutions, the Borrower Ownership tab reveals when state-owned enterprises and governments hold indirect ownership stakes in borrowing institutions, which can help identify contingent liabilities and the entities that stand to benefit from or influence a particular project or activity.

AidData systematically documents the ownership structures of borrowing institutions through a multi-step research protocol grounded in the TUFF methodology. For each direct receiving agency (DRA), we conducted targeted, source-triangulated investigations to identify all intermediate and ultimate parent owners. High-value sources were drawn from borrowing institutions, securities regulators (e.g., the Securities and Exchange Commission), and authoritative media or industry publications. With these sources of evidence, we reconstructed ownership trees that specify each parent entity and its equity stake, enabling a clear view of who ultimately controls the borrowing institution.

The resulting, harmonized ownership dataset clarifies the public, private, host-country, Chinese, and third-country entities that stand behind China's overseas lending portfolio. The Borrower Ownership tab flattens each ownership tree into a series of standardized ownership links: each row represents a relationship between a DRA and one of its parent owners, with additional rows added when multiple owners exist. This

structure allows users to trace ownership chains from the borrower through intermediate entities to the ultimate controlling organization.

The tab includes detailed identification fields, geographic markers, parent-owner characteristics (including whether the entity is Chinese), Ultimate Beneficial Owner (UBO) designations, and indicators of offshore financial center incorporation. UBOs are defined as parent owners with more than 25% equity in the borrowing institution.

The dataset covers 26,851 ownership branches for 4,430 borrowing institutions tied to 12,890 loan records. It identifies 3,981 unique parent owners, including 511 with Chinese nationality. Although Chinese state-controlled parent owners make up only 5.8% of all parent owners, they appear in more than 16% of all loan records, while Chinese private parent owners appear in 851 unique records.

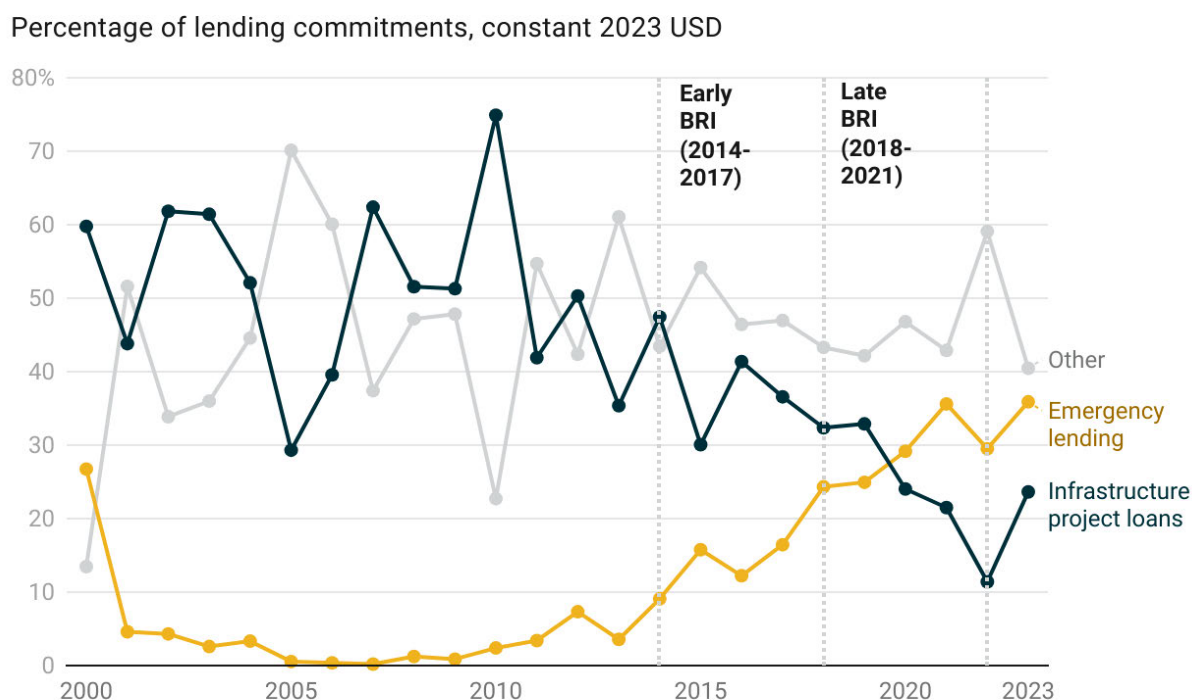
Overall, the tab provides a granular view of the organizational structures of borrowing entities. The Borrower Ownership tab clarifies both the jurisdictional and operational reach of the borrowers by distinguishing between where a borrower and its parent entities are legally registered—its country of incorporation—and where it is actually managed or controlled—its nationality. The country of incorporation refers to the jurisdiction under whose laws an entity is legally registered; all borrowing institutions and parent owners have their countries of incorporation coded. By contrast, nationality refers to the country that reflects the people or institutions that actually govern or control an entity, reflected in its headquarters location or the citizenship of its owners; all borrowing institutions and parent owners have their nationalities coded. These distinctions matter because many firms engaged in Chinese-financed projects are incorporated in one jurisdiction but managed or owned from another. For example, a company may be registered in the Cayman Islands or the British Virgin Islands but headquartered in Beijing or Singapore, reflecting a separation between legal existence and operational control.

The tab also flags borrowers and parent owners incorporated in offshore financial centers (OFCs)—jurisdictions such as the Cayman Islands that serve as conduits for large volumes of cross-border financial activity. OFCs are often used to facilitate international investment or to provide tax, regulatory, or confidentiality advantages.

Beyond improving transparency, the data in the Borrower Ownership tab allow for new questions about the structure of China's overseas lending operations to be answered with large-n, empirical evidence. Analysts can now systemically evaluate the presence of Chinese owners in the loan portfolio, how offshore incorporation affects debt transparency, and when and why host governments take ownership stakes in borrowing entities. Policymakers can use these data to determine whether limited-recourse project finance mechanisms genuinely insulate governments from public debt exposure or simply repackage it through complex transaction structures. By disentangling nationality, incorporation, and ownership, the Borrower Ownership tab allows users of the data to move beyond the "where" and "how much" of Chinese lending and understand the "who" and "why" of its global financial reach.

A1.5: Replication of selected figures from *Belt and Road Reboot* with the 1.0 version of the CLG-Global Dataset

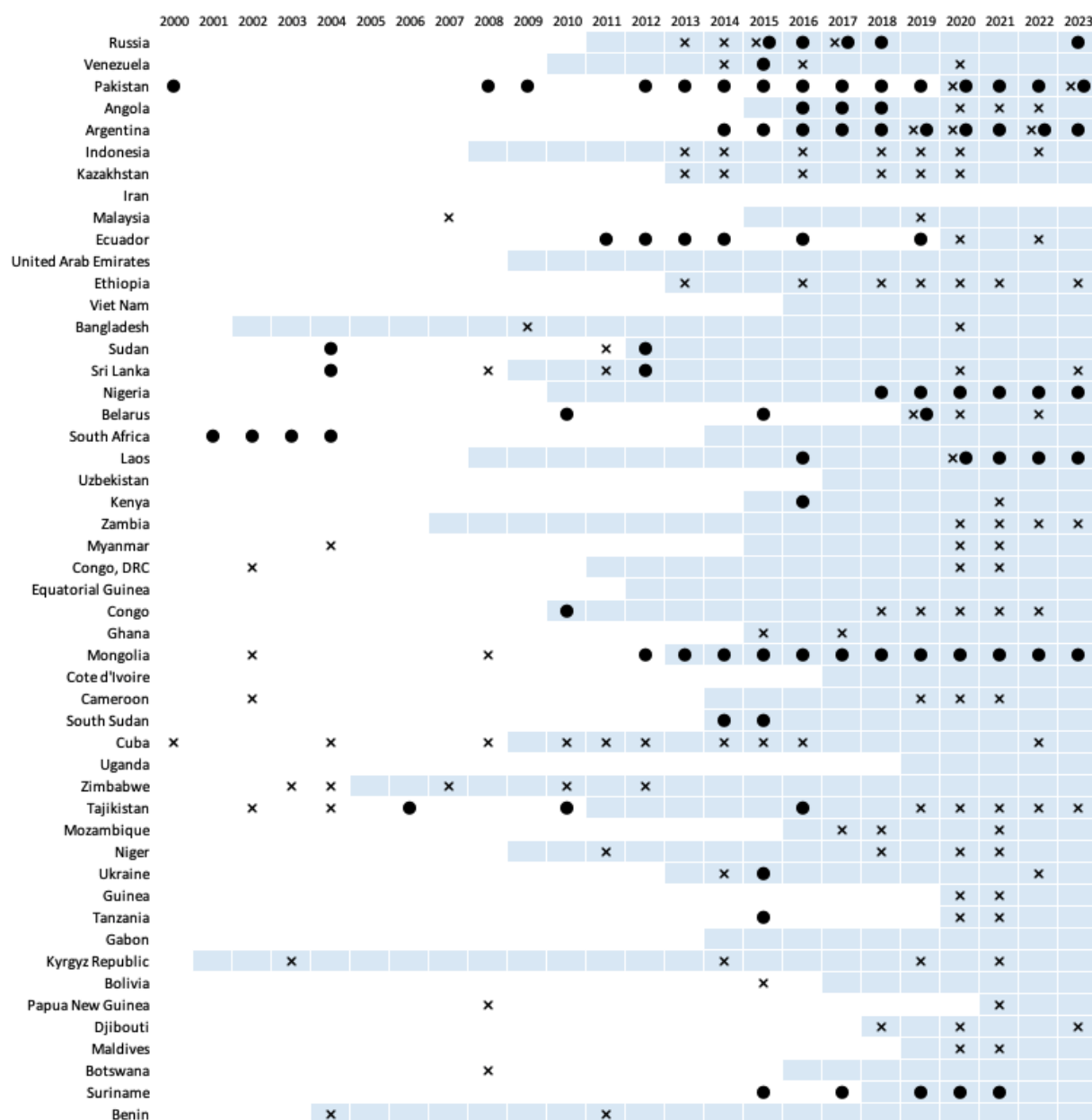
Figure A1.4.1: Composition of China's overseas lending portfolio by financial instrument, 2000-2023



Notes: This figure distinguishes between infrastructure project lending, emergency lending, and other official sector loans from China. Infrastructure project facilities are identified using the investment project loan and infrastructure

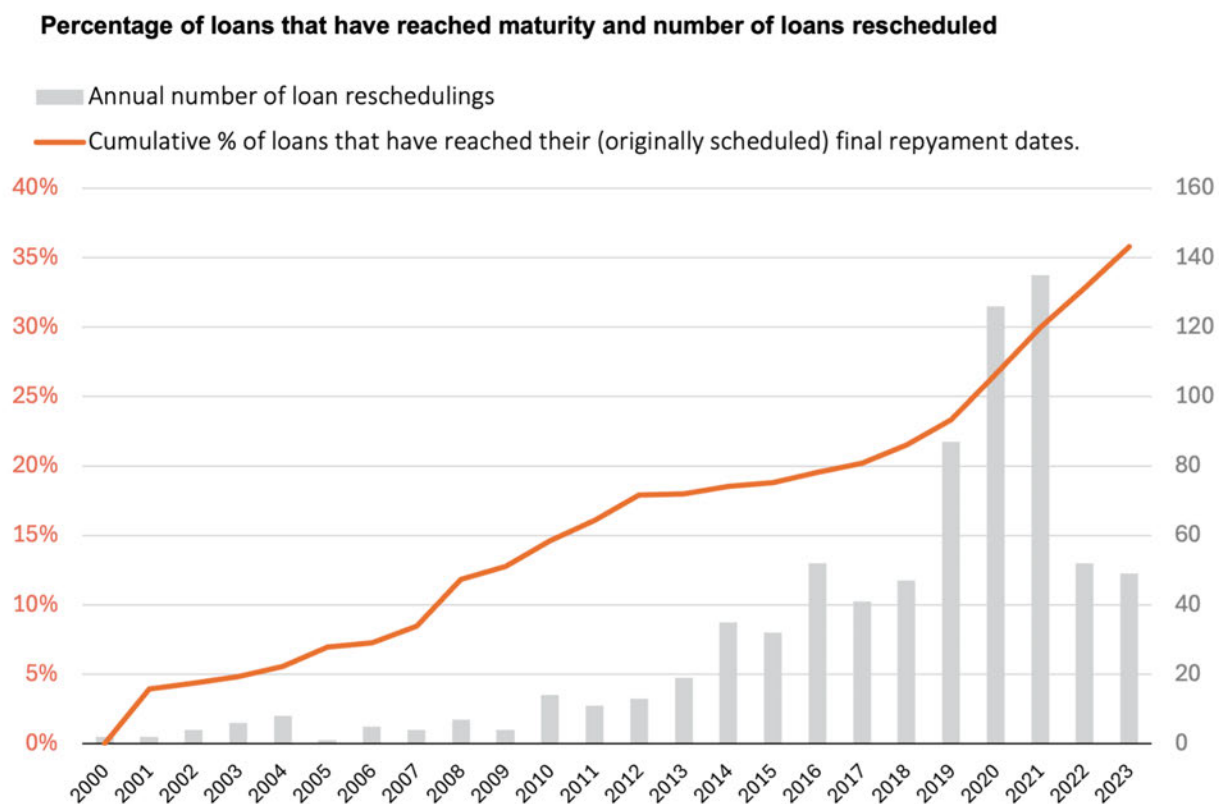
flags in combination, while emergency lending facilities are identified using the rescue flag. The “Other” category captures remaining loans that are neither infrastructure projects nor emergency lending.

Figure A1.4.2: Rescue lending and debt rescheduling events for the top 50 borrowers in financial distress, 2000-2023



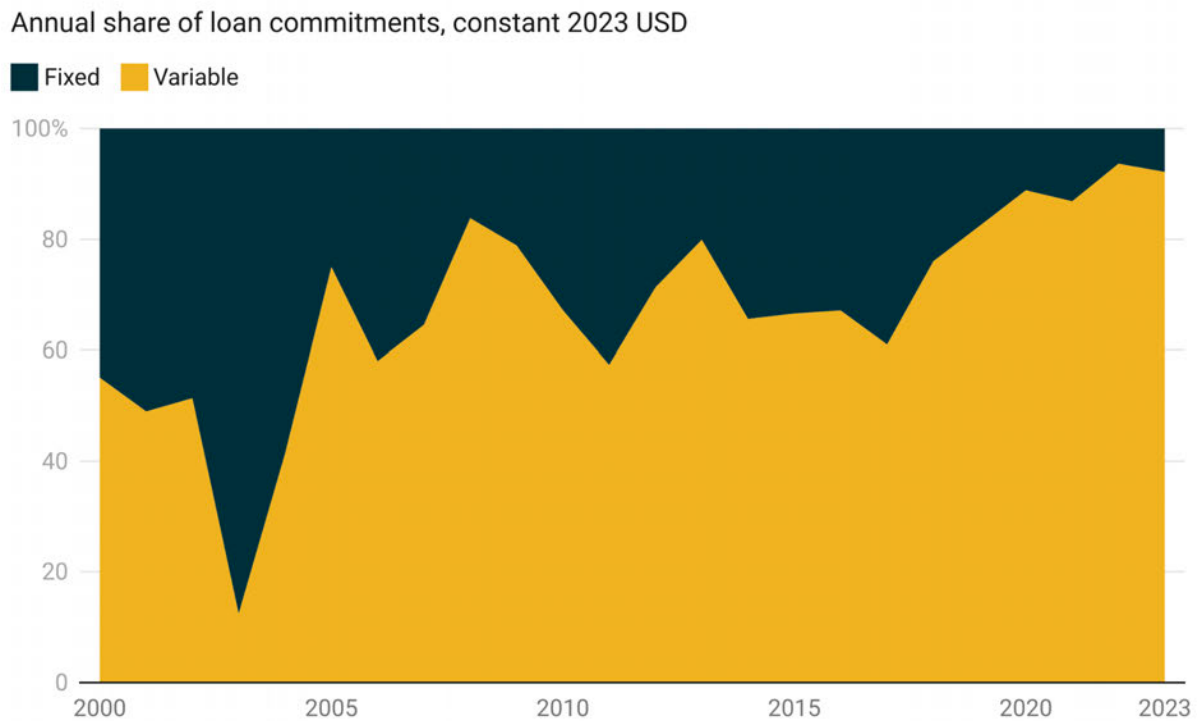
Notes: This figure provides an overview of the timeline of when countries experienced financial distress (blue shading), when China provided rescue lending (circles), and when China rescheduled existing loan repayments (X's). 'Circle' indicates that at least one rescue loan was provided by China to the respective country that year, and an 'X' indicates that at least one loan was rescheduled by China for the respective country that year. Countries included in this list represent the top 50 borrowers in distress, ordered by the size of their cumulative lending portfolio as of 2023.

Figure A1.4.3: Percentage of loans that have reached maturity and number of loans rescheduled



Notes: To determine when each loan will reach maturity, each loan's maturity period is added to its commitment date. This figure represents when loans reached their final maturity dates according to the original borrowing terms, although many loans have been rescheduled (often involving an extension of the loan's grace period and/or maturity). MOFCOM interest-free loan commitments (which are typically issued without a credible expectation of repayment) are excluded from the calculation.

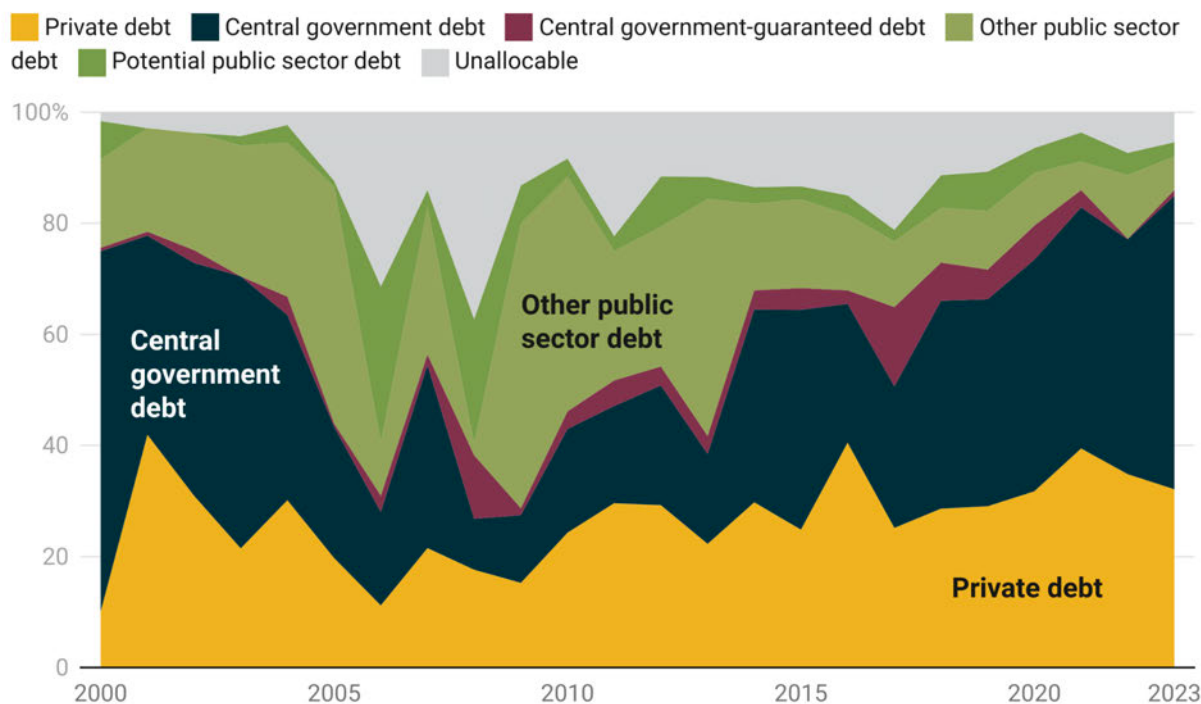
Figure A1.4.5: Percentage of China's overseas lending portfolio using fixed or variable interest rates



Notes: Variable interest rates that Chinese state-owned creditors use as benchmarks include LIBOR, EURIBOR, SHIBOR, BADLAR, CIRR, JIBOR, LPR and BADCOR. We exclude all loans for which we cannot determine if a fixed or variable interest rate was applied.

Figure A1.4.6: Decomposition of China's overseas lending portfolio

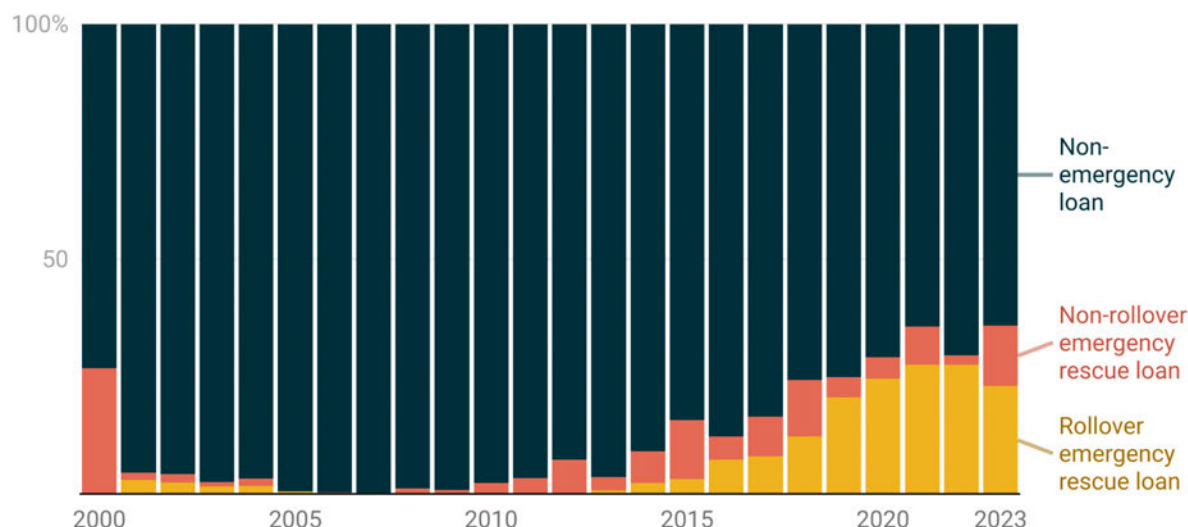
Annual share of loan commitments, constant 2023 USD



Notes: This graph decomposes China's overseas lending portfolio, including emergency rescue loans, according to the extent to which host governments may eventually be liable for debt repayment. Central government debt and other public sector debt represent loans where the borrower is a government agency or a wholly- or majority-owned state entity. Central government-guaranteed debt represents loans that have a sovereign guarantee from the host government. Potential public debt represents loans to entities (including special purpose vehicles or joint ventures) where the host government has a minority stake. Private debt captures loans to private entities.

Figure A1.4.7: Decomposition of China's overseas lending portfolio by emergency and non-emergency lending instruments

Annual share of loan commitments, constant 2023 USD



Notes: This figure measures the share of China's overseas lending portfolio (in 2023 constant USD) consisting of non-emergency loans, non-rollover emergency rescue loans, and rollover emergency rescue loans. Emergency rescue loans are identified using the rescue variable, which captures loans that enable sovereign borrowers to service existing debts, finance general budgetary expenditures, or shore up foreign reserves. Loans to the central banks of Malaysia, Thailand, Singapore, and South Korea are excluded from the rescue category, as evidence indicates these swap lines were not used during periods of macroeconomic distress. Rollover emergency rescue loan amounts are calculated as the difference between Amount (Constant USD 2023) and Adjusted Amount (Constant USD 2023), while non-rollover amounts correspond to the adjusted values.

Figure A1.4.8: China's overseas lending commitments by lending institution type, 2000-2023

Percentage of official sector lending from China (in 2023 constant USD)

Year	State-owned policy banks	State-owned commercial banks	State-owned companies	State-owned funds	MOFCOM	PBOC/SAFE	Other
2000	39.48%	38.0 %	14.89%	-	5.85	-	1.73%
2001	49.28%	40.15%	4.43%	-	4.98	-	1.16%
2002	41.1 %	49.84%	1.0 %	-	4.24	-	3.8 %
2003	58.23%	36.0 %	1.66%	-	1.37	-	2.67%
2004	57.34%	28.18%	9.74%	-	1.83	-	2.91%
2005	73.42%	18.57%	6.94%	-	0.66	-	0.4 %
2006	55.82%	26.61%	13.67%	-	0.36	0.28%	3.27%
2007	69.49%	23.77%	5.92%	-	0.55	0.2 %	0.0 %
2008	74.81%	17.99%	5.87%	-	0.17	0.79%	0.36%
2009	75.74%	18.76%	2.56%	2.24%	0.16	0.44%	0.0 %
2010	73.85%	21.46%	3.33%	-	0.17	1.11%	0.0 %
2011	69.52%	25.21%	4.79%	-	0.18	0.0 %	0.3 %
2012	61.73%	32.12%	4.0 %	-	0.18	1.75%	0.14%
2013	45.71%	19.54%	29.59%	-	0.11	4.99%	0.0 %
2014	50.36%	32.76%	8.7 %	0.19%	0.0	7.4 %	0.5 %
2015	50.54%	35.98%	3.17%	-	0.0	10.25%	0 %
2016	34.76%	47.93%	8.0 %	0.41%	0.0	8.34%	0.45%
2017	37.37%	48.0 %	2.46%	0.26%	0.12	11.7 %	0 %
2018	28.2 %	47.0 %	3.22%	0.38%	0.18	19.89%	1.1 %
2019	25.92%	45.58%	4.21%	0.21%	0.0	23.0 %	0.98%
2020	12.35%	45.9 %	9.19%	0.2 %	-	31.89%	0.47%
2021	15.3 %	41.66%	5.0 %	-	-	37.67%	0.36%
2022	7.11%	53.15%	3.76%	0.1 %	-	35.88%	-
2023	11.44%	40.85%	8.85%	-	-	36.26%	2.59%

Notes: Shares are calculated from China's official sector loan commitments (2000–2023) in 2023 constant USD.

Section A2: Comparing the scale and scope of China's official financial flows: G7 donors and the World Bank

A2.1: How does China stack up against G7 donor countries?

AidData compares China's official financial flows with those of G7 member countries—the United States, Japan, Germany, the United Kingdom, France, Italy, and Canada—by aligning the scope and measurement of each according to the reporting standards of the Organisation for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC).

G7 countries report their official financial flows to the OECD-DAC, but only for ODA- and OOF-eligible countries and transactions. These data include grants and loans that meet the OECD's definitional criteria for Official Development Assistance (ODA) and Other Official Flows (OOF). To ensure comparability, AidData includes only those Chinese grant and loan commitments that fall into the analogous categories of ODA, OOF, or Vague (ODA or OOF), as defined in the CLG-Global 1.0 Dataset.⁴¹¹

AidData excludes OFIC from its direct comparisons because OECD-DAC members do not report their official financial flows to high-income or ODA-ineligible countries.

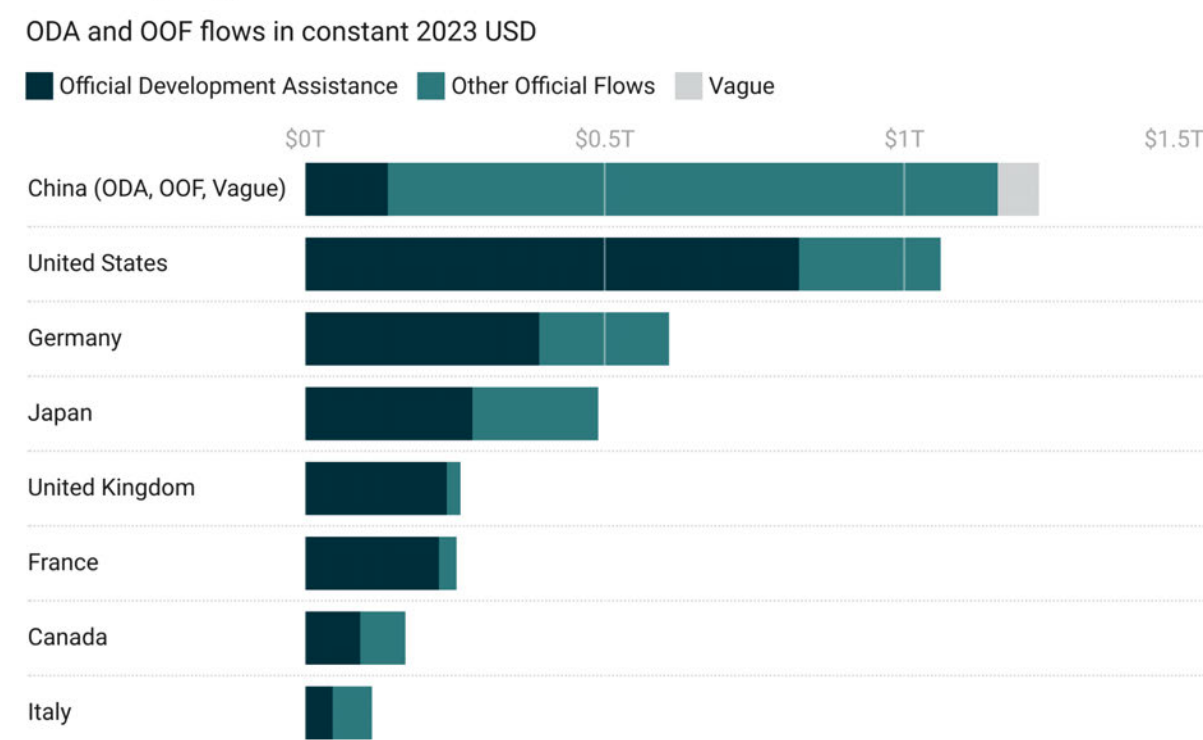
Given that detailed commitment-level data are not available for all OOF flows published by the OECD-DAC, AidData relies on gross disbursement data for G7 countries to construct the most comparable cross-national measure of official finance. This measure includes both ODA and OOF disbursements, including officially supported export credits, which are a significant component of the G7's non-concessional official financial flows but are not comprehensively recorded in commitment-level datasets.

⁴¹¹ The Vague (ODA or OOF) category is a residual category that captures grant and loan commitments from Chinese state-owned entities that cannot be definitively categorized as ODA or OOF due to insufficient information about concessionality and/or developmental intent.

All G7 data are drawn from the OECD-DAC at the donor/creditor-year level, capturing gross disbursements to all developing countries. To maintain temporal and monetary consistency, all figures are expressed in constant 2023 U.S. dollars and aligned to the same reporting period (2000–2023) covered by the CLG-Global 1.0 dataset.

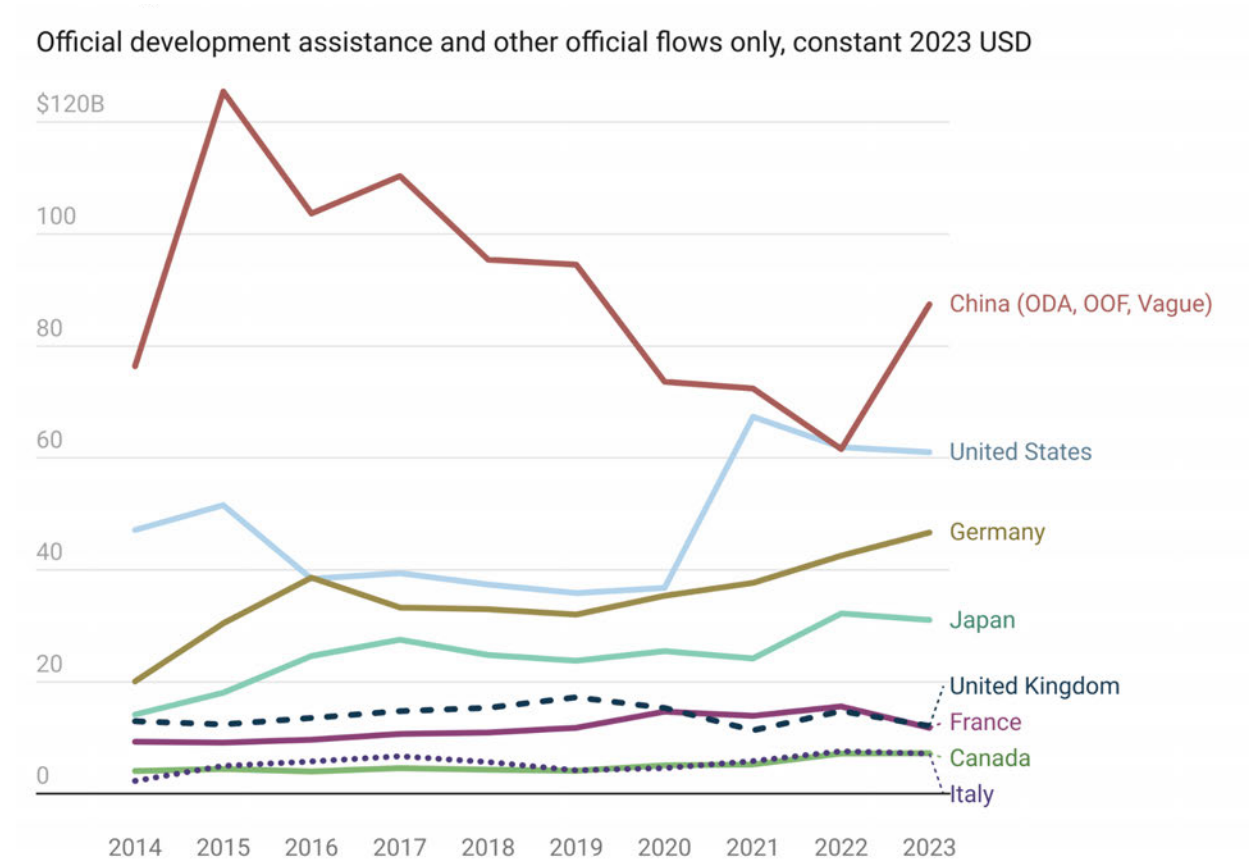
Based on this harmonized comparison, the G7 collectively remains the largest source of official financial flows to developing countries, providing approximately \$2.95 trillion in ODA and OOF between 2000 and 2023. However, Beijing’s ODA and OOF portfolio exceeds that of any individual G7 country.

Figure A2.1.1: Official financial flows from China and the G7 to the developing world, 2000-2023



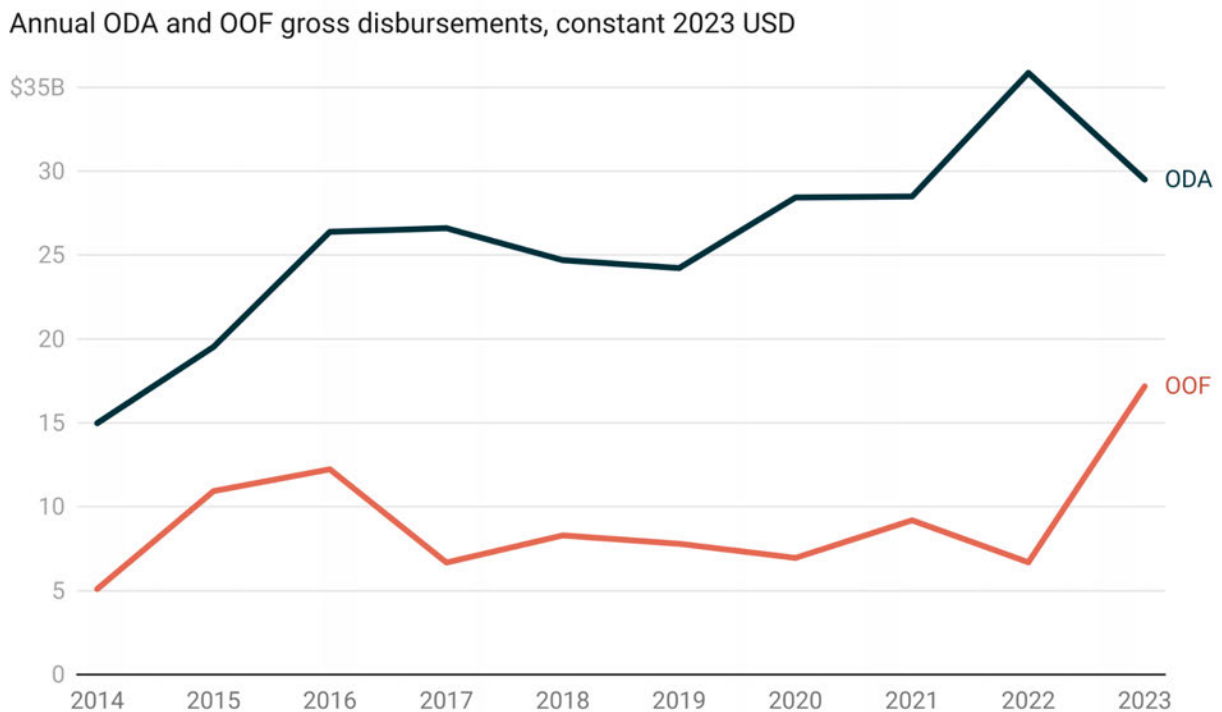
Notes: Notes: This figure excludes China’s loans and grants to countries ineligible for ODA and OOF (captured as OFIC flows). AidData relies on OECD-DAC measurement criteria to make ODA and OOF determinations (as described in Section A3.1 of the Appendix). The Vague (ODA or OOF) is a residual category for official financial commitments from China that could not be reliably categorized as ODA or OOF because of insufficiently detailed information. G7 ODA and OOF data represent gross disbursements from the OECD-DAC. This figure excludes short-term “rollover” facilities from the tally of official financial commitments (Section A3.2 in the Appendix).

Figure A2.1.2: Official financial flows flows (ODA + OOF) from China and G7 countries, 2014-2023



Notes: This figure excludes China's loans and grants to countries ineligible for ODA and OOF (captured as OFIC flows). AidData relies on OECD-DAC measurement criteria to make ODA and OOF determinations. The Vague (ODA or OOF) is a residual category for official financial commitments from China that could not be reliably categorized as ODA or OOF because of insufficiently detailed information. G7 ODA and OOF data represent gross disbursements from the OECD-DAC.

Figure A2.1.3: Official financial flows from Germany to the developing world, 2014-2023



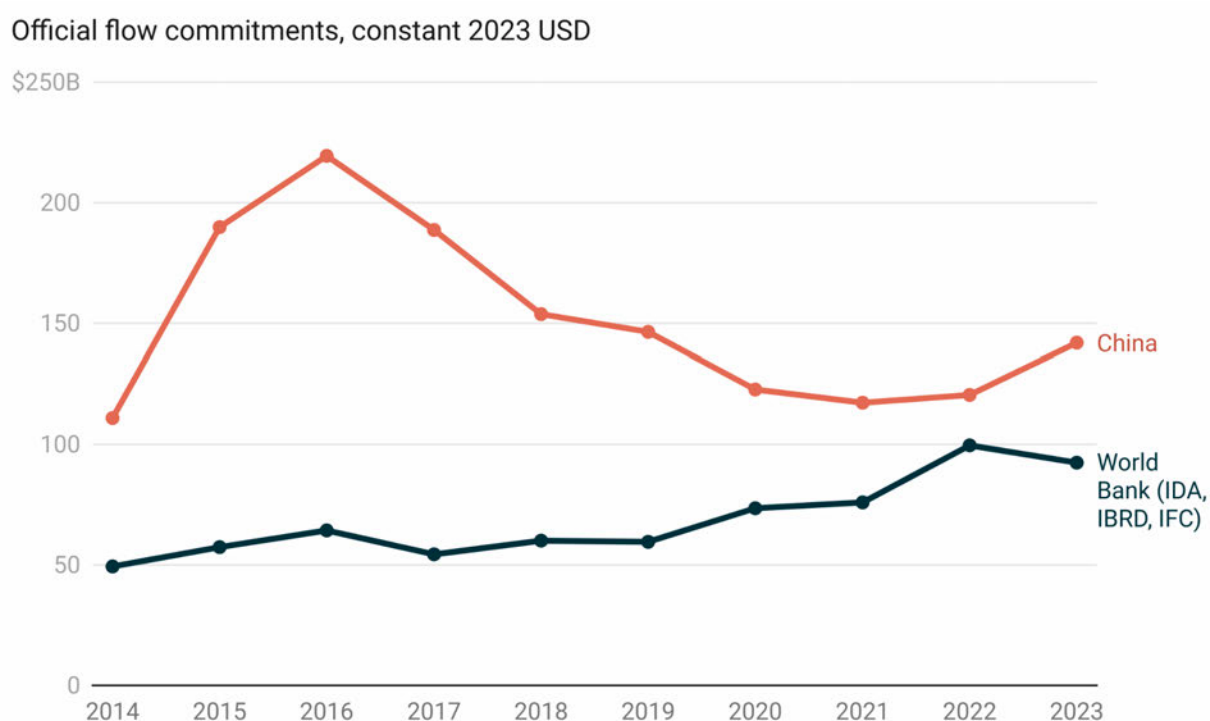
Notes: German ODA and OOF flows reflect gross disbursements (as OOF commitment data are not published by the OECD-DAC for individual DAC members).

A2.2: How do official financial flows from China and the World Bank compare?

The World Bank Group (WBG) is one of the world's largest and most influential sources of official financial flows, providing a combination of grants, concessional loans, and non-concessional credit to public sector and private sector entities in developed and developing countries. It supports sovereign borrowers with long-term financing for public investments and policy reform through its concessional lending and grant-giving arm: the International Development Association (IDA). It also does so through its non-concessional lending window: the International Bank for Reconstruction and Development (IBRD). Complementing these sovereign operations, the International Finance Corporation (IFC) provides direct lending and equity investment to private clients, while the Multilateral Investment Guarantee Agency (MIGA) offers risk insurance to mobilize additional private capital. Collectively, these institutions make the WBG a

central pillar of the global development finance architecture and a critical benchmark for understanding China's role as a leading source of official financial flows. Between 2000 and 2023, the World Bank Group's loan and grant commitments rose steadily, reaching nearly \$100 billion a year between 2022 and 2023. While the annual commitment volumes of the World Bank and China have converged in recent years, Beijing remains the world's single largest official source of international credit. However, the World Bank Group's portfolio is far more concessional and heavily weighted toward policy-based support.

Figure A2.2.1: Annual loan and grant commitments from China and the World Bank



Notes: This figure presents annual loan and grant commitments from the World Bank and official sector donors and creditors in China across all recipient countries, including high-income countries. World Bank commitments combine IDA, IBRD, and IFC grant and loan commitments.

To develop a comprehensive measure of the World Bank Group's annual loan and grant commitment volumes that is comparable to China's official sector loan and grant commitment, we integrate data across the World Bank Group's sovereign and non-sovereign lending and grant-giving windows. To do so, we integrated information from two datasets available through the World Bank's Finance One databank: (1) *IBRD*

and *IDA Net Flows & Commitments* and (2) *IFC Investment Services Portfolio*. This unified dataset allows for a consistent view of the WBG's sovereign and non-sovereign lending activities over time. In this analysis, we exclude MIGA operations because its political risk insurance and guarantee instruments do not constitute loan or grant commitments and therefore are not directly comparable.

The IBRD and IDA dataset provides project-level records of loan and grant commitments to sovereign borrowers, encompassing concessional (IDA) and non-concessional (IBRD) sources of financing. The IFC Investment Services Portfolio, by contrast, captures the International Finance Corporation's direct lending to private clients. Taken together, these two sources provide the most complete measure of the World Bank Group's commitments across its public and private windows.

To align these data with OECD-DAC measurement standards and ensure comparability with China's official financial flows (as measured in the CLG-Global 1.0 Dataset), we applied several filters and implemented several data cleaning procedures.

For IBRD and IDA Commitments, we began with all entries listed under *IBRD and IDA Net Flows & Commitments* and retained project-level commitments to sovereign borrowers only. Rows in which the *country/economy* field referred to internal World Bank transfers—such as loans to MIGA or IFC—were excluded. We also removed entries where the *region* field was set to "World," as these represent institutional transfers rather than country-specific commitments.

Within the dataset, we included the following categories of financing: IBRD Commitments, IDA Grant Commitments, IDA Concessional Commitments, and IDA Non-Concessional Commitments. We excluded records classified as *IDA Other Commitments* as they corresponded to guarantees or Private Sector Window (PSW) operations. The final sum therefore reflects traditional loan and grant commitments to sovereign entities.

To incorporate the private-sector window of the WBG, we relied on the *IFC Investment Services Portfolio* dataset, focusing on IFC's loan commitments only. We filtered out all records where *status* was "pending approval" or "hold," and retained those marked as "active," "completed," "pending signing," or "pending disbursement." Records involving risk-management instruments, guarantees, or equity investments were

removed to maintain focus on debt commitments. We standardized the commitment year using the *approval date year* field. Because the IFC dataset reports values in millions of U.S. dollars, we applied this unit consistently across both datasets prior to aggregation.

After filtering, we calculated annual totals for each component and deflated them to constant 2023 USD. These totals were then combined to produce a single measure of WBG total commitments, expressed in constant U.S. dollars.

The World Bank's IDA and IBRD grant and loan commitments are reported using the World Bank's fiscal year. To make commitments comparable to financing from China, we rely on the simplifying assumption that the fiscal year equals the calendar year.

Section A3: Methods and measurements

A3.1: How AidData measures concessionality and intent

As part of its data collection and classification system, AidData designates each financial and in-kind transfer (“flow”) from an official sector institution as Official Development Assistance (ODA), Other Official Flows (OOF), Vague (ODA or OOF), or Official Flow to Ineligible Countries (OFIC). Flows classified as ODA, OOF, or Vague (ODA or OOF) represent official financial flows—or development finance commitments—to low- and middle-income countries, as defined by the OECD-DAC. ODA and OOF follow OECD-DAC criteria for eligibility and concessionality, while flows that cannot be reliably categorized due to missing information are coded as Vague (ODA or OOF). The fourth category, OFIC (Official Flows to Ineligible Countries), captures loans and grants directed to countries that the OECD-DAC defines as ineligible for ODA and OOF, such as high-income countries, G7 members, or those ascending to the EU. OFIC falls outside the OECD-DAC reporting framework, but still represents official financial flows from China.

The OECD’s Development Assistance Committee (DAC) has used the designations for ODA and OOF since 1972 to distinguish between flows going to developing countries from official sector institutions that (a) are provided on concessional terms and that promote and specifically target the economic development and welfare of developing countries (ODA), and (b) are provided on non-concessional terms or do not specifically target the economic development and welfare of developing countries (OOF). The sum of ODA and OOF is sometimes referred to as Official Finance or Official Development Finance. Many DAC countries, non-DAC countries, and multilateral institutions report the volume and composition of their official financial flows according to these categories and criteria.

In alignment with the OECD-DAC’s own definitions, AidData seeks to classify each record to developing countries (by the OECD-DAC definition) in its dataset as either ODA or OOF. This unique feature of the dataset sets it apart from other publicly available datasets that measure Chinese development finance in that it allows analysts

to make “apples-to-apples” comparisons of Chinese development finance and other international sources of development finance (that report their ODA and OOF data to the OECD-DAC).

The criteria for whether an official sector flow (commitment) qualifies as ODA or OOF is determined by the OECD-DAC. It is based on (1) the intent of the flow (whether its primary intent was development or not), (2) the income classification of the receiving country, and (3) the concessionality level of the flow. All grants and in-kind transfers are treated as concessional. However, a “grant element” measure is used to calculate the concessionality level of all loans. This measure, which varies from 0 percent to 100 percent, seeks to capture the generosity of a loan—or the extent to which it is priced below market rates. In principle, any loan provided on entirely non-concessional terms should have a grant element of 0 percent. While the first two criteria have remained consistent since the concept of ODA was introduced more than five decades ago, the OECD-DAC made changes to the third (concessionality) criterion over the last decade. Until 2017, a loan from an official sector institution to a low-income or middle-income country had to meet a concessionality (grant element) threshold of 25% to qualify as ODA (calculated with a uniform 10% discount rate). However, in 2018, the OECD-DAC introduced a tiered system of discount rates and concessionality thresholds based on the income classifications of borrower countries and whether borrowing institutions are official sector or private sector institutions.

The 2018 definition of concessionality is based on the following criteria:

- For loans to official sector institutions, the following concessionality thresholds apply:
 - Least-developed countries and low-income countries: a minimum grant element of 45% (calculated using a 9% discount rate).
 - Lower-middle income countries: a minimum grant element of 15% (calculated using a 7% discount rate).
 - Upper-middle income countries: a minimum grant element of 10% (calculated using a discount rate of 6%).

- For loans to private sector institutions, the OECD-DAC maintains the pre-2018 definition of concessionality and requires a grant element of at least 25% (that is calculated using a 10% discount rate).

To ensure comparability between the flows documented in the CLG-Global 1.0 Dataset and the flow data published by the OECD-DAC, AidData has applied these definitions in the following manner:

1. Intent: AidData codes the intent of each financial and in-kind transfer ("flow"). Flows with "development intent" are those that are primarily oriented toward the promotion of economic development and welfare in the country where the activity is taking place. Flows with "commercial intent" are those that primarily seek to promote the commercial interests of the country from which the financial transfer has originated (e.g., encouraging the export of Chinese goods and services). Flows with "representational intent" are those that primarily seek to promote a bilateral relationship with another country or otherwise promote the language, culture, or values of the country from which the financial transfer has originated (e.g., the establishment of a Confucius Institute or Chinese cultural center).
2. ODA-Eligibility: AidData reports the ODA & income classification group of the country where the activity takes place. Any records assigned to a country not eligible for ODA (and therefore not eligible for OOF), are automatically assigned to the OFIC category. This includes all types of in-kind or financial transactions such as grants, technical assistance, scholarships, and loans where the country of activity is not eligible for ODA.
3. Concessionality:
 - a. For flows committed between 2000 and 2017, a flow is classified as ODA when it (1) has development intent, (2) has a grant element of at least 25% (using a 10% discount rate), and (3) supports a country that is ODA-eligible according to the OECD-DAC's ODA income classification list.
 - b. For flows committed between 2018 and 2023, a flow is classified as ODA when it (1) has development intent, (2) has a concessionality level that meets the new criteria (established in 2018 definition), and (3) supports

country that is ODA-eligible according to the OECD-DAC's ODA income classification list.

By definition, any official sector flows that are not classified as ODA to an ODA-eligible country are classified as OOF. OOF in AidData's CLG-Global 1.0 Dataset largely consists of export credits and non-concessional loans.

In some cases, we are not able to determine if an official sector flow would qualify as ODA or OOF because of insufficiently detailed information in source documentation. In such cases, the flow in question is categorized as Vague (ODA and OOF).

A3.2: How does AidData measure the cumulative stock of official financial flows from China to developed and developing countries?

Short-term emergency rescue loans represent an increasingly important part of China's overseas portfolio of loans to developed and developing countries. Nearly all of these borrowings, which are typically used to refinance maturing debts, carry de jure maturities of one year or less (i.e., they are initially scheduled for repayment in 12 months or less). However, it is not unusual for financially-distressed developed and developing countries to receive short-term emergency rescue loans from the same Chinese creditor in a series of consecutive years. So-called "rollover" emergency rescue loans come in two varieties: (1) those that reach their original contractual maturity dates and secure final maturity date extensions; and (2) those that are repaid on their original contractual maturity dates and reissued (with similar or different face values and borrowing terms) and assigned new maturity dates. However, among serial recipients of short-term emergency rescue loans, it is seldom possible—with publicly available sources of information—to differentiate between those who had their final maturity dates extended and those who fully repaid on their original contractual maturity dates but were reissued new loans.

This feature of China's overseas lending program raises an important question about how to accurately estimate the cumulative stock of official financial flows—or lending

commitments—from China to developed and developing countries. Neither the OECD's Creditor Reporting System (CRS) nor the World Bank's Debtor Reporting System (DRS) ask lenders or borrowers to disclose loans with maturities of one year or less. However, most of China's short-term emergency rescue loans have de facto maturities that substantially exceed one year (Horn et al. 2023a), which makes it difficult to justify the exclusion of all emergency rescue loans from stock- or flow-based measures of official financial commitments (or lending commitments) from China to developed and developing countries. At the same time, rollover debt presents an overcounting risk because it straddles a fine line between new lending commitments and maturity extensions of existing lending commitments. This risk is particularly relevant to estimations of the cumulative stock of official financial flows (or lending commitments) from China. In order to address this challenge, AidData's CLG-Global 1.0 Dataset includes three variables (fields) that measure transaction amounts without including any rollover amounts from PBOC swap line borrowings or emergency rescue loans from other creditors (with maturities of one year or less). These amounts are reported in their original currencies of denomination, nominal USD, and constant 2023 USD via the `Adjusted_Amount_Original_Currency`, `Adjusted_Amount_Constant_USD_2023`, and `Adjusted_Amount_Nominal_USD` variables.

A3.3: How does AidData categorize Chinese lending to different types of borrowers?

The "Level of Public Liability" field in the 3.0 version of AidData's GCDF dataset captures the extent to which the host government may eventually be liable for debt repayment. It is hierarchically and automatically determined based on the following criteria:

1. The loan record is classified as "Central government debt" if it is an official sector loan to a central government institution in the recipient country, measured by whether there is at least one receiving agency (direct or indirect) from the recipient country that is classified as a government agency;

2. If the loan record does not meet the first (1) criterion, it is classified as "Central government-guaranteed debt" if it is an official sector loan to a state-owned entity (e.g., state-owned enterprise and state-owned bank) or privately-owned entity in the recipient country that benefits from a sovereign (central government) repayment guarantee;
3. If the loan record does not meet the first (1) criterion or the second (2) criterion, it is classified as "Other public sector debt" if (a) it is an official sector loan to a state-owned entity (such as a city/municipal government, a state-owned bank, or a state-owned enterprise) in the recipient country that does not benefit from a sovereign (central government) repayment guarantee; (b) it is an official sector loan to a private entity or state-owned entity in the recipient country that is backed by a repayment guarantee from a state-owned entity other than the central government in the recipient country (such as a city/municipal government, a state-owned bank, or a state-owned enterprise), OR (c) it is an official sector loan to a special purpose vehicle (SPV) or joint venture (JV) that is majority-owned by one or more public sector institutions in the recipient country and that does not benefit from a sovereign (central government) repayment guarantee or a repayment guarantee from a state-owned entity other than the central government in the recipient country (such as a city/municipal government, a state-owned bank, or a state-owned enterprise).
4. If the loan record does not meet the first (1) criterion, the second (2) criterion, or the third (3) criterion, it is classified as "Potential public sector debt" if it is an official sector loan to a special purpose vehicle (SPV) or joint venture (JV) borrower that is minority-owned by one or more public sector institutions in the recipient country and that does not benefit from a sovereign (central government) repayment guarantee or a repayment guarantee from a state-owned entity other than the central government in the recipient country (such as a city/municipal government, a state-owned bank, or a state-owned enterprise).
5. If the loan record does not meet the first (1) criterion, the second (2) criterion, the third (3) criterion, and the fourth (4) criterion, it is classified as "Private debt"

if it is an official sector loan to a privately-owned entity that does not benefit from a repayment guarantee from a public sector institution in the recipient country (this includes lending to a private entity, or lending to a Joint Venture or Special Purpose Vehicle with no level of host government ownership (i.e., the "JV/SPV Host Government Ownership" variable is set to "No Host Government Ownership";

6. If the loan record does not meet the first (1) criterion, the second (2) criterion, the third (3) criterion, the fourth (4) criterion, or the fifth (5) criterion, then it is classified as "Unallocable" due to a lack of information.

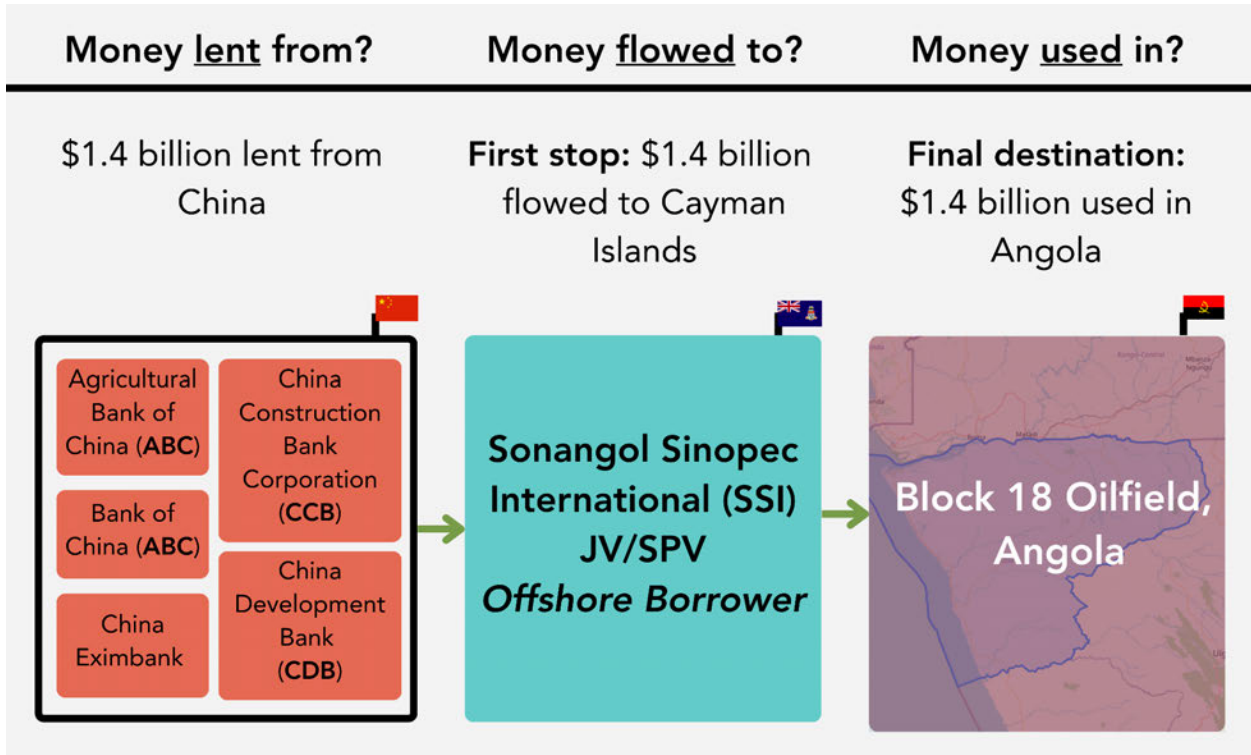
Using these classifications, the PPG_Debt_Status variable classifies each loan record as either Public and Publicly Guaranteed (PPG) Debt or Non-PPG Debt. Users seeking to isolate PPG debt—that is, loans to government agencies, majority state-owned institutions, or other borrowers backed by central or subnational government guarantees—should reference the Level_of_Public_Liability variable and select records labeled "Central government debt," "Central government-guaranteed debt," or "Other public sector debt." For simplicity, this same subset can be identified directly by filtering for "PPG Debt" in the PPG_Debt_Status field.

A3.4: What is the new "two destinations" data architecture in the CLG-Global 1.0 dataset?

A portion of China's official lending is channeled to support projects and activities in one country, while the borrowing institution is legally incorporated in another country. These types of arrangements include borrowing institutions that are incorporated in offshore financial centers (OFCs), such as Bermuda, the British Virgin Islands, and the Cayman Islands. In order to more precisely track the destination of official sector credit from China, the CLG-Global 1.0 dataset (and the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets) introduces two separate destination fields which represent (1) the host country where the financed project or activity takes place ('Country_of_Activity') and (2) the country of incorporation of the direct receiving agency of the financial or in-kind transfer ('DRA_Country_of_Inc'). To facilitate analysis regarding financing channeled

through OFCs, the dataset also includes a marker that enables users to isolate these flows in the data ('DRA_Country_of_Inc_OFC').⁴¹²

Figure A3.1: Tracking two destinations—an example from Angola



Notes: In this illustrative case, a syndicate of banks provided a \$1.4 billion loan to Sonangol Sinopec International, a joint venture that is legally incorporated in the Cayman Islands. However, the proceeds of the loan were to be used by the borrower to develop an oil field known as Block 18 located in Angola. The DRA_Country_of_Inc variable in the 1.0 version of AidData’s CLG-Global Dataset designates the Cayman Islands as the country where the borrower was legally incorporated. The Country_of_Activity variable in the 1.0 version of AidData’s CLG-Global Dataset designates Angola as the country where the loan-financed project/activity took place.

A3.5: How does AidData classify standard and non-standard credit instruments?

Over the last two decades, China has consistently used a core set of credit instruments—including interest-free loans, government concessional loans (GCLs), preferential buyer’s credits (PBCs), and export buyer’s credits—to support its overseas lending program. These credit instruments are widely understood by debt

⁴¹² AidData references the list of offshore financial centers maintained by the Bank for International Settlements (BIS) for its OFC marker.

management officers and transaction lawyers in borrower countries (e.g. Banco Central de Bolivia 2016; NEDA 2017; Economic Relations Division of the Government of the People's Republic of Bangladesh 2023) and well-documented in the existing literature on China's overseas lending program (Horn et al. 2021: 6; Gelpern et al. 2023: 357-358). As such, AidData considers them to be "standard" credit instruments.

Non-standard credit instruments are more complex, opaque, and difficult to track (see Rivetti 2021; World Bank 2025b). They include supplier's credits (including export seller's credits), deferred payment agreements (DPA), EPC+F agreements, drawdowns on foreign currency swap lines (FXSL), balance of payments (liquidity support facility) loans, pre-export financing (commodity prepayment) facilities, interbank loans, shareholder loans, exploration/development carry, and repurchase ("repo") transactions. All such credit instruments are classified by AidData as "non-standard."

A3.6: How does AidData measure FDI lending and liquidity support measures?

AidData classifies FDI loans and corporate liquidity support in the CLG-Global 1.0 dataset (and the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets) based on each transaction's underlying purpose and structure. We now distinguish between 28 different types of credit instruments, accounting for the functional purposes (e.g., mergers and acquisitions) and structural features (e.g., shareholder or intercompany lending).

FDI loans are identified using the FDI_Loan variable, which flags all records associated with cross-border investment activity—specifically, loans financing mergers and acquisitions, project finance arrangements, shareholder or intercompany lending, or exploration and development carry financing (alone or in combination). These loans typically provide capital that supports equity acquisition, asset expansion, or other forms of productive investment abroad.

By contrast, liquidity support to corporates represent short or medium term financing meant to provide liquidity to private or state-owned entities. The liquidity support to corporates category does not have a dedicated flag in the dataset and is instead identified in the analysis by the credit instruments themselves—namely revolving credit

facilities, working capital loans, and refinancing arrangements that do not meet the FDI_Loan criteria. Loans that are classified as both working capital and project finance, but are not flagged as loans to facilitate a merger and acquisition or have a shareholder or development and carry structure, are classified as liquidity support to corporates.

Each record flagged as an FDI loan (in the FDI_Loan field) is also classified according to whether the transaction supports a brownfield or greenfield investment (in the FDI_Type field). Greenfield FDI loans refer to those that create new productive capacity—such as the construction of new plants, facilities, or infrastructure—while brownfield FDI loans refers to those that acquire, expand, or rehabilitate existing assets or enterprises. All loans associated with mergers and acquisitions (M&A) are coded as brownfield, given that such financing supports the acquisition or redevelopment of existing assets. In cases where a loan is categorized as a cross-border merger and acquisition with a limited-recourse project finance transaction structure (through the Project_Finance and M&A fields), the record is also set to brownfield. All remaining loans with a limited-recourse project finance transaction structure are classified as greenfield, indicating investment in new facilities or infrastructure. For exploration/development carry arrangements as well as shareholder (intercompany) loans (captured in through the Exploration_Development_Carry and Shareholder_Loan fields), each record was manually reviewed to determine whether the underlying investment represented a brownfield or greenfield activity.

A3.7: How does AidData identify creditors that report to the BIS?

The Bank for International Settlements (BIS) maintains two complementary reporting frameworks: the *Locational Banking Statistics (LBS)*, which track cross-border banking activity on a residency and nationality basis, and the *Consolidated Banking Statistics (CBS)*, which report global banking exposures on a nationality basis (Cerutti et al. 2023; Casanova et al. 2024). As of 2023, more than 40 jurisdictions participate in one or both systems. China joined the BIS reporting network in late 2015, and seven major Chinese state-owned banks currently report their cross-border claims through these frameworks (Cerutti et al. 2023: 6).

In Figure 4.1 in the report and Figure A5.9 below, AidData classifies loans as “reported to the BIS” based on two characteristics: (1) whether the creditor is one of the seven Chinese state-owned banks known to report cross-border claims to the Bank for International Settlements—China Development Bank (CDB), the Export–Import Bank of China (China Eximbank), the Agricultural Development Bank of China (ADBC), the Industrial and Commercial Bank of China (ICBC), Bank of China (BOC), China Construction Bank (CCB), and the Agricultural Bank of China (ABC)—and (2) whether the lending institution or affiliate extending the loan is located in a BIS-reporting country or territory. The “reporting to BIS” cohort therefore includes all loans issued by these seven parent banks from mainland China, as well as loans extended through their overseas branches or subsidiaries domiciled in jurisdictions that participate in the BIS’s Locational Banking Statistics (LBS) or Consolidated Banking Statistics (CBS) reporting systems. The complementary cohort, defined as “not reported to BIS,” encompasses all other Chinese creditors and affiliates in the dataset, as well as loans from the seven BIS-reporting banks when extended through affiliates based in non-reporting countries.

Lender location is determined from the recorded jurisdiction of the lending institution or branch at the time of commitment as captured in CLG-Global 1.0 Dataset. AidData maps each lender’s jurisdiction, as recorded in the CLG-Global 1.0 Dataset, against the BIS’s published list of reporting countries to determine whether the loan was likely reported to the BIS at the time of commitment. This classification enables comparison between Chinese lending activities that are likely to appear in BIS aggregates and those that fall outside its formal reporting perimeter.

See Table A6.2 for a full list of countries that report to the BIS.

A3.8: How does AidData identify “sensitive sectors” and investment screening mechanisms for M&A transactions?

The Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023) dataset tracks the evolution of investment screening mechanisms (ISMs) across 38 OECD countries from 2007 to 2023, documenting how governments regulate and review foreign investments on national security and public interest grounds. It includes detailed annual observations for each

country, capturing whether screening mechanisms exist, their scope (sectoral, cross-sectoral, or mixed), and the legal and procedural characteristics of each regime—such as notification requirements, pre-approval processes, interagency review, thresholds for triggering review, and coverage of greenfield or real estate investments. The dataset also codes whether mechanisms allow for blocking transactions on national security, public order, or economic benefit grounds, and identifies 37 specific sectors where enhanced screening applies (e.g., energy, telecommunications, defense, and critical technologies). These sectoral variables enable analysis of both the depth and breadth of national investment screening over time, offering a standardized basis for cross-country comparison of ISM policy change and intensity

This report also draws upon the PRISM dataset to identify episodes in which countries strengthened their Investment Screening Mechanisms (ISMs) between 2007 and 2023. An ISM-strengthening measure is defined as a significant expansion in the sectoral coverage of a country's ISM in a single year between 2007 and 2023, as recorded in the PRISM dataset (Bauerle Danzman and Meunier 2023). A significant expansion in sectoral coverage is defined as four or more sectors. Across the dataset's time series (2007–2023), 15 of the 38 countries included in the PRISM dataset experienced at least one ISM-strengthening event. Table B5.1 details the sectoral expansions by country and year. See Box 3.4 in Chapter 3 for more details on how we used the PRISM dataset to also define sensitive sectors for China's cross-border M&A lending portfolio.

Table A3.1: ISM strengthening events per country used for analysis

Country	Number of Events 2007-2023	Year	Sectors Added
Australia	2	2020	Defense Production, Defense Technologies, Healthcare Infrastructure, Mineral Resources, Sensitive Personal Data, Transportation Infrastructure
		2022	Agriculture/Food Security, Energy Storage, Finance, Media
Austria	2	2011	Defense Production, Education and Training, Energy Infrastructure, Healthcare Infrastructure, Telecommunications Infrastructure, Transportation Infrastructure, Water Infrastructure
		2020	Agriculture/Food Security, Artificial Intelligence and Machine Learning, Biotechnology, Civil Nuclear, Critical Supplies, Cyber Security, Defense Technologies, Energy Storage, Finance, Media, Microprocessor Technology, Quantum Information and Sensing Technology, Research Institutions, Robotics, Sensitive Personal Data
Denmark	1	2021	Advanced Computing Technology, Agriculture/Food Security, Artificial Intelligence and Machine Learning, Biotechnology, Civil Nuclear, Controlled Dual-Use, Critical Supplies, Cyber Security, Defense Technologies, Energy Infrastructure, Energy Storage, Finance, Healthcare Infrastructure, Media, Microprocessor Technology, Robotics, Sensitive Personal Data, Space, Telecommunications Infrastructure, Transportation Infrastructure, Water Infrastructure
France	2	2014	Energy Infrastructure, Healthcare Infrastructure, Telecommunications Infrastructure, Water Infrastructure
		2019	Additive Manufacturing, Artificial Intelligence and Machine Learning, Energy Storage, Microprocessor Technology, Quantum Information and Sensing Technology, Robotics, Sensitive Personal Data
Germany	3	2009	Energy Infrastructure, Telecommunications Infrastructure, Transportation Infrastructure, Water Infrastructure
		2013	Agriculture/Food Security, Defense Technologies, Energy Storage, Finance, Healthcare Infrastructure, Media
		2020	Additive Manufacturing, Advanced Computing Technology, Artificial Intelligence and Machine Learning, Biotechnology, Cyber Security, Data Analytics Technology, Hypersonics, Logistics Technology, Microprocessor Technology, Mineral Resources, Quantum Information and Sensing Technology, Robotics

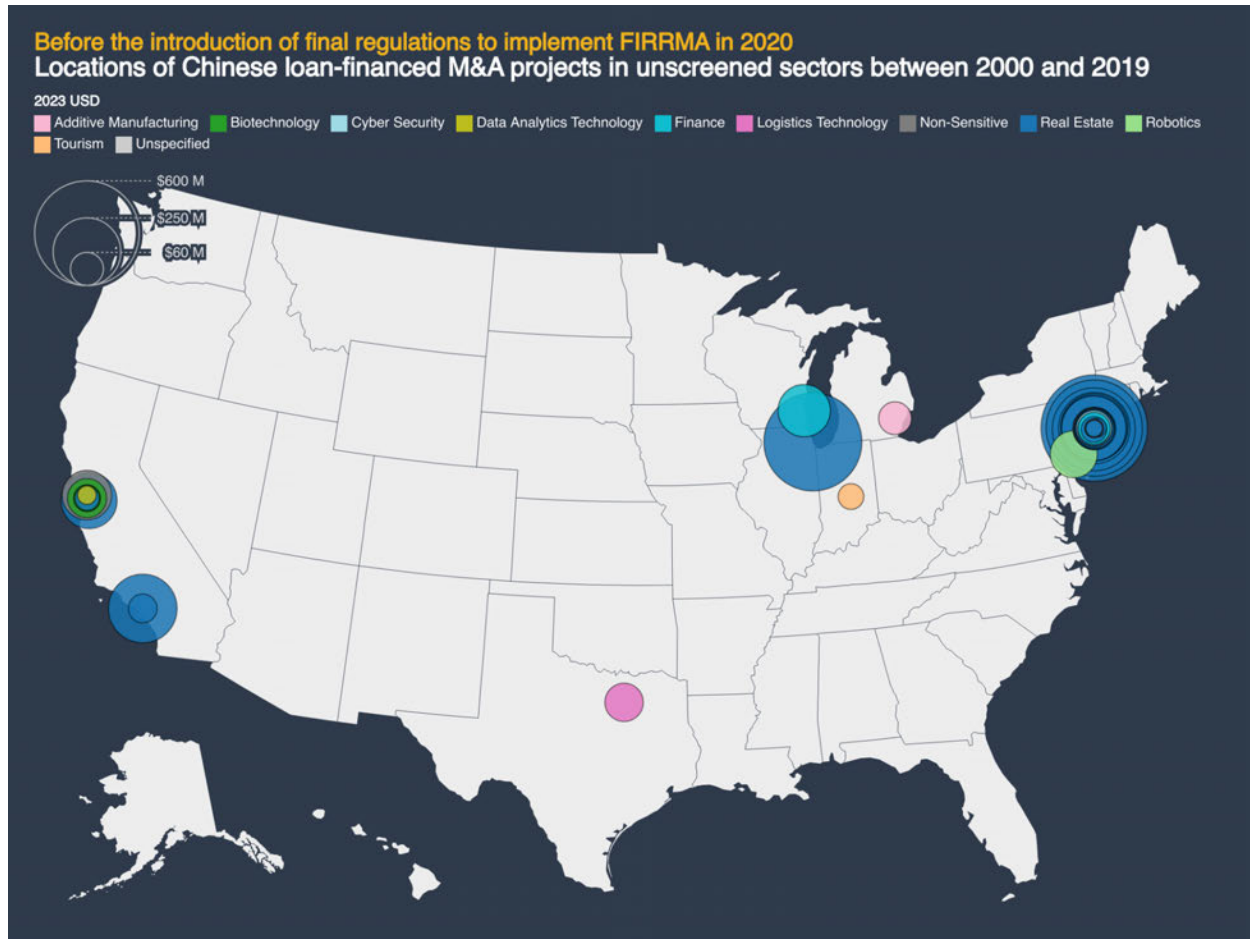
Hungary	2	2019	Advanced Surveillance Technologies, Controlled Dual-Use, Defense Production, Energy Infrastructure, Finance, Telecommunications Infrastructure, Water Infrastructure
		2020	Agriculture/Food Security, Artificial Intelligence and Machine Learning, Healthcare Infrastructure, Media, Microprocessor Technology, Quantum Information and Sensing Technology, Robotics, Transportation Infrastructure
Israel	1	2020	Energy Infrastructure, Finance, Telecommunications Infrastructure, Transportation Infrastructure, Water Infrastructure
Japan	1	2020	Artificial Intelligence and Machine Learning, Biotechnology, Hypersonics, Robotics, Space
Netherlands	1	2022	Controlled Dual-Use, Defense Production, Finance, Transportation Infrastructure
New Zealand	1	2020	Controlled Dual-Use, Critical Supplies, Defense Production, Defense Technologies, Energy Infrastructure, Energy Storage, Finance, Media, Sensitive Personal Data, Telecommunications Infrastructure, Water Infrastructure
Portugal	1	2014	Energy Infrastructure, Sensitive Personal Data, Telecommunications Infrastructure, Transportation Infrastructure
Spain	1	2020	Artificial Intelligence and Machine Learning, Biotechnology, Civil Nuclear, Critical Supplies, Data Analytics Technology, Defense Technologies, Finance, Healthcare Infrastructure, Microprocessor Technology, Quantum Information and Sensing Technology, Robotics, Sensitive Personal Data, Water Infrastructure
United Kingdom	1	2022	Biotechnology, Civil Nuclear, Critical Supplies, Data Analytics Technology, Defense Technologies, Education and Training, Energy Infrastructure, Energy Storage, Logistics Technology, Logistics Technology.1, Microprocessor Technology, Research Institutions, Robotics, Space, Telecommunications Infrastructure, Transportation Infrastructure
United States	1	2020	Controlled Dual-Use, Energy Infrastructure, Sensitive Personal Data, Telecommunications Infrastructure, Transportation Infrastructure, Water Infrastructure
Italy	2	2012	Defense Production, Energy Infrastructure, Telecommunications Infrastructure, Transportation Infrastructure
		2017	Artificial Intelligence and Machine Learning; Biotechnology, Cyber Security, Defense Technologies, Energy Infrastructure, Healthcare Infrastructure, Media, Research Institutions, Space

Notes: This table provides an overview of each 'strengthening measure' as defined in this report. An ISM-strengthening measure is defined as a significant expansion in the sectoral coverage of a country's ISM in a single year between 2007 and 2023, as recorded in the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023). A significant

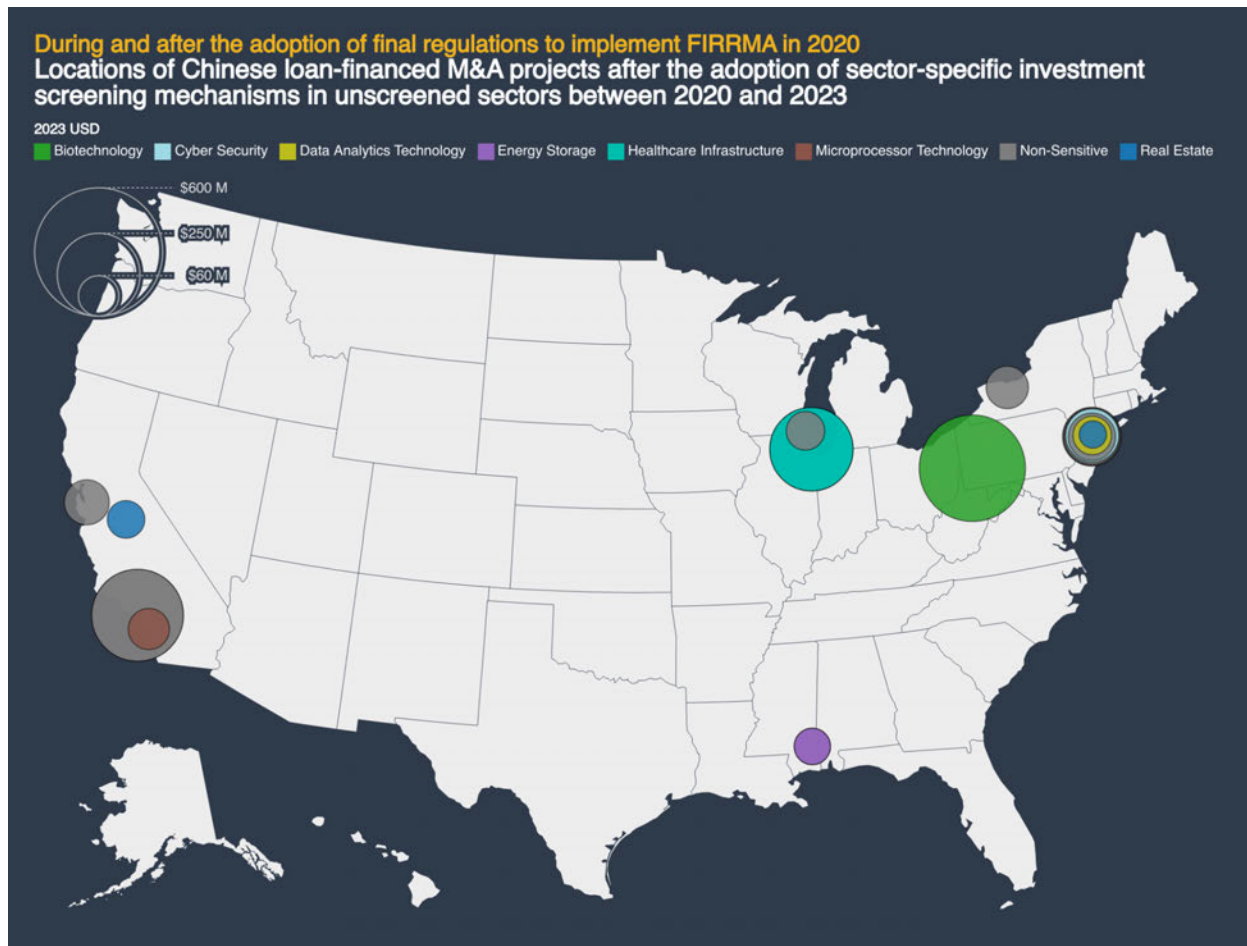
expansion in sectoral coverage is defined as four or more sectors. For countries that did not have ISMs in place before 2007, this table also identifies the year that each relevant country established their first ISM between 2007-2023.

A3.9: Chinese loan-financed M&A activities in the U.S. before and after FIRRMA

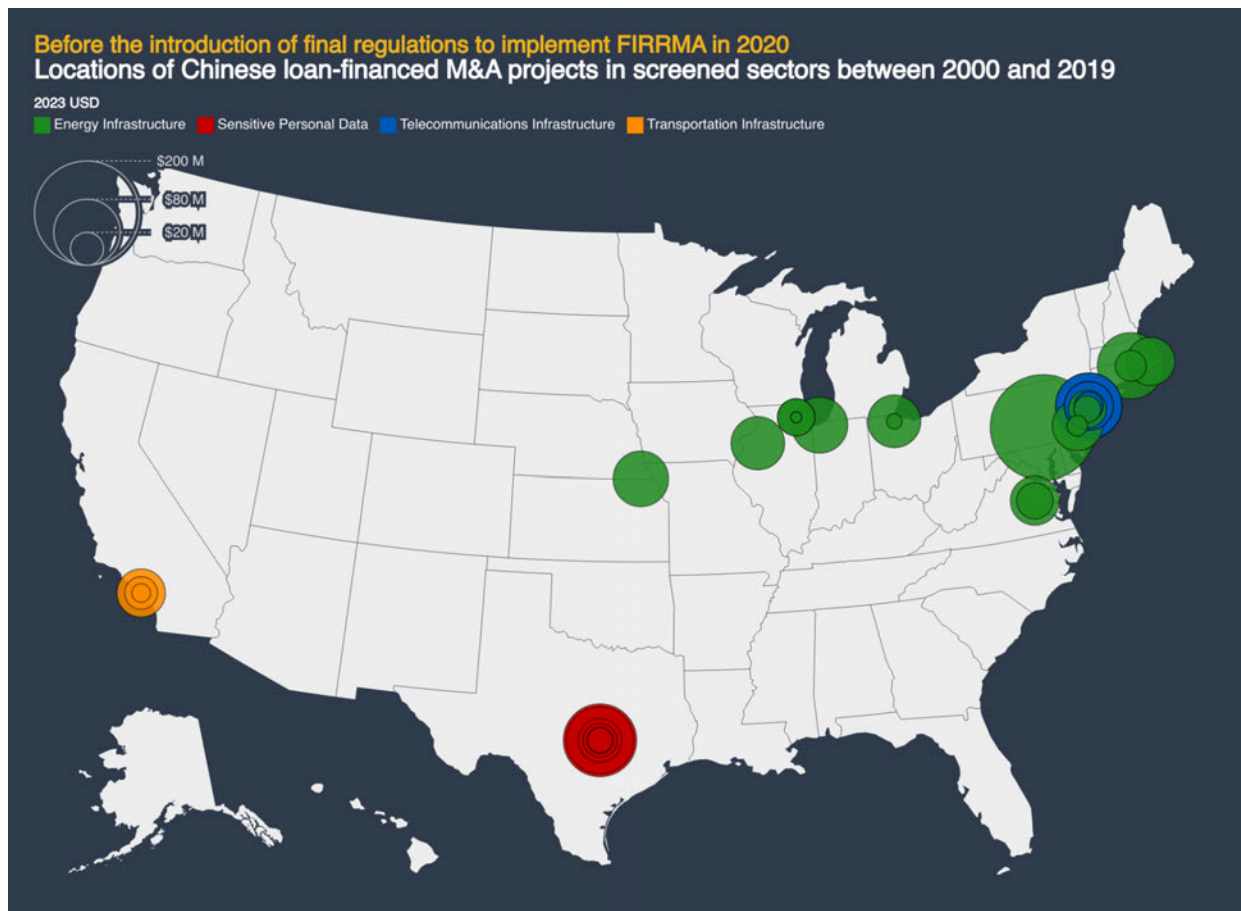
Map A3.1.A: Chinese loan-financed M&A activities in unscreened sectors before FIRRMA went into effect



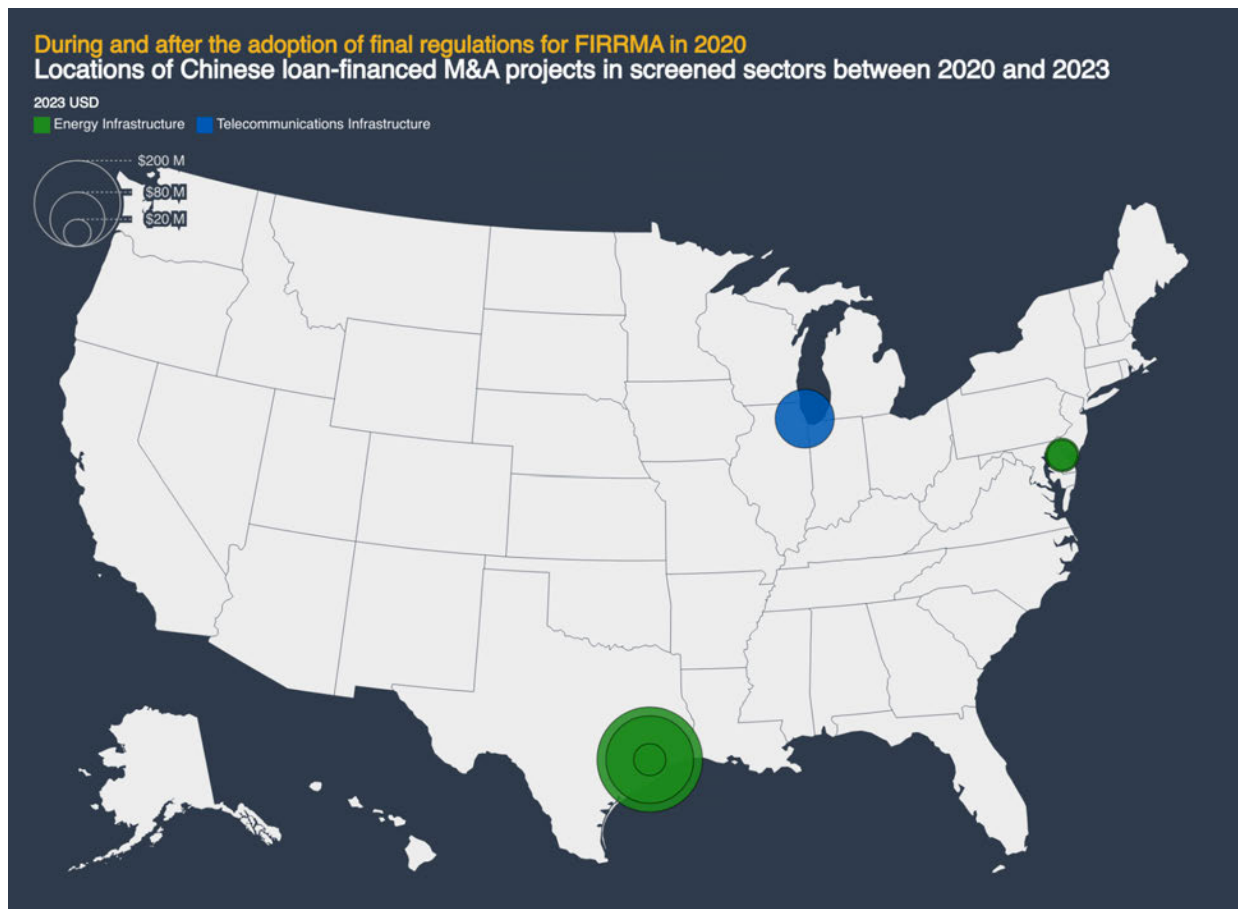
Map A3.1.B: Chinese loan-financed M&A activities in unscreened sectors after FIRRMA went into effect



Map A3.2.A: Chinese loan-financed M&A activities in screened sectors before FIRREA went into effect



Map A3.2.B: Chinese loan-financed M&A activities in screened sectors before FIRRMA went into effect



The Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA) was signed into law on August 13, 2018. It introduced several new, sector-specific investment screening mechanisms (ISMs) related to energy infrastructure, sensitive personal data, telecommunications infrastructure, transportation infrastructure, water infrastructure). However, it did not become effective until its final implementing regulations were published on February 13, 2020.

In Map A3.1 and Map A3.2, we compare cross-border M&A lending commitments from Chinese state-owned creditors before and after the introduction of these ISM-strengthening policy measures (2000-2019 and 2020-2023) across two cohorts: sectors subjected to these measures and sectors not subjected to these measures. The geolocations of Chinese loan-financed M&A activities were mapped as centroids, with

the size of the bubbles denoting financial commitment amounts (in constant 2023 USD).

Following the introduction of FIRRMA's final regulations in 2020, one can see a substantial reduction in Chinese loan-financed M&A activities in screened sectors. However, Chinese lending for M&A activities in unscreened sectors continued to proliferate between 2020 and 2023.

Section A4: Summary of AidData's Chinese PPG loan performance dataset and descriptive statistics

AidData's CLG-Global 1.0 dataset and its predecessor datasets provide the most comprehensive view of China's overseas lending commitments and borrowing terms. Yet commitment-level data alone cannot fully capture the evolution of China's role as an international creditor—how disbursements unfold, how debts are serviced, and how repayment terms change over time through events such as restructurings or defaults. Existing resources such as the International Debt Statistics (IDS) of the World Bank provide aggregate estimates of PPG debt stocks and debt service. However, these values are black-box figures that rely on voluntary disclosures by a non-random set of borrower countries in low- and middle-income countries (i.e., those that choose to borrow from the World Bank).⁴¹³

To address the limitations of existing data, AidData has developed a new methodology for measuring the financial performance of China's cross-border loans that qualify as sources of public and publicly guaranteed (PPG) debt. The 2.0 version of its Chinese PPG Loan Performance Dataset measures disbursements, repayments, arrears, restructurings, and amounts outstanding for loans issued by official sector PRC institutions to government and government-guaranteed borrowing institutions. It does so at the individual loan level by integrating observed data from borrower governments and other sources with modeling techniques to generate credible estimates of disbursements, debt service payments, arrears, and restructuring outcomes.

We have built amortization tables for more than 3,100 PPG loans issued to 124 borrowing countries between 2000 and 2022. To do so, we first collected over 14,000 direct observations of loan performance from a range of sources, including government debt reports, sovereign bond prospectuses, and financial statements. We then used a combination of rule-based and machine learning–assisted imputation techniques to impute missing data. By blending observed and imputed data, we were able to

⁴¹³ For more on this point, see Chapter 4.

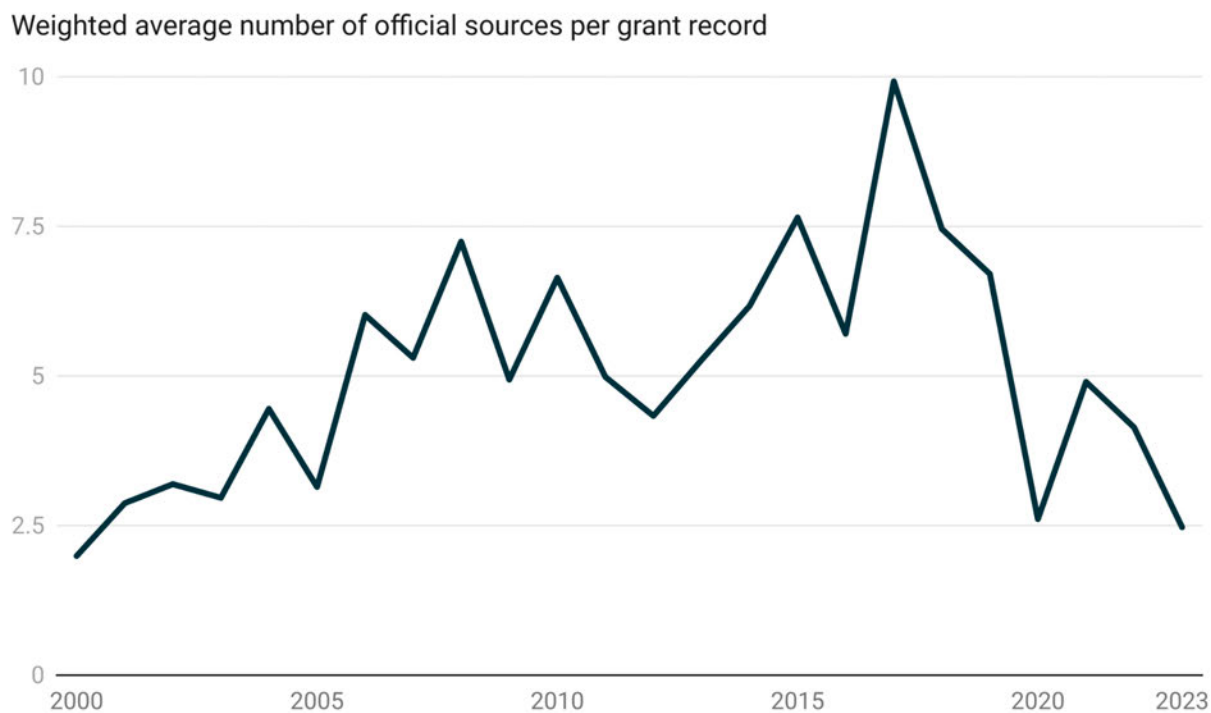
generate a harmonized series of disbursement and repayment schedules that can be aggregated to the country or regional level.

Each loan is represented through three complementary amortization models that together reconstruct its financial lifecycle. The planned model relies solely on the loan's original commitment terms—disbursement schedule, maturity, and fixed interest rate—assuming full and timely repayment with no deviations. The perfect compliance model incorporates observed disbursement information and adjusts for variable or floating interest rates over time while assuming that borrowers fully meet repayment obligations as scheduled. The actual performance model offers the most realistic representation of each loan's trajectory, integrating all observed data on repayments, arrears, defaults, and restructuring agreements, including events such as debt restructurings under the G20 Debt Service Suspension Initiative (DSSI) in 2020–2021. Together, the three amortization models enable accurate comparisons between the borrower's debt service costs at the time of a loan's commitment and the actual cost of debt service incurred into the loan's lifecycle.

In developing these amortization models, AidData has also harmonized all loan-level financial values in net present value (NPV) terms, discounting future disbursements and repayments to the year of commitment. This NPV standardization enables direct comparison of loan performance at the loan, country, and global levels—across time, borrower types, and creditor institutions—allowing analysts to assess the evolving concessionality and financial risk of PPG lending with greater precision. These modeled timelines provide credible, transparent estimates of outstanding debt stock, projected debt service, and the financial implications of distress or restructuring for both creditors and borrowers within individual countries and across the broader landscape of low- and middle-income economies.

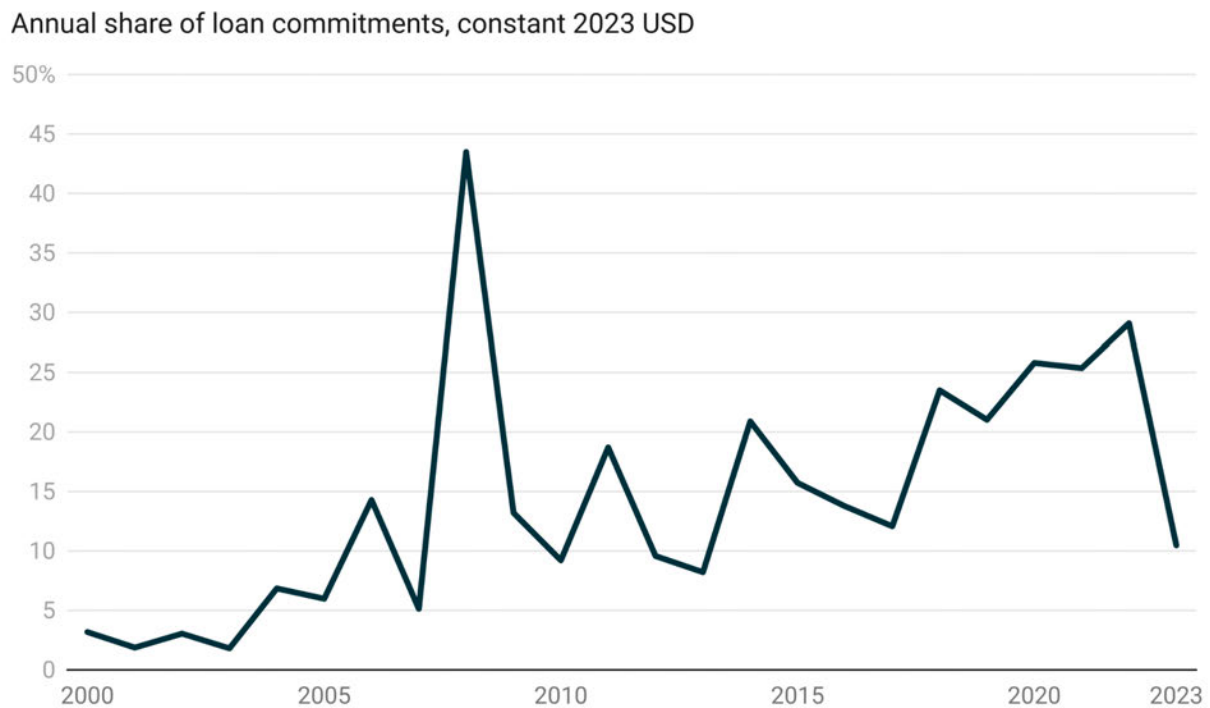
Section A5: Supplemental figures

Figure A5.1: Discoverability of information about China's overseas grant-giving portfolio



Notes: The metric is weighted by loan commitment amounts in constant 2023 USD.

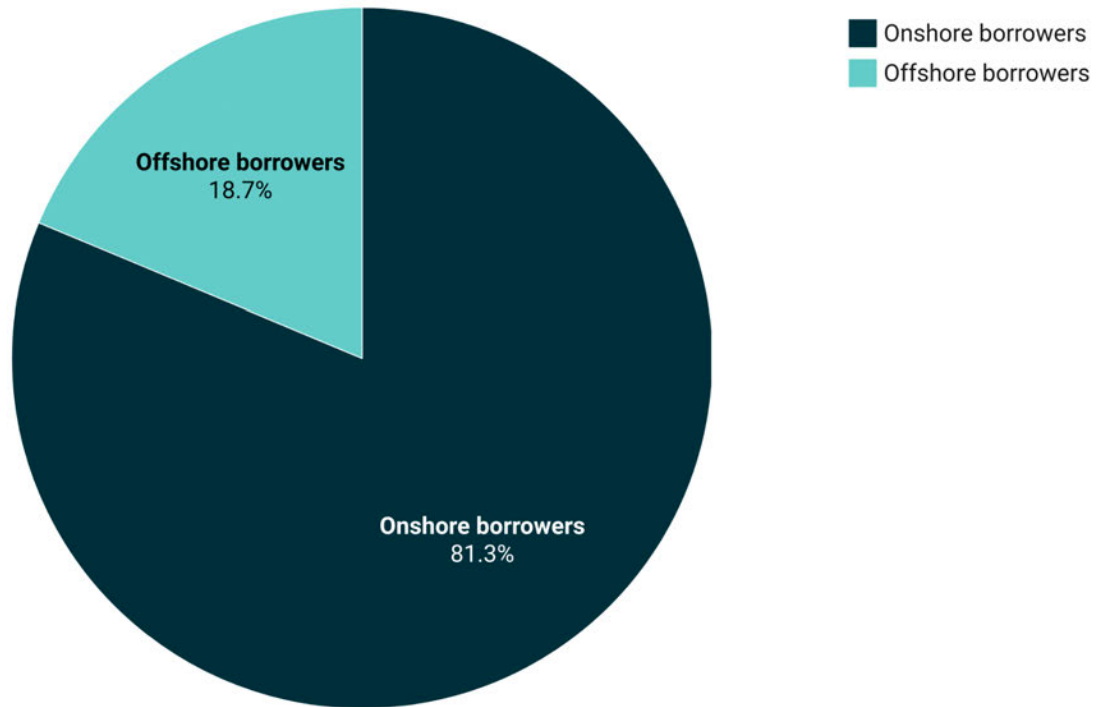
Figure A5.2: Discoverability of contractual documents for China's overseas lending portfolio



Notes: This graph shows the share of China's overseas lending portfolio for which AidData was able to identify the underlying contractual documentation through its implementation of the TUFF methodology.

Figure A5.3: Decomposition of China's overseas lending portfolio by onshore vs. offshore borrowers, 2000-2023

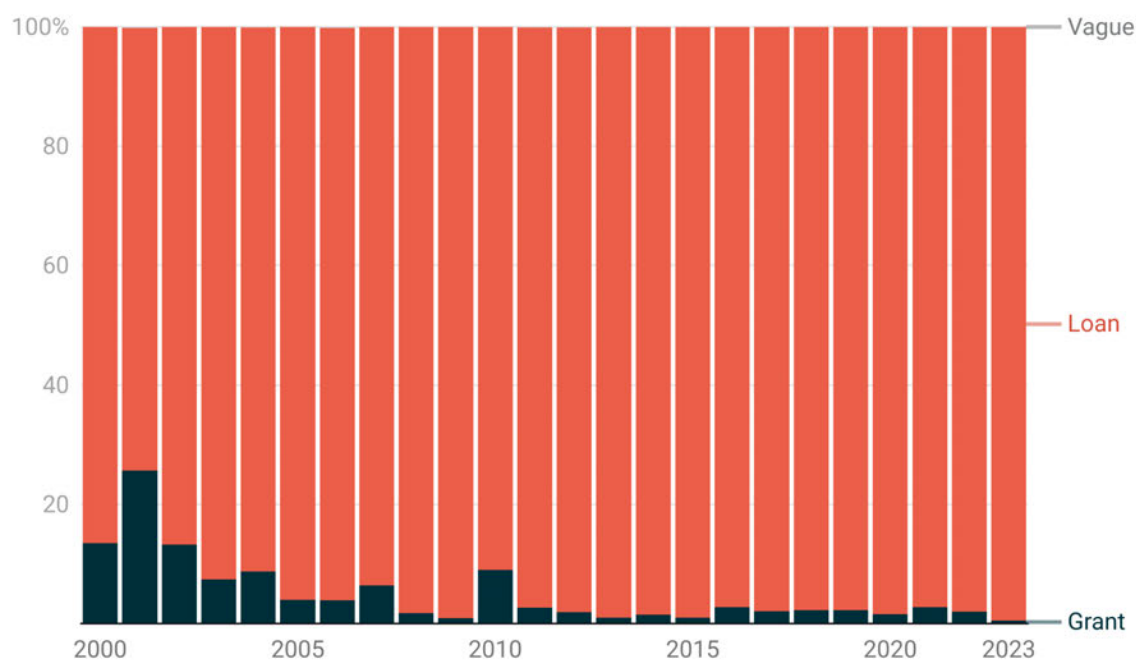
Share of loan commitments, constant 2023 USD



Notes: This figure reports the share of China's cross-border loan commitments where the country of incorporation of the direct receiving agency is the same as ("onshore borrowers") or differs ("offshore borrowers") from the country of activity. We exclude rescue lending and require both ISO-3 codes to be present. Shares are calculated from adjusted commitment amounts in constant 2023 USD aggregated over 2000–2023. Source: AidData CLG-Global 1.0.

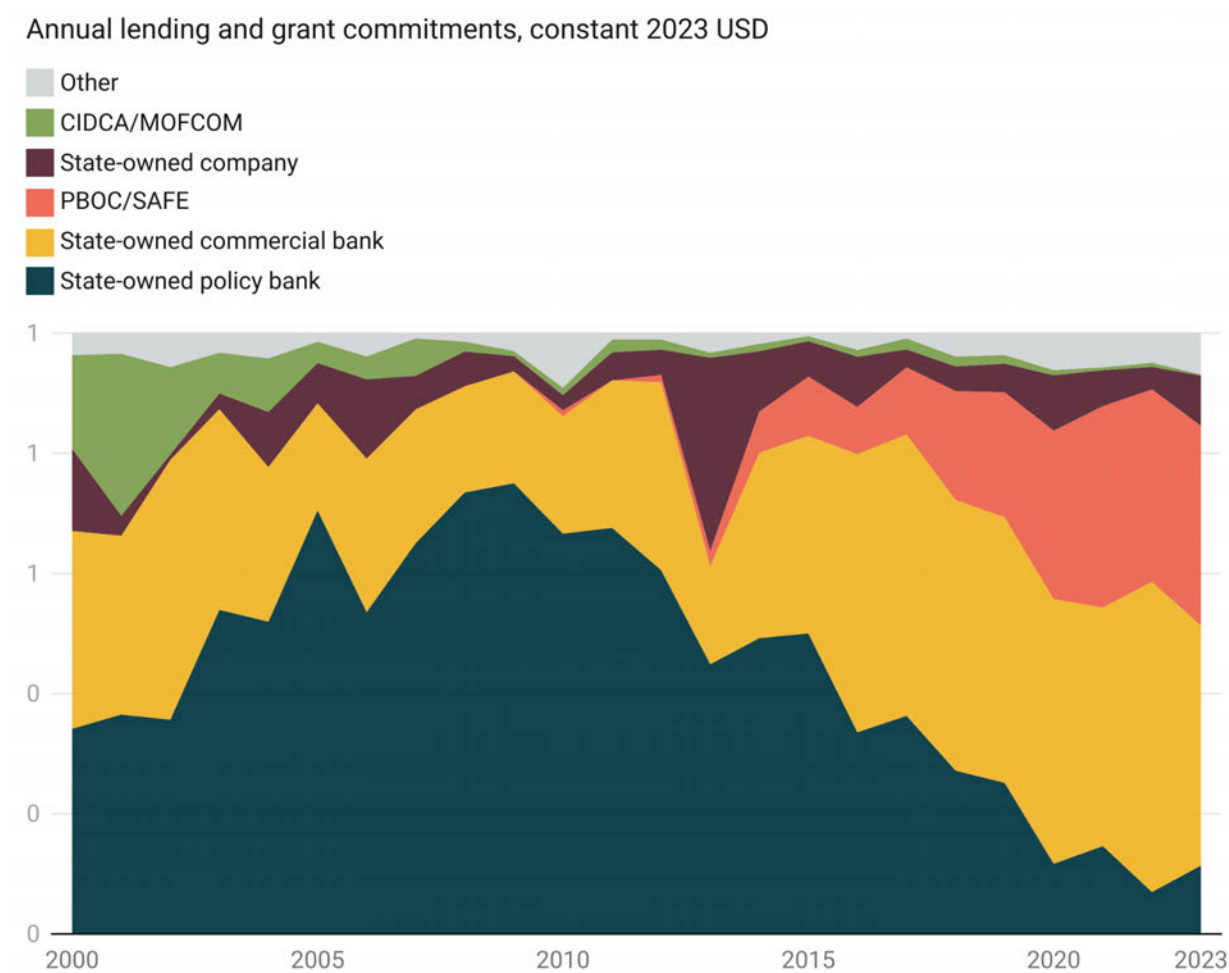
Figure A5.4: Decomposition of China's overseas lending and grant-giving portfolio by simplified flow type

Annual shares of loan and grant commitments, constant 2023 USD



Notes: This figure decomposes China's official financial commitments (in 2023 constant USD) between 2000 and 2023 into three cohorts by simplified flow type: (i) loans, (ii) grants, (iii) and vague. Vague category constitutes below 0.02% of China's portfolio on average per year. It is included for completeness but not visible in the chart.

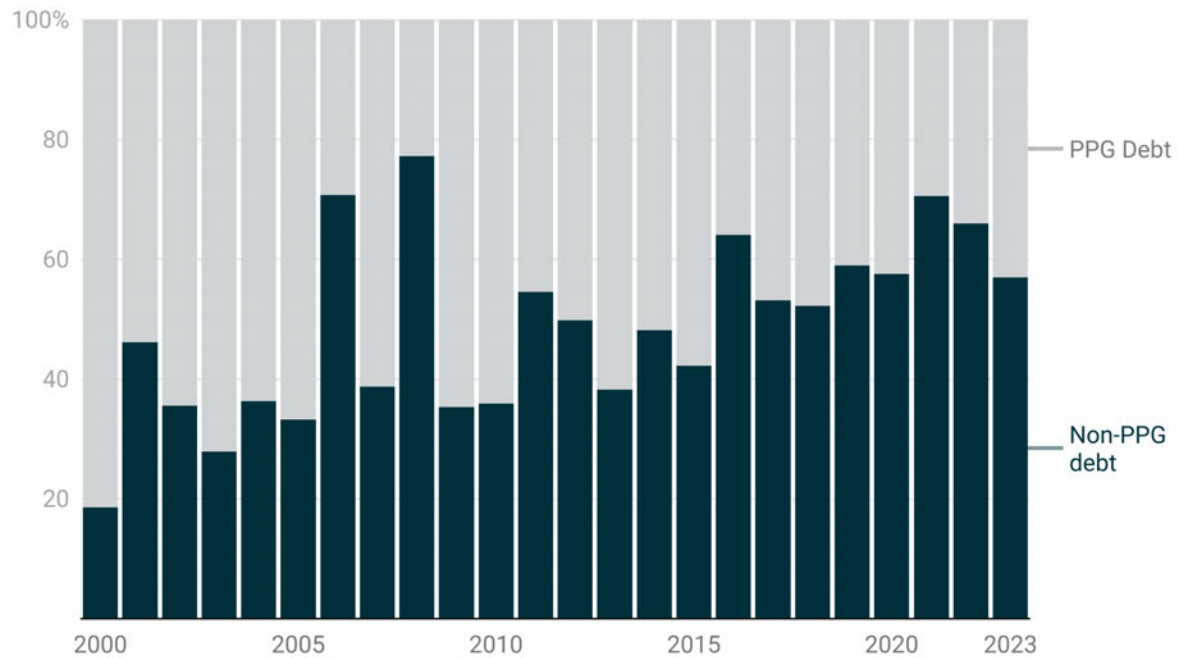
Figure A5.5: Decomposition of China’s overseas lending and grant-giving portfolio by creditor/donor category



Notes: The creditor/donor categories include state-owned policy banks, state-owned commercial banks, state-owned companies, the central bank (PBOC/SAFE), foreign aid agencies (e.g., CIDCA/MOFCOM), and other official sector creditors.

Figure A5.6: China's overseas lending portfolio supporting PPG borrowers vs. non-PPG borrowers, excluding rollovers

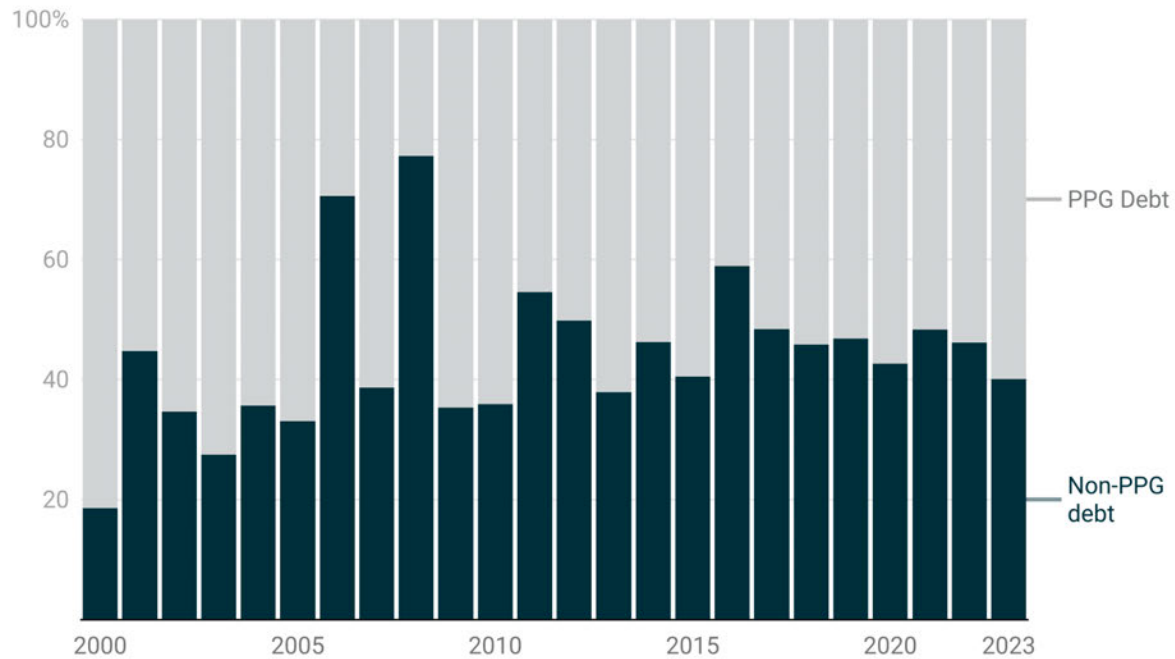
Annual share of lending commitments, constant 2023 USD



Notes: It includes ERL commitments, but excludes those of the short-term, rollover variety. Rollover ERL commitment amounts are calculated by subtracting the values in the *Adjusted_Amount_Constant_USD_2023* variable from the values in the *Amount_Constant_USD_2023* variable.

Figure A5.7: China's overseas lending portfolio supporting PPG borrowers vs. non-PPG borrowers

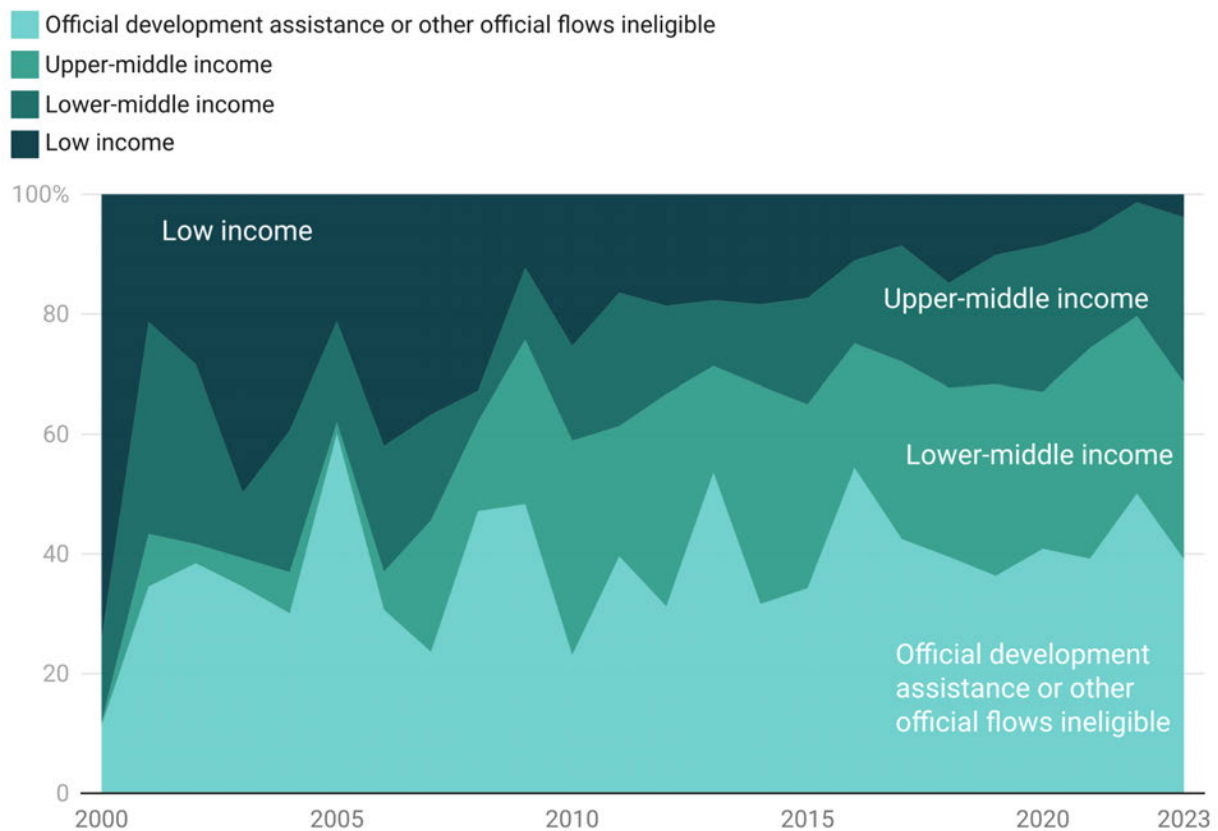
Annual share of lending, constant 2023 USD



Notes: Emergency rescue loan (ERL) commitments of the rollover and non-rollover varieties are included.

Figure A5.8: Decomposition of China's overseas lending program by OECD income bracket

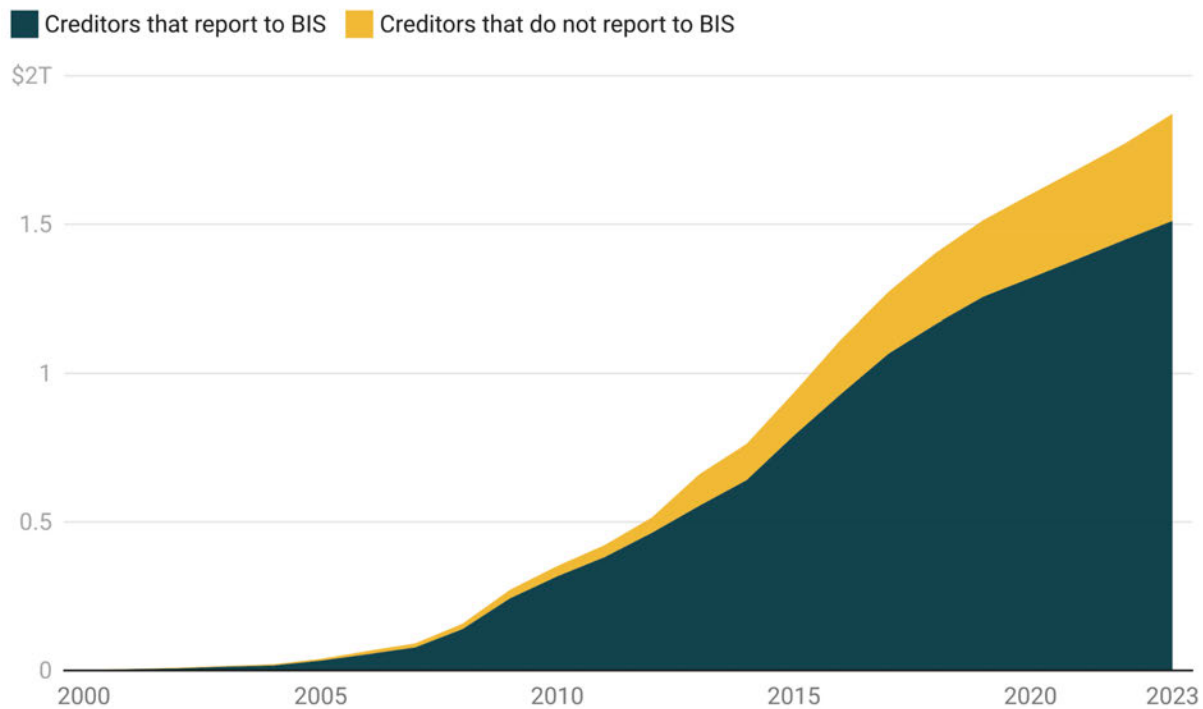
Annual percentage of loan commitments, constant 2023 USD



Notes: Each loan commitment is assigned to an income bracket based on the borrower country's OECD-DAC income classification in the year of the commitment. Borrower countries are identified using the Country_of_Activity variable (where the financed project/activity actually takes place) from the 1.0 version of AidData's CLG-Global Dataset. The OECD-DAC assigns countries eligible for ODA and OOF to one of three income brackets (low, lower-middle, and upper-middle income). For countries that are not classified as eligible for ODA and OOF, the OECD-DAC does not provide an income classification. We have classified such countries as high income or otherwise ineligible. Unlike the annual income classifications of the World Bank, the OECD-DAC assigns income classifications every three years.

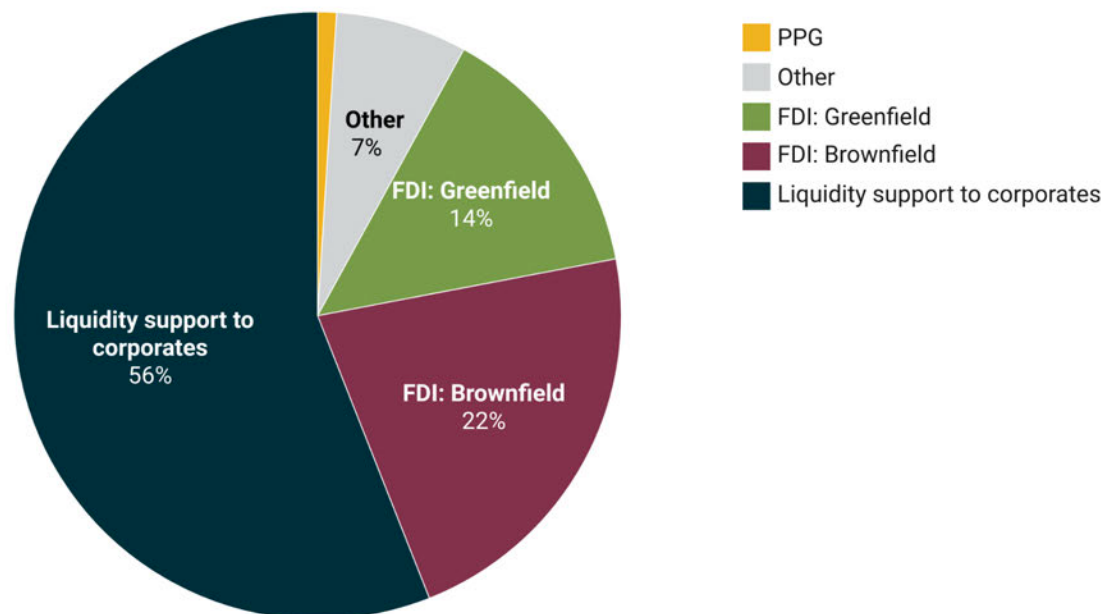
Figure A5.9: China's cumulative overseas lending portfolio according to BIS reporting status of creditors

Cumulative loan commitments between 2000-2023, nominal USD



Notes: This figure presents the cumulative tally of China's overseas loan commitments (in nominal USD) between 2000 and 2023 from the 1.0 version of AidData's CLG-Global Dataset in two cohorts: creditor institutions that are known to report to the BIS and creditor institutions that are not known to report to the BIS. This figure excludes short-term, emergency rescue rollover facilities from the tally of financial commitments. See Section A3.7 in the appendix for more information on how the two cohorts are defined.

Figure A5.10: Decomposition of China's portfolio of loan-financed projects and activities in the U.S.



Notes: In this figure, China's overseas PPG and non-PPG loans to the U.S. are categorized into five groups based on loan instrument types. Loans classified as public or publicly guaranteed (PPG) sources of debt include those designated as central government debt, central government-guaranteed debt, or other public sector debt in the Level_of_Public_Liability field in AidData's CLG-Global 1.0 Dataset. Non-PPG loans are those that do not qualify as public or publicly guaranteed (PPG) debt. See Section A3.6 of the Appendix for details on how loans are classified as FDI loans (brownfield or greenfield) or liquidity facilities for corporates. All remaining non-PPG loans are assigned to a residual ("other") category. Any loans designated as sources of PPG debt are categorized as such, regardless of whether they also qualify as brownfield or greenfield FDI loans.

Figure A5.11: China's overseas lending portfolio routed through offshore borrowers

Percentage of portfolio, constant 2023 USD

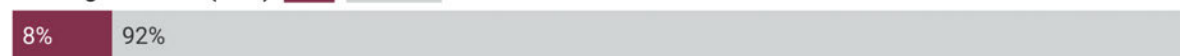
Income group: **Low income** **Lower middle** **Upper middle** **High income**



FDI focus: **FDI** **Not FDI**



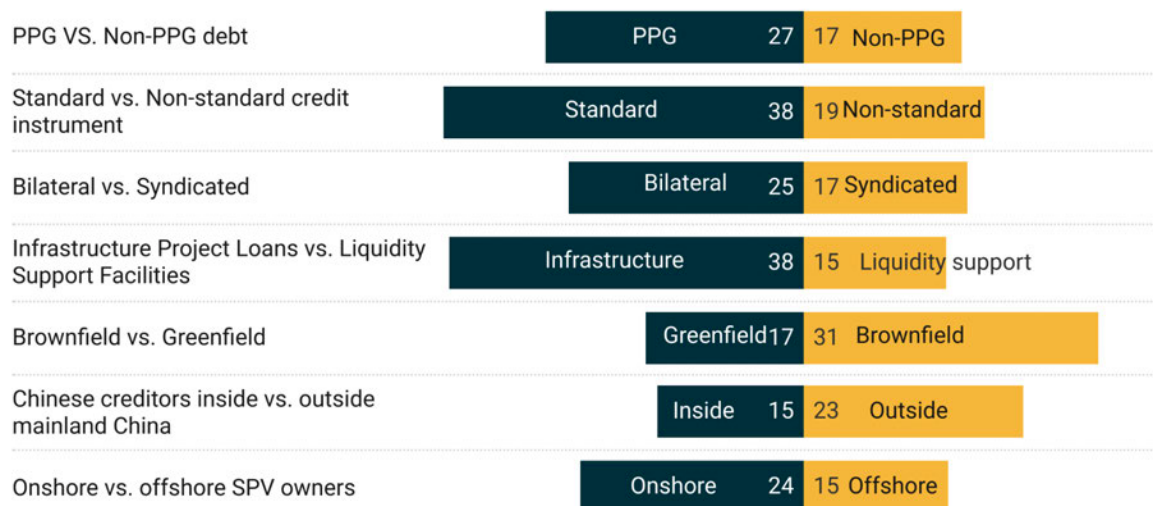
Public guarantees (PPG): **PPG** **Non-PPG**



Notes: This figure shows the composition of China's cumulative overseas loan portfolio between 2000 and 2023 that was channeled through an offshore conduit (i.e., the borrower's country of incorporation is different from the jurisdiction where the financed project/activity took place). The offshore conduit lending portfolio is disaggregated by (i) the World Bank's income classification (low, lower middle, upper middle, or high income) in the year of loan commitment based on the country where the funded project/activity took place; (ii) whether the loan supported an FDI or non-FDI project/activity; and (iii) whether the loan supported a PPG or non-PPG borrower. Shares are calculated within each category so that they sum to 100% of the offshore conduit lending portfolio.

Figure A5.12: Discoverability of information about China's overseas lending portfolio

Weighted average number of all sources per loan record (by constant 2023 USD)

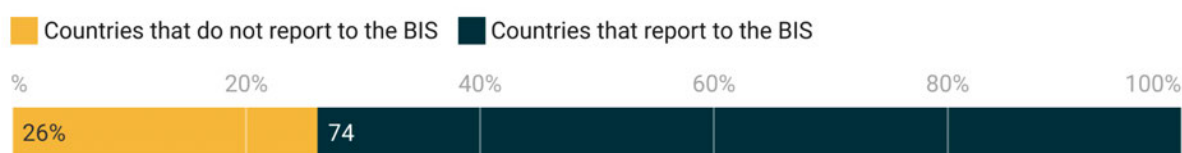


Notes: This figure presents the weighted average number of all sources per loan record in the 1.0 version of AidData's CLG-Global Dataset. The metric is weighted by loan commitment amounts in constant 2023 USD.

Comparisons are shown across the seven binary dimensions: (i) loans to public and publicly guaranteed (PPG) borrowers versus non-PPG borrowers; (ii) loans to offshore SPVs (i.e., SPV borrowers incorporated in a different jurisdiction than the country where the loan-financed project/activity takes place) versus onshore SPVs; (iii) loans extended from creditors in mainland China versus those routed through overseas affiliates, branches, or subsidiaries of Chinese banks and non-bank institutions; (iv) infrastructure project loans versus liquidity support facilities; (v) standard versus non-standard credit instruments; (vi) brownfield versus greenfield FDI loans; and (vii) bilateral versus syndicated loans. See Section A3.5 in the appendix for more details on how standard and non-standard credit instruments are defined.

Figure A5.13: Decomposition of China's cross-border lending portfolio via overseas affiliates/branches by BIS reporting status of countries

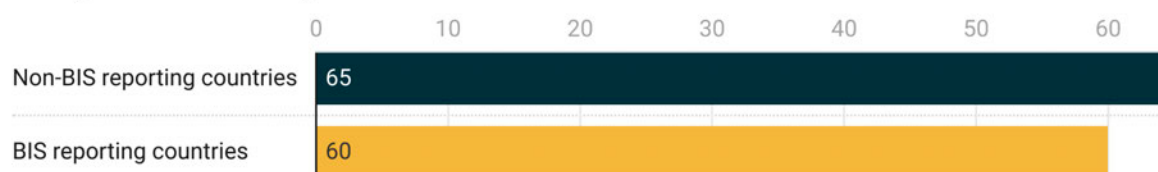
Loan commitments, constant 2023 USD



Notes: This figure presents the share of China's cumulative cross-border lending commitments between 2000 and 2023 provided through the overseas affiliates, branches, and subsidiaries of bank and nonbank institutions across two country cohorts: countries that report to the BIS and countries that do not report to the BIS. Countries are assigned to BIS reporting and non-reporting categories based on where borrowing institutions are legally incorporated.

Figure A5.14: Average levels of financial secrecy in BIS reporting countries vs. non-BIS reporting countries

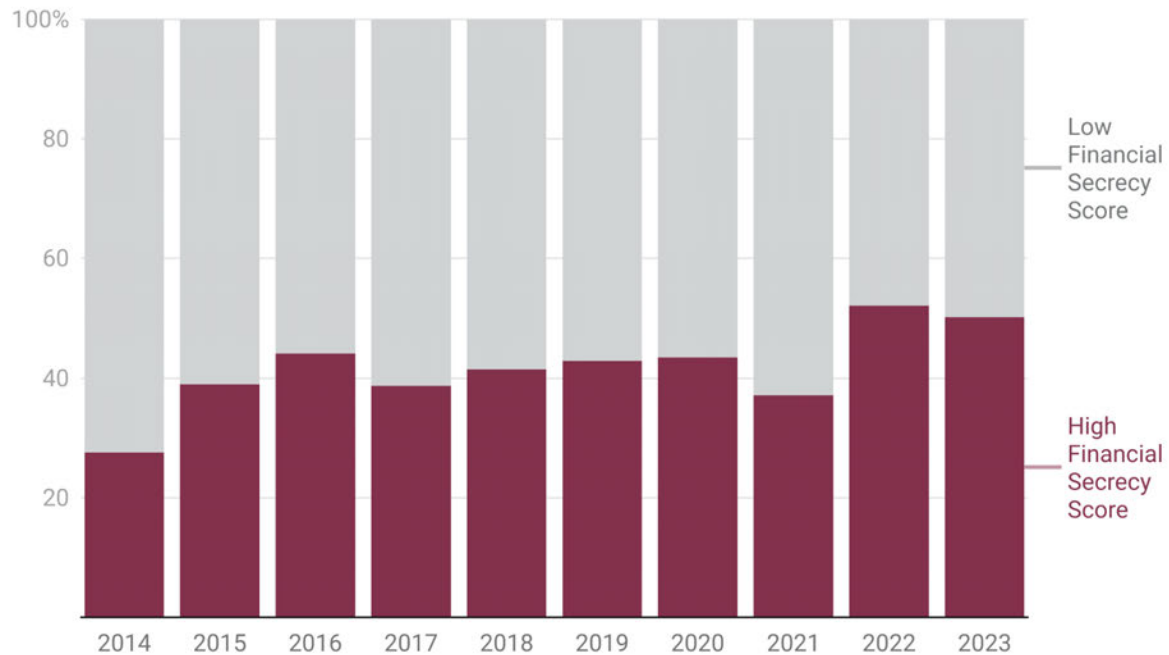
Average financial secrecy score



Notes: Financial secrecy scores come from the Tax Justice Network's 2022 Financial Secrecy Index (FSI). See Table B.A in the appendix for a list of countries that report to the BIS.

Figure A5.15: Decomposition of China's non-PPG lending portfolio by financial secrecy of creditor jurisdiction between 2014-2023

Annual share of loan commitments, constant 2023 USD



Notes: This figure presents the annual percentage of China's cross-border non-PPG lending portfolio between 2014 and 2023 across two cohorts: creditor jurisdictions with relatively high levels of financial secrecy and relatively low levels of financial secrecy. The cohort classification is derived from the 2022 Financial Secrecy scores published by the Tax Justice Network, with scores above the median categorized as relatively levels of high secrecy and those below the median as relatively low levels of secrecy.

Figure A5.16: Decomposition of China's cross-border investment project lending portfolio by channel of delivery

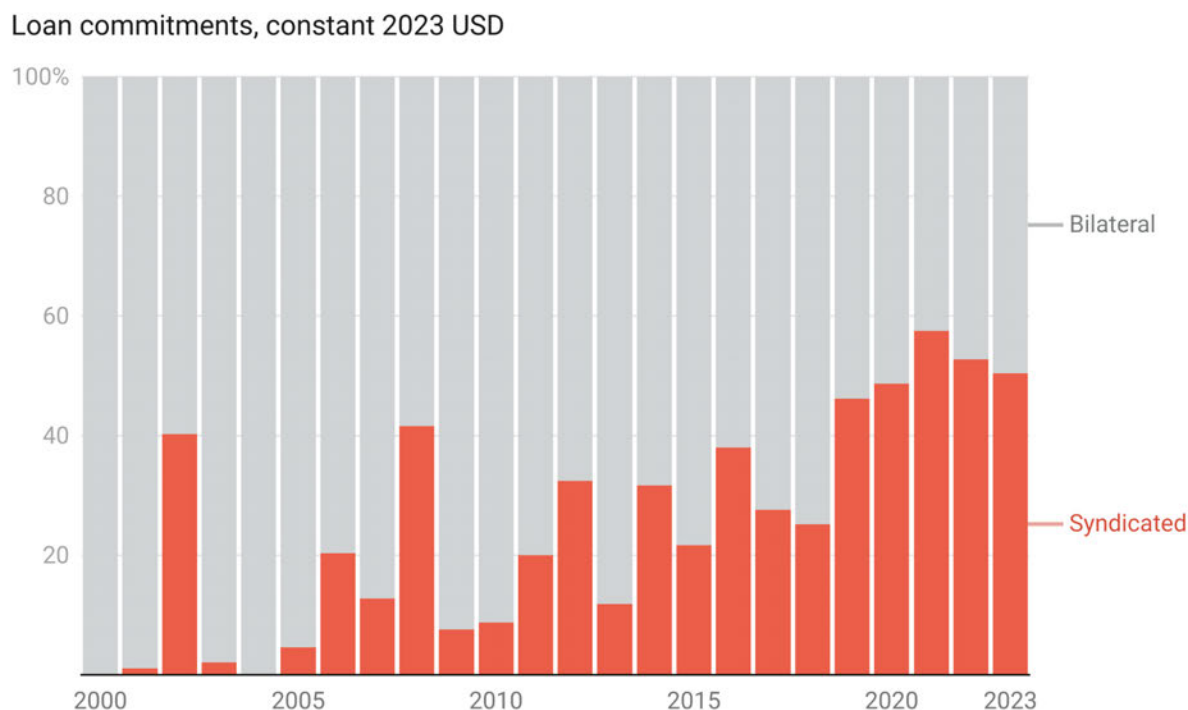


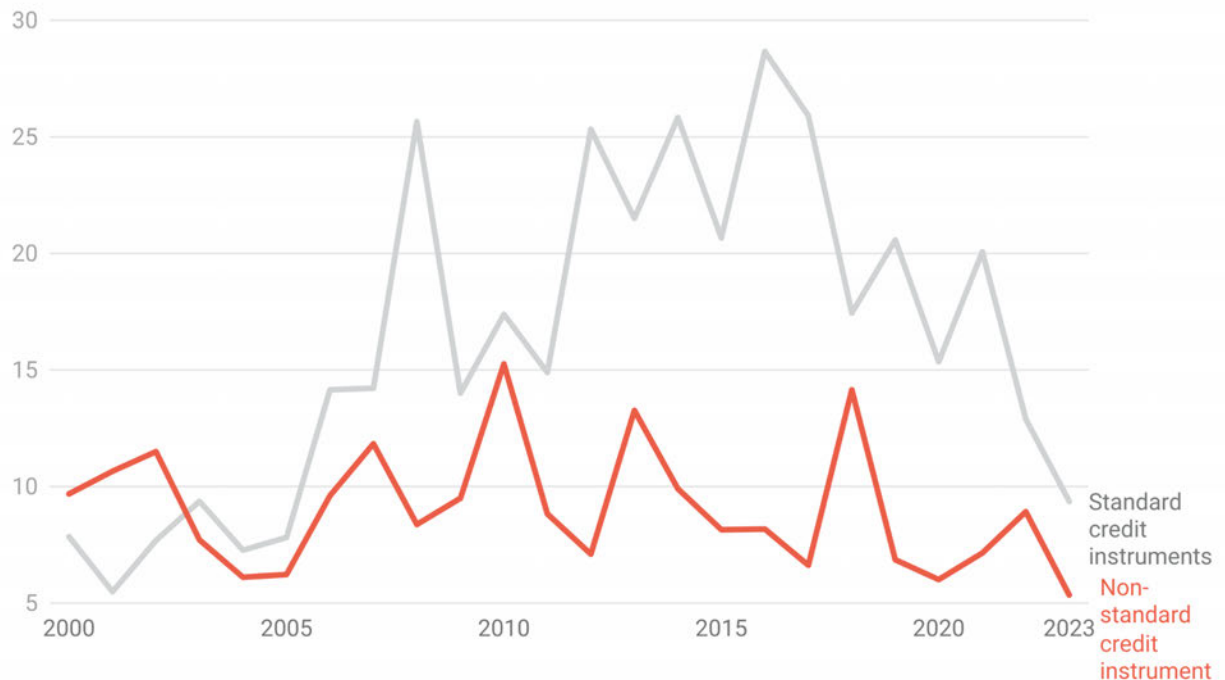
Figure A5.17: Decomposition of China's cross-border PPG and non-PPG lending portfolio by credit instrument type



Notes: See Section A3.5 in the appendix for details on standard and non-standard credit instrument types.

Figure A5.18: Discoverability of information on China's overseas PPG and non-PPG lending portfolio by credit instrument type

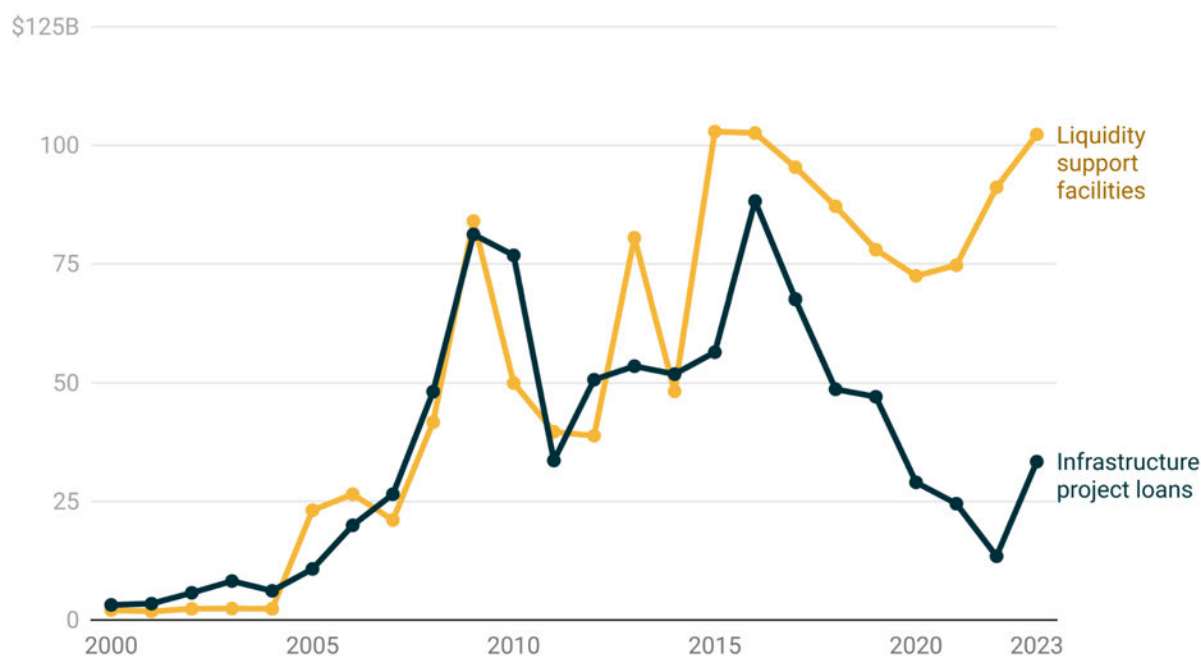
Weighted average number of official sources per PPG loan record (by constant 2023 USD)



Notes: This figure presents the annual weighted average number of official sources per PPG and non-PPG loan record for two instrument types in the 1.0 version of the CLG-Global Dataset: standard credit instruments and non-standard credit instruments. See Section A3.5 in the Appendix for more details on how standard and non-standard credit instruments are defined.

Figure A5.19: Decomposition of China's lending portfolio by credit instrument type

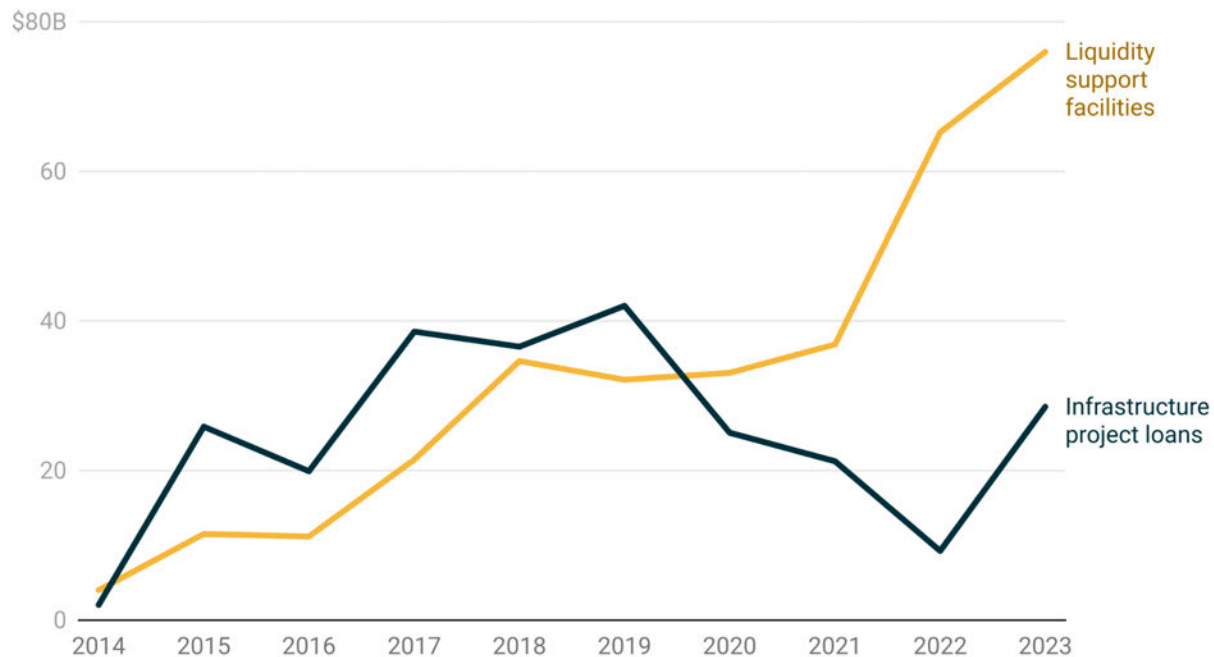
Loan commitments, constant 2023 USD



Notes: Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination. Liquidity support facilities are identified with any of the following flags (in combination or independently): FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A. Infrastructure project facilities and liquidity support facilities are not mutually exclusive, as some infrastructure projects are financed via PxF/commodity prepayment facilities. All data are drawn from the 1.0 version of the CLG-Global Dataset.

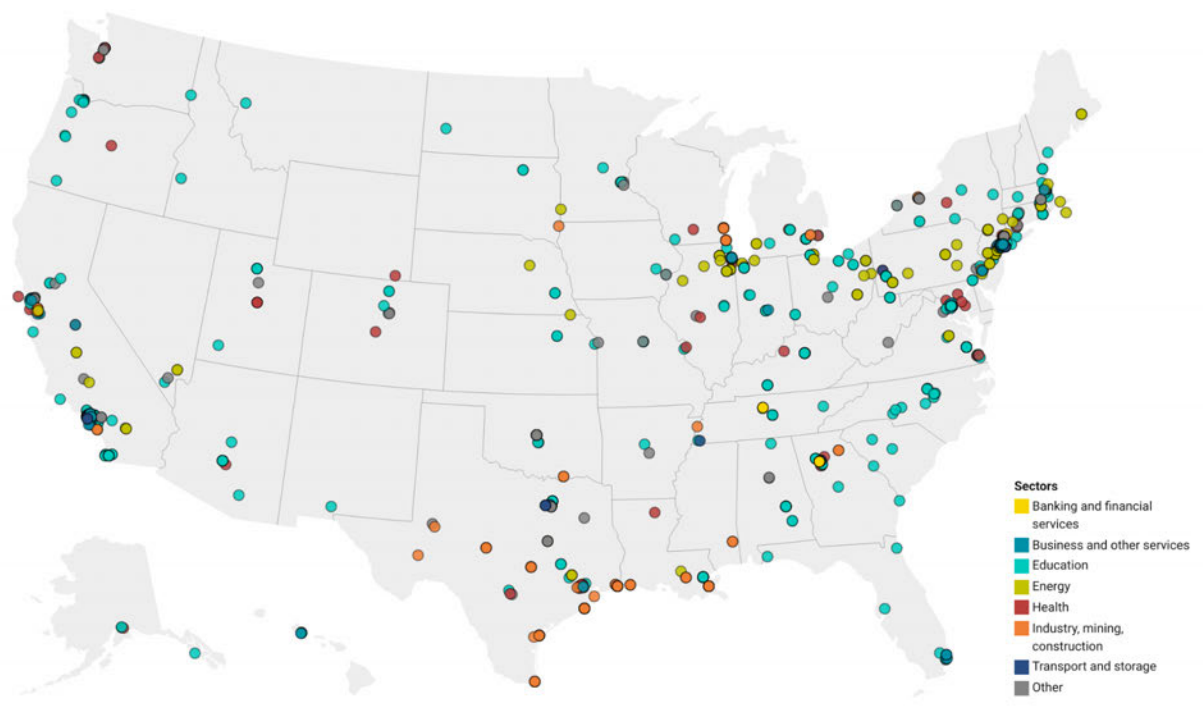
Figure A5.20: China's overseas lending portfolio in BRI participant countries by credit instrument type

Annual loan commitments, constant 2023 USD



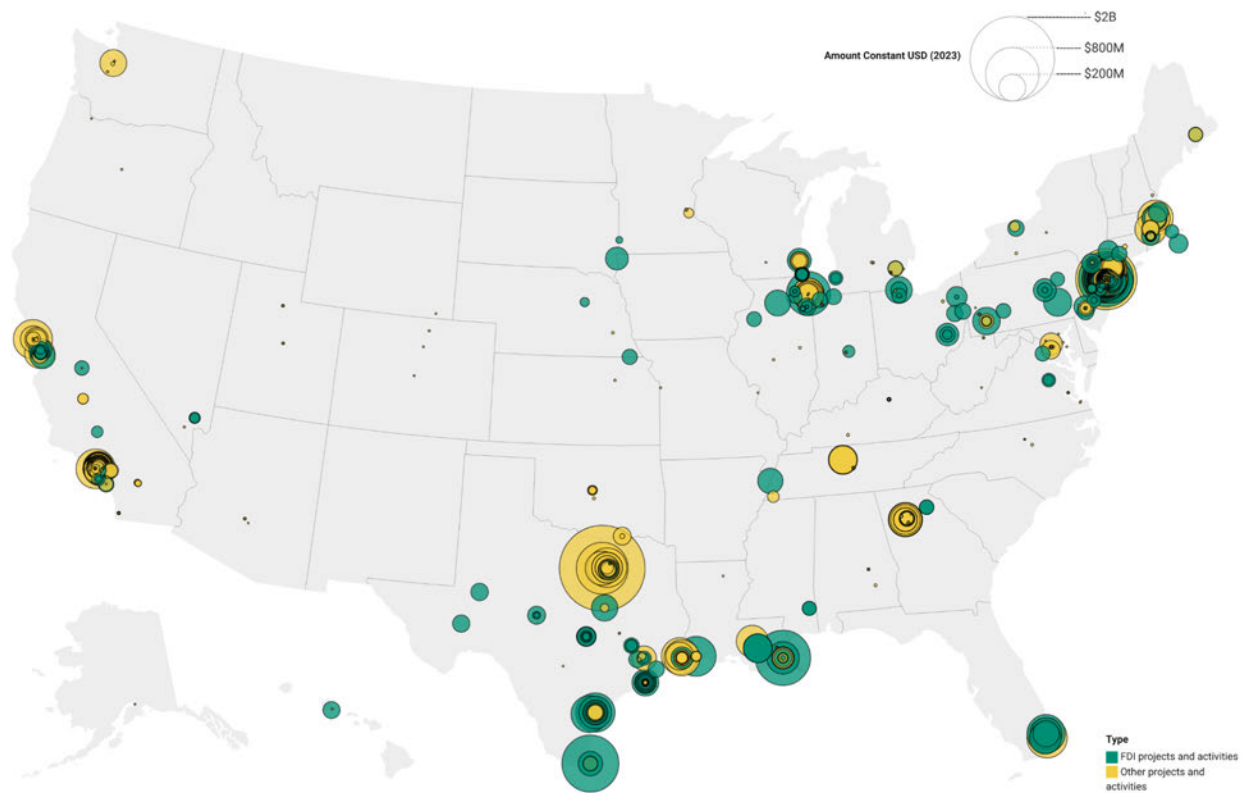
Notes: Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination. Liquidity support facilities are identified with any of the following flags (in combination or independently): FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A. These data are drawn from the 1.0 version of the CLG-Global Dataset. Infrastructure project facilities and liquidity support facilities are not mutually exclusive, as some infrastructure projects are financed via PxF/commodity prepayment facilities. BRI participant countries include those countries that have signed MOUs with China to join its Belt and Road Initiative. A country is assigned to the BRI participant cohort in the year it signed the MOU and every year thereafter.

Map A5.1: Locations of Chinese loan and grant-financed projects and activities in the U.S. between 2000 and 2023 by sector



Notes: This figure presents the locations of Chinese loan- and grant-financed projects and activities in the U.S. between 2000 and 2023. Each project/activity location is assigned 3-digit OECD sector codes in the 1.0 version of AidData's CLG-Global Dataset. The "other" category consists of projects and activities assigned to the following OECD sector codes: agriculture, forestry, fishing; communications; emergency response; government and civil society; other multisector; other social infrastructure and services; water supply and sanitation. Projects and activities with multiple locations (e.g. gas pipelines) are collapsed into a singular representative point using Python.

Map A5.2: Locations of Chinese loan and grant-financed projects and activities in the U.S. between 2000 and 2023 by investment type

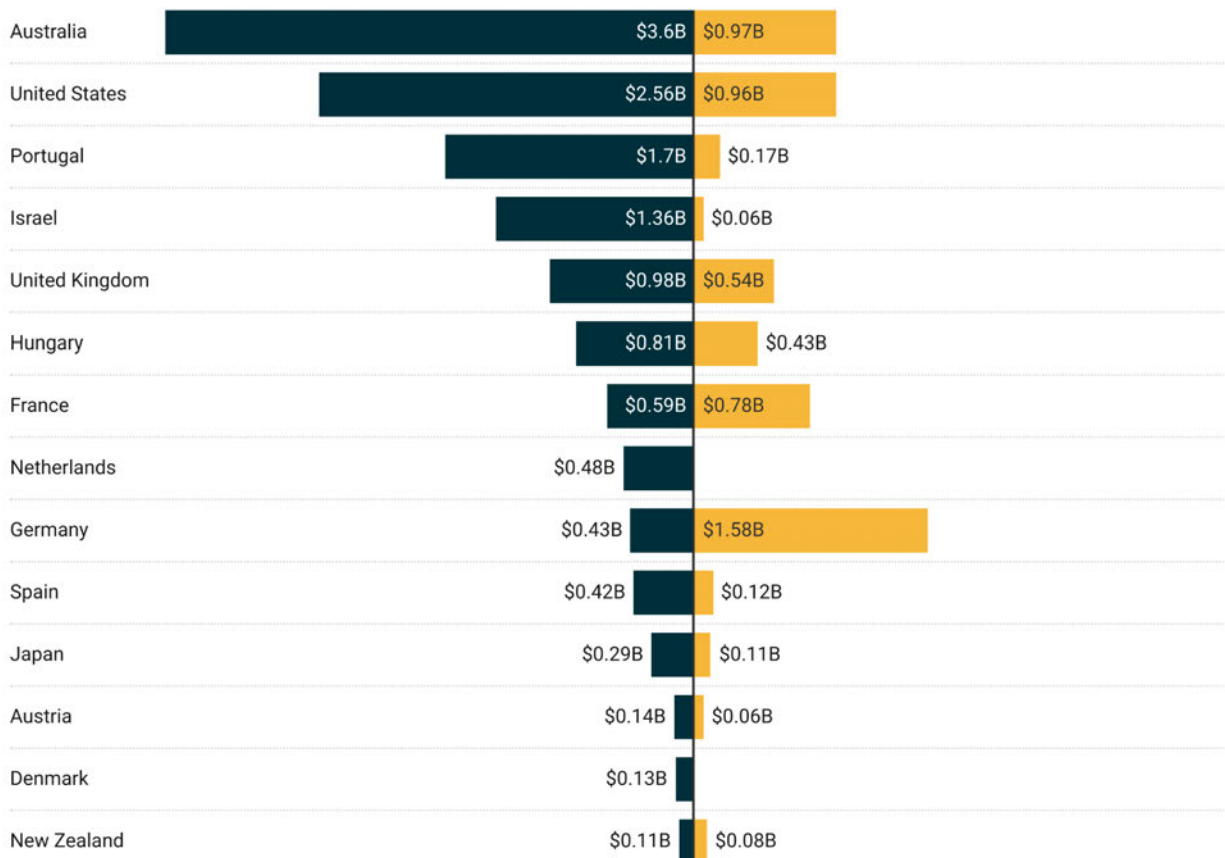


Notes: This figure presents the locations of Chinese loan- and grant-financed projects and activities in the U.S. between 2000 and 2023. All projects and activities are assigned to one of two cohorts: (i) those that facilitate foreign direct investment (FDI), and (ii) those that do not. The size of each centroid is derived from the financial commitment amount (in constant 2023 USD) directed to each project/activity location. Projects and activities with multiple locations (e.g. gas pipelines) are collapsed into a singular representative point using Python.

Figure A5.21: China's cross-border M&A lending commitments before and after the earliest adoption of ISM-strengthening measures, 2007-2023

Annual average loan commitments, constant 2023 USD.

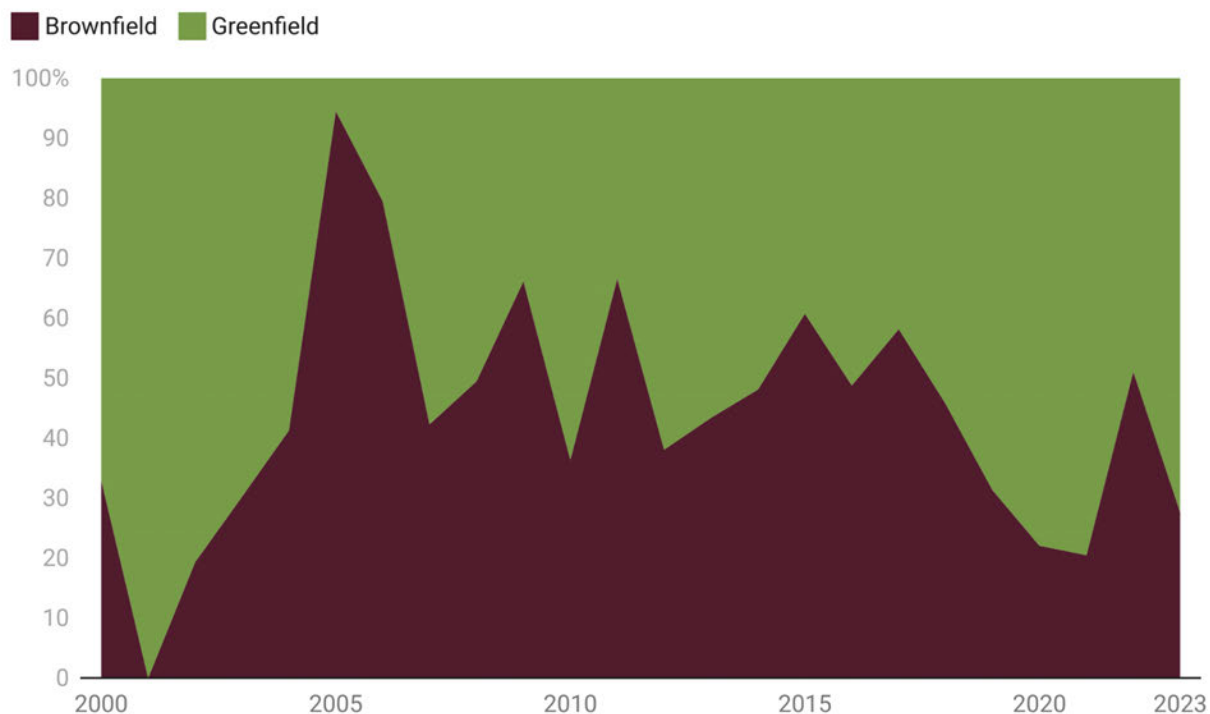
■ Pre-policy average ■ Post-policy average



Note: See Section A3.8 of the Appendix for details on how the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023) is used to identify ISM strengthening measures. For countries that adopted ISM strengthening measures multiple times during the 17-year period, the pre- and post-policy averages are based on the earliest instance of an ISM-strengthening measure.

Figure A5.22: Decomposition of China's cross-border FDI loan commitments by type

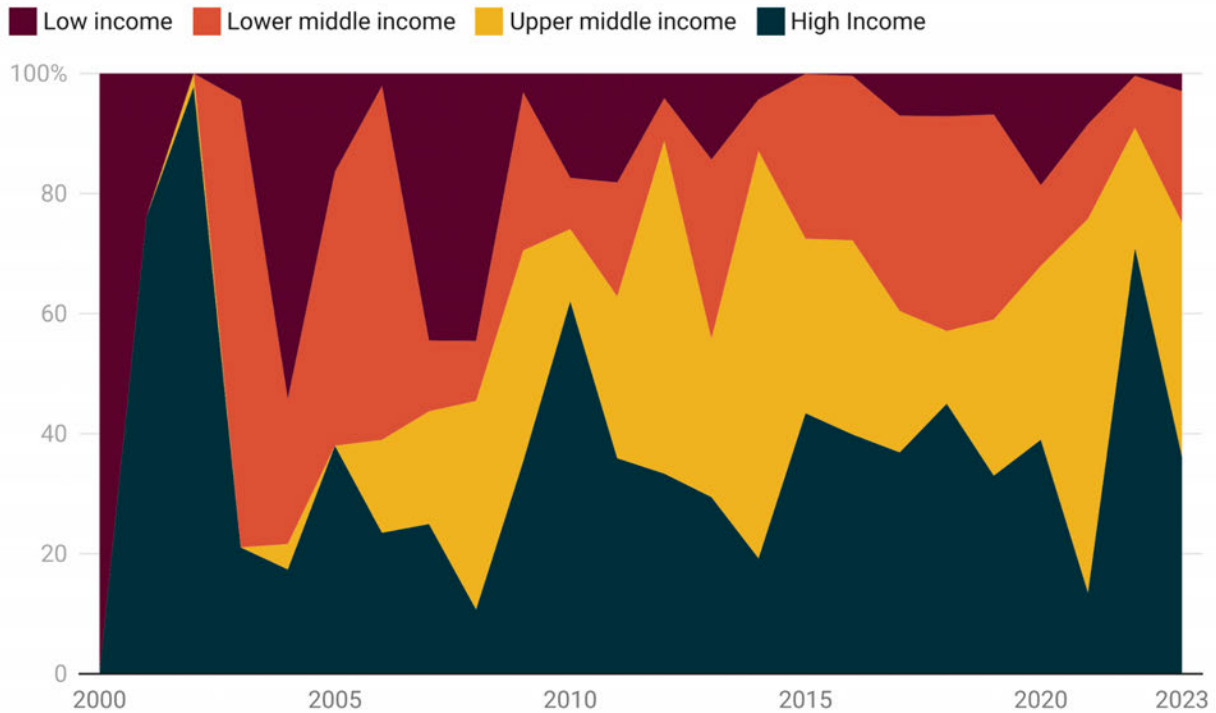
Share of loan commitments, constant 2023 USD



Notes: See Section A3.6 of the Appendix for details on how loans are classified as FDI loans (brownfield or greenfield).

Figure A5.23: Decomposition of China's cross-border greenfield FDI loan portfolio by World Bank income bracket, 2000-2023

Share of loan commitments, constant 2023 USD

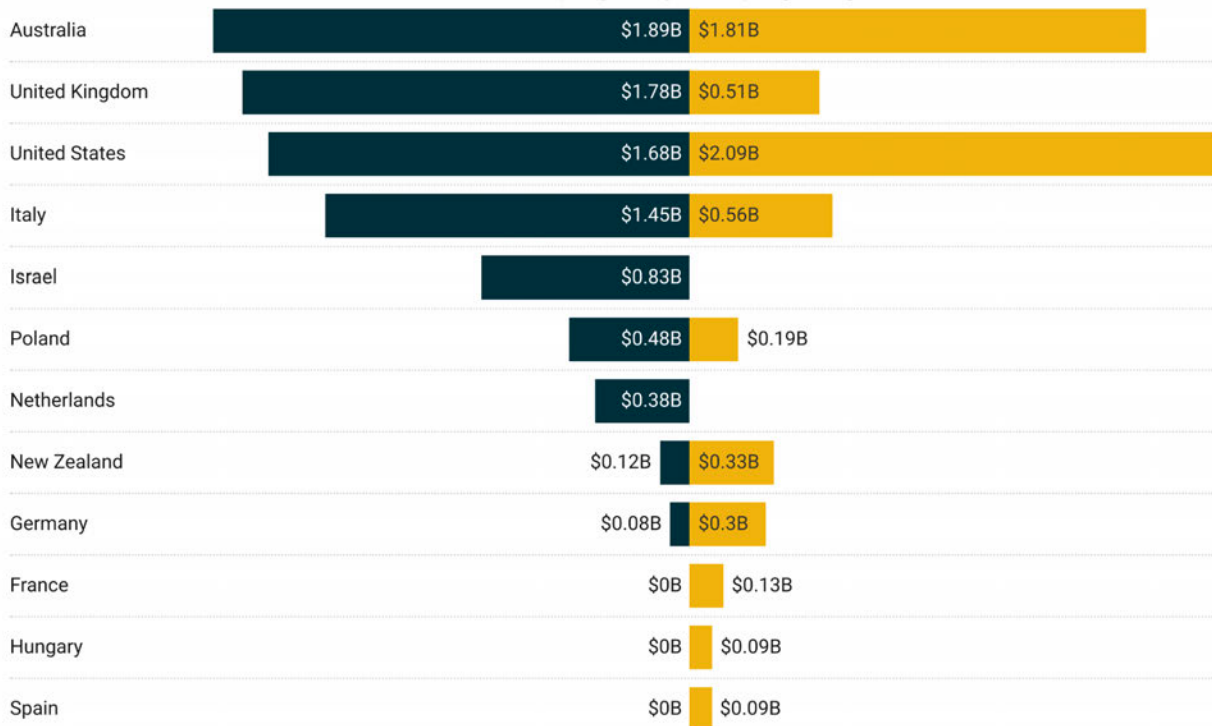


Notes: Each greenfield FDI loan commitment is assigned to an income bracket based on the borrower country's World Bank income classification in the year of the commitment. Borrower countries are identified using the Country_of_Activity variable (where the financed project/activity actually takes place) from the 1.0 version of AidData's CLG-Global Dataset. Greenfield FDI loan commitments to regional recipients are excluded. See Section A3.6 for details on how greenfield and brownfield FDI loans are classified.

Figure A5.24: China's cross-border greenfield FDI lending commitments before and after the earliest adoption of ISM-strengthening measures, 2007-2023

Annual average loan commitments, constant 2023 USD.

■ Pre-policy average ■ Post-policy average



Note: See Section A3.8 of the Appendix for details on how the Politics and Regulation of Investment Screening Mechanisms (PRISM) dataset (Bauerle Danzman and Meunier 2023) is used to identify ISM strengthening measures. For countries that adopted ISM strengthening measures multiple times during the 17-year period, the pre- and post-policy averages are based on the earliest instance of an ISM-strengthening measure.

Figure A5.25: Decomposition of China's cross-border M&A lending portfolio via SPVs in countries with relatively strong and weak ISMs

Percentage of commitment amount, constant 2023 USD

Relatively Weak ISMs Relatively Strong ISMs

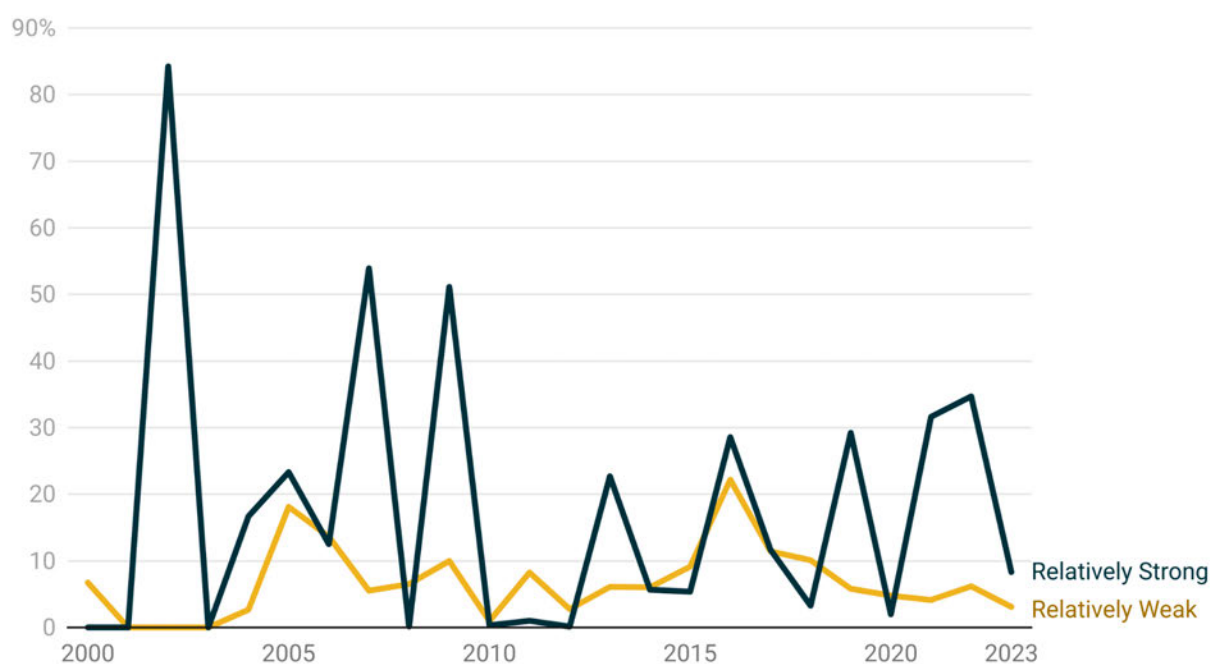
Relatively Strong ISMs 60%

Relatively Weak ISMs 49%

Notes: This figure decomposes China's cross-border M&A loan commitments through special purpose vehicles (SPVs) into two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs), and (ii) countries with relatively weak ISMs. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.26: Decomposition of China's syndicated cross-border M&A lending portfolio in countries with relatively strong and weak ISMs

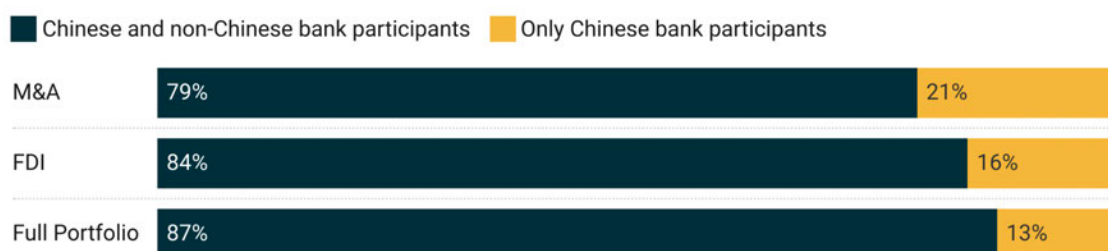
Share of loan commitments, constant 2023 USD



Notes: This figure presents the shares of China's cross-border M&A lending portfolio (in 2023 constant USD) allocated across two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs) and (ii) countries with relatively weak ISMs. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.27: Decomposition of China's cross-border syndicated lending portfolio in countries with relatively strong ISMs

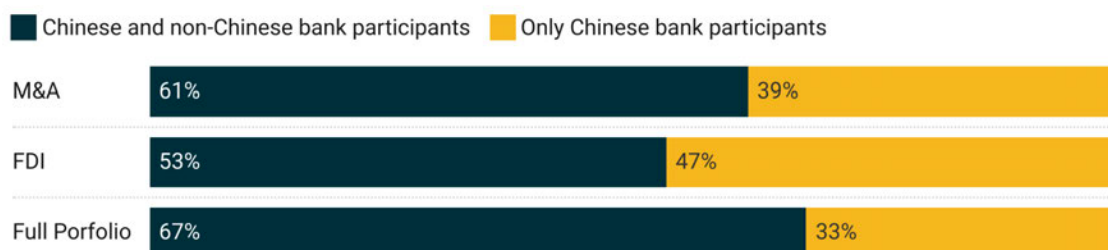
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes syndicated loan commitments (in 2023 constant USD) from China to countries with relatively strong investment screening mechanisms (ISMs) for (i) Chinese and non-Chinese bank participants and (ii) only Chinese banks across three categories: (i) M&A loans, (ii) all loans, and (iii) FDI loans. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.28: Decomposition of China's cross-border syndicated lending portfolio in countries with relatively weak ISMs

Share of loan commitments, constant 2023 USD



Notes: This figure decomposes syndicated loan commitments (in 2023 constant USD) from China to countries with relatively weak investment screening mechanisms (ISMs) for (i) Chinese and non-Chinese bank participants and (ii) only Chinese banks. The decomposition is reported for (a) M&A loans, (b) all loans, and (c) FDI loans. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.29: Decomposition of China's cross-border bilateral FDI lending portfolio in countries with relatively strong and weak ISMs

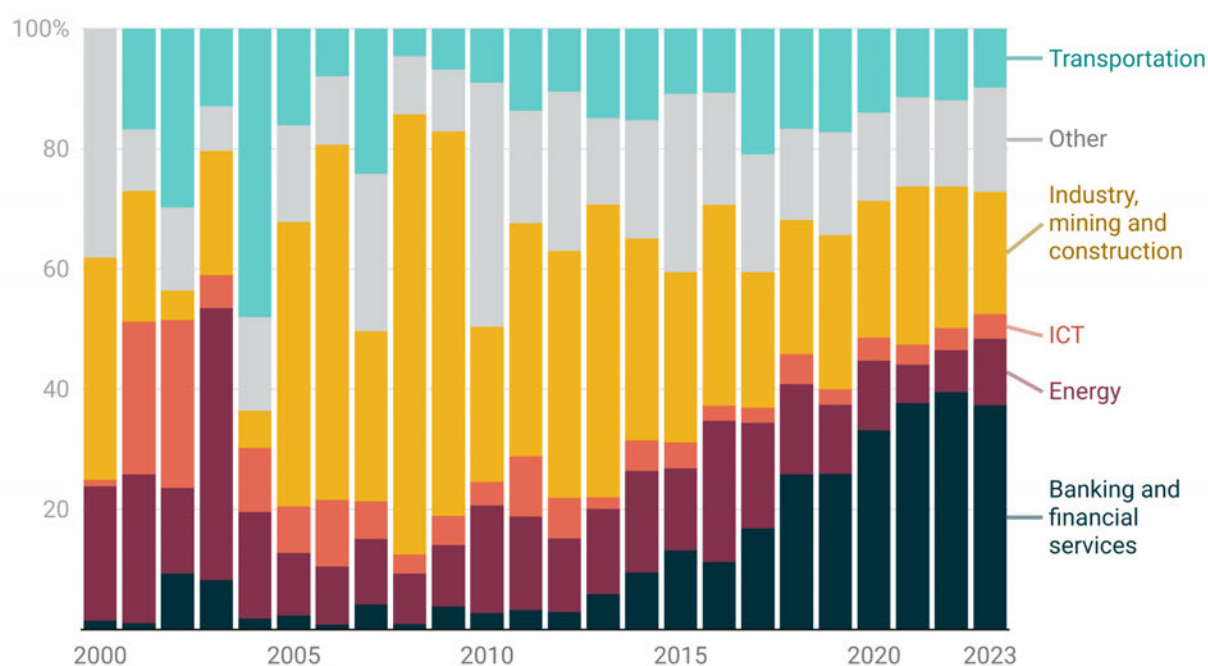
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes cross-border bilateral FDI loan commitments (in 2023 constant USD) from China into two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs), and (ii) countries with relatively weak ISMs. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.30: Sectoral decomposition of China's overseas lending portfolio

Share of loan commitment, constant 2023 USD



Notes: This figure includes emergency rescue lending commitments (see Figure 3.12 in the report for a replication that excludes emergency lending). This figure decomposes China's lending commitments in LICs, MICs, and HICs between 2000 and 2023 according to the 3-digit OECD sector codes in the 1.0 version of AidData's CLG-Global Dataset. The energy, transportation, information and communications technology (ICT), banking and financial services, and industry, mining, and construction sectors correspond to the following 3-digit OECD sector codes: 230, 210, 220, 240, and 320. The residual ("other") category captures all of the remaining 3-digit OECD sector codes.

Figure A5.31: Decomposition of China's overseas lending portfolio in the transportation sector

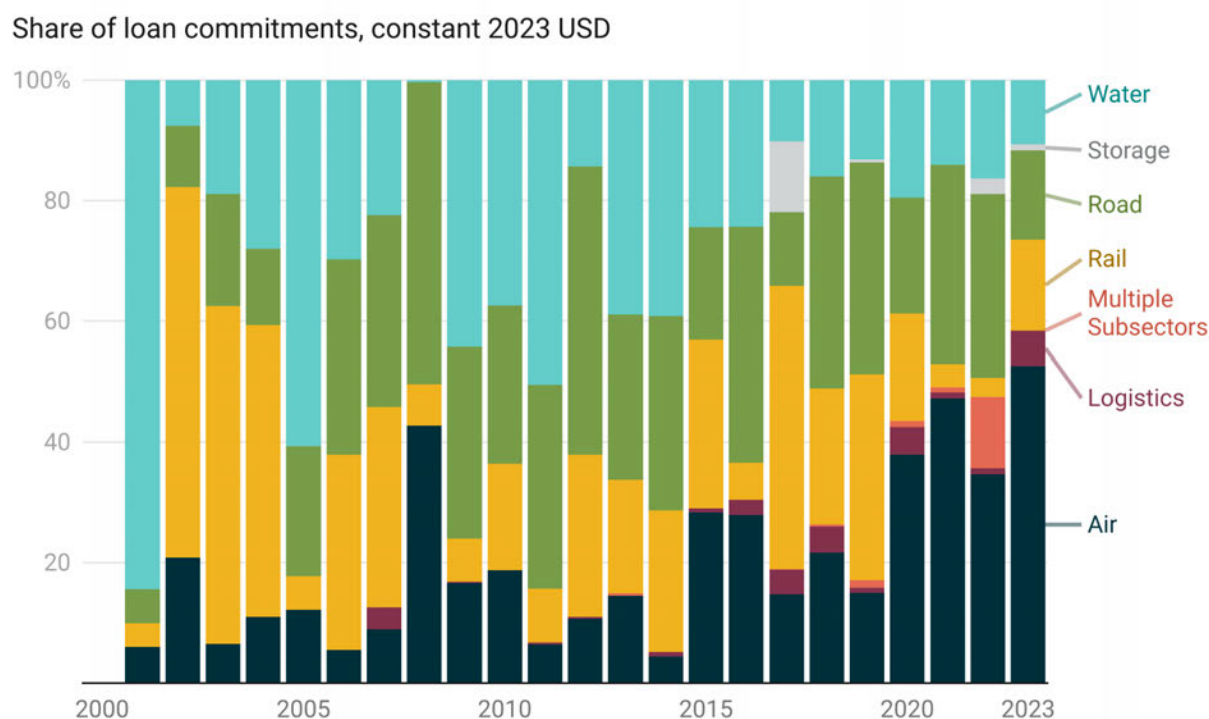


Figure A5.32: Decomposition of China’s overseas energy sector lending portfolio by energy source

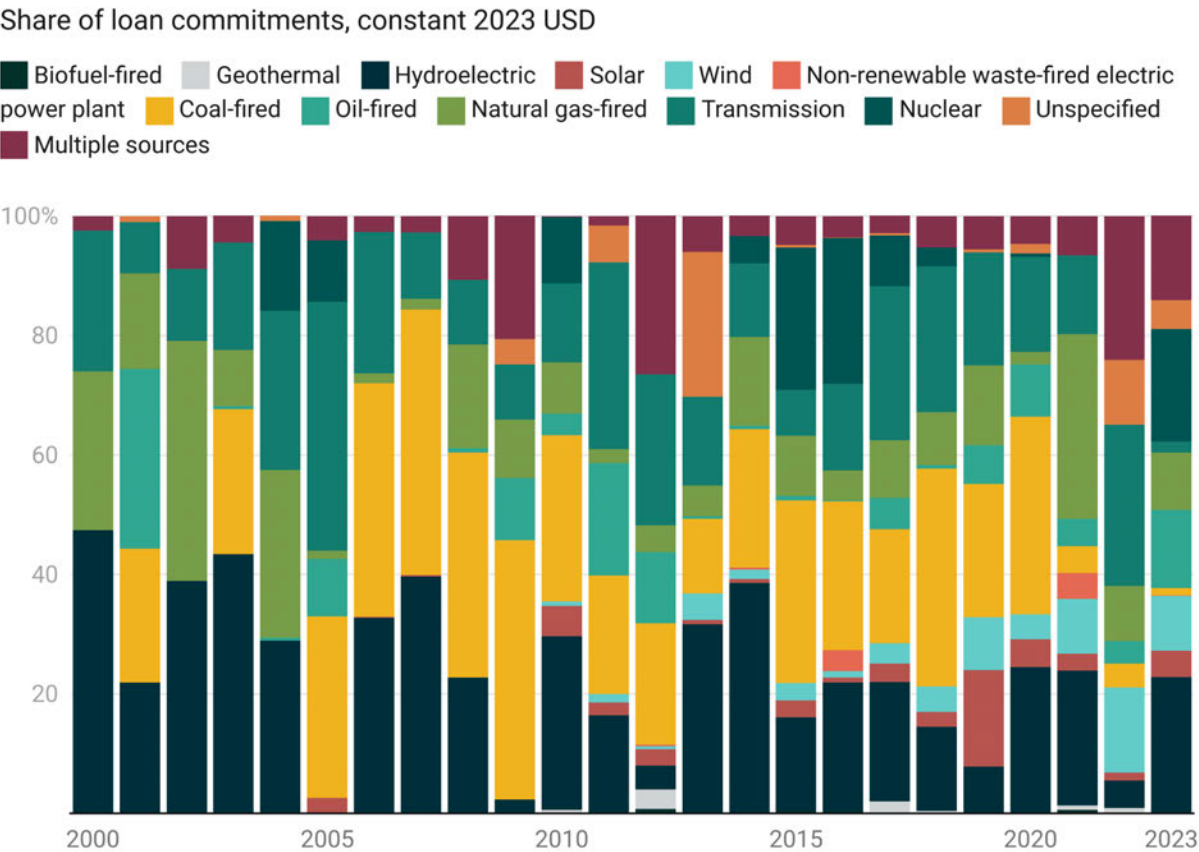


Table A5.1: China's overseas lending commitments for critical mineral operations by mineral

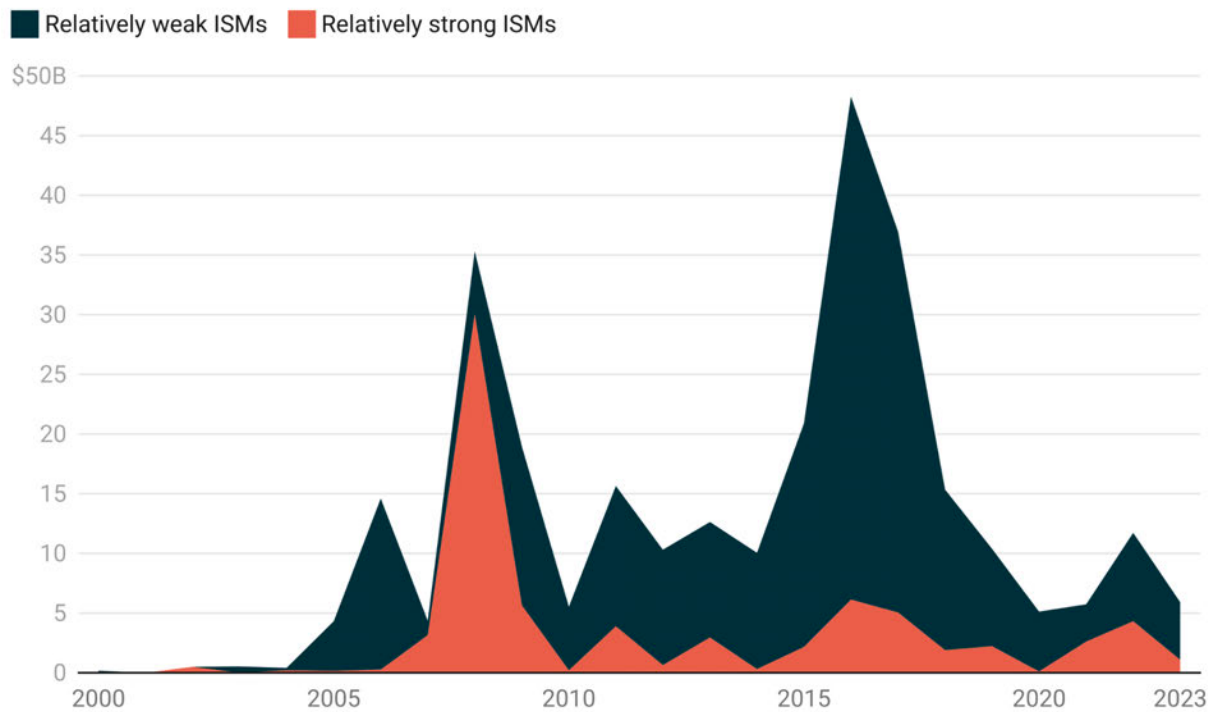
■ Both USGS and EU lists
 ■ Only USGS list
 ■ Only EU list

Combined critical mineral list	Cumulative loan commitments 2000-2023 (constant 2023 USD)
Copper	\$42.8B
Aluminum	\$37.2B
Silver	\$16.1B
Cobalt	\$10.4B
Nickel	\$8.9B
Zinc	\$4.9B
Lithium	\$4.3B
Fertilizer Minerals (Potash)	\$3.4B
Silicon	\$2.4B
Niobium	\$2.2B
Bauxite	\$1.9B
Lead	\$1.4B
Chromium	\$1.2B
Manganese	\$1.2B
Fertilizer Minerals (Phosphates)	\$0.8B
Tin	\$0.7B
Platinum	\$0.7B
Tungsten	\$0.2B
Palladium	\$0.2B
Rhodium	\$0.2B

Notes: This table represents the top 20 critical minerals that have received cross-border loan commitments (in 2023 constant USD) from China between 2000 and 2023. A mineral is defined as "critical" if it appears on either the European Union's 2023 (fifth) list of critical raw materials or the August 2025 draft list of critical minerals published by the U.S. Geological Survey (USGS).

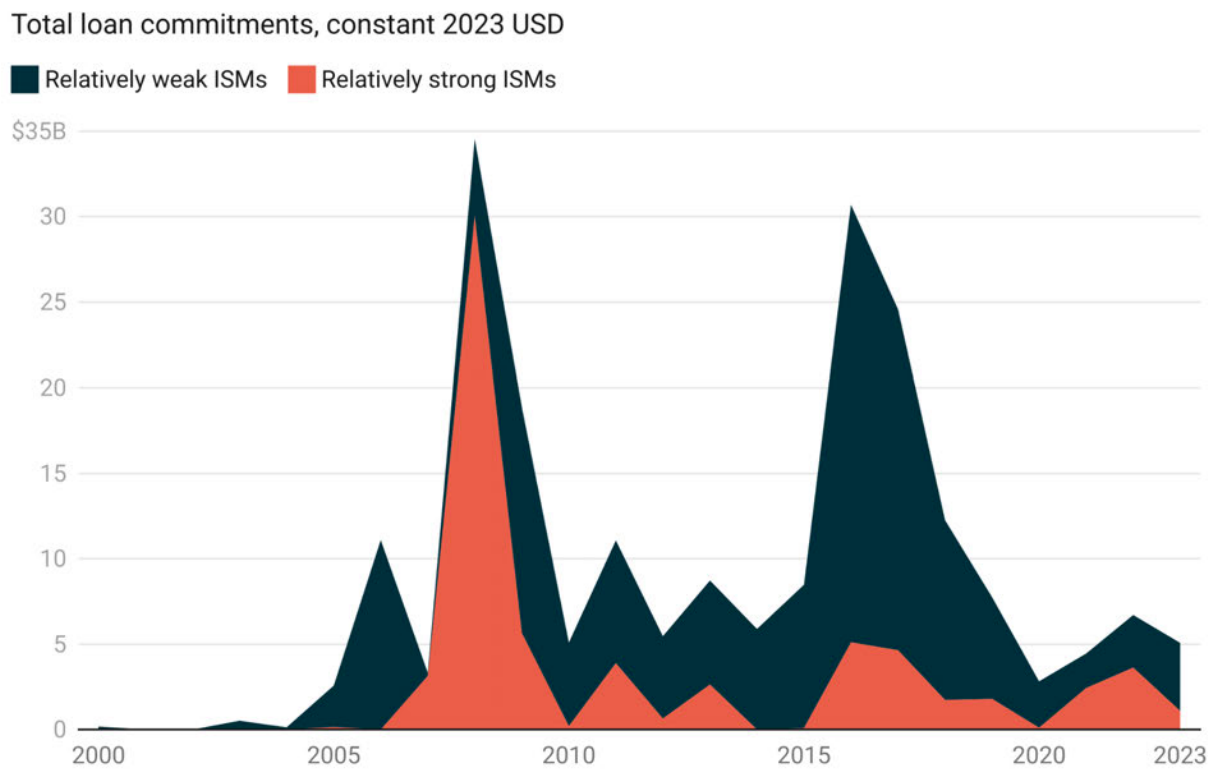
Figure A5.33: China's cross-border M&A lending portfolio by screening mechanism stringency

Total loan commitments, constant 2023 USD



Notes: This figure decomposes China's cross-border M&A loan commitments (in 2023 constant USD) into two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs), and (ii) countries with relatively weak ISMs. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs.

Figure A5.34: China's cross-border M&A lending portfolio in sensitive sectors by screening mechanism stringency



Notes: This figure decomposes China's cross-border M&A loan commitments (in 2023 constant USD) in sensitive sectors into two cohorts: (i) countries with relatively strong investment screening mechanisms (ISMs), and (ii) countries with relatively weak ISMs. The cohort classification is derived from the "screening of foreign investment" subcomponent score of the OECD's 2023 FDI Regulatory Restrictiveness Index (OECD 2024), with scores above the median categorized as relatively strong ISMs and those below the median as relatively weak ISMs. Sectors that host countries have designated as "sensitive" on national security grounds were identified based upon the measurement criteria described in Box 3.4.

Figure A5.35: China's cross-border M&A lending portfolio in sensitive sectors to offshore and onshore SPV borrowers

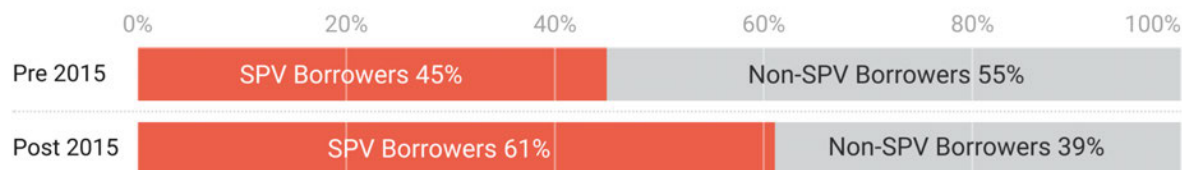
Share of loan commitments, constant USD 2023



Notes: This figure decomposes China's cross-border M&A loan commitments (in 2023 constant USD) from China in sensitive sectors across two cohorts: (i) onshore special purpose vehicles (SPVs), and (ii) offshore SPVs. Offshore SPVs represent SPV borrowers that are incorporated in a jurisdiction other than the jurisdiction where merger or acquisition target resides. Onshore SPVs are those that are legally incorporated in the same jurisdiction where the merger or acquisition target resides. Sectors that host countries have designated as "sensitive" on national security grounds are identified based upon the measurement criteria described in Box 3.4.

Figure A5.36: China's cross-border M&A lending in sensitive sectors with SPV vs. Non-SPV borrowers

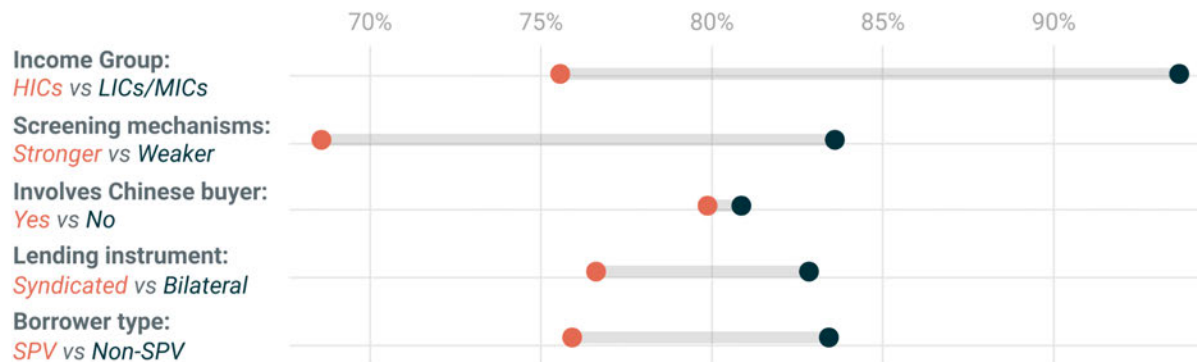
Annual share of loan commitments, constant 2023 USD



Notes: This figure decomposes China's cross-border M&A loan commitments (in 2023 constant USD) in sensitive sectors across two cohorts: (i) special purpose vehicles (SPVs) borrowers, and (ii) non-SPV borrowers. The decomposition is presented over two different time periods—2000-2014 ("Pre-2015") and 2015-2023 ("Post-2015")—in order to measure differences before and after the adoption of the Made in China 2025 (MIC2025) policy. Sectors that host countries have designated as "sensitive" on national security grounds are identified based upon the measurement criteria described in Box 3.4.

Figure A5.37: M&A loans in sensitive sectors strictly and their success rates in different cohorts

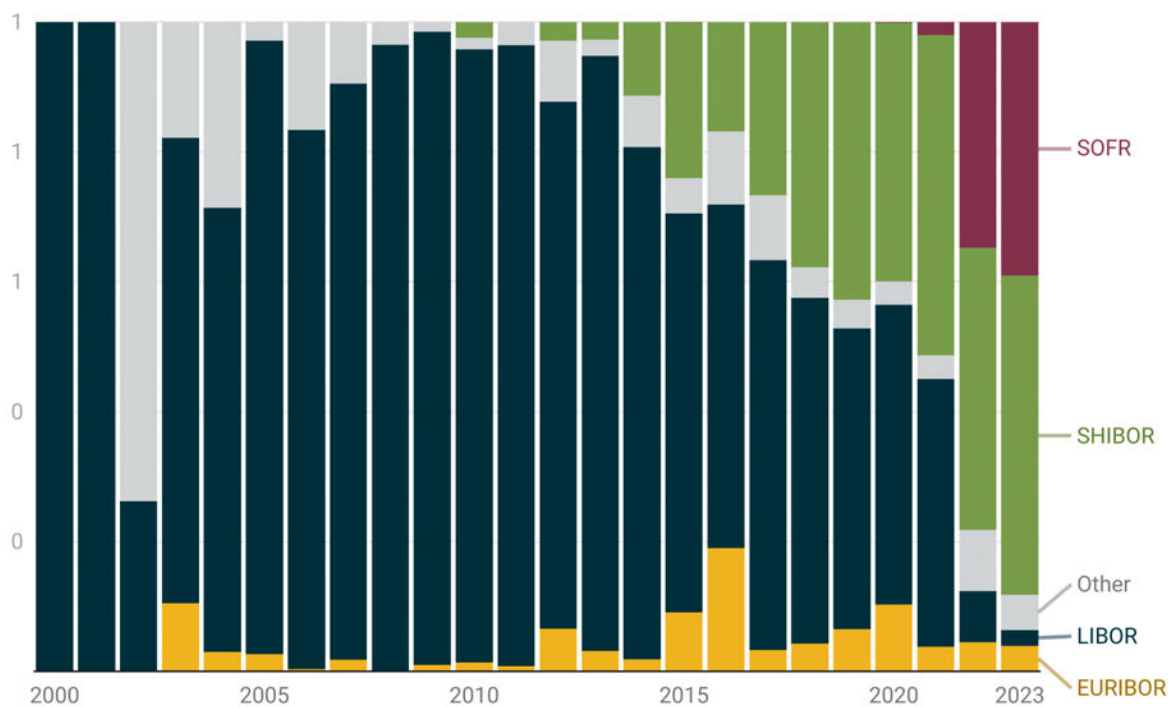
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes the success rate of China's cross-border M&A loan commitments (in 2023 constant USD) in sensitive sectors between 2000 and 2023 according to five dimensions: (i) relative strength of investment screening mechanisms (ISMs), (ii) lending instrument, (iii) location of the buyer, (iv) income bracket of the recipient country, and (v) borrower type. The success of each cross-border M&A transaction is identified based upon the measurement criteria described in Box 3.4. Sectors that host countries have designated as "sensitive" on national security grounds are also identified based upon the measurement criteria described in Box 3.4. All M&A loan records are included regardless of their recorded status in the dataset, whether pledged, formally committed, under implementation, suspended, or cancelled.

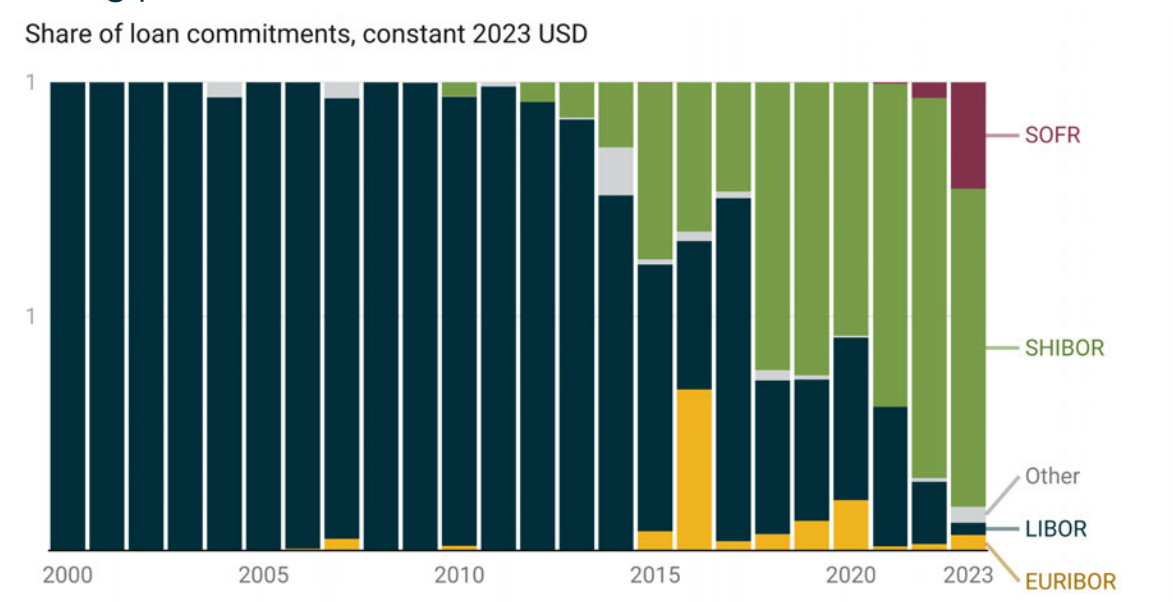
Figure A5.38: Currency composition of China's variable-rate overseas lending portfolio

Share of loan commitments, constant 2023 USD



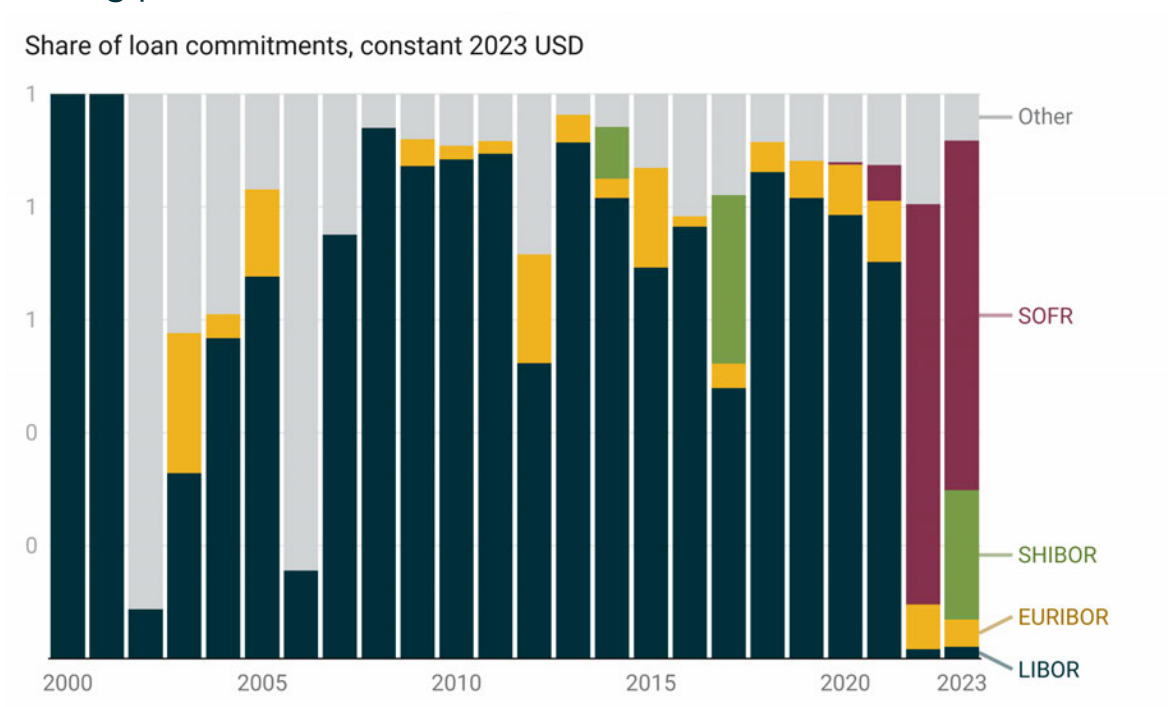
Notes: We exclude all loans for which we cannot determine if a fixed or variable interest rate was applied.

Figure A5.39: Currency composition of China’s variable-rate overseas lending portfolio in LICs/MICs



Notes: We exclude all loans for which we cannot determine if a fixed or variable interest rate was applied.

Figure A5.40: Currency composition of China’s variable-rate overseas lending portfolio in HICs



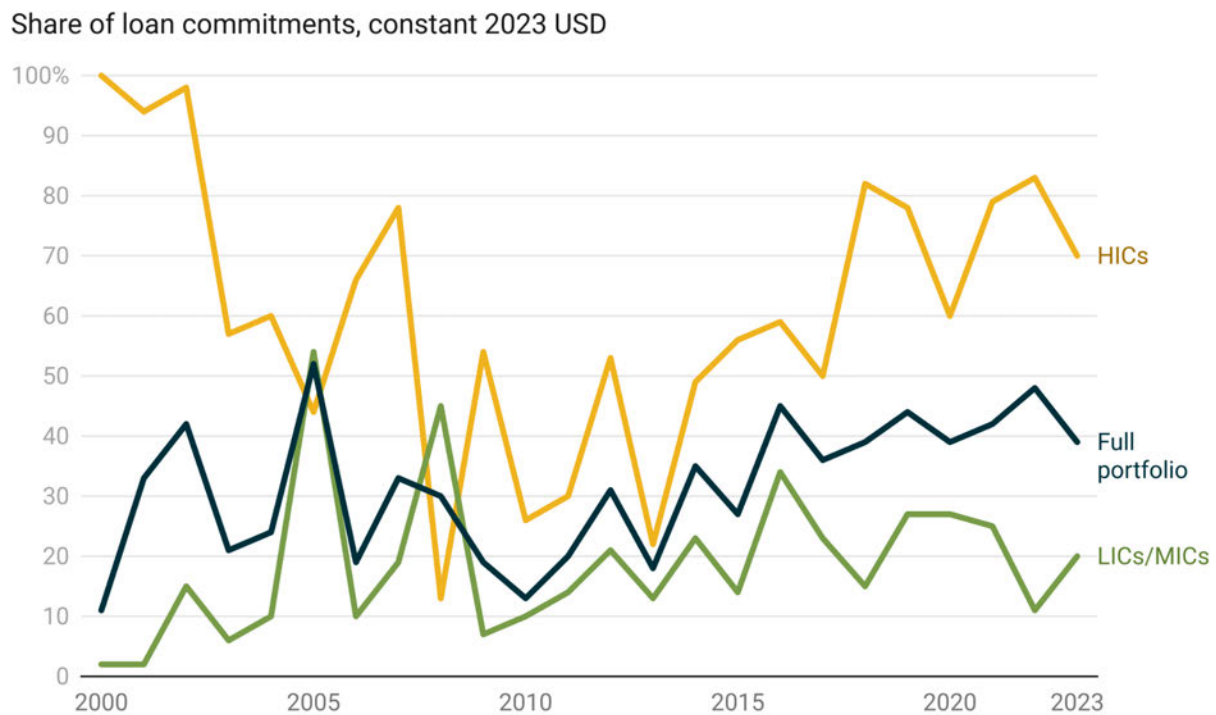
Notes: We exclude all loans for which we cannot determine if a fixed or variable interest rate was applied.

Figure A5.41: Percentage of China's overseas lending portfolio that is collateralized



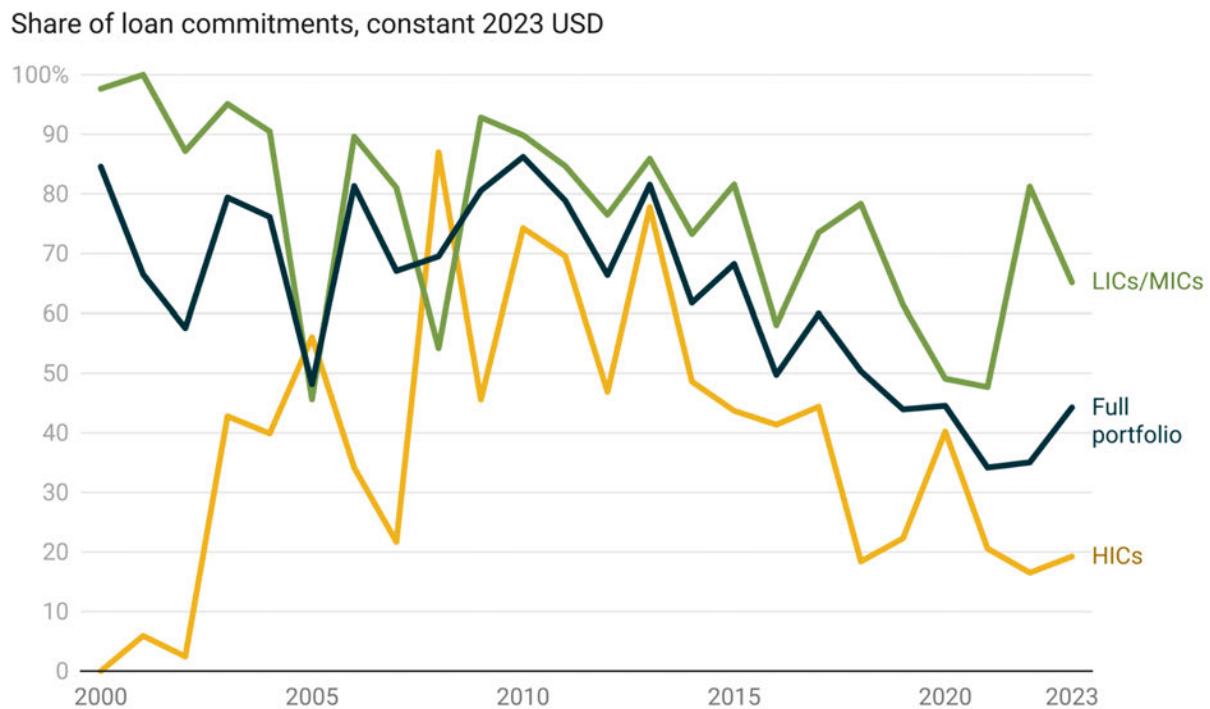
Notes: This figure shows the annual share of China's overseas lending portfolio between 2000 and 2023 that is collateralized. These shares are reported for three groups: (i) high-income countries (HICs), (ii) low and middle-income countries (LICs/MICs), and (iii) LICs, MICs, and HICs.

Figure A5.42: Percentage of China's overseas lending portfolio that is provided via syndication



Notes: This figure shows the annual share of China's overseas lending portfolio between 2000 and 2023 that is syndicated. These shares are reported for three groups: (i) high-income countries (HICs), (ii) low and middle-income countries (LICs/MICs), and (iii) LICs, MICs, and HICs.

Figure A5.43: Percentage of China's non-emergency overseas lending portfolio that is provided via bilateral instruments



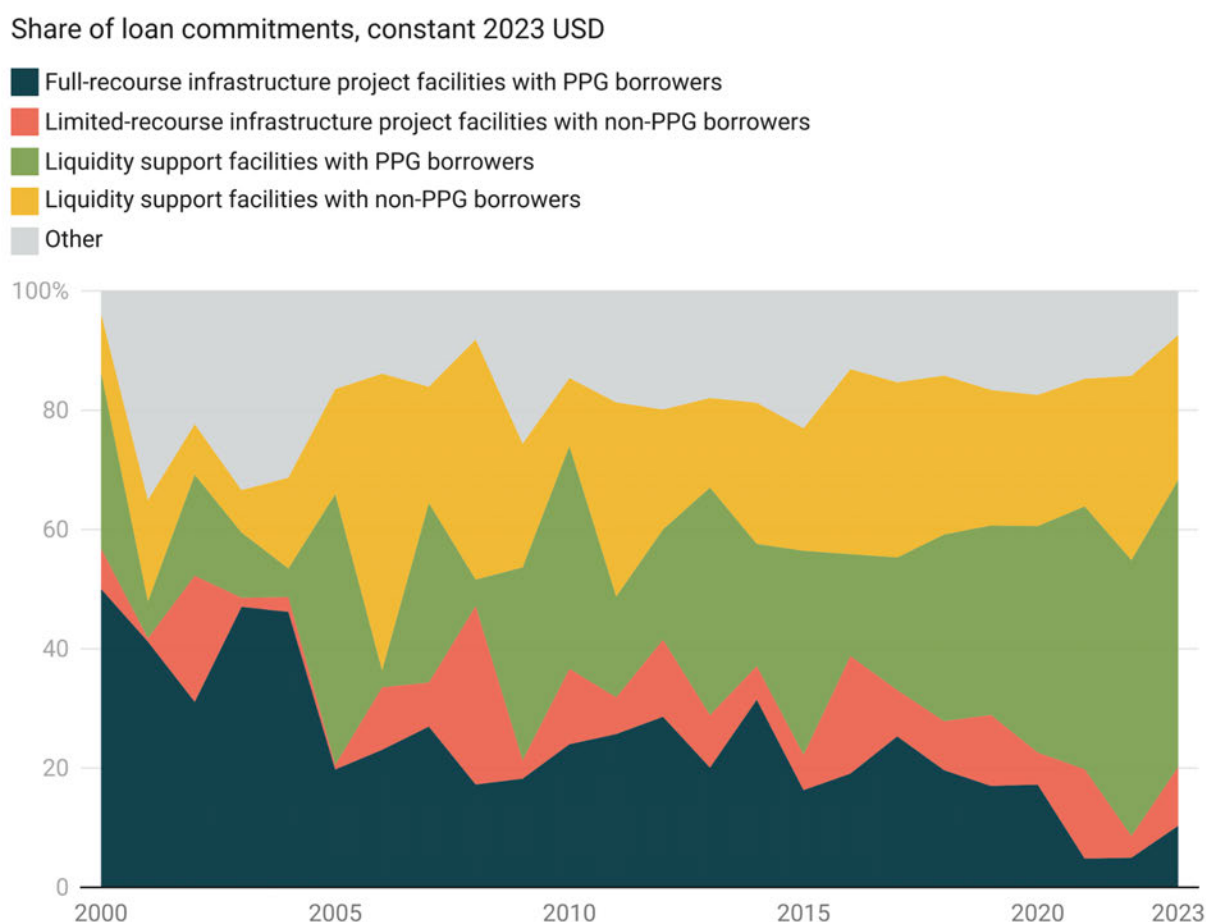
Notes: This figure shows the annual share of China's non-emergency overseas lending portfolio between 2000 and 2023 that used a bilateral lending instrument. These shares are reported for three groups: (i) high-income countries (HICs), (ii) low and middle-income countries (LICs/MICs), and (iii) LICs, MICs, and HICs.

Figure A5.44: Percentage of China's overseas lending portfolio earmarked for FDI projects



Notes: This figure presents the annual share of China's overseas lending portfolio between 2000 and 2023 provided for FDI projects and activities. These shares are reported for three groups: (i) high-income countries (HICs), (ii) low and middle-income countries (LICs/MICs), and (iii) LICs, MICs, and HICs. See Section A3.6 of the appendix for details on how loans are classified as FDI loans.

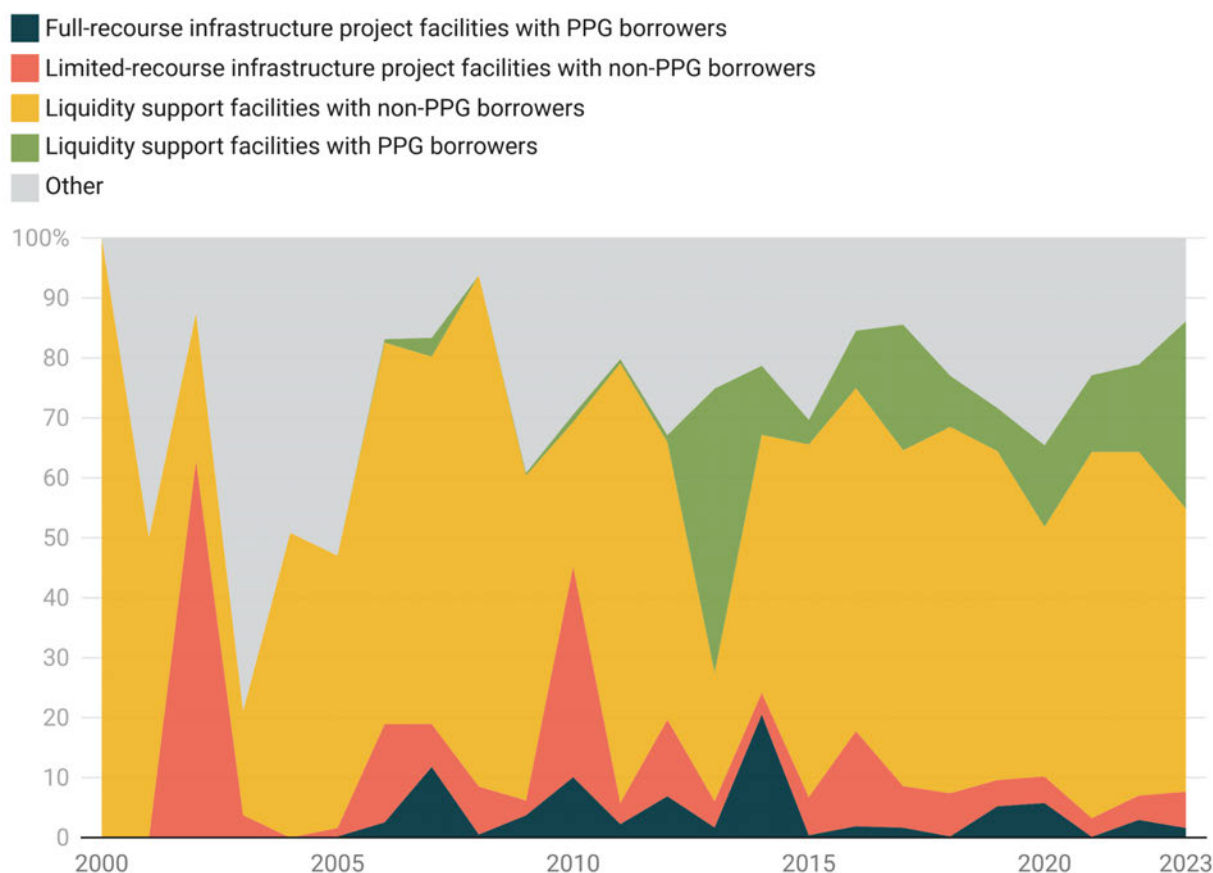
Figure A5.45: Decomposition of China's overseas lending portfolio by different financing facility types



Notes: This figure decomposes China's overseas lending portfolio between 2000 and 2023 by borrower type (PPG and non-PPG) and financing purpose (infrastructure project facilities and liquidity support facilities). Together, these sources of variation result in four, main categories: (i) full-recourse infrastructure project facilities with PPG borrowers, (ii) limited-recourse infrastructure project facilities with non-PPG borrowers, (iii) liquidity support facilities with PPG borrowers, and (iv) liquidity support facilities with non-PPG borrowers. A fifth residual ("other") category captures all remaining lending not assigned to one of the other four categories. Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination. Liquidity support facilities are identified with any of the following flags (in combination or independently): FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A.

Figure A5.46: Decomposition of China's overseas lending portfolio by different financing facility types in high-income countries

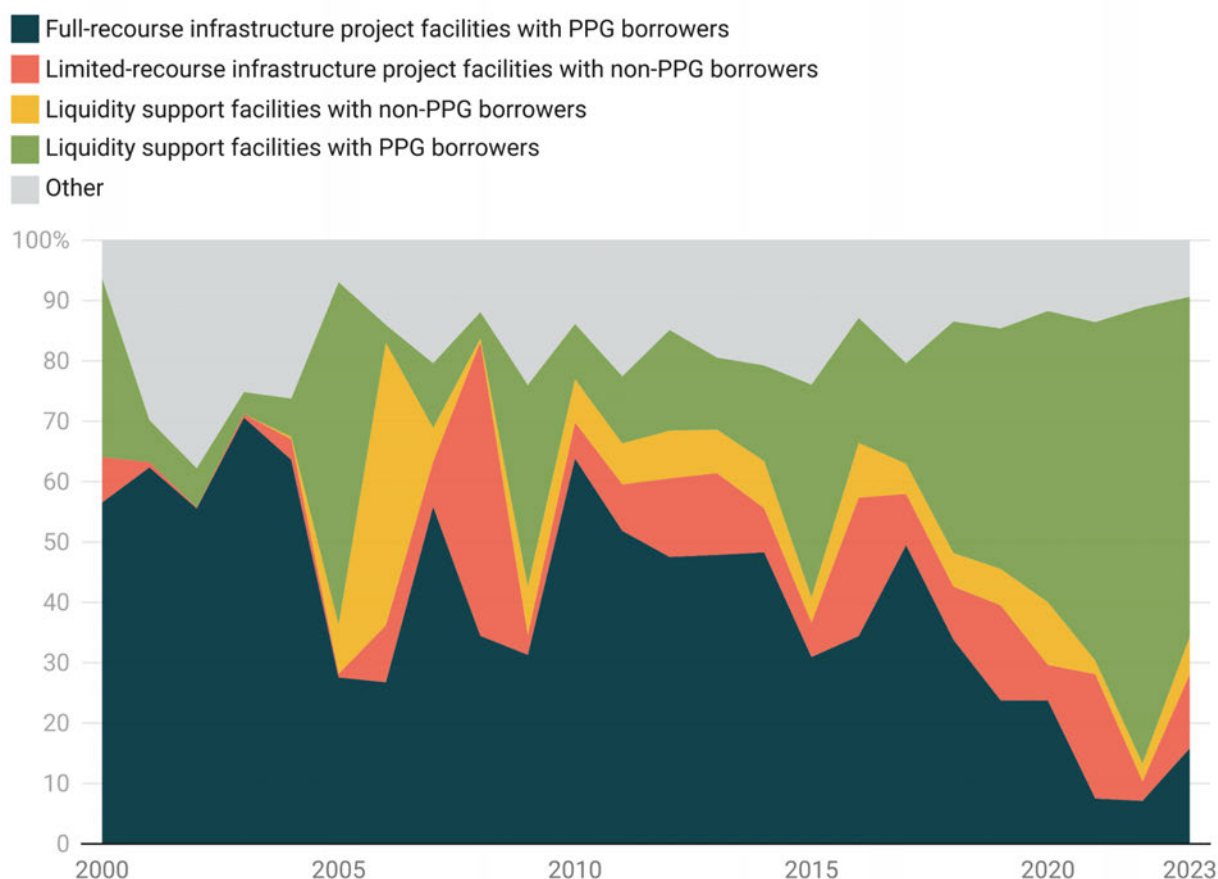
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes China's overseas lending portfolio to high-income countries (HICs) between 2000 and 2023 by borrower type (PPG and non-PPG) and financing purpose (infrastructure project facilities and liquidity support facilities). Together, these sources of variation result in four, main categories: (i) full-recourse infrastructure project facilities with PPG borrowers, (ii) limited-recourse infrastructure project facilities with non-PPG borrowers, (iii) liquidity support facilities with PPG borrowers, and (iv) liquidity support facilities with non-PPG borrowers. A fifth residual ("other") category captures all remaining lending not assigned to one of the other four categories. Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination. Liquidity support facilities are identified with any of the following flags (in combination or independently): FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A.

Figure A5.47: Decomposition of China's overseas lending portfolio by different financing facility types in low- and middle-income countries

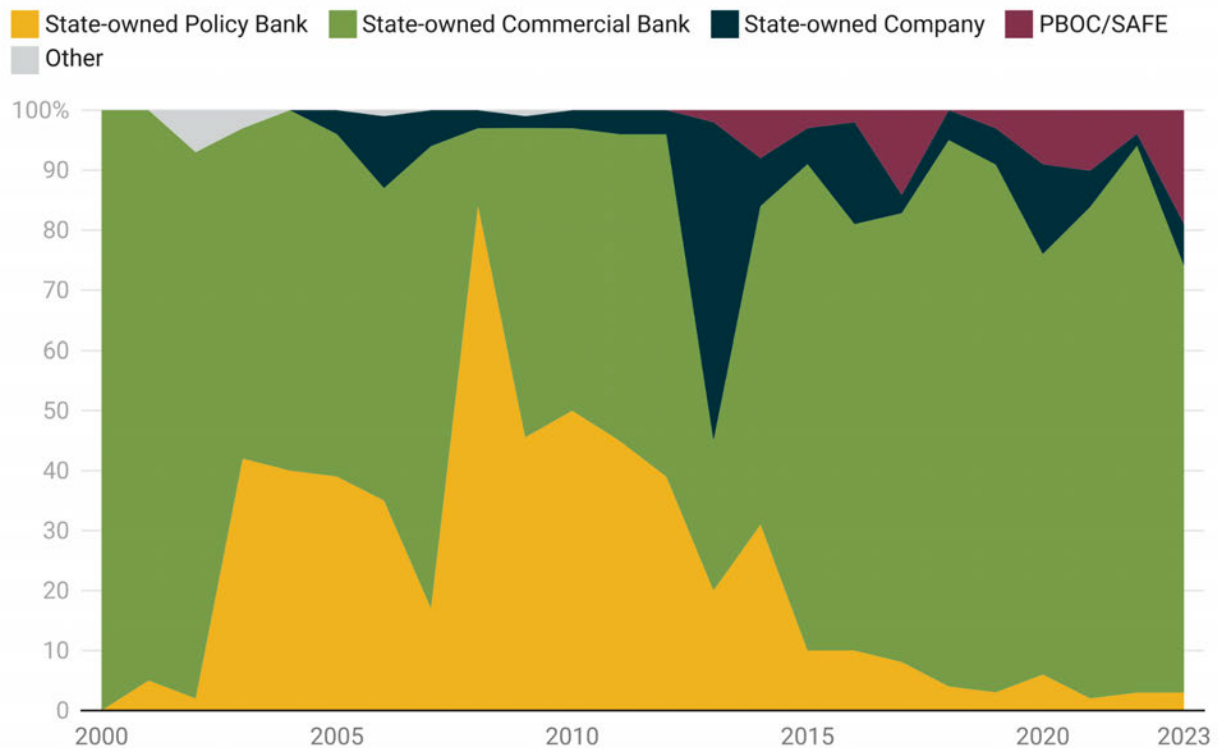
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes China's overseas lending portfolio to low- and middle-income countries between 2000 and 2023 by borrower type (PPG and non-PPG) and financing purpose (infrastructure project facilities and liquidity support facilities). Together, these sources of variation result in four, main categories: (i) full-recourse infrastructure project facilities with PPG borrowers, (ii) limited-recourse infrastructure project facilities with non-PPG borrowers, (iii) liquidity support facilities with PPG borrowers, and (iv) liquidity support facilities with non-PPG borrowers. A fifth residual ("other") category captures all remaining lending not assigned to one of the other four categories. Infrastructure project facilities are identified using the investment project loan and infrastructure flags in combination. Liquidity support facilities are identified with any of the following flags (in combination or independently): FXSL, BOP, repurchase transaction, PxF/commodity prepayment, RCF, working capital, interbank loan, or M&A.

Figure A5.48: Decomposition of China's overseas lending portfolio by creditor category in high-income countries

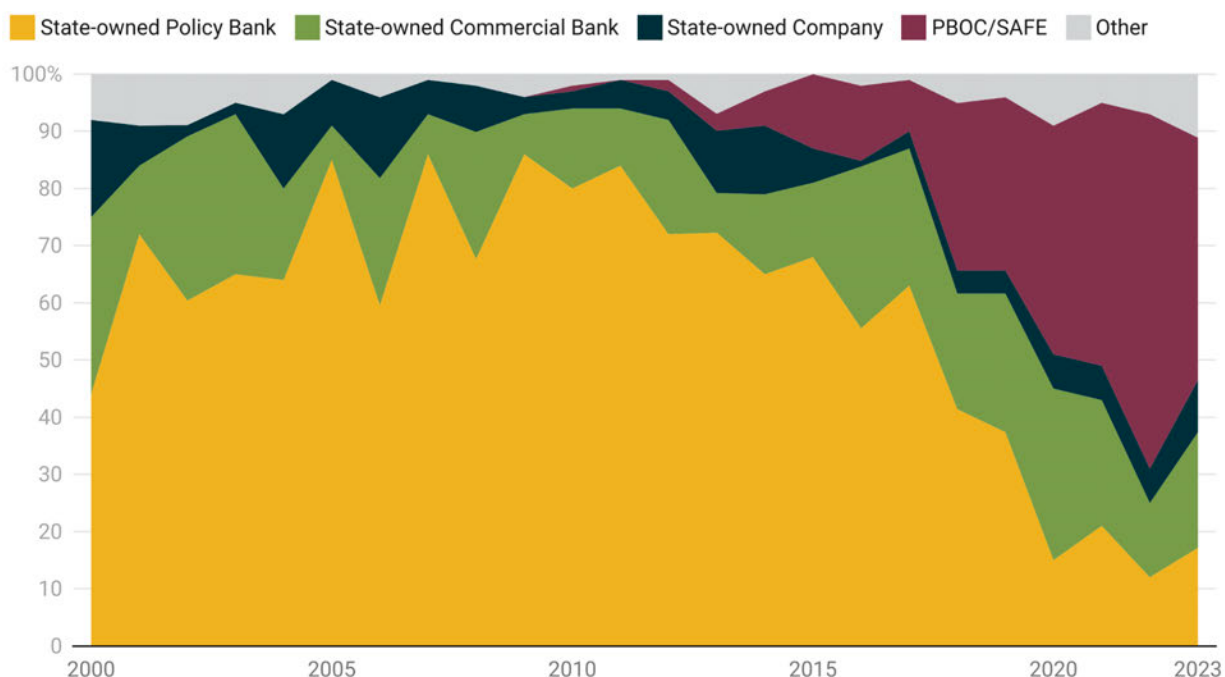
Share of loan commitments, constant 2023 USD



Notes: This figure presents the composition of China's overseas lending portfolio to high-income countries (HICs) between 2000 and 2023 across five creditor categories: (i) PBOC/SAFE, (ii) state-owned commercial banks, (iii) state-owned companies, (iv) state-owned policy banks, and (v) other funding agencies.

Figure A5.49: Decomposition of China's overseas lending portfolio by creditor category in low-and middle-income countries

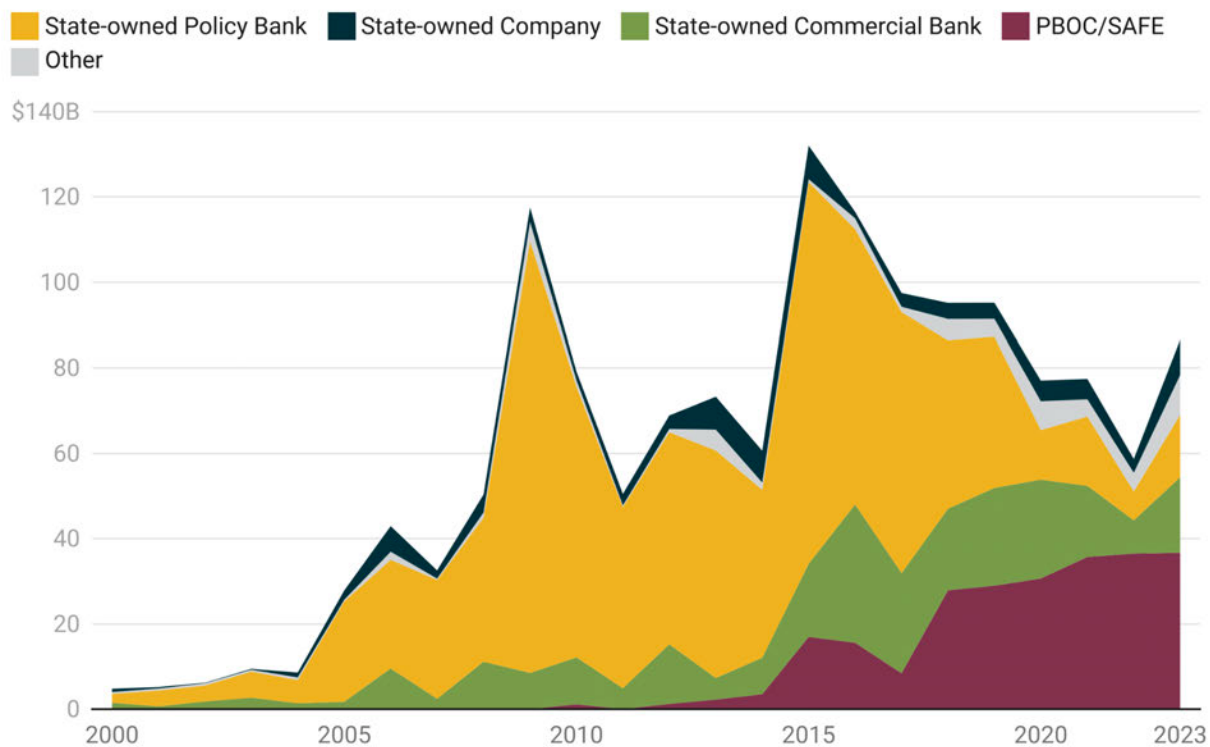
Share of loan commitments, constant 2023 USD



Notes: This figure presents the composition of China's overseas lending portfolio to low- and middle-income countries (LICs/MICs) between 2000 and 2023 across five creditor categories: (i) PBOC/SAFE, (ii) state-owned commercial banks, (iii) state-owned companies, (iv) state-owned policy banks, and (v) other funding agencies.

Figure A.5.50: China's overseas lending commitments by creditor category in low-and middle-income countries

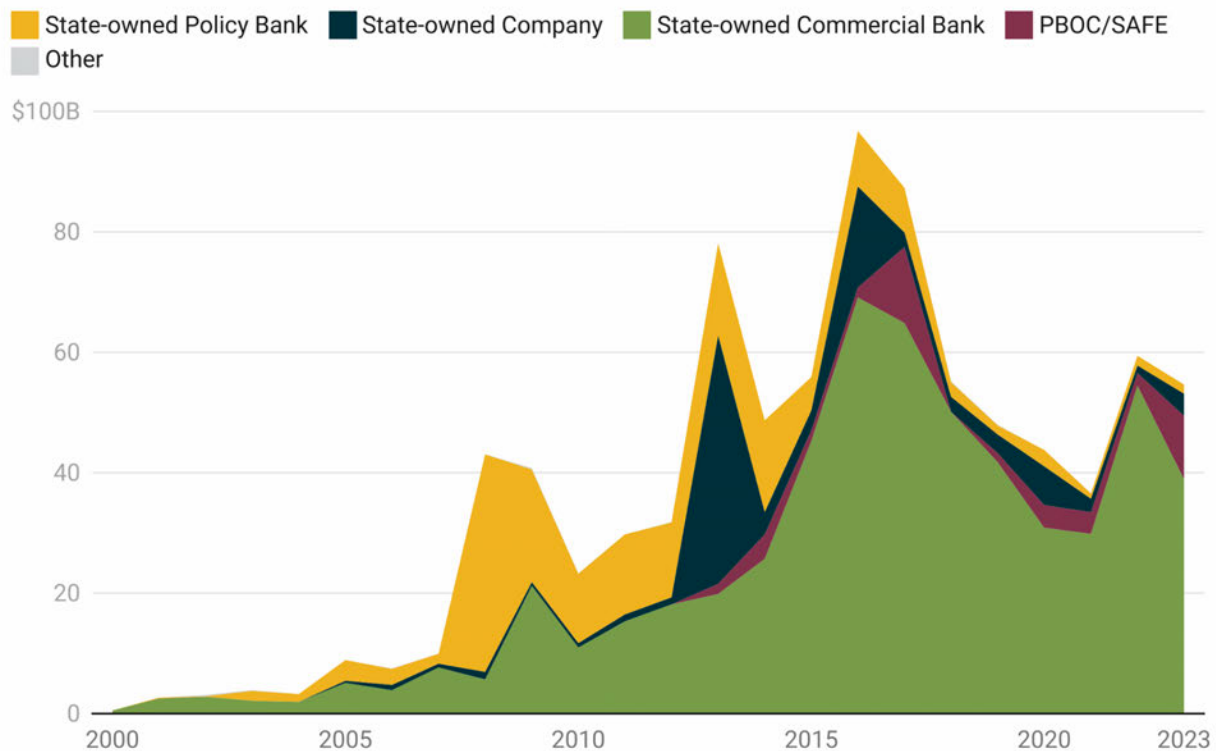
Annual lending commitments, constant 2023 USD



Notes: This figure presents annual lending commitments from different groupings of Chinese state-owned creditors to low- and middle-income countries (LICs/MICs) from 2000-2023. Amounts are recorded in constant 2023 USD.

Figure A5.51: China's overseas lending commitments by creditor category in high-income countries

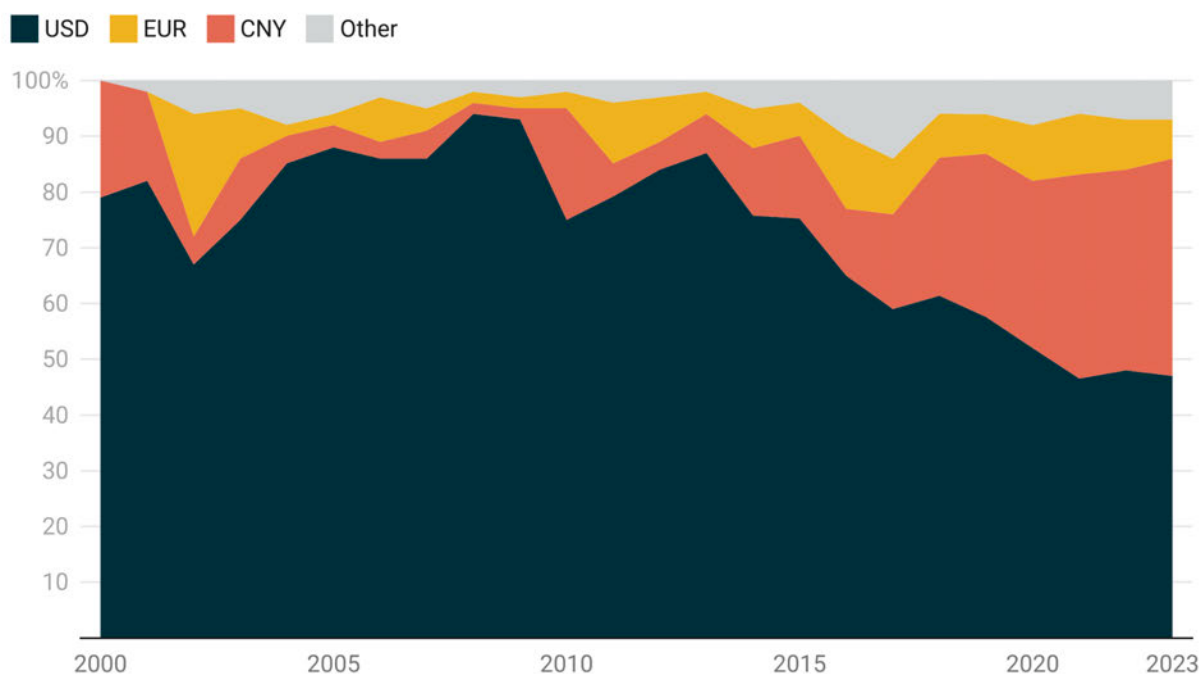
Annual lending commitments, constant 2023 USD



Notes: This figure presents annual lending commitments from different groupings of Chinese state-owned creditors to high-income countries (HICs) from 2000-2023. Amounts are recorded in constant 2023 USD. The "Other" category is below \$0.01 billion USD on average per year in China's portfolio on average per year. It is included for completeness but not visible in the chart.

Figure A5.52: Decomposition of China's overseas lending portfolio by currency of denomination

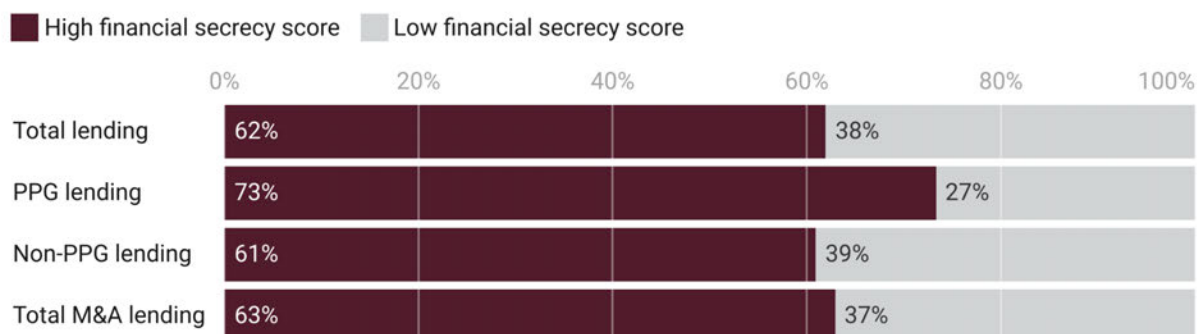
Share of loan commitments, constant 2023 USD



Notes: This figure decomposes China's overseas lending portfolio between 2000 and 2023 by the currency of denomination. The "Other" category includes all other currencies of denomination, including GBP, and local currencies.

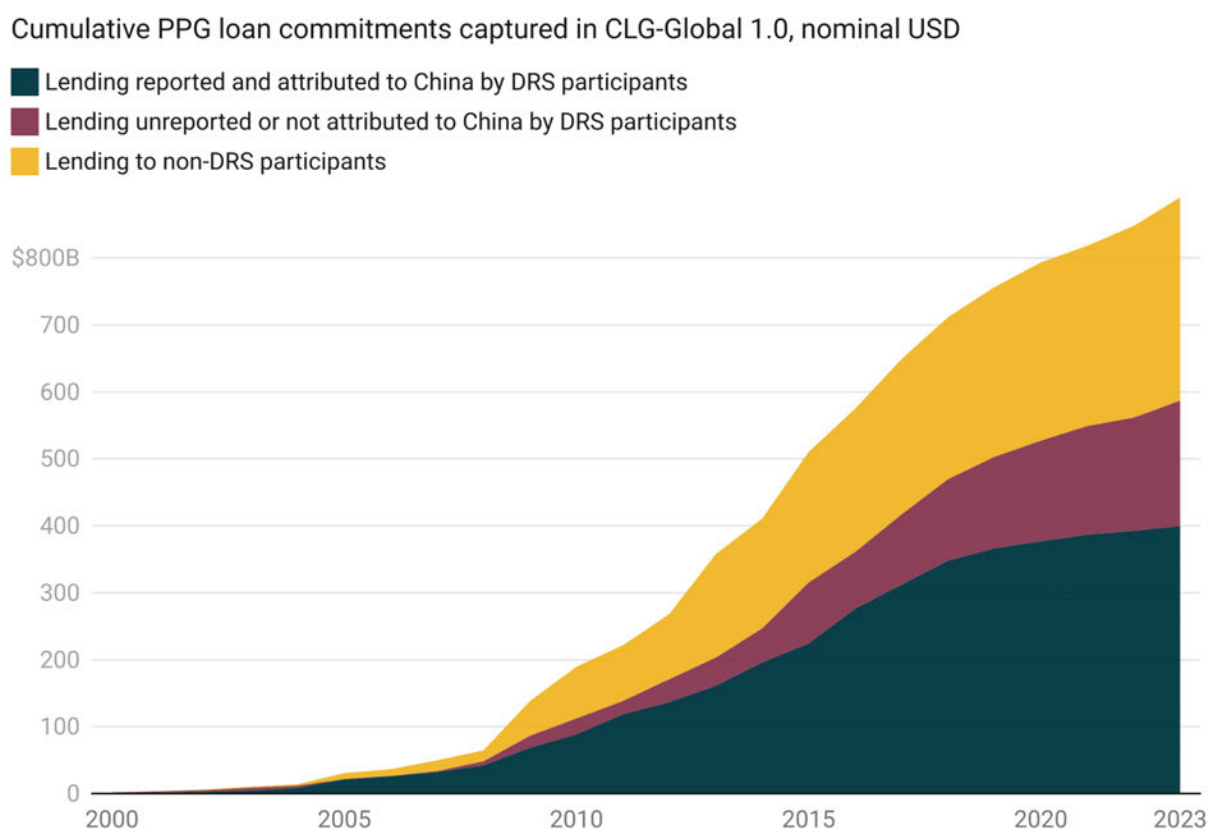
Figure A5.53: Cumulative share of China's offshore lending by financial secrecy of borrower, 2000-2023

Percentage of cumulative loan commitments, constant 2023 USD



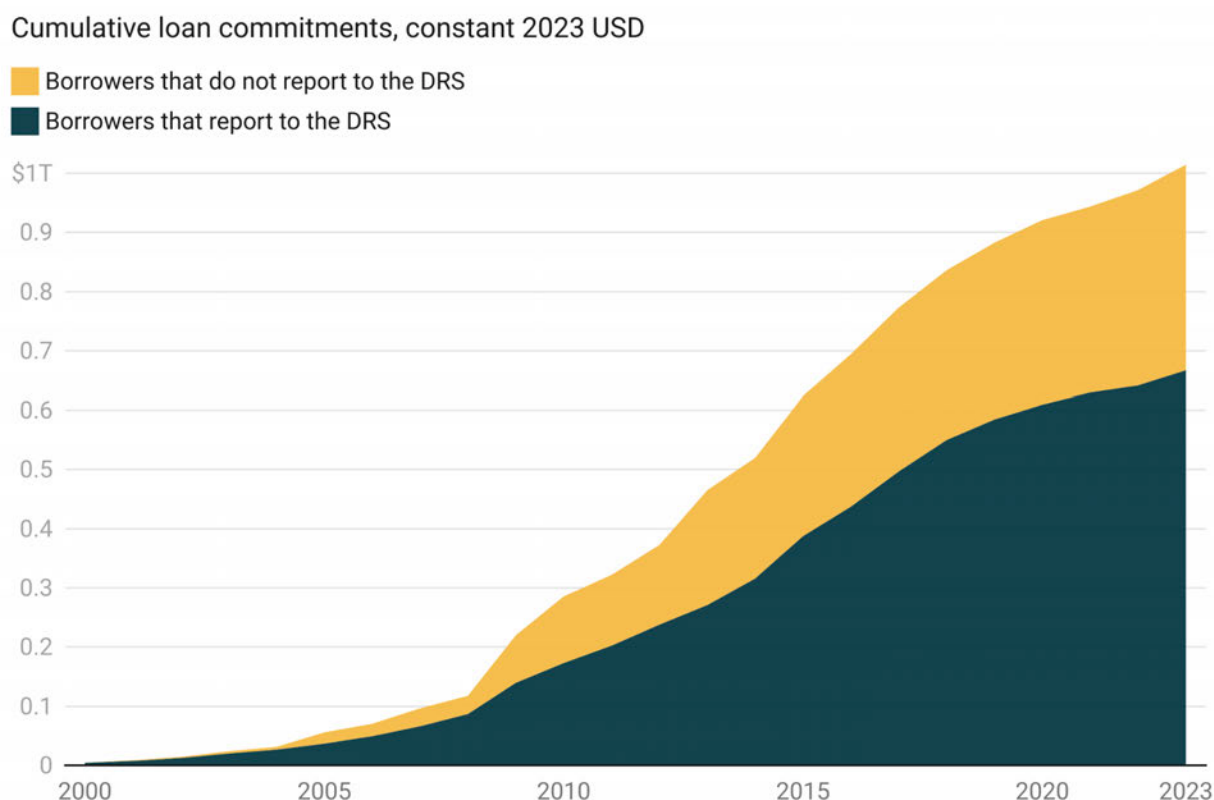
Notes: This figure presents the cumulative share of China's overseas (PPG, non-PPG, and M&A) loan commitments to offshore borrowers between 2000 and 2023 allocated across two cohorts: jurisdictions with high levels of financial secrecy and low levels of financial secrecy. The jurisdictions are based on the borrower's country of legal incorporation, as identified in the *DRA_Country_of_Inc* variable from the 1.0 version of AidData's CLG-Global Dataset. The cohort classification is based upon the 2022 Financial Secrecy scores published by the Tax Justice Network, with scores above the median categorized as high secrecy and those below the median as low secrecy. To isolate cases of financial conduit use (i.e. offshore borrowers), the analysis excludes all cases in which the borrower's country of incorporation was the same jurisdiction where the financed project/activity took place.

Figure A5.54: China's cumulative PPG lending portfolio according to DRS reporting status of borrowers (nominal USD)



Notes: This figure compares China's cumulative PPG lending commitments between 2000 and 2023 (in nominal USD) across three categories. It excludes short-term rollover facilities to refinance maturing debts. The blue segment represents "private" and "official" lending from Chinese creditors, as recorded in the World Bank's Debtor Reporting System (DRS) by 114 reporting countries (in the 2024 IDS data (that were initially published in December 2024 and later updated in February 2025). PPG loan commitments from "private" and "official" creditors are included because nearly all creditors that the DRS assigns to these categories are classified as "official" creditors by AidData. PPG loan commitments are excluded from DRS-reporting countries in all years when they maintained diplomatic relations with the ROC. The maroon segment represents additional PPG loan commitments identified in the 1.0 version of AidData's CLG-Global Dataset for the same 114 DRS-reporting countries over the same 24-year period. These commitments should have been reported to the DRS or they were extended through an affiliate creditor located outside mainland China (see Table 4.1). The yellow segment represents additional PPG loan commitments captured by the 1.0 version of AidData's CLG-Global Dataset in countries that do not report to the DRS.

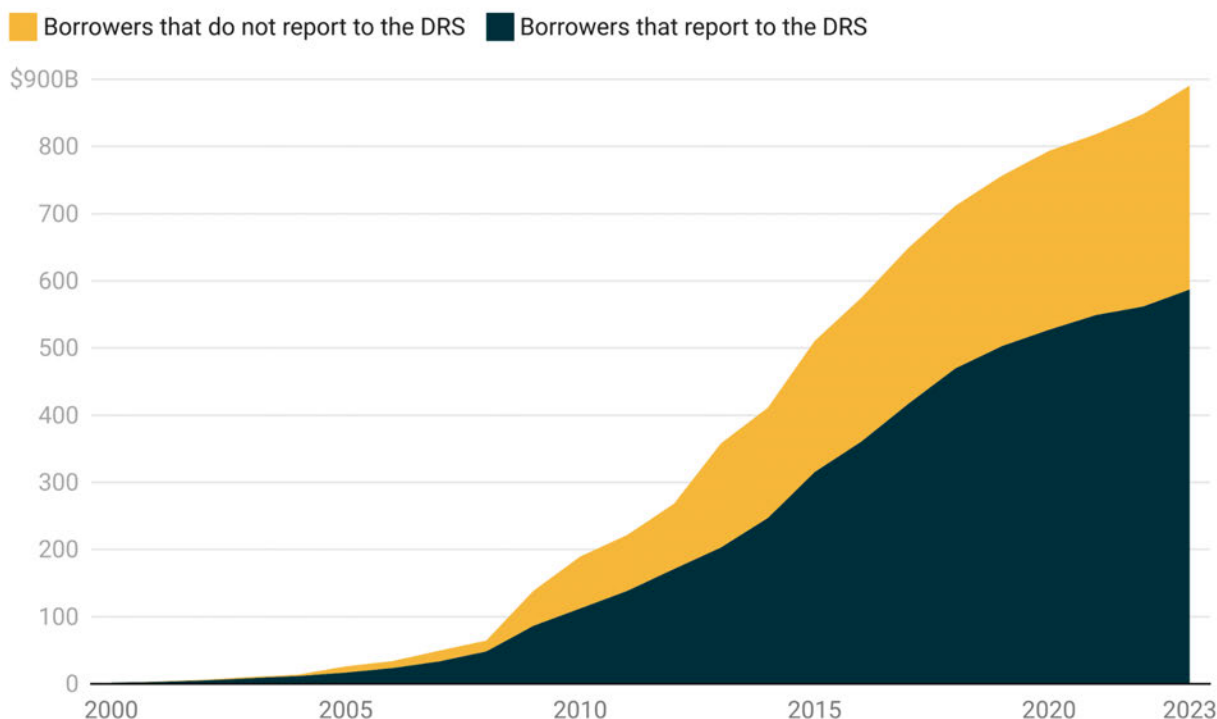
Figure A5.55: China's cumulative PPG lending portfolio according to DRS reporting status of borrowers (constant 2023 USD)



Notes: This figure captures cumulative PPG loan commitments from Chinese state-owned creditors (measured in constant 2023 USD) between 2000 and 2023 in the 1.0 version of AidData's CLG-Global dataset. It is disaggregated by the DRS reporting status of borrowing countries. The blue segment represents loan commitments to borrowing countries that report to DRS, while the yellow segment represents loan commitments to borrowing countries that do not report to DRS. The figure excludes short-term rollover facilities to refinance maturing debts. AidData assigns each loan record as one of six "level of public liability" categories, three of which align with the International Debt Statistics (IDS) definition of PPG used for the DRS reporting: (1) Central government debt, (2) Central government-guaranteed debt, and (3) Other public sector debt. This crosswalk facilitates comparisons between China's official sector lending commitments to PPG borrowers, as recorded in the IDS and the 1.0 version of AidData's CLG-Global Dataset.

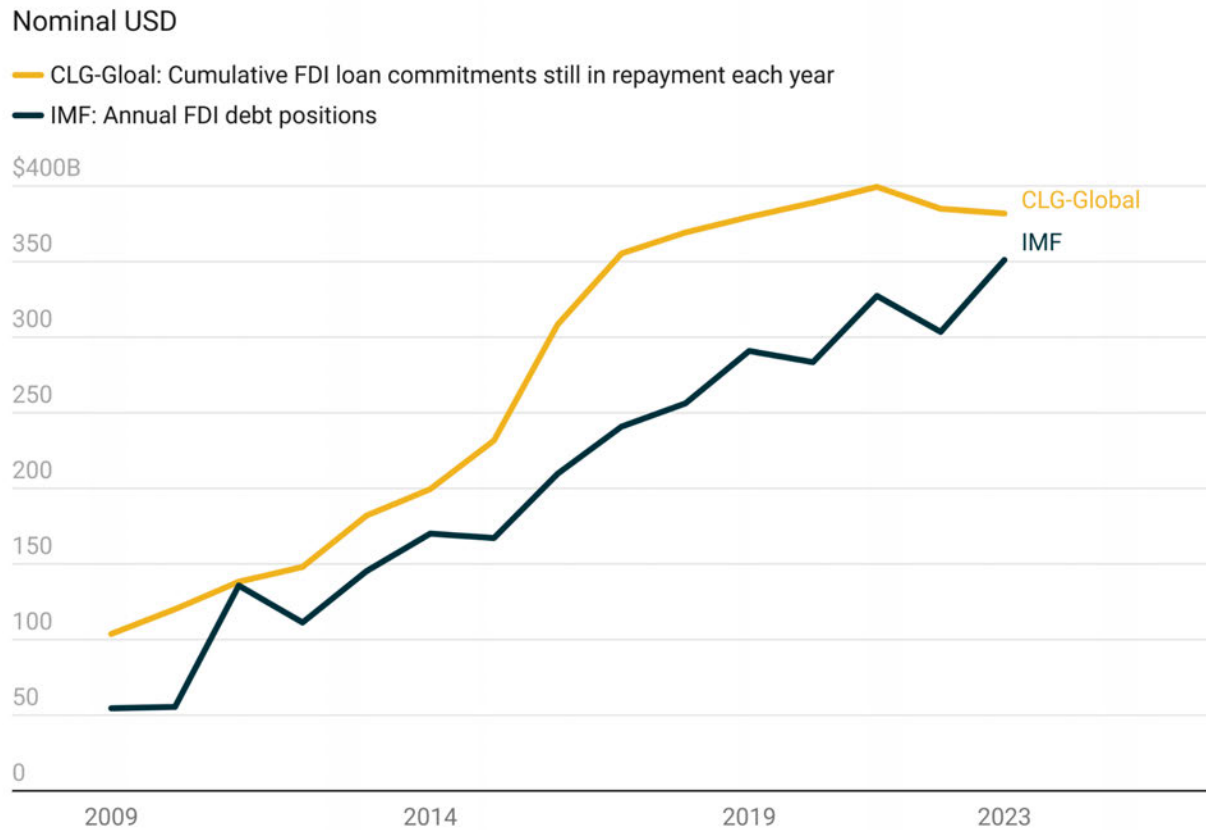
Figure A5.56: China's cumulative PPG lending portfolio according to DRS reporting status of borrowers (nominal USD)

Cumulative PPG loan commitments captured in CLG-Global 1.0, nominal USD



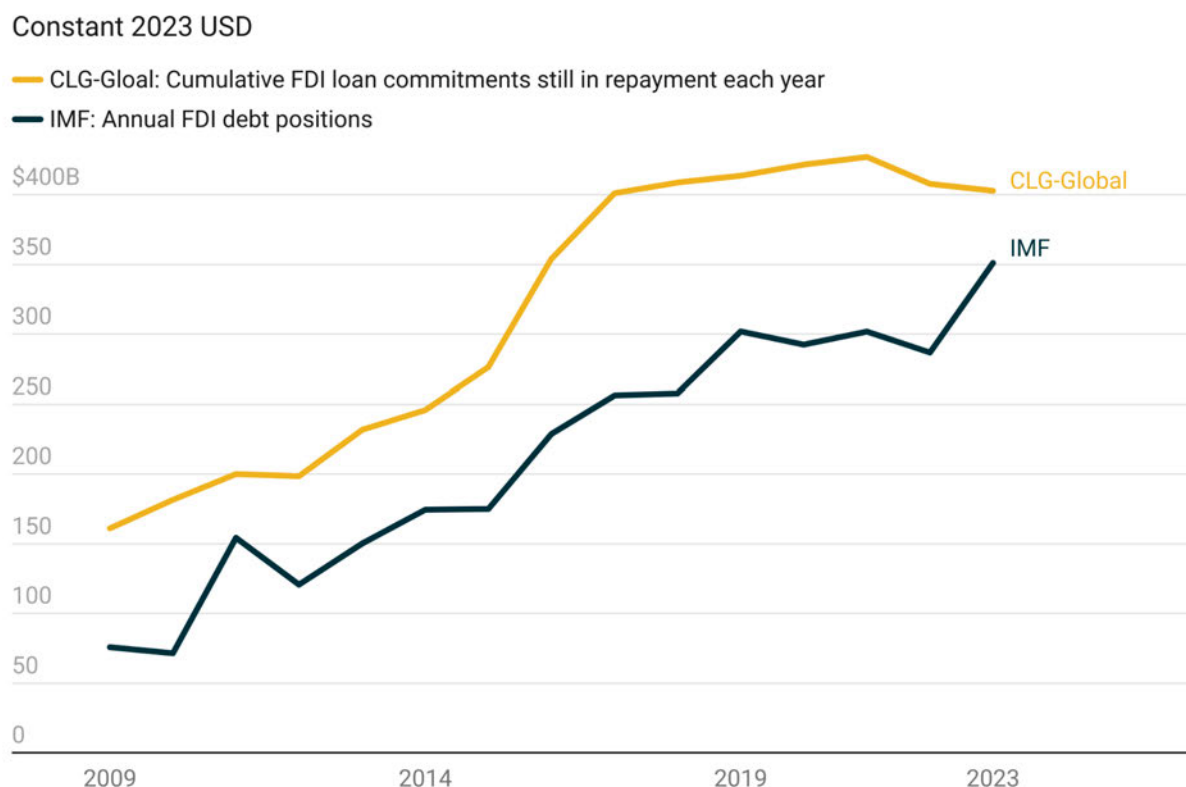
Notes: This figure captures cumulative PPG loan commitments from Chinese state-owned creditors (measured in nominal USD) between 2000 and 2023 in the 1.0 version of AidData's CLG-Global dataset. It is disaggregated by the DRS reporting status of borrowing countries. The blue segment represents loan commitments to borrowing countries that report to DRS, while the yellow segment represents loan commitments to borrowing countries that do not report to DRS. The figure excludes short-term rollover facilities to refinance maturing debts. AidData assigns each loan record as one of six "level of public liability" categories, three of which align with the International Debt Statistics (IDS) definition of PPG used for the DRS reporting: (1) Central government debt, (2) Central government-guaranteed debt, and (3) Other public sector debt. This crosswalk facilitates comparisons between China's official sector lending commitments to PPG borrowers, as recorded in the IDS and the 1.0 version of AidData's CLG-Global Dataset.

Figure A5.57: Cumulative stock of Chinese FDI lending commitments from AidData versus total inward Chinese FDI debt positions from IMF (nominal)



Notes: This figure presents two series from 2009 to 2023, measured in billions of nominal USD. The green line ("CLG-Global") represents cumulative Chinese FDI loan commitments in the 1.0 version of AidData's CLG-Global Dataset. The yellow line ("IMF") represents inward direct investment positions via debt instruments from entities in mainland China, drawn from the IMF's Direct Investment Positions by Counterpart Economy Dataset and reported on a stock basis.

Figure A5.58: Comparison of cumulative Chinese FDI lending from AidData and IMF-reported FDI debt positions, 2009-2023



Notes: This figure presents two series from 2009 to 2023, measured in billions of constant 2023 USD. The yellow line (“CLG-Global”) represents cumulative Chinese FDI loan commitments (still in their originally scheduled repayment periods) in each year. It is drawn from the 1.0 version of AidData’s CLG-Global Dataset. The dark blue line (“IMF”) represents inward direct investment positions via debt instruments from entities in mainland China, drawn from the IMF’s Direct Investment Positions by Counterpart Economy Dataset and reported on a stock basis.⁴¹⁴

In Figure A5.58, we benchmark AidData’s Chinese FDI lending data against a similar measure from the IMF. The IMF’s Direct Investment Positions by Counterpart Economy Dataset provides a bilateral measure of gross liabilities for inward direct investment positions via debt instruments between 2009 and 2023.⁴¹⁵ This measure captures all outstanding debt obligations owed by resident companies to foreign direct investors from mainland China. The 1.0 version of AidData’s CLG-Global Dataset provides a

⁴¹⁴ We exclude inbound FDI debt from Hong Kong and Macau in Figure A5.58 in the Appendix and Figure 4.6, but include inbound FDI debt from Hong Kong, Macau, and mainland China in Figure A5.57 in the appendix.

⁴¹⁵ FDI consists of two primary components, which are counted as either assets or liabilities in a country’s International Investment Position (IIP): equity capital and debt investments (including intercompany loans, debt securities, and trade credits).

similar but not identical measure: the cumulative stock of China's outbound FDI loan commitments.

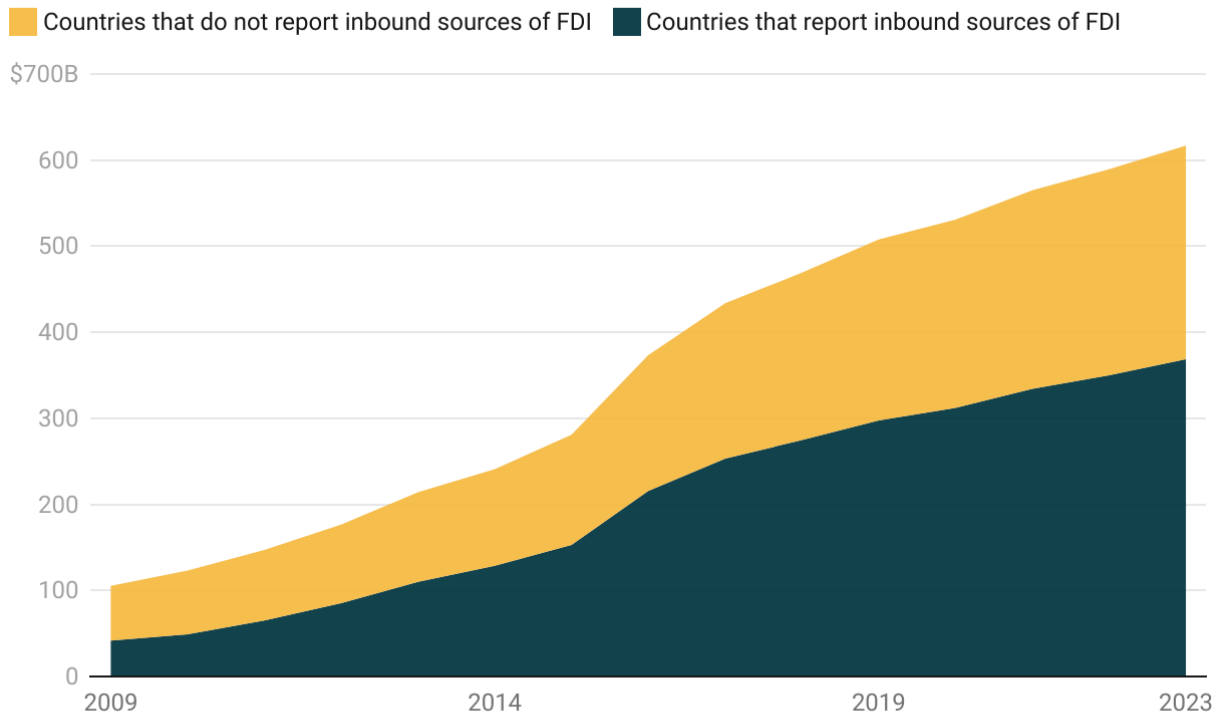
Figure A5.58 demonstrates that the IMF's measure increases from \$76 billion in 2009 to \$351 billion in 2023.⁴¹⁶ AidData's measure increases from \$161 billion in 2009 to \$403 billion in 2023, if one only includes those loans within their originally scheduled repayment periods in the cumulative tally.⁴¹⁷

⁴¹⁶ AidData's estimates are also considerably higher than those published by SAFE, which publishes IIP data on China's *outward* direct investment positions via debt instruments (as an external financial asset under the "direct investment" category and "debt instruments" subcategory). Its 2023 tally is \$354 billion (SAFE 2025). When one recalculates the tally with BOP data from SAFE to expunge the effect of valuation changes using the Horn et al. (2021) approach, it increases to \$390 billion. See Table 4.1 for more information on the differences between the IIP and BOP data from SAFE and the CLG-Global Dataset.

⁴¹⁷ With the FDI_Loan indicator in the 1.0 version of the CLG-Global Dataset, AidData's measure identifies cumulative loan commitments from Chinese state-owned entities for greenfield and brownfield FDI projects/activities in LICs, MICs, and HICs (excluding Macao and Hong Kong). This measure does not capture disbursements, repayments, or amounts outstanding under such loan commitments. Nor does AidData measure capture debt securities, which are included in the IMF's measure of outstanding debt obligations owed by resident companies to foreign direct investors from mainland China. To construct a more comparable measure of FDI lending over time, we identify all FDI loan commitments captured in the 1.0 version of the CLG-Global Dataset that were still in their originally scheduled repayment periods in each year between 2009 and 2023. The final (originally scheduled) repayment year for each loan is estimated based on its commitment date and its known or imputed maturity length, with missing maturities imputed using the average observed maturity of FDI loans in the dataset. For each year, we then calculate the cumulative stock of China's overseas FDI lending commitments by including all loans with final repayment years equal to or later than that year.

Figure A5.59: China's FDI Lending portfolio according to IMF inbound sources of FDI reporting status (nominal)

Cumulative FDI loan commitments from CLG-Global 1.0, nominal USD



Notes: This figure represents cumulative Chinese FDI loan commitments (measured in nominal USD) in the 1.0 version of AidData's CLG-Global dataset. It is disaggregated into two cohorts: (1) countries that report inbound sources of FDI to the IMF's Direct Investment Positions by Counterpart Economy Dataset, and (2) countries that do not. See Section A3.6 of the appendix for details on how loans are classified as FDI.

Section A6: Additional reference tables

Table A6.1: Country classifications

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Afghanistan	2000-2023 ODA eligible	2013	-	2000-2023 Low income	-	-
Albania	2000-2023 ODA eligible	2017	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Algeria	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2021 Upper-middle income, 2022-2023 Lower-middle income	-	High Financial Secrecy Score
American Samoa	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	High Financial Secrecy Score
Andorra	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Angola	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	High Financial Secrecy Score
Antigua and Barbuda	2000-2021 ODA eligible, 2022-2023 ODA ineligible	2018	1976	2000-2021 Upper-middle income, 2022-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Argentina	2000-2023 ODA eligible	2022	-	2000-2023 Upper-middle income	-	Low Financial Secrecy Score
Armenia	2000-2023 ODA eligible	2015	-	2000-2004 Low income, 2005-2021 Lower-middle income, 2022-2023 Upper-middle income	-	-
Aruba	2000-2023 ODA ineligible	No	1995	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Australia	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	Low Financial Secrecy Score
Austria	2000-2023 ODA ineligible	2018	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Azerbaijan	2000-2023 ODA eligible	2015	-	2000-2004 Low income, 2005-2010 Lower-middle income, 2011-2023 Upper-middle income	-	-
Bahamas	2000-2023 ODA ineligible	No	1976	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Bahrain	2000-2004 ODA eligible, 2005-2023 ODA ineligible	2018	1995	2000-2004 Upper-middle income, 2005-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Bangladesh	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	High Financial Secrecy Score
Barbados	2000-2010 ODA eligible, 2011-2023 ODA ineligible	2019	1976	2000-2010 Upper-middle income, 2011-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Belarus	2000-2004 ODA ineligible, 2005-2023 ODA eligible	2013	-	2000-2004 High income, 2005-2007 Lower-middle income, 2008-2023 Upper-middle income	-	-
Belgium	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Belize	2000-2023 ODA eligible	No	-	2000-2004 Lower-middle income, 2005-2010 Upper-middle income, 2011-2013 Lower-middle income, 2014-2021 Upper-middle income, 2022-2023 Lower-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Benin	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-
Bermuda	2000-2023 ODA ineligible	No	1976	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Bhutan	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Bolivia	2000-2023 ODA eligible	2018	-	2000-2023 Lower-middle income	-	High Financial Secrecy Score
Bosnia and Herzegovina	2000-2023 ODA eligible	2017	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	-
Botswana	2000-2023 ODA eligible	2021	-	2000-2023 Upper-middle income	High Financial Secrecy Score	Low Financial Secrecy Score
Brazil	2000-2023 ODA eligible	No	-	2000-2004 Upper-middle income, 2005-2007 Lower-middle income, 2008-2023 Upper-middle income	-	Low Financial Secrecy Score
British Virgin	2000-2023 ODA	No	1976	2000-2023 High income	High Financial	High Financial

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Islands	ineligible				Secrecy Score	Secrecy Score
Brunei Darussalam	2000-2023 ODA ineligible	2018	-	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Bulgaria	2000-2023 ODA ineligible	2015	-	2000-2023 High income	-	Low Financial Secrecy Score
Burkina Faso	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Burundi	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Cabo Verde	2000-2023 ODA eligible	2018	-	2000-2006 Low income, 2007-2023 Lower-middle income	-	-
Cambodia	2000-2023 ODA eligible	2013	-	2000-2023 Low income	-	-
Cameroon	2000-2023 ODA eligible	2015	-	2000-2007 Low income, 2008-2023 Lower-middle income	-	High Financial Secrecy Score
Canada	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Cayman Islands	2000-2023 ODA ineligible	No	1976	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Central African Republic	2000-2023 ODA eligible	2021	-	2000-2023 Low income	-	-
Chad	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Chile	2000-2017 ODA eligible, 2018-2023 ODA ineligible	2018	-	2000-2017 Upper-middle income, 2018-2023 High income	-	Low Financial Secrecy Score
Colombia	2000-2023 ODA eligible	2025	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Comoros	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-
Congo	2000-2023 ODA eligible	2021	-	2000-2007 Low income, 2008-2023 Lower-middle income	-	-
Cook Islands	2000-2019 ODA eligible, 2020-2023 ODA ineligible	2018	-	2000-2019 Upper-middle income, 2020-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Costa Rica	2000-2023 ODA	2018	-	2000-2002 Lower-middle	Low Financial	Low Financial Secrecy

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
	eligible			income, 2003-2023 Upper-middle income	Secrecy Score	Score
Cote D'Ivoire	2000-2023 ODA eligible	2017	-	2000-2010 Low income, 2011-2023 Lower-middle income	-	-
Croatia	2000-2010 ODA eligible, 2011-2023 ODA ineligible	2017	-	2000-2010 Upper-middle income, 2011-2023 High income	-	Low Financial Secrecy Score
Cuba	2000-2023 ODA eligible	2019	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	-
Curacao	2000-2023 ODA ineligible	No	1976	2000-2023 High income	-	High Financial Secrecy Score
Cyprus	2000-2023 ODA ineligible	2019	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Czech Republic	2000-2023 ODA ineligible	2015	-	2000-2023 High income	-	Low Financial Secrecy Score
Democratic People's Republic of Korea	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Democratic Republic of the Congo	2000-2023 ODA eligible	2021	-	2000-2023 Low income	-	-
Denmark	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Djibouti	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Dominica	2000-2023 ODA eligible	2018	-	2000-2002 Lower-middle income, 2003-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Dominican Republic	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Ecuador	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Egypt	2000-2023 ODA eligible	2016	-	2000-2023 Lower-middle income	-	High Financial Secrecy Score
El Salvador	2000-2023 ODA eligible	2018	-	2000-2023 Lower-middle income	-	Low Financial Secrecy Score
Equatorial	2000-2023 ODA	2019	-	2000-2017 Low income,	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Guinea	eligible			2018-2023 Upper-middle income		
Eritrea	2000-2023 ODA eligible	2021	-	2000-2023 Low income	-	-
Estonia	2000-2023 ODA ineligible	2017	-	2000-2023 High income	-	Low Financial Secrecy Score
Eswatini	2000-2023 ODA eligible	No	-	2000-2023 Lower-middle income	-	-
Ethiopia	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Faroe Islands	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
Fiji	2000-2023 ODA eligible	2018	-	2000-2007 Lower-middle income, 2008-2010 Upper-middle income, 2011-2013 Lower-middle income, 2014-2023 Upper-middle income	-	High Financial Secrecy Score
Finland	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	Low Financial Secrecy Score
France	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
French Polynesia	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
Gabon	2000-2023 ODA eligible	2018	-	2000-2023 Upper-middle income	-	-
Gambia	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	High Financial Secrecy Score
Georgia	2000-2023 ODA eligible	2016	-	2000-2002 Lower-middle income, 2003-2004 Low income, 2005-2021 Lower-middle income, 2022-2023 Upper-middle income	-	-
Germany	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Ghana	2000-2023 ODA eligible	2018	-	2000-2010 Low income, 2011-2023 Lower-middle income	High Financial Secrecy Score	Low Financial Secrecy Score
Gibraltar	2000-2023 ODA ineligible	No	2003	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Greece	2000-2023 ODA ineligible	2018	-	2000-2023 High income	-	Low Financial Secrecy Score
Greenland	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
Grenada	2000-2023 ODA	2018	-	2000-2023 Upper-middle	High Financial	High Financial

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
	eligible			income	Secrecy Score	Secrecy Score
Guam	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	High Financial Secrecy Score
Guatemala	2000-2023 ODA eligible	No	-	2000-2021 Lower-middle income, 2022-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Guernsey	2000-2023 ODA ineligible	No	2002	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Guinea	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Guinea-Bissau	2000-2023 ODA eligible	2021	-	2000-2023 Low income	-	-
Guyana	2000-2023 ODA eligible	2018	-	2000-2017 Lower-middle income, 2018-2023 Upper-middle income	-	-
Haiti	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Honduras	2000-2023 ODA eligible	2023	-	2000-2002 Low income, 2003-2023 Lower-middle income	-	-
Hungary	2000-2023 ODA ineligible	2015	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Iceland	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	Low Financial Secrecy Score
India	2000-2023 ODA eligible	No	-	2000-2007 Low income, 2008-2023 Lower-middle income	Low Financial Secrecy Score	Low Financial Secrecy Score
Indonesia	2000-2023 ODA eligible	2015	-	2000-2004 Low income, 2005-2023 Lower-middle income	-	Low Financial Secrecy Score
Iran	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2021 Upper-middle income, 2022-2023 Lower-middle income	-	-
Iraq	2000-2023 ODA eligible	2015	-	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	-	-
Ireland	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Isle of Man	2000-2023 ODA ineligible	No	2002	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Israel	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Italy	2000-2023 ODA ineligible	2019-2023	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Jamaica	2000-2023 ODA eligible	2019	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	-
Japan	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Jersey	2000-2023 ODA ineligible	No	2002	2000-2023 High income	High Financial Secrecy Score	Low Financial Secrecy Score
Jordan	2000-2023 ODA eligible	2023	-	2000-2010 Lower-middle income, 2011-2017 Upper-middle income, 2018-2021 Lower-middle income, 2022-2023 Upper-middle income	-	High Financial Secrecy Score
Kazakhstan	2000-2023 ODA eligible	2015	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	Low Financial Secrecy Score
Kenya	2000-2023 ODA eligible	2017	-	2000-2017 Low income, 2018-2023 Lower-middle income	-	High Financial Secrecy Score
Kiribati	2000-2023 ODA eligible	2020	-	2000-2023 Low income	-	-
Korea	2000-2023 ODA ineligible	2018	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Kosovo	2000-2023 ODA eligible	No	-	2000-2021 Lower-middle income, 2022-2023 Upper-middle income	-	-
Kuwait	2000-2023 ODA ineligible	2018	-	2000-2023 High income	-	High Financial Secrecy Score
Kyrgyz Republic	2000-2023 ODA eligible	2013	-	2000-2013 Low income, 2014-2023 Lower-middle income	-	-
Lao People's Democratic	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Republic						
Latvia	2000-2023 ODA ineligible	2016	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Lebanon	2000-2023 ODA eligible	2017	1976	2000-2023 Upper-middle income	High Financial Secrecy Score	Low Financial Secrecy Score
Lesotho	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-
Liberia	2000-2023 ODA eligible	2019	1976-2002	2000-2023 Low income	High Financial Secrecy Score	High Financial Secrecy Score
Libya	2000-2004 ODA ineligible, 2005-2023 ODA eligible	2018	-	2000-2004 High income, 2005-2023 Upper-middle income	-	-
Liechtenstein	2000-2023 ODA ineligible	No	-	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Lithuania	2000-2023 ODA ineligible	2017	-	2000-2023 High income	-	Low Financial Secrecy Score
Luxembourg	2000-2023 ODA ineligible	2019	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Madagascar	2000-2023 ODA eligible	2017	-	2000-2023 Low income	-	-
Malawi	2000-2023 ODA eligible	2022	-	2000-2023 Low income	-	-
Malaysia	2000-2023 ODA eligible	2017	-	2000-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Maldives	2000-2023 ODA eligible	2017	-	2000-2010 Low income, 2011-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Mali	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-
Malta	2000-2002 ODA eligible, 2003-2023 ODA ineligible	2018	-	2000-2002 Upper-middle income, 2003-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Marshall Islands	2000-2023 ODA eligible	No	-	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Mauritania	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Mauritius	2000-2023 ODA eligible	No	2003	2000-2023 Upper-middle income	Low Financial Secrecy Score	High Financial Secrecy Score
Mexico	2000-2023 ODA eligible	No	-	2000-2023 Upper-middle income	-	Low Financial Secrecy Score

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Micronesia	2000-2023 ODA eligible	2018	-	2000-2023 Lower-middle income	-	-
Moldova	2000-2023 ODA eligible	2013	-	2000-2007 Low income, 2008-2021 Lower-middle income, 2022-2023 Upper-middle income	-	-
Monaco	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Mongolia	2000-2023 ODA eligible	2013	-	2000-2007 Low income, 2008-2023 Lower-middle income	-	-
Montenegro	2000-2023 ODA eligible	2017	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	Low Financial Secrecy Score
Morocco	2000-2023 ODA eligible	2017	-	2000-2023 Lower-middle income	-	High Financial Secrecy Score
Mozambique	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Myanmar	2000-2023 ODA eligible	2016	-	2000-2023 Low income	-	-
Namibia	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	High Financial Secrecy Score
Nauru	2000-2023 ODA eligible	No	-	2000-2023 Upper-middle income	High Financial Secrecy Score	Low Financial Secrecy Score
Nepal	2000-2023 ODA eligible	2017	-	2000-2023 Low income	-	-
Netherlands	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
New Caledonia	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
New Zealand	2000-2023 ODA ineligible	2017	-	2000-2023 High income	-	Low Financial Secrecy Score
Nicaragua	2000-2023 ODA eligible	2022	-	2000-2007 Low income, 2008-2023 Lower-middle income	-	-
Niger	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-
Nigeria	2000-2023 ODA eligible	2018	-	2000-2010 Low income, 2011-2023 Lower-middle income	-	Low Financial Secrecy Score
Niue	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
North Macedonia	2000-2023 ODA eligible	2013	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Northern Mariana Islands	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
Norway	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	Low Financial Secrecy Score
Oman	2000-2010 ODA eligible, 2011-2023 ODA ineligible	2018	-	2000-2010 Upper-middle income, 2011-2023 High income	-	High Financial Secrecy Score
Pakistan	2000-2023 ODA eligible	2013	-	2000-2010 Low income, 2011-2023 Lower-middle income	-	High Financial Secrecy Score
Palau	2000-2023 ODA eligible	No	-	2000-2023 Upper-middle income	-	-
Panama	2000-2023 ODA eligible	2017-2025	1976	2000-2023 Upper-middle income	Low Financial Secrecy Score	High Financial Secrecy Score
Papua New Guinea	2000-2023 ODA eligible	2016	-	2000-2002 Lower-middle income, 2003-2010 Low income, 2011-2023 Lower-middle income	-	-
Paraguay	2000-2023 ODA eligible	No	-	2000-2017 Lower-middle income, 2018-2023 Upper-middle income	-	High Financial Secrecy Score
Peru	2000-2023 ODA eligible	2019	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	Low Financial Secrecy Score
Philippines	2000-2023 ODA eligible	2017	-	2000-2023 Lower-middle income	Low Financial Secrecy Score	High Financial Secrecy Score
Poland	2000-2023 ODA ineligible	2015	-	2000-2023 High income	-	Low Financial Secrecy Score
Portugal	2000-2023 ODA ineligible	2018	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Puerto Rico	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	High Financial Secrecy Score
Qatar	2000-2023 ODA ineligible	2019	-	2000-2023 High income	-	High Financial Secrecy Score
Romania	2000-2023 ODA ineligible	2015	-	2000-2023 High income	-	Low Financial Secrecy Score
Russia	2000-2023 ODA ineligible	2017	-	2000-2023 High income	-	Low Financial Secrecy Score
Rwanda	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	High Financial Secrecy Score
Saint Kitts and	2000-2013 ODA	No	1976	2000-2013 Upper-middle	High Financial	High Financial

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Nevis	eligible, 2014-2023 ODA ineligible			income, 2014-2023 High income	Secrecy Score	Secrecy Score
Saint Lucia	2000-2023 ODA eligible	No	-	2000-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Saint Martin (French part)	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	-
Saint Vincent and the Grenadines	2000-2023 ODA eligible	No	-	2000-2004 Lower-middle income, 2005-2023 Upper-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Samoa	2000-2023 ODA eligible	2018	2006	2000-2013 Low income, 2014-2017 Lower-middle income, 2018-2021 Upper-middle income, 2022-2023 Lower-middle income	High Financial Secrecy Score	High Financial Secrecy Score
San Marino	2000-2023 ODA ineligible	No	-	2000-2023 High income	High Financial Secrecy Score	Low Financial Secrecy Score
Sao Tome and Principe	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Saudi Arabia	2000-2007 ODA eligible, 2008-2023 ODA ineligible	2018	-	2000-2007 Upper-middle income, 2008-2023 High income	-	High Financial Secrecy Score
Senegal	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Serbia	2000-2023 ODA eligible	2015	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	Low Financial Secrecy Score
Seychelles	2000-2017 ODA eligible, 2018-2023 ODA ineligible	2018	-	2000-2017 Upper-middle income, 2018-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Sierra Leone	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Singapore	2000-2023 ODA ineligible	2018	1976	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Sint Maarten (Dutch part)	2000-2023 ODA ineligible	No	1976	2000-2023 High income	-	-
Slovak Republic	2000-2023 ODA ineligible	2015	-	2000-2023 High income	-	Low Financial Secrecy Score
Slovenia	2000-2002 ODA eligible, 2003-2023 ODA ineligible	2017	-	2000-2002 Upper-middle income, 2003-2023 High income	-	Low Financial Secrecy Score
Solomon Islands	2000-2023 ODA eligible	2019	-	2000-2023 Low income	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Somalia	2000-2023 ODA eligible	2015	-	2000-2023 Low income	-	-
South Africa	2000-2023 ODA eligible	2015	-	2000-2004 Lower-middle income, 2005-2023 Upper-middle income	-	Low Financial Secrecy Score
South Sudan	2000-2010 N/A, 2011-2023 ODA eligible	2018	-	2000-2010 N/A, 2011-2023 Low income	-	-
Spain	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
Sri Lanka	2000-2023 ODA eligible	2017	-	2000-2023 Lower-middle income	-	High Financial Secrecy Score
Sudan	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Suriname	2000-2023 ODA eligible	2018	-	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	-	-
Sweden	2000-2023 ODA ineligible	No	-	2000-2023 High income	-	Low Financial Secrecy Score
Switzerland	2000-2023 ODA ineligible	No	-	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Syrian Arab Republic	2000-2023 ODA eligible	2022	-	2000-2021 Lower-middle income, 2022-2023 Low income	-	-
Tajikistan	2000-2023 ODA eligible	2018	-	2000-2017 Low income, 2018-2023 Lower-middle income	-	-
Tanzania	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	High Financial Secrecy Score
Thailand	2000-2023 ODA eligible	2014	-	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	-	High Financial Secrecy Score
Timor-Leste	2000-2023 ODA eligible	2017	-	2000-2023 Low income	-	-
Togo	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Tonga	2000-2023 ODA eligible	2018	-	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Trinidad and Tobago	2000-2010 ODA eligible, 2011-2023 ODA ineligible	2018	-	2000-2010 Upper-middle income, 2011-2023 High income	-	High Financial Secrecy Score
Tunisia	2000-2023 ODA eligible	2018	-	2000-2010 Lower-middle income, 2011-2017 Upper-middle income, 2018-2023 Lower-middle income	-	Low Financial Secrecy Score
Turkey	2000-2023 ODA eligible	2015	-	2000-2002 Upper-middle income, 2003-2004 Lower-middle income, 2005-2023 Upper-middle income	-	Low Financial Secrecy Score
Turkmenistan	2000-2023 ODA eligible	2023	-	2000-2002 Low income, 2003-2013 Lower-middle income, 2014-2023 Upper-middle income	-	-
Turks and Caicos Islands	2000-2007 ODA eligible, 2008-2023 ODA ineligible	No	-	2000-2007 Upper-middle income, 2008-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
Tuvalu	2000-2023 ODA eligible	No	-	2000-2023 Low income	-	-
Uganda	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Ukraine	2000-2004 ODA ineligible, 2005-2023 ODA eligible	2017	-	2000-2004 High income, 2005-2023 Lower-middle income	-	Low Financial Secrecy Score
United Arab Emirates	2000-2023 ODA ineligible	2018	-	2000-2023 High income	High Financial Secrecy Score	High Financial Secrecy Score
United Kingdom	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	Low Financial Secrecy Score
United States	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
United States Virgin Islands	2000-2023 ODA ineligible	No	-	2000-2023 High income	Low Financial Secrecy Score	High Financial Secrecy Score
Uruguay	2000-2017 ODA eligible, 2018-2023 ODA ineligible	2018	-	2000-2017 Upper-middle income, 2018-2023 High income	High Financial Secrecy Score	Low Financial Secrecy Score
Uzbekistan	2000-2023 ODA eligible	2015	-	2000-2002 Lower-middle income, 2003-2010 Low income, 2011-2023 Lower-middle income	-	-

Country	ODA eligibility	BRI participation	OFC listing start-end year	OECD ODA Income Classification	Financial Secrecy Score- Median 2011 Group	Financial Secrecy Score- Median 2022 Group
Vanuatu	2000-2023 ODA eligible	2018	1976	2000-2020 Low income, 2021-2023 Lower-middle income	High Financial Secrecy Score	High Financial Secrecy Score
Venezuela	2000-2023 ODA eligible	2018	-	2000-2023 Upper-middle income	-	High Financial Secrecy Score
Viet Nam	2000-2023 ODA eligible	2017	-	2000-2010 Low income, 2011-2023 Lower-middle income	-	High Financial Secrecy Score
West Bank and Gaza Strip	2000-2023 ODA eligible	2022	-	2000-2023 Lower-middle income	-	-
Yemen	2000-2023 ODA eligible	2017	-	2000-2023 Low income	-	-
Zambia	2000-2023 ODA eligible	2018	-	2000-2023 Low income	-	-
Zimbabwe	2000-2023 ODA eligible	2018	-	2000-2021 Low income, 2022-2023 Lower-middle income	-	-

This table provides an overview of the 217 countries that the 1.0 version of CLG-Global covers. OECD income classification and ODA eligibility come from the OECD-DAC historical list of ODA eligible countries. BRI entry year is based on information made available at Green Finance & Development Center, FISF Fudan University with additional supplemental research to fill in missing or unclear years.⁴¹⁸ Each country's financial secrecy score is based on the 2022 Financial Secrecy scores published by the Tax Justice Network, with scores above the median categorized as relatively high levels of secrecy and those below the median as relatively low levels of secrecy. Offshore Financial Centers (OFC) status is taken from a July 2022 working paper published by the Bank of International Settlements (BIS).⁴¹⁹

⁴¹⁸ See Christoph Nedopil (2025), "Countries of the Belt and Road Initiative," Shanghai: Green Finance & Development Center, FISF Fudan University, available at <https://greenfdc.org/countries-of-the-belt-and-road-initiative-bri>

⁴¹⁹ See Annex A table ("BIS's list of offshore centres") available at <https://www.bis.org/publ/work1035.pdf>

Table A6.2: Country reporting status and loan statistics in version 1.0 of CLG-GLocal

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Afghanistan	No	Yes	No	2	12	0	2957.737
Albania	No	Yes	Yes	2	10	92.00742	0
Algeria	No	Yes	Yes	4	23	105.1306	0
American Samoa	No	No	No	0	1	0	0
Andorra	No	No	No	0	1	0	0
Angola	No	Yes	No	275	34	65204.96	8355.891
Antigua and Barbuda	Yes	No	No	9	9	294.7885	0
Argentina	No	Yes	Yes	127	57	160961.1	5306.843
Armenia	No	Yes	Yes	1	8	25.873	0
Aruba	Yes	No	No	0	0	0	0
Australia	No	No	No	1110	70	1542.797	128892.6
Austria	No	No	Yes	9	11	0	437.207
Azerbaijan	No	Yes	No	20	16	289.9272	1277.056
Bahamas	Yes	No	No	6	11	128.954	3151.039
Bahrain	Yes	No	Yes	7	13	502.0745	274.7469
Bangladesh	No	Yes	Yes	67	31	17204.39	2753.915
Barbados	Yes	No	Yes	6	20	315.8927	2189.869
Belarus	No	Yes	Yes	57	23	11145.89	223.5877
Belgium	No	No	Yes	12	15	0	1718.496
Belize	No	Yes	No	0	0	0	0
Benin	No	Yes	No	22	27	1399.11	796.5039
Bermuda	Yes	No	No	31	15	0	6594.05
Bhutan	No	Yes	No	0	0	0	0
Bolivia	No	Yes	Yes	18	22	2204.828	5.230992
Bosnia and Herzegovina	No	Yes	Yes	9	15	1574.058	812.156
Botswana	No	Yes	Yes	12	27	1522.279	2000
Brazil	No	Yes	Yes	225	56	39213.4	24297.5
British Virgin Islands	Yes	No	No	0	0	0	0
Brunei Darussalam	No	No	No	7	19	0	1964.64
Bulgaria	No	No	Yes	14	16	895.7487	490.8222
Burkina Faso	No	Yes	No	4	13	273.994	0

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Burundi	No	Yes	No	5	14	78.47305	0
Cabo Verde	No	Yes	Yes	11	13	182.5629	0
Cambodia	No	Yes	No	154	68	6576.682	9759.561
Cameroon	No	Yes	No	51	29	6117.566	1493.99
Canada	No	No	Yes	102	51	329.9553	20995.97
Cayman Islands	Yes	No	No	4	2	0	522.6208
Central African Republic	No	Yes	No	9	19	245.7512	184.4283
Chad	No	Yes	No	13	23	1356.587	732.6791
Chile	No	No	No	56	25	206.4168	7372.889
Colombia	No	Yes	No	34	30	661.386	3047.306
Comoros	No	Yes	No	2	9	127.1193	0
Congo	No	Yes	No	52	25	8835.505	259.6697
Cook Islands	No	No	No	3	6	35.23721	0
Costa Rica	No	Yes	Yes	7	23	692.9616	0
Cote D'Ivoire	No	Yes	No	52	0	0	0
Croatia	No	No	Yes	2	9	20.64911	33.6294
Cuba	No	No	No	39	31	4314.002	65.37364
Curacao	Yes	No	No	0	2	0	0
Cyprus	No	No	Yes	2	7	0	557.1782
Czech Republic	No	No	Yes	23	9	0	2278.811
Democratic People's Republic of Korea	No	No	No	0	14	0	0
Democratic Republic of the Congo	No	Yes	No	112	36	9441.944	12698.32
Denmark	No	No	Yes	30	12	0	5704.069
Djibouti	No	Yes	No	15	20	1976.391	0
Dominica	No	Yes	No	2	15	53.20047	0
Dominican Republic	No	Yes	No	3	15	90.0101	144.3948
Ecuador	No	Yes	No	66	51	22679.44	2871.684
Egypt	No	Yes	No	66	40	31028.44	1149.357
El Salvador	No	Yes	Yes	6	12	0	122.019
Equatorial Guinea	No	No	No	41	23	9097.864	0
Eritrea	No	Yes	No	18	10	1234.131	182.6699
Estonia	No	No	Yes	0	2	0	0

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Eswatini	No	Yes	Yes	0	0	0	0
Ethiopia	No	Yes	No	86	44	17689.29	114.5271
Faroe Islands	No	No	No	0	0	0	0
Fiji	No	Yes	Yes	7	23	410.1582	0
Finland	No	No	Yes	37	23	459.035	4332.741
France	No	No	Yes	114	27	667.5859	20589.08
French Polynesia	No	No	No	1	3	0	72.37869
Gabon	No	Yes	No	29	17	2517.359	10.84873
Gambia	No	Yes	No	1	15	27.56138	0
Georgia	No	Yes	No	11	11	29.17758	401.3626
Germany	No	No	Yes	191	49	643.0692	32796.91
Ghana	No	Yes	Yes	85	31	7835.906	1972.439
Gibraltar	Yes	No	No	0	0	0	0
Greece	No	No	Yes	35	29	586.8303	2374.221
Greenland	No	No	No	0	2	0	0
Grenada	No	Yes	No	2	15	77.86906	0
Guam	No	No	No	1	1	0	0
Guatemala	No	Yes	Yes	1	1	0	18.44283
Guernsey	Yes	No	No	0	0	0	0
Guinea	No	Yes	No	24	21	2783.69	3989.891
Guinea-Bissau	No	Yes	No	2	8	24.63132	0
Guyana	No	Yes	No	15	27	868.3496	489.9981
Haiti	No	Yes	No	0	3	0	0
Honduras	No	Yes	Yes	5	3	307.8339	105.5662
Hungary	No	No	Yes	50	27	4819.282	6013.48
Iceland	No	No	Yes	6	14	0	249.8714
India	No	Yes	Yes	81	25	1051.989	10024.35
Indonesia	No	Yes	Yes	427	55	27052.01	33562.59
Iran	No	Yes	No	69	24	26521.6	2208.372
Iraq	No	Yes	No	31	27	8537.83	2072.487
Ireland	No	No	Yes	19	16	58.40724	3568.964
Isle of Man	Yes	No	No	0	1	0	0
Israel	No	No	No	16	15	0	4929.831
Italy	No	No	Yes	128	54	1254.709	16096.92
Jamaica	No	Yes	No	19	18	1595.804	659.0097
Japan	No	No	Yes	55	100	0	2803.913

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Jersey	Yes	No	No	0	1	0	0
Jordan	No	Yes	No	8	18	33.24227	1798.639
Kazakhstan	No	Yes	Yes	121	35	26818.31	36765.55
Kenya	No	Yes	No	56	40	10213.96	316.6355
Kiribati	No	No	No	1	11	0	105.8104
Korea	No	No	Yes	133	130	714.0318	7431.713
Kosovo	No	Yes	Yes	0	0	0	0
Kuwait	No	No	Yes	13	9	0	1080.96
Kyrgyz Republic	No	Yes	Yes	34	21	2488.13	855.0602
Lao People's Democratic Republic	No	Yes	No	124	65	11643.6	10882.33
Latvia	No	No	Yes	6	8	0	50.74374
Lebanon	Yes	Yes	Yes	4	8	292.9048	0
Lesotho	No	Yes	No	6	11	292.6601	0
Liberia	Yes	Yes	No	4	26	57.44901	516.9856
Libya	No	No	No	2	8	416.1953	91.38439
Liechtenstein	No	No	No	0	0	0	0
Lithuania	No	No	Yes	0	2	0	0
Luxembourg	No	No	Yes	31	11	45.28333	8337.596
Madagascar	No	Yes	No	8	14	768.0199	14.08963
Malawi	No	Yes	No	16	21	674.4022	58.96528
Malaysia	No	No	No	95	54	31974.59	5194.054
Maldives	No	Yes	No	15	15	1774.676	0
Mali	No	Yes	No	15	18	1158.24	0
Malta	No	No	Yes	3	12	0	562.1128
Marshall Islands	No	No	No	75	14	0	6890.541
Mauritania	No	Yes	No	13	20	882.476	158.9266
Mauritius	Yes	Yes	Yes	35	34	819.6863	412.8507
Mexico	No	Yes	Yes	60	32	1462.947	5474.427
Micronesia	No	No	No	1	20	3.323129	0
Moldova	No	Yes	No	2	11	15.23285	0
Monaco	No	No	No	2	1	0	1692.286
Mongolia	No	Yes	Yes	71	35	23630.27	1276.722

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Montenegro	No	Yes	No	5	11	1099.607	41.25912
Morocco	No	Yes	Yes	13	16	1363.791	581.0873
Mozambique	No	Yes	Yes	41	30	3224.05	5296.694
Myanmar	No	Yes	No	98	92	9478.317	4066.038
Namibia	No	No	Yes	15	33	586.0029	1417.063
Nauru	No	No	No	3	3	0	0
Nepal	No	Yes	Yes	10	30	459.481	319.6088
Netherlands	No	No	Yes	118	32	485.8235	11086.02
New Caledonia	No	No	No	0	1	0	0
New Zealand	No	No	Yes	161	40	448.1193	5557.343
Nicaragua	No	Yes	No	5	9	477.3193	18.66369
Niger	No	Yes	Yes	12	17	3055.285	1643.471
Nigeria	No	Yes	Yes	64	32	14960.22	4524.248
Niue	No	No	No	0	3	0	0
North Macedonia	No	Yes	Yes	7	15	1212.342	24.73816
Northern Mariana Islands	No	No	No	0	0	0	0
Norway	No	No	Yes	44	14	0	11027.88
Oman	No	No	No	23	15	6337.216	599.2864
Pakistan	No	Yes	Yes	205	118	116978.1	3430.273
Palau	No	No	No	0	1	0	0
Panama	Yes	No	Yes	18	30	97.8355	728.1708
Papua New Guinea	No	Yes	No	33	26	2076.608	5420.723
Paraguay	No	Yes	Yes	4	1	52.30992	18.71186
Peru	No	Yes	Yes	76	48	163.0775	23889.16
Philippines	No	Yes	Yes	85	57	2185.89	8959.203
Poland	No	No	Yes	70	15	1214.356	4564.905
Portugal	No	No	Yes	31	15	596.5324	11147.06
Puerto Rico	No	No	No	3	1	0	93.06144
Qatar	No	No	No	51	16	7984.475	1976.058
Romania	No	No	Yes	7	20	269.2782	397.6898
Russia	No	No	Yes	234	53	121940.2	49838.74
Rwanda	No	Yes	Yes	12	23	803.5375	0
Saint Kitts and Nevis	Yes	No	No	0	0	0	0
Saint Lucia	No	Yes	No	0	4	0	0

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Saint Martin (French part)	No	No	No	0	0	0	0
Saint Vincent and the Grenadines	No	Yes	No	0	0	0	0
Samoa	Yes	Yes	No	6	17	265.9448	0
San Marino	No	No	No	0	1	0	0
Sao Tome and Principe	No	Yes	No	0	13	0	0
Saudi Arabia	No	No	No	79	17	17203.7	8184.463
Senegal	No	Yes	No	31	19	3644.164	0
Serbia	No	Yes	Yes	39	23	6936.77	1578.495
Seychelles	No	No	No	1	16	2.031565	0
Sierra Leone	No	Yes	No	15	28	820.6476	3371.362
Singapore	Yes	No	No	385	32	22706.51	28376.68
Sint Maarten (Dutch part)	Yes	No	No	0	1	0	0
Slovak Republic	No	No	Yes	1	4	0	28.80045
Slovenia	No	No	Yes	0	6	0	0
Solomon Islands	No	Yes	No	1	13	63.39998	0
Somalia	No	Yes	No	0	4	0	0
South Africa	No	Yes	Yes	206	48	11020.93	11369.17
South Sudan	No	No	No	8	21	4648.907	0
Spain	No	No	Yes	63	46	87.33224	8914.353
Sri Lanka	No	Yes	Yes	80	46	19003.43	1953.825
Sudan	No	Yes	No	81	28	16230.96	392.9761
Suriname	No	Yes	No	24	19	1994.452	0
Sweden	No	No	Yes	42	17	0	6687.685
Switzerland	No	No	Yes	124	27	135.6307	40968.79
Syrian Arab Republic	No	Yes	No	8	8	138.8937	2102.817
Tajikistan	No	Yes	Yes	64	28	3359.417	1932.51
Tanzania	No	Yes	No	27	44	2763.881	41.02213
Thailand	No	Yes	Yes	52	38	283.7718	2858.125
Timor-Leste	No	Yes	No	0	18	0	0
Togo	No	Yes	No	20	17	1044.125	53.00623

Country	Reports to BIS	Reports PPG to the DRS	Reports FDI to IMF	# of Records in CLG-Global	Number of Unique Chinese Creditors	Total Chinese PPG Lending (2023 USD millions)	Total Chinese Non-PPG Lending (2023 USD millions)
Tonga	No	Yes	No	5	16	178.6607	0
Trinidad and Tobago	No	No	No	6	11	594.3016	0
Tunisia	No	Yes	No	11	22	290.6182	8.718852
Turkey	No	Yes	Yes	173	25	16877.4	15757.84
Turkmenistan	No	Yes	No	20	11	11277.22	0
Turks and Caicos Islands	No	No	No	0	0	0	0
Tuvalu	No	No	No	0	0	0	0
Uganda	No	Yes	Yes	22	42	4303.143	251.0876
Ukraine	No	Yes	Yes	11	36	2838.412	306.643
United Arab Emirates	No	No	No	131	24	18798.35	2225.995
United Kingdom	No	No	Yes	476	115	510.4858	59366.52
United States	No	No	Yes	1655	132	3562.85	198267.6
United States Virgin Islands	No	No	No	0	0	0	0
Uruguay	No	No	Yes	10	29	121.1821	142.1963
Uzbekistan	No	Yes	No	140	26	10672.35	7992.791
Vanuatu	Yes	Yes	No	7	16	298.9757	0
Venezuela	No	No	Yes	106	19	105013.4	585.2755
Viet Nam	No	Yes	No	160	35	17375.39	9438.96
West Bank and Gaza Strip	No	No	No	0	9	0	0
Yemen	No	Yes	No	9	12	329.5022	0
Zambia	No	Yes	No	111	34	9923.099	2730.924
Zimbabwe	No	Yes	No	44	48	3609.876	1095.713

Table A6.3: Countries with diplomatic relations with Taiwan

Country	Maintained Diplomatic Relations with Taiwan
Belize	2000-2023
Burkina Faso	2000-2017
Chad	2000-2006
Costa Rica	2000-2006
Dominica	2000-2003
Dominican Republic	2000-2017
El Salvador	2000-2017
Eswatini	2000-2023
Gambia	2000-2013
Grenada	2000-2004
Guatemala	2000-2023
Haiti	2000-2023
Honduras	2000-2022
Kiribati	2004-2018
Liberia	2000-2003
Malawi	2000-2007
Marshall Islands	2000-2023
Nauru	2000-2002
Nicaragua	2000-2020
North Macedonia	2000-2000
Palau	2000-2023
Panama	2000-2016
Paraguay	2000-2023
Saint Kitts and Nevis	2000-2023
Saint Lucia	2007-2023
Saint Vincent and the Grenadines	2000-2023
Sao Tome and Principe	2000-2015
Senegal	2000-2005
Solomon Islands	2000-2018
Tuvalu	2000-2023

Notes: This table records the years in which each country maintained diplomatic relations with Taiwan between 2000 and 2023. A limitation of the World Bank's Debt Reporting System (DRS) is that it does not distinguish between PPG loan commitments from the People's Republic of China (PRC) and Taiwan. Instead, all PPG loan commitments from the PRC and Taiwan are treated as loan commitments from "China" (Malik and Parks 2021; Parks et al. 2023). To account for this feature of the DRS, authors exclude all loan commitments from "Chinese" creditors from totals of Chinese PPG loan commitments used in this report.