

# Tracking Loans and Grants from China to Low-, Middle-, and High-Income Countries

An Application of AidData's TUFF 4.0 Methodology

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Bradley C. Parks, Brooke Escobar, Katherine Walsh, Sheng Zhang, Rory Fedorochko, Lydia Vlasto, Julie Sickell, Sailor Miao, Emma Bury, Jacqueline Zimmerman, Samantha Custer, Axel Dreher, Lukas Franz, Andreas Fuchs, Sebastian Horn, Ammar A. Malik, Carmen M. Reinhart, Austin Strange, Michael J. Tierney, and Christoph Trebesch

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# Table of Contents

Introduction	5
Section 1 - Data Coverage and Key Characteristics of AidData's China's Loans and Grants (CLG) Datasets	13
1.1 - Scope Parameters of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 Datasets	13
1.2 - Key Features of the Dataset	17
1.3 - Guide to Using the Dataset	24
1.4 - Field Definitions	31
Section 2 - Capturing Official Sector Grants and Loans from China	87
2.1 - Measuring Concessionality and Intent	88
2.2 - Measuring Emergency Rescue Loans and the Cumulative Stock of Official Financial Flows from China	90
2.3 - Categorizing China's Overseas Lending to Different Types of Borrowers	92
2.4 - Identifying when China's Overseas Borrowers are Experiencing Financial Distress	93
2.5 - China's Official Sector Agencies and Instruments	94
Section 3 - TUFF 4.0 Data Collection Process	141
3.1 - Data Collection for Low- and Middle-Income Countries	141
3.2 - Data Collection for High-Income Countries	150
3.2.3 - Stage 3: Dataset-Level Quality Assurance	158
3.3 - Coding Guidance for Dataset Variables	159
Section 4 - Geospatial Data Collection Process	185
4.1 - Stage 1: Geospatial Data Collection and Precision Level Labeling	186
4.2 - Stage 2: Geospatial Data Enhancement and Quality Assurance	187
4.3 - Stage 3: Geospatial Data Cleaning and Dataset Generation	187
Section 5 - Ownership Data Collection Process	188
5.1 Create Stakeholder Organizations	189
5.2 Stakeholders' Nationality	191
5.3 Ownership Relationships	192
Appendices	195
Appendix A: Classification of Official Sector Loans and Grants by Flow Class	195
Appendix B: Geographic Coverage	197
Appendix C: TUFF Source Prioritization Protocol	203
Appendix D: AidData's Deflation Methodology	204
Appendix E: Health of Record Scores	207
Appendix F: OECD Income Classification from 2000-2023	210
Appendix G: AidData's China's Global Loans and Grants Dataset at a glance	219
References	221

# Introduction

Over the last thirteen years, AidData has refined the Tracking Underreported Financial Flows (TUFF) methodology to track grant and loan commitments from official sector entities that do not report to international monitoring organizations, such as the OECD's Development Assistance Committee. During this period of time, AidData has primarily used the TUFF methodology to capture official financial flows from Chinese government and state-owned entities to low- and middle-income countries. Yet Beijing's official sector donors and creditors are not exclusively focused on the Global South; they also extend aid and credit to high-income countries. The purpose of this methodological guidance note is to document the standards and procedures by which we have tracked China's official sector grant and loan commitments to countries of all income levels, including high-income countries, between 2000 and 2023 (Parks et al. 2025).

To help those who seek to understand the nature, distribution, and effects of official sector financial flows from emerging donors and creditors, AidData developed the TUFF methodology 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; Gelpert 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). The methodology codifies a systematic, transparent, and replicable set of procedures that facilitate the collection of information about grants and loans 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, project-level information published by governments, intergovernmental organizations, companies, nongovernmental organizations, journalists, and research institutions.

The methodology was first introduced in April 2013 as a way of tracking Chinese government-financed development projects in Africa (Strange et al. 2013). It was then revised and extended to track Chinese government-financed development projects in Africa, Asia, Latin America and the Caribbean, the Middle East, Oceania, and Eastern and Central Europe in September 2015, January 2017, and October 2017 (Muchapondwa et al. 2016; BenYishay et al. 2016; Strange et al. 2017; Bluhm et al. 2018; Dreher et al. 2018, 2019, 2021, 2022). These revisions were chronicled in a book entitled *Banking on Beijing: The Aims and Impacts of China's Overseas Development Program* (Dreher et al. 2022). AidData then re-engineered the TUFF methodology to support the creation of AidData's Global Chinese Development Finance (GCDF) Dataset, Version 2.0, which was published in September 2021. This retooling of the methodology involved (a) increased reliance on official sources, (b) the collection of more detailed information on the terms and conditions of the financing agreements issued by Chinese state-owned entities, and (c) a stronger focus on project implementation to improve the reporting of commencement dates, completion dates, and precise geographical locations. To capture the changing nature of China's overseas lending and grant-giving portfolio, AidData implemented several additional improvements in the 3.0 version of the TUFF methodology, which was used to support the creation of GCDF 3.0 dataset, which was published in

November 2023 (Custer et al. 2023). These changes included (a) improved coverage and categorization of the diverse credit instruments used by China's official sector creditors, including a marker for emergency rescue lending; (b) improved tracking of debt repayment obligations and liabilities; and the (c) creation of a flag for flows related to COVID-19 response activities as well as the development of a method to impute transaction amounts for in-kind donations of COVID-19 vaccines and supplies.<sup>1</sup>

Since 2023, AidData has refined and adapted its TUFF methodology to systematically capture official sector grant and loan commitments from China to all high-income countries and territories. With this innovation, AidData is now able to provide truly global coverage of China's official sector lending and grant-giving portfolio, tracking official financial flows across 217 countries and territories between 2000 and 2023.

The latest (4.0) version of the TUFF methodology has been used to produce two separate but closely related data products: China's Loans and Grants to Low- and Middle- Income Countries Dataset, Version 1.0 (CLG-LMIC 1.0) and China's Loans and Grants to High Income Countries Dataset, Version 1.0 (CLG-HIC 1.0).<sup>2</sup> These datasets are fully interoperable and also available in a single, combined dataset known as the China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0).<sup>3</sup> The 4.0 version of the TUFF methodology also introduces a new set of variable names and definitions and data architecture to match the evolving nature of China's official lending and grant-giving, while providing additional functionality and flexibility for users and ensuring interoperability between the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets.

In total, the CLG-Global 1.0 dataset captures 33,580 projects and activities in low-, middle-, and high-income countries supported by financial and in-kind transfers worth nearly \$2.2 trillion (constant 2023 USD, excluding short-term "rollover" facilities) from official sector institutions in China. The vast majority of these (nearly \$2.11 trillion in constant 2023 USD) represent loan commitments. The CLG-Global 1.0 dataset captures projects and activities supported by 1,193 official sector lending and grant-giving institutions in China, including central government agencies (like the Ministry of Commerce, the Ministry of Foreign Affairs, and the Ministry of Agriculture), regional and local government agencies (like Chongqing Municipal Health Commission and Tianjin Municipal Government), state-owned enterprises (like CNPC, CMEC, CATIC, and CRBC), state-owned policy banks (like China Development Bank and China Eximbank), state-owned commercial banks (like ICBC, BoC, and CCB), and state-owned funds (like the Silk Road Fund). AidData provides a detailed analysis of key patterns and trends from

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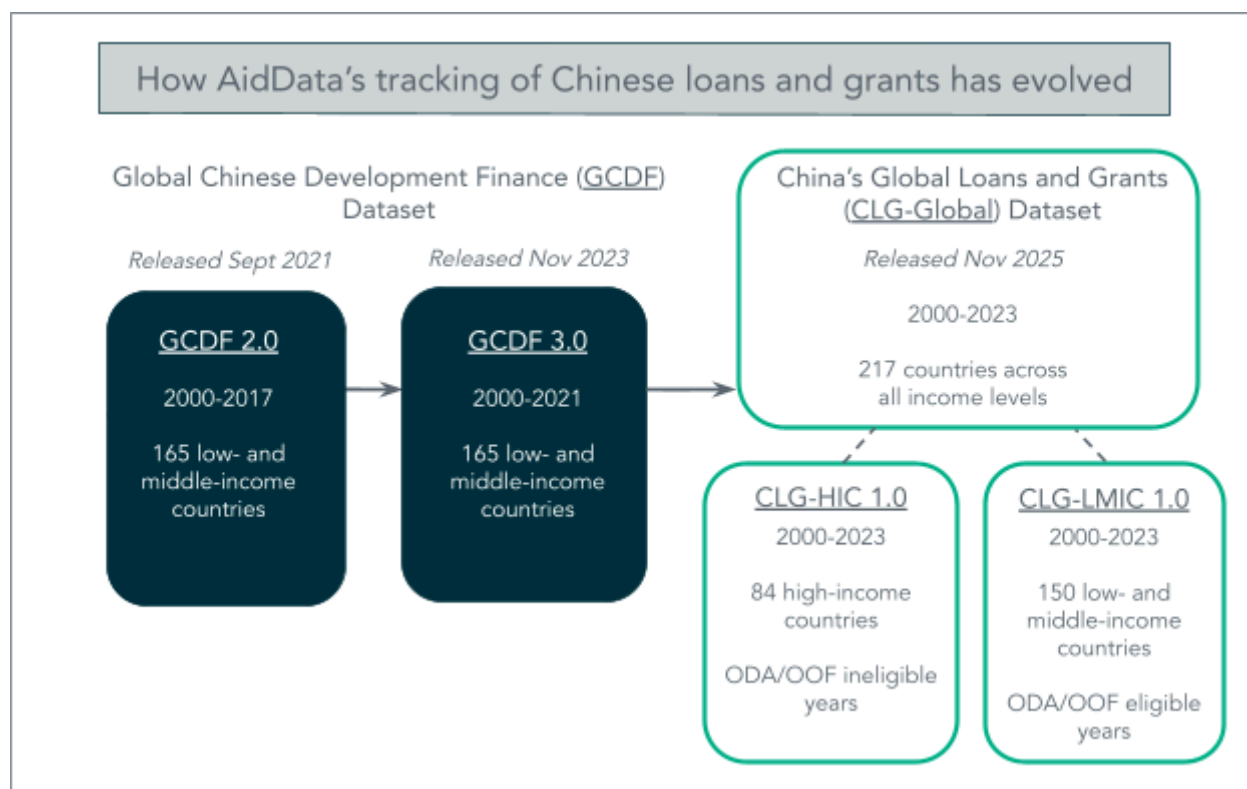
<sup>1</sup> Along with the introduction of the data fields that track diverse debt instruments, AidData introduced adjusted amount fields to reduce the risk of over-counting China's cumulative lending commitments in the case of "rollover" emergency rescue loans and/or swap borrowings when aggregating transaction data across commitment years. See Section 1.4 for the definitions of the adjusted amount fields (Adjusted\_Amount\_Original\_Currency, Adjusted\_Amount\_Nominal\_USD, and Adjusted\_Amount\_Constant\_USD\_2023).

<sup>2</sup> For more information on how project/activity records are divided between the two datasets, refer to Section 1.1 (Scope Parameters of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 Datasets). See Appendix F for a full list of countries and territories along with the year range during which they were considered high-income.

<sup>3</sup> The evolution of AidData's datasets from the Global Chinese Development Finance (GCDF) Dataset to the China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0) is visually represented in Figure 1.1, along with the distinguishing aspects between the constituent CLG-HIC 1.0 and CLG-LMIC 1.0 datasets.

the CLG-Global 1.0 dataset in *Chasing China: Learning to Play by Beijing's Global Lending Rules* (Parks et al. 2025).

Figure 1.1: How AidData's tracking of Chinese loans and grants has evolved



*Notes: In order to construct the CLG-Global 1.0 dataset we searched for Chinese loans and grants across 217 countries and territories, 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 identified grants and/or loans in 142 out of 150 low- and middle-income countries and in 72 out of 84 high-income countries.*

We have made 7 major improvements to the 4.0 version of the TUFF methodology to support new types of analysis.<sup>4</sup>

1. **Enhanced tracking of flow destinations:** A significant share of China's official sector lending is channeled to support projects/activities in one country, while the actual borrowing institution is legally incorporated in another country (Parks et al. 2025). This includes 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 cross-border routing of funds from official sector institutions in China, the 4.0 version of the TUFF methodology introduces two separate destination fields which represent (1) the host country where the financed project/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

<sup>4</sup> For detailed descriptions of each field in the dataset, refer to Section 1.4.

regarding financing channeled through OFCs, the 4.0 methodology introduces a marker that enables users to isolate these flows in the data (DRA\_Country\_of\_Inc\_OFC).<sup>5</sup> For additional information, see Section 2.5.2.

2. Enhanced tracking of lending from Chinese state-owned institutions based outside mainland China: China increasingly relies on its bank branches and its company affiliates in overseas jurisdictions to finance overseas projects/activities (Parks et al. 2025). To better track the geographic origin of the Chinese state-owned institutions that finance overseas projects/activities, the 4.0 version of the TUFF methodology introduces a marker for all loans provided by institutions based outside mainland China, along with a field that provides the jurisdiction of the funding agency (Lending\_from\_Overseas\_Branch\_or\_Subsiary and Overseas\_Jurisdiction). For additional information, see Section 2.5.1.8 (Overseas Branch/Subsidiary).
3. Ultimate beneficial owners (UBOs) and other parent owners of borrowers: China's loan-financed projects and activities generate financial gains and losses. In order to identify the entities that experience these gains and losses, the 4.0 version of the TUFF methodology introduces a new set of procedures for collecting detailed data on the ultimate parent owners of borrowing institutions (Direct\_Receiving\_Agencies) for all loan records in the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets. This allows us to identify parent owners that meet the Ultimate Beneficial Owner (UBO) threshold (a shareholding that exceeds 25%). The TUFF 4.0 methodology introduces new fields that designate if a Chinese or host country institution has a shareholding in the borrowing institution that exceeds 25% (Chinese\_Group\_UBO and Host\_Country\_UBO), 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.<sup>6</sup> For users interested in analyzing the liabilities that the parent owners of a given borrowing institution may carry, 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), as well as fields that provide the name of the institution, the type of institution, the country of origin of the institution, the type of credit enhancement that was 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).<sup>7</sup> The underlying parent ownership data that we collected to identify the UBOs is in the new Borrower Ownership Records data tab that accompanies the main dataset, and it includes

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<sup>5</sup> AidData references the list of offshore financial centers maintained by the Bank for International Settlements (BIS) for its OFC marker.

<sup>6</sup> 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 Hong Kong. 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).

<sup>7</sup> 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.



detailed information regarding all parent owners, including those with less than 25% shareholding. This file includes 32 variables about the parent owners 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, and (v) an AidData\_Record\_ID field that ensures every observation can be tied back to the loan it corresponds to in the CLG-Global 1.0 dataset. The key features of the Borrower Ownership Records data tab are detailed in Section 1.2.2 and data collection methods for the borrower ownership dataset are detailed in Section 5.

4. **New variables for loan-level analysis:** Syndicated lending is an increasingly popular method by which China undertakes cross-border lending operations (Parks et al. 2025). This presents a unique challenge for the aggregation and sorting of loans, given the structure of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets (in which each contribution from a Chinese creditor to a syndicated loan is captured separately).<sup>8</sup> To address this challenge and enable new types of analysis, AidData now assigns unique Loan Event IDs to each syndicated and bilateral loan record in its datasets. These Loan Event IDs enable users to organize and analyze data at the loan level, which is particularly useful in cases where multiple Chinese creditors contributed to the same syndicated loan and one or more Chinese creditors contributed to different tranches of the same syndicated loan. The accompanying Loan\_Tranche field identifies the specific tranche of a syndicated loan to which a Chinese creditor contributed, whenever known, and the Loan\_Event\_Description field provides a short description of the loan event captured by the corresponding Loan Event ID. The 4.0 version of the TUFF methodology also introduces new fields specifically for syndicated loans, including (i) a Syndicated\_Loan\_Amount variable, which identifies the total face value of the syndicated loan or syndicated loan tranche to which one or more Chinese creditors contributed; (ii) a Syndicated\_Loan\_Currency variable, which identifies the currency of denomination of the syndicated loan; and (iii) a Syndicated\_Loan\_Share variable, which measures the relative size of each Chinese creditor's contribution to a syndicated loan

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<sup>8</sup> The TUFF methodology organizes data at the financial contribution level, wherein one row of data (record) represents a financial commitment from a Chinese official sector institution to support a project/activity in an overseas jurisdiction. For more information, see Section 2.5.3.4 (Syndicated Loans).

or syndicated loan tranche (i.e. its “ticket size”).<sup>9</sup> The latest version of the methodology also introduces new fields to identify the linkages between loan records and debt restructuring records in the dataset (Rescheduled\_Loan\_Record\_ID and Rescheduling\_Event\_ID).

5. **Expanded credit instrument coverage:** Building upon the credit instrument categorization scheme introduced in the 3.0 version of the TUFF methodology, the 4.0 version expands the number of credit instruments covered from 23 to 29.<sup>10</sup> This detailed categorization scheme enables users to more effectively analyze the types of credit instruments used in China’s overseas lending portfolio over time. AidData has now introduced new variables that track commodity-backed loans, shareholder loans, repurchase transactions, exploration/development “carry” loans, and FDI loans. For all FDI loans, AidData has introduced a binary marker that indicates whether the investment activity is Greenfield or Brownfield.<sup>11</sup> Additionally, AidData has retired the FXSL/BOP flag from the previous version of the methodology, which tracked borrowings via foreign currency swap lines (FXSL) and balance of payments (BOP) loans, and replaced it with two flags (FXSL and BOP) to enable users to analyze these two types of credit instruments separately.
6. **Enhanced coverage of borrowing terms:** In order to better capture the interest rate associated with each loan record, AidData has replaced the ‘Interest Rate’ variable with six new variables: Interest\_Rate\_Type, Fixed\_Interest\_Rate, Reference\_Rate, Loan\_Tenor, Margin\_on\_Reference\_Rate, and Interest\_at\_T0. These new variables are particularly useful for variable interest rate loans, providing more granular information in a structure that can be used for analysis.
7. **Identification of underlying original agreements:** The 4.0 version of the TUFF methodology introduces a new Original\_Agreement marker to indicate whenever the underlying sources for the project/activity record include an original agreement (i.e., an agreement between two parties related to a grant, loan, or debt restructuring captured in the dataset). AidData has also included fields that provide the name and title of the source, as well as a stable URL link for users to access the copy of the original agreement. AidData has assigned the original agreements to general and specific

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<sup>9</sup> The syndicated loan amount fields should not be used for aggregation across the dataset. Because of the way in which the data is organized—wherein, for loan records, a row of data captures a financial contribution from one official sector creditor to a given loan event—the syndicated loan amount for the same loan event will be duplicated across records in the dataset whenever multiple official sector institutions from China provided contributions to the same loan event. Users should also consider the loan tranche when using the Syndicated\_Loan\_Share field for analysis. Because the syndicated loan amount fields capture the contribution from an official sector institution in China to a specific tranche (whenever applicable), the Syndicated\_Loan\_Share field reflects the percentage contribution of the official sector institution from China to that particular tranche rather than to the full multi-tranche facility. In cases where Chinese official sector institutions contributed to multiple, separate tranches assigned to the same Loan\_Event\_ID, aggregating the Syndicated\_Loan\_Share field without considering the Loan\_Event\_Tranche may result in percentage values that exceed 100% for a given loan event ID. For more information, see Section 1.3 (Guide to Using the Dataset).

<sup>10</sup> See Section 2.5.3.3 for a detailed description of the credit instruments covered by the CLG-Global 1.0 dataset.

<sup>11</sup> For further information on the criteria for designating a cross-border investment activity as “Greenfield” or “Brownfield,” please see the FDI\_Type field definition in section 1.4.1.

categories to facilitate analysis and enable users to more easily consult with sources of interest.<sup>12</sup> 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.

In addition, we have introduced a number of supplemental variables and structural changes, as described below, to enhance the usability of the dataset:

1. **Division of records across two datasets:** Project/activity records appear in either the CLG-LMIC 1.0 or CLG-HIC 1.0 dataset based on whether the host country (Country\_of\_Activity) is eligible for Official Development Assistance (ODA) and Other Official Flows (OOF) in the year when the project/activity secured a commitment. ODA/OOF-eligibility is determined by the OECD-DAC, taking into consideration the country's income level. Income bracket determinations are made at the country-year level, and individual records are mapped to these income brackets through the OECD\_Income\_Status\_Host\_Country field. All flows that are committed in years when a given host country is classified by the OECD as high-income—or otherwise rendered ineligible for ODA/OOF—are now included in the CLG-HIC 1.0 dataset. These flows to ODA/OOF-ineligible countries are assigned to a new flow class created by AidData: Official Flows to Ineligible Countries (OFIC). Given that the income status of a particular country can vary by year, some host countries that have historically appeared in the various iterations of AidData's GCDF dataset "graduated" to the high income bracket at some point over the observation period (2000-2023). As such, their records are now split between the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets, depending on the years in which the commitments were issued.<sup>13</sup> Additionally, for users that prefer to use World Bank income group designations instead of OECD income bracket designations, all records now include a WB\_Income\_Group\_Host\_Country variable. A more detailed overview of the scope parameters of the CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets is provided in Section 1.1.
2. **Machine-readable data field names:** To support more seamless integration with data analysis software, AidData has implemented changes to the data field names in the dataset to make them more machine-readable. A full list of the data field names and definitions is provided in Section 1.4.
3. **Parent ID Description:** While the 3.0 version of the TUFF methodology included a unique identification number for linked projects/activities (the Parent identification number, or 'Parent ID'), there were many reasons why records were linked through common Parent ID. The 4.0 version introduces a new Parent\_ID\_Description field that provides a brief description for each Parent ID, identifying the way in which records are assigned a common Parent ID. Users can now more easily filter for linked records based on the Parent ID description. For example, users interested in the China Co-Financing Fund for Latin America and the Caribbean (CHC) can filter for the Parent ID (Parent ID#8) that has this description.

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<sup>12</sup> Full lists of the original agreement general and specific category types are included in the data variable definitions in Section 1.4. The relevant fields are Original\_Agreement\_Type\_General and Original\_Agreement\_Type\_Specific.

<sup>13</sup> In the previous (3.0) version of the TUFF methodology, these OFIC records were automatically assigned to the OOF flow class.

4. **New PPG debt marker:** To allow for easy identification of loans that qualify as public and publicly-guaranteed (PPG) debt, the 4.0 version of the TUFF methodology introduces a new, binary PPG\_Debt\_Status marker that indicates whether a loan is PPG or non-PPG debt. This marker is based upon the Level\_of\_Public\_Liability field, which include 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 (and the PPG\_Debt\_Status marker in AidData's CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets): central government debt, central government-guaranteed debt, or other public sector debt.
5. **Funding Agency Parent:** China relies on a diverse set of state-owned institutions to administer its overseas grant-giving and lending portfolio. The 4.0 version of the TUFF methodology introduces a new variable that identifies the parent owners of all the funding agencies in the dataset, enabling users to analyze all flows from a common parent organization. This field is useful for the aggregation of flows from state-owned companies and state-owned banks with multiple subsidiaries. For example, AidData has identified 20 subsidiaries of Bank of China, in addition to the main Bank of China branch, that provided overseas lending between 2000 and 2023. Additionally, to facilitate aggregation of flows from Chinese government agencies, AidData has assigned government agencies to one of the five following categories: (1) PRC Central Government, (2) PRC Subnational Government, (3) PRC Public University, (4) Unspecified PRC Public Sector Institution, and (5) PRC Central Bank.

This publication has five sections, which describe the process for assembling the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets. Section 1 provides an overview of the scope parameters and key features of the datasets, as well as guidance regarding how the datasets should be used in different types of applications. Section 2 explains how financial and in-kind commitments from official sector institutions in China are designed and delivered to other countries, as well as the coding rules and procedures that AidData used to capture and categorize projects/activities financed by Chinese official sector institutions. Section 3 describes the sources and methods that AidData used to assemble a comprehensive and detailed picture of Chinese officially financed activities around the globe. Section 4 describes the methods that AidData used to collect precise geographic locational details and geocode the datasets. Section 5 describes the methods and coding practices used to collect data on the parent owners of borrower institutions and assemble the Borrower Ownership tabs of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets.

# Section 1 - Data Coverage and Key Characteristics of AidData's China's Loans and Grants (CLG) Datasets

## 1.1 - Scope Parameters of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 Datasets

AidData's Global Chinese Development Finance (GCDF) dataset was envisioned as a tool to create a comprehensive and detailed picture of China's overseas development finance portfolio. It was unique in that, while other datasets captured official financial transfers from China to a single sector (e.g., energy) or region (e.g., Latin America) or only tracked certain types of financial flows (e.g., loans) and funding sources (e.g., China's policy banks), it covered all regions, sectors, sources, and types of financial and in-kind transfers from government and state-controlled institutions from China in low- and middle-income countries. It also ensured that reliable comparisons could be made over time and geographic space by measuring financial commitments in constant (i.e., inflation-adjusted) U.S. dollars (USD).<sup>14</sup>

However, this approach was not truly *global*; as a dataset interested in China's overseas *development* finance, its scope parameters were limited to those countries that, at any point between 2000 and 2021, were classified as low- or middle-income countries. Because the GCDF 3.0 dataset and previous iterations of the GCDF dataset sought to align closely with the framework for reporting development finance from the OECD Development Assistance Committee (OECD-DAC), countries assigned to the high-income bracket over the entire observation period were excluded, as high-income countries (HICs) are deemed ineligible for Official Development Assistance (ODA) and Other Official Flows (OOF) by the OECD-DAC. Similarly, grant and loan commitments to countries that were assigned a low- or middle-income bracket for any year during the 2000-2021 period of observation were included in the GCDF 3.0 dataset, regardless of whether they were committed in a year when the host country was designated a high-income country (and thus ineligible for ODA/OOF).

In light of this expansion to HICs, AidData now produces two datasets with different geographic scope parameters: the China's Loans and Grants to High-Income Countries Dataset, Version 1.0 (CLG-HIC 1.0) and the China's Loans and Grants to Low- and Middle-Income Countries Dataset, Version 1.0 (CLG-LMIC 1.0). The project/activity records included in these datasets are mutually exclusive (i.e., a given project/activity appears in one dataset or the other, but not both) and interoperable (i.e., capture the same variables). For users interested in analyzing the datasets together, AidData has also published a combined data file called the China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0).

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<sup>14</sup> It did so by capturing official financial commitments in their original currencies of denomination, converting these financial amounts into nominal USD values at the average exchange rates that were in effect during the commitment years, and subsequently converting the nominal USD values to constant 2021 USD values using the OECD's deflation methodology (to adjust for inflation and ensure comparability over time and geographic space). The TUFF 4.0 methodology follows the same set of methods to convert nominal USD values to constant 2023 USD values. See Appendix D and Box 1 in Section 1.3 for more detailed information.

## An Updated Understanding of Flow Class and Dividing Records Between CLG-LMIC 1.0 and CLG-HIC 1.0:

Project/activity records appear in either the CLG-LMIC 1.0 or the CLG-HIC 1.0 dataset based on whether or not the host country (Country\_of\_Activity) is eligible for Official Development Assistance (ODA) and Other Official Flows (OOF) in the year that the Chinese official sector institution made a formal commitment (or informal pledge) to provide grant or loan financing for the project/activity (Commitment\_Year). The Organization for Economic Cooperation and Development (OECD) determines ODA-eligibility of a given host country in a given year.<sup>15</sup> The OECD maintains a triennially-reviewed list of ODA-eligible countries that are recognized as low- and middle-income countries.<sup>16</sup> There are important differences between this list and the World Bank's annual income groupings: several countries designated by the World Bank as middle-income were nevertheless excluded by the OECD from ODA-eligibility for all or part of the 2000–2023 period of observation (e.g., Russia, countries acceding to the European Union, and several post-Soviet states).

These country-year income bracket (or other ODA/OOF-ineligibility) determinations are then applied to individual AidData project/activity records via the OECD\_Income\_Status\_Host\_Country variable, based on the Country\_of\_Activity and Commitment\_Year of the specific project/activity record.

AidData then classifies each financial or in-kind transfer from official sector institutions in China to a host country into one of four flow classes: Official Development Assistance (ODA), Other Official Flows (OOF), Vague (ODA or OOF), and Official Flows to Ineligible Countries (OFIC). The OECD-DAC is the international monitoring institution that maintains the criteria for ODA and OOF eligibility. In the TUFF 4.0 methodology, AidData introduces a new flow class: Official Flows to Ineligible Countries (OFIC). OFIC is assigned to all flows that do not meet the criteria for ODA and OOF based on the OECD income classification of the host country. Because the CLG-LMIC 1.0 dataset covers only flows to host countries that are ODA/OOF-eligible, all flow classes in the CLG-LMIC 1.0 dataset are either ODA, OOF, or Vague (ODA or OOF). Similarly, because the CLG-HIC 1.0 dataset covers only flows to countries that are not ODA/OOF-eligible, the only flow class present in the CLG-HIC 1.0 dataset is OFIC.

Earlier versions of the GCDF dataset (i.e., version 1.0, 2.0, 3.0) classified all flows directed to “fuzzy” destinations as OOF. In practice, this meant that flows to countries classified by the World Bank as middle-income, but excluded from the OECD's list of ODA-eligible countries, were coded as OOF. However, during the CLG-HIC 1.0 and CLG-LMIC 1.0 production cycles, AidData consulted with OECD staff and reviewed updated documentation, which clarified that countries ineligible for ODA are also ineligible for OOF. Once a country graduates from ODA eligibility and sustains high-income status for three consecutive years, the OECD-DAC ceases to report any official financial flows to that country, including OOF.

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<sup>15</sup> For users that prefer to use the World Bank's income classifications instead, AidData recommends using the CLG-Global 1.0 dataset and the WB\_Income\_Group\_Host\_Country variable – which provides the World Bank income group for the Country\_of\_Activity that received the flow in that Commitment\_Year.

<sup>16</sup> The year-specific ODA eligibility determinations are effectively also year-specific OOF eligibility designations (Staur 2023).

To address this measurement gap, AidData introduced the OFIC flow class to capture official financial commitments to ODA- and OOF-ineligible countries. Consequently, some flows published as OOF in previous versions of the GCDF dataset are now classified as OFIC. Users comparing ODA and OOF from China and other bilateral and multilateral sources should exclude OFIC from those analyses, while using CLG-HIC 1.0 to analyze China's grant-giving and lending operations in high-income and other ODA- and OOF-ineligible countries. However, for a comprehensive view of China's official financial flows to countries across all income levels, users should rely on the CLG-Global 1.0 dataset.

In the majority of cases, a given host country remains either ODA/OOF-eligible or ODA/OOF-ineligible over the full period of observation covered by the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets (2000-2023). In these cases, all flows to that country can be found in one dataset or the other. However, during the period of observation, it is also possible that a host country "graduated" from low- or middle-income status to high-income status or was otherwise rendered ineligible for ODA/OOF by the OECD. In these cases, flows committed while the host country was designated a low- or middle-income country are included in the CLG-LMIC 1.0 dataset, while the flows committed in the year(s) when the host country was designated a high-income country are included in the CLG-HIC 1.0 dataset.<sup>17</sup> Consequently, the CLG-LMIC 1.0 dataset and the previous versions of the GCDF dataset are not a perfect apples-to-apples comparison (since the GCDF dataset included all flows to countries that were designated as low- or middle- income *at any point* during their observation periods, including flows that were committed years when these countries were considered to be high income).

In total, there are 142 countries covered by the CLG-LMIC 1.0 dataset, 72 countries covered by the CLG-HIC 1.0 dataset, and 200 countries covered in the CLG-Global 1.0 dataset (with some countries appearing in both the CLG-HIC 1.0 and CLG-LMIC 1.0 datasets because they "graduated" or otherwise became ODA/OOF-ineligible).<sup>18</sup> All projects/activities with a regional Country\_of\_Activity (i.e. Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region) are included in the CLG-LMIC 1.0 dataset.

The following scope parameters are consistent across both the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets, and thus the CLG-Global 1.0 dataset:

- ➔ **Financiers:** The CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets all seek to capture projects/activities supported by financial or in-kind transfers from 1,193 official sector institutions in China, including central government agencies (like the Ministry of

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<sup>17</sup> For example, Antigua and Barbuda graduated from upper-middle income in 2022, therefore all records from 2000 to 2021 are in the CLG-LMIC 1.0 dataset and all records from 2022 to 2023 are in the CLG-HIC 1.0 dataset. For a full list of the years all 217 countries are ODA-eligible, see Appendix F.

<sup>18</sup> These numbers represent the total countries where AidData discovered projects or activities. There are an additional 17 countries where AidData conducted data collection but found no projects or activities. These countries include: Aruba, Belize, Bhutan, British Virgin Islands, Faroe Islands, Gibraltar, Guernsey, Kosovo, Liechtenstein, Saint Kitts and Nevis, Saint Martin (French part), Saint Vincent and the Grenadines, Eswatini, Northern Mariana Islands, Turks and Caicos Islands, Tuvalu, and the United States Virgin Islands. Thus, AidData scrapped a total of 150 LMIC countries and 84 HIC countries, but only uncovered projects in 142 LMIC countries and 72 HIC countries. Countries that appear in both the CLG-LMIC 1.0 dataset and CLG-HIC 1.0 dataset (because their ODA-eligibility changed at some point during the observation period) are Antigua and Barbuda, Bahrain, Barbados, Belarus, Chile, Cook Islands, Croatia, Libya, Malta, Oman, Saint Kitts and Nevis, Saudi Arabia, Seychelles, Slovenia, Trinidad and Tobago, Ukraine, and Uruguay.

Commerce, the Ministry of Foreign Affairs, and the Ministry of Agriculture), regional and local government agencies (like Chongqing Municipal Health Commission and Tianjin Municipal Government), state-owned enterprises (like CNPC, CMEC, CATIC, and CRBC), state-owned policy banks (like China Development Bank and China Eximbank), state-owned commercial banks (like ICBC, BoC, and CCB), and state-owned funds (like the Silk Road Fund). The datasets capture grant-giving, lending, and debt restructuring from these official sector institutions. These scope parameters align with the OECD's definition of ODA and OOF in terms of the types of financiers and flows that are included in the dataset.<sup>19</sup> The only type of official financial (or in-kind) commitments from China we do not seek to capture is Official Investment, although we do capture debt financing that facilitates overseas investment activities.

- **Types of Flows:** The CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets all capture grants, technical assistance, loans (with categorization of 29 distinct credit instruments), debt forgiveness, debt rescheduling, debt refinancing, scholarships, and training activities.<sup>20</sup> By monetary value, the majority of the transfers ("flows") captured in the datasets come from loans. Yet the majority of the project/activity records in the datasets represent other types of financial or in-kind support. For many flow types other than loans, AidData was not able to identify monetary commitment values. However, these project/activity records still provide valuable information for users who are interested in understanding the entire scope of Chinese officially-financed activities in a given world region, country, or subnational area.
- **Sectors:** The CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets capture all projects/activities supported by official sector institutions, regardless of the sector that they support. We classify each project/activity in the dataset according to the OECD's 3-digit sector classification scheme.<sup>21</sup> AidData follows the OECD's classification guidelines to identify the sector that a given project/activity is meant to support.
- **Receiving Agencies:** The CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets capture all officially-financed projects/activities regardless of the type of borrower/recipient organization (Direct\_Receiving\_Agencies and Indirect\_Receiving\_Agencies) that received the flow.<sup>22</sup> Flows must be provided by a Chinese state-owned institution, but can be received by either public or private institutions. Recipient agencies may also have a country of incorporation (DRA\_Country\_of\_Inc) that differs from the country in which the financed project/activity takes place (the Country\_of\_Activity). The Country\_of\_Activity is the variable that determines the dataset, if any, to which a project/activity record belongs, rather than

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<sup>19</sup> AidData has assigned flows to countries that are ineligible to receive ODA/OOF (according to OECD-DAC categorization) to AidData's new Official Flows to Ineligible Countries (OFIC) flow class. For more information, see Section 1.3.

<sup>20</sup> See Section 2.5.3.3 for a detailed description of the credit instruments covered by the CLG-Global 1.0 dataset.

<sup>21</sup> See the DAC and CRS code lists for a full list of purpose codes for sector classification: <https://www.oecd.org/content/oecd/en/data/insights/data-explainers/2024/10/resources-for-reporting-development-finance-statistics.html>

<sup>22</sup> The organization type categories for direct and indirect receiving agencies are as follows: Government Agency, State-Owned Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, and Miscellaneous Agency Type.



the country of incorporation of the Receiving Agency. See Section 2.5.2 (Destinations of Official Sector Financing from China) for more detail.

- **Temporal coverage:** The CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets capture the known universe of projects/activities (with development, commercial, representational, or mixed intent) supported by official financial and in-kind commitments (and pledges) from China between January 1, 2000 and December 31, 2023, with details on the timing of project/activity implementation over a 26-year period (2000-2025). The dataset also assigns every project/activity to one of six status categories (Pipeline: Pledge, Pipeline: Commitment, Implementation, Completion, Suspended, or Cancelled) based on sources that were available as late as October 2025.

## 1.2 - Key Features of the Dataset

The CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets all include two tabs capturing related, but distinct, information. The main set of records is contained in the tab of the .xlsx file that contains the name of the dataset (i.e., CLG-LMIC 1.0, CLG-HIC 1.0, or CLG-Global 1.0). The subsidiary set of records is contained in the 'Borrower Ownership' tab of the same .xlsx file.

- **CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 Records:** The Records tabs catalog financial and in-kind commitments from official sector institutions in China for individual projects/activities. Each row (record) represents a commitment to a given project/activity by a Chinese official sector financier, including central government agencies, regional and local government agencies, state-owned enterprises, state-owned policy banks, state-owned commercial banks, and state-owned funds (see Section 1.1). More information regarding the types of information about each project/activity in the Records tabs can be found below.
- **Borrower Ownership:** The new 'Borrower Ownership' tab in each dataset contains information about the organizations that own the direct receiving agency (borrowing institution) of each loan contribution cataloged in the Records tab. This data tab empowers users to draw insights about the organizations that may stand to gain from, or be liable for, a debt obligation. The process for assembling the ownership data is described in greater detail in Section 5.

### 1.2.1 Key Features of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 Records Tab

The Records tab includes 175 fields (variables). Each field seeks to capture a different aspect of a project/activity or provide information about the sources used to compile the project/activity record. A complete list of field names and definitions is provided in Section 1.4. The fields in the dataset capture the following types of information about each project/activity:

- **Basic Project/Activity Information:** The dataset provides foundational information about each project/activity, including its title in English, Chinese, and host country languages, a unique and stable project/activity record identification number, the date of the official commitment, the monetary value of the official commitment, the currency in which the official commitment was denominated, the identity of the funder and receiving agency,

the primary purpose of the project/activity, the current status of the project/activity, and URLs for all sources that supported the creation of the project/activity record.

- **Transactional Details:** The dataset identifies the nature of the financial or in-kind transfer (e.g., grant, loan, technical assistance, debt forgiveness, debt rescheduling, scholarship/training) supporting each project/activity in the dataset. Whenever applicable, it documents loan pricing details (interest rate, default interest rate, grace period, maturity, commitment fee, management fee, insurance fee); levels of financial concessionality, as measured by the grant element calculators of the OECD and the IMF; the first loan repayment date; the last loan repayment date; the monetary value and timing of disbursements and repayments; the use of credit enhancements, including guarantees, insurance, and collateral; the establishment of special purpose vehicles, subsidiary on-lending arrangements, and escrow/revenue/special accounts; and the monetary value and timing of underlying commercial contracts. The dataset also provides stable URLs to unredacted grant, loan, and debt forgiveness/rescheduling agreements whenever they have been successfully retrieved.
- **Credit Instrument Categorization:** Given that Chinese state-owned creditors rely on an increasingly diverse set of credit instruments to finance projects/activities around the globe, AidData tracks 29 distinct types of credit instruments. See Section 2.5.3.3 for more details. Additionally, the 4.0 version of the methodology identifies loans that involve an on-lending arrangement (in the 'Onlending' field); loans that involve multilateral institutions as a loan administrator, co-financier, insurer, and/or financial technical adviser (in the Involving\_Multilateral field); loans that involve co-financing agencies from countries other than China (in the Involves\_Non-Chinese\_Financer field); and loans that allow sovereign debtors to (i) service existing debts, (ii) finance general budgetary expenditures and/or, (iii) shore up foreign reserves (in the Rescue field).
- **Development Finance Categorization:** In cases where host countries (as identified in the Country\_of\_Activity field) are eligible for ODA/OOF based on the OECD-DAC reporting directives, AidData seeks to designate each project/activity in the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets as Official Development Assistance (ODA) or Other Official Flows (OOF) based on measurement of the primary intent of the project/activity and the concessionality level of the financing provided for the project/activity. AidData adheres closely to the OECD-DAC reporting directives that outline the financial, structural, and intent-related eligibility criteria for ODA and OOF. This unique feature of the dataset allows users to make cross-donor and cross-lender comparisons at global, regional, national, and subnational scales and over time. In cases where host countries are not eligible for ODA/OOF, AidData assigns the records to AidData's new Official Flows to Ineligible Countries (OFIC) flow class designation. AidData has included three different grant element variables in the CLG-Global 1.0 dataset based on OECD and IMF methods of measuring financial concessionality. OECD grant element fields are not populated for a record with a flow class designation of OFIC, since the host country is not eligible for ODA/OOF in the corresponding year. The 1.0 datasets also include fields that designate whether the host country of each financial flow was a high-income, low-income, or middle-income country at the time of commitment according to the World Bank income group designation and OECD classifications.

- **Sectoral Categorization:** AidData assigns 3-digit OECD sector codes and names to all projects/activities using the 4.0 version of the TUFF methodology that align with the OECD's classification criteria. This unique feature of the dataset enables cross-donor and cross-lender comparisons—at global, regional, national, and subnational scales—since most official sources of international development finance (including all of the members of the OECD-DAC and the most multilateral institutions) use the same criteria. It also facilitates analysis of sectoral patterns and trends over geographic space and time.
- **Stakeholder Organizations:** Another feature that sets the 4.0 version of the TUFF methodology apart is the level of detail that it provides about the organizations involved in projects and activities supported by financial and in-kind transfers from Chinese government and state-owned entities. It provides information about nine potential types of organizations for each project/activity: (1) the official sector institution in China that is responsible for providing funding and/or in-kind support for the project/activity and its ultimate parent owner; (2) the co-financing institutions from inside and outside of China that are supporting the same project/activity; (3) the recipient (host) country institutions that are responsible for managing incoming funds and in-kind transfers and their ultimate beneficial owners; (4) the agency or agencies that receive and manage a financial transfer (loan) from the entity captured in the `Direct_Receiving_Agencies` field (as part of an on-lending arrangement); (5) the contractors and subcontractors that are responsible for project/activity implementation; (6) the agency that provided a repayment guarantee; (7) the third-party (accountable agency) that provided a credit insurance policy to the borrower; (8) the agency that provided one or more sources of collateral that can be seized in the event the borrower defaults on its repayment obligation; and (9) the security agent or collateral agent that was appointed to enforce rights against the collateral in the event that the borrower defaults on its debt repayment obligations. The 4.0 methodology also categorizes each of these organizations by type (i.e., Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type) and country of origin (i.e., China, Recipient Country, or Other). In the CLG-Global 1.0 version of the dataset, AidData identifies 1,193 official sector financing institutions from China, 2,606 co-financing institutions, 10,040 receiving agencies (direct and indirect), 6,765 implementing institutions, and 1,832 institutions that provide guarantees, insurance, sources of collateral, or act as security agents.
- **UBOs and Related Credit Enhancements:** Six new variables track (i) whether a given borrowing institution (direct receiving agency) of a loan has an ultimate beneficial owner (UBO)—a parent owner with an aggregate shareholding that exceeds 25%—from China, Hong Kong, or Macau (referred to as Chinese Group) or from the host country, (ii) how many Chinese Group or Host Country UBOs are present, and (iii) whether these UBOs are “Private Sector” or “Public Sector.” Additional variables track whether the providers of credit enhancements of a given loan—guarantors, insurance providers, collateral providers, or security/collateral agents—are related to the borrowing institution (direct receiving agency) and the nature of their relationship (i.e., whether they are a subsidiary, parent, other affiliated organization, or are the direct receiving agency itself). Further

information regarding the UBOs and other parent owners can be found in the new 'Borrower Ownership' tab (as described in Section 1.2.2).

- **Actual and Potential Loan Repayment Obligations:** To facilitate more analysis of (actual and potential) loan repayment obligations, the 4.0 version of the TUFF methodology provides new variables that identify the extent of host government ownership and Chinese government ownership via the 'Borrower Ownership' tab. This tab tracks the ultimate parent owners of a given direct receiving agency and their countries of origin. The 4.0 version of the methodology also includes the `Level_of_Public_Liability` field, which assigns each loan record to one of six categories: "Central government debt", "Central government-guaranteed debt", "Other public sector debt", "Potential public sector debt", "Private debt", or "Unallocable" and the `PPG_Debt_Status` field that classifies records into "PPG Debt" and "Non-PPG Debt". Users who wish to isolate all loans that qualify as public and publicly-guaranteed debt (PPG)—that is to say, loans to government and majority state-owned institutions in the host country as well as other institutions that secured central government repayment guarantees or repayment guarantees from state-owned entities other than the central government in the host country—should select all loan commitments assigned to the "Central government debt," "Central government-guaranteed debt," and "Other public sector debt" under the `Level_of_Public_Liability` field or "PPG Debt" under the `PPG_Debt_Status` field. The "Potential public sector debt" category captures loans to special purpose vehicles (SPV) or joint ventures (JV) that are minority-owned by one or more public sector institutions in the host country and that do not benefit from a central government repayment guarantee or a repayment guarantee from a state-owned entity other than the central government in the host country. The `Level_of_Public_Liability` field also allows for the identification of official sector loans to privately-owned entities that do not benefit from repayment guarantees from host country public sector institutions ("Private debt") and loans that cannot be easily categorized based on the level of public liability ("Unallocable" debt).
- **Timing of Project/Activity Implementation:** The 4.0 methodology includes a `Commitment_Date` field that records the calendar day on which the official financing agreement was signed and provides an unprecedented level of detail via the precise project/activity commencement (implementation start) dates and project/activity completion (implementation end) dates. The 4.0 methodology also includes two fields (`Deviation_from_Planned_Implementation_Start_Date` and `Deviation_from_Planned_Completion_Date`) that enable users to easily determine whether projects/activities were or have been implemented on schedule, behind schedule, or ahead of schedule.
- **Relationships between separate project/activity records:** For project/activity records that relate to others in the dataset, the 4.0 version of the methodology includes seven fields to help users organize the data and understand these relationships between records: `Parent_ID`, `Parent_ID_Description`, `Loan_Event_ID`, `Loan_Event_Tranche`, `Loan_Event_Description`, `Rescheduled_Loan_Record_ID`, and `Rescheduling_Event_ID`. The `Parent_ID` field assigns a common identification number to records that relate to each other, allowing users to view groups of related records easily. The `Parent_ID` field is accompanied by a `Parent_ID_Description` field that explains why project/activity records are assigned to a common Parent ID. Furthermore, the 4.0 methodology

introduces a new Loan\_Event\_ID field. A Loan\_Event\_ID is assigned to all loan records in the dataset, including contributions by different Chinese state-owned financiers to the same syndicated loan and contributions by one or more Chinese state-owned financiers to different tranches of the same syndicated loan (as indicated in the Loan\_Event\_Tranche field).<sup>23</sup> Lastly, the 4.0 version of the methodology introduces two new variables that link together loans with their debt restructuring events. For records that capture a debt restructuring event (i.e., the Flow\_Type field is set to “Debt rescheduling” or “Debt forgiveness”), the Rescheduled\_Loan\_Record\_ID field lists the original loan record that was rescheduled or forgiven. For records that capture a loan that was subsequently rescheduled or forgiven, the Rescheduling\_Event\_ID field lists the record ID number(s) of the corresponding debt rescheduling and/or debt forgiveness record(s).

- **Location Details:** For projects/activities that have physical footprints or involve specific locations, the 4.0 methodology provides written descriptions of the geographical locations and features of projects/activities and OpenStreetMap links in the Location\_Narrative field.
- **Risks, Achievements, Failures, and Setbacks:** The 4.0 methodology provides a suite of variables (e.g., Commitment\_Year, Implementation\_Start\_Year, Completion\_Year, Status) that allow users to track projects/activities over their full life-cycles. Whenever possible, it also provides a detailed overview (in the Narrative\_Description field) of project/activity achievements and failures, contractor performance vis-à-vis deadlines and deliverables, findings from audits and evaluations, a summary of the various challenges that arose during project/activity design and implementation (such as strikes, riots, public protests, wars, corruption scandals, natural disasters, public health restrictions, political transitions, bankruptcies, loan defaults, contractual disputes, lawsuits, and ruptures in diplomatic relations), and a description of how funding, receiving, implementing, and accountable institutions responded to these challenges. The 4.0 methodology also includes a Financial\_Distress flag that identifies whether, for a given loan, there is an indication that the borrower had difficulty repaying the loan or was financially distressed during the loan’s repayment period (according to the project/activity life-cycle information that is identified in the description field), and a Financial\_Distress\_Onset\_Year field that captures the year in which the borrowing institution initially encountered difficulties in repaying the loan or demonstrated other signs of financial distress during the loan’s repayment period.
- **Sources:** One of the hallmarks of the TUFF methodology is source transparency. For each record in the dataset, a complete list of the sources is provided, including public URLs, the title of the source, the publisher, and the type of source. The sources used to

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<sup>23</sup> Users who wish to calculate the total number of loans to which Chinese official sector creditors provided financial contributions should use the Loan Event ID to generate a count of unique loan events. The Number\_of\_Lenders field identifies whether the financial contribution captured in the project/activity record supported a bilateral or a syndicated loan. Separate rows of data may capture contributions from distinct Chinese official sector creditors to the same syndicated loan event.

create the dataset include both official and non-official sources.<sup>24</sup> In constructing the dataset, we sought to identify and integrate as many official sources as possible. These sources are authoritative in that they provide data and documentation from funding agencies, recipient agencies, and implementing agencies that are directly involved in the project/activity or have firsthand knowledge of the financial/in-kind transfer supporting the project/activity.<sup>25</sup> We assigned special priority to the use of these sources during the construction of the dataset.

### 1.2.2: Key Features of the Borrower Ownership Tab

The 'Borrower Ownership' tab includes 32 fields (variables), capturing the most salient details of: 1) the country-level jurisdiction in which a given loan transaction will be implemented; 2) the direct borrowing entity(s) and relevant information on its characteristics; and 3) the ownership of said borrowing institution(s) and the characteristics of any owner entity. It is designed to complement the 'Records' tab of each of the CLG datasets by documenting the incorporation, ownership, and control relationships of borrowing institutions. This tab is intended for users interested in understanding the role of state-owned versus privately owned entities, the prevalence of offshore financial centers, and broader patterns of control and influence within borrowing channels. By tracing relationships from direct receiving agencies to their parent owners, the 'Borrower Ownership' tab helps researchers and practitioners analyze the institutional foundations of Chinese official lending.

The dataset relies on several core concepts to structure information. The Direct Receiving Agency (DRA) refers to the immediate, legal borrower named in a loan commitment, while the Parent Owner refers to the ultimate controlling organization of that DRA. Ownership chains trace the links from a DRA through intermediate entities until a parent owner is identified. When AidData cannot reliably trace ownership to the ultimate controlling organization, the chain is marked as incomplete, and the last known entity in the ownership path is recorded as the parent. These conventions ensure that ownership structures are documented in as much detail as possible, while clearly indicating where disclosure gaps exist.

The unit of observation in the 'Borrower Ownership' tab is the ownership link between a direct receiving agency and a parent owner, tied to a unique AidData record ID. Each row therefore represents one branch of an ownership tree, beginning with the direct receiving agency (the borrowing institution named in the loan agreement) and extending to one of its identified parent owners. In cases where a borrowing institution has multiple parent owners, or where multiple ownership branches lead to the same parent organization, multiple rows are generated. Users should therefore expect that a single loan commitment may be represented by several rows in the 'Borrower Ownership' tab.

The 'Borrower Ownership' tab contains a number of fields that enable users to analyze the institutional and geographic characteristics of borrowers and their owners.

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<sup>24</sup> Official source types include "Donor/Recipient Official Source," "Implementing/Intermediary Organization Source," and "Other Official Source (non-Donor, non-Recipient, non-Implementing)." Non-official source types include "NGO/Civil Society/Advocacy (non-Donor, non-Recipient, non-Implementing)," "Media Report," "Social Media, including Unofficial Blogs," "Academic Journal Article," "Other Academic (Working Paper, Dissertation)," and "Other."

<sup>25</sup> We also treat intergovernmental organizations—like the World Bank and the International Monetary Fund—with aid and debt monitoring responsibilities as official sources.

- **Identification fields:** These variables link each record in the 'Borrower Ownership' tab to records (with unique record identification numbers) and organizations (with unique organization identification numbers). The AidData\_Record\_ID ensures every observation can be identified in the respective Records tab in the CLG datasets, while the DRA\_Org\_ID and Parent\_Owner\_Org\_ID uniquely identify the borrower and its parent owner, allowing researchers to follow chains of ownership across different project/activity records. Together, they provide the backbone for merging or cross-referencing across AidData's China's Loans and Grants datasets (CLG-HIC 1.0 and CLG-LMIC 1.0).
- **Geographical Destinations:** The 'Borrower Ownership' tab includes several fields that situate the activity and the borrowing entities geographically. The Country\_of\_Activity field captures the host country where the financed project/activity takes place, while the DRA\_Incorporation field identifies the legal and operational bases of the borrowing institution. ISO-3 codes provide standardized identifiers that facilitate cross-country comparisons and aggregation.
- **Parent Owner Characteristics:** The 'Borrower Ownership' tab provides several fields that describe the identity and classification of parent owners. The Parent\_Owner\_Nationality field records the country that best reflects where the parent owner is operationally headquartered, allowing researchers to distinguish between domestic, Chinese, and third-country ownership. The Parent\_Owner\_Type field classifies parent owners into categories such as government agencies, state-owned companies, private companies, or multilateral institutions, while the Parent\_Owner\_Channel field consolidates these classifications into broader ownership channels—public, private, or multilateral. Taken together, these fields enable users to systematically evaluate the institutional and geographic characteristics of parent owners that exercise control or ownership over borrowing institutions.
- **Parent Ownership Details:** Other fields capture the degree and completeness of ownership relationships. The Parent\_Ownership\_Percentage field measures the stake a parent owner holds in the direct receiving agency, and is essential for quantifying control. When precise shares are unavailable, the Parent\_Ownership\_Estimated field signals that AidData has applied structured assumptions to approximate ownership stakes, ensuring transparency in cases of incomplete disclosure. Finally, the Parent\_Ownership\_Incomplete field highlights situations where ownership trees are not fully reconstructed, enabling users to separate fully documented cases from those with gaps in shareholder information. These fields collectively help researchers assess the robustness of ownership data and interpret the limits of what is known.
- **Ultimate Beneficial Owner (UBO) designation:** When a parent owner has over 25% shareholding in the direct receiving agency (as identified in the Parent\_Ownership\_Percentage field), then the parent owner qualifies as an Ultimate Beneficial Owner (UBO), which is then reflected in the Ultimate\_Beneficial\_Owner variable. The UBO\_Chinese\_Group field further identifies when parent owners that are designated as UBOs have a Parent\_Owner\_Nationality of China, Macau, or Hong Kong. This allows users to analyze cases where companies based in China, Macau, or Hong Kong stand to gain from (or would be liable for) a loan-financed project/activity.

- **OFC Markers:** The dataset also includes indicators of whether borrowers and owners are incorporated in jurisdictions classified as offshore financial centers (OFCs). The `DRA_Incorporation_OFC` field and the `Parent_Owner_OFC` field are set to “Yes” when the relevant country of incorporation appears on the Bank for International Settlements’ OFC list in the year of the loan commitment. These fields allow users to track the role of offshore structures in Chinese official lending.

The ‘Borrower Ownership’ tab for the CLG-Global 1.0 dataset captures 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.

## 1.3 - Guide to Using the Dataset

When using the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 ‘Records’ tab or ‘Borrower Ownership’ tab, there are several aspects users should carefully consider to best use and analyze each data file.

### 1.3.1 Using the Records Tab

Given the comprehensive nature of the 1.0 version of the CLG-HIC and CLG-LMIC datasets and some of the unique challenges that arise when data on Chinese loan and grant commitments are collected from a highly decentralized set of open sources, we have created several fields intended to help users easily identify the subset of project/activity records that they wish to analyze. These fields include:

- **Umbrella:** This field is designed to capture hierarchical relationships between projects/activities and various types of agreements. This field identifies projects and/or activities that fall within “umbrella” agreements (with a “Yes” designation) in two circumstances. The first circumstance is when a financial agreement was signed by at least one party in the donor/creditor country and one party in the receiving country, but funds were not allocated for a specific purpose (or set of purposes) until a subsequent date. These types of umbrella agreements include Economic and Technical Cooperation Agreements (ECTA) issued by China’s Ministry of Commerce (MOFCOM), master facility agreements issued by China Eximbank, lines of credit issued by China Development Bank, and Framework Agreements issued by a variety of official sector institutions in China. Due to the nature of the TUFF data collection process, the subsidiary transactions and projects/activities approved and financed under these types of umbrella agreements are likely captured elsewhere in the dataset. These umbrella records are included in the datasets to clarify linkages between projects/activities and to capture relevant activities without double-counting financial amounts or record counts. The second circumstance is when a project/activity involves debt forgiveness of a loan commitment that is likely captured in another record in the dataset. More details about when the Umbrella field is set to “Yes” for debt forgiveness projects/activities can be found below in the discussion of the `Flow_Type` variable. As a general rule, no umbrella records should be included in financial analysis or analysis of record counts as doing so will almost certainly result in double-counting. All umbrella agreements in the dataset



are assigned a designation of "No" in the Recommended\_for\_Aggregates field to help users avoid double-counting.

- **Status:** The 1.0 version of the CLG-LMIC, CLG-HIC, and CLG-Global 'Records' tab captures the full range of potential, active, completed and suspended/canceled projects/activities, and it distinguishes among them using the status field. This field identifies the latest status of a project/activity. Each project/activity is assigned to one of six categories: Pipeline: Pledge, Pipeline: Commitment, Implementation, Completion, Suspended, Canceled (see Section 1.4 for a full description of each status). Projects/activities assigned to the Pipeline: Commitment, Implementation, and Completion categories represent active or completed projects/activities that either benefit(ed) from (1) a binding, written agreement that governs the provision of financial or in-kind support from an official sector donor or lender in China (especially for loans and large grants), or (2) the provision of financial or in-kind support that has already taken place (e.g., humanitarian aid or small donations that were handed over to the recipient). As such, we consider the portfolio of projects/activities assigned to the Pipeline: Commitment, Implementation, and Completed categories to represent the actual portfolio of Chinese ODA, OOF, and OFIC (i.e., financial and in-kind transfers that have already happened, are underway, or scheduled to take place in the future). In contrast, projects/activities assigned to the Pipeline: Pledge category represent projects/activities that official sector institutions in China have indicated interest in supporting but have no binding legal obligation to do so. These projects/activities may benefit from financial and in-kind transfers in the future, but additional steps need to be taken by the official sector institutions in China and/or host country counterparts before the projects/activities can move forward with support from Chinese ODA, OOF, or OFIC. Similarly, projects/activities assigned to the Suspended and Canceled categories represent those that were backed by an official commitment but subsequently suspended or canceled (typically due to project design or implementation problems or disagreements). For analysis that requires the aggregation of projects supported by Chinese ODA, OOF, and OFIC commitments, including analysis of monetary amounts and record counts, only projects assigned to the Pipeline: Commitment, Implementation, and Completion categories should be included. However, given that some analysts are interested in better understanding China's portfolio of pledged, canceled, and suspended projects, we have included them in the full dataset to provide flexibility to users.
- **Recommended\_for\_Aggregates:** We recommend using this field for analysis that requires the aggregation of projects/activities supported by financial or in-kind commitments from official sector institutions in China, including analysis of monetary amounts and project/activity counts. It is useful for identifying formally approved, active, and completed Chinese financing for projects/activities—and excluding all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the formal approval (official commitment) stage. The field is set to "Yes" for all projects/activities with a status designation of Pipeline: Commitment, Implementation, and Completion that have not also been designated as umbrella agreements. It is set to "No" for all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the official commitment stage (i.e. those projects/activities with a status designation of Pipeline: Pledge, Suspended, and Canceled). Additionally, as a safeguard against double-counting, the field is set to

"No" for all umbrella agreements. Not all projects/activity records with a Recommended\_for\_Aggregates value of "Yes" identify a financial transaction value (since some transactions are difficult to monetize, such as in-kind donations, technical assistance, scholarships, and training activities). Further, AidData does not populate the Adjusted\_Amount\_Original\_Currency, Adjusted\_Amount\_Constant\_USD\_2023, or Adjusted\_Amount\_Nominal\_USD for projects/activity records where Recommended\_for\_Aggregates is set to "No", as these transaction amount fields are often those recommended for high-level aggregation of transaction amounts. See the Adjusted\_Amount section of Section 1.3.1 (below) or Section 2.2 for more information about when to use the adjusted amount fields.

- **Flow Type:** This field captures the type of financial or in-kind transfer supporting the project/activity. Each project/activity is assigned to one of seven categories: Loan, Debt forgiveness, Debt rescheduling, Grant, Scholarships/training in the donor country, Free-standing technical assistance, and Vague TBD. For projects/activities that are assigned to the "Loan" category, the dataset includes a host of other variables that capture the type of loan, the borrowing terms, the use of credit enhancements, and the involvement of co-financiers, among other things. See Section 2 for a more detailed description.
  - In cases of debt forgiveness, the Umbrella field is set to "Yes" if the original contracted loan could be captured elsewhere in the dataset as a loan record. This is done to avoid double counting. If the original contracted loans occurred before 2000 (when the dataset begins to track Chinese official flows), then the Umbrella field is set to "No." As such, if users are interested in isolating all cases of debt forgiveness, AidData recommends turning the Recommended\_for\_Aggregates filter off and then using the Flow\_Type field to identify all projects/activities assigned to the "Debt forgiveness" category (irrespective of whether they are coded as umbrella records).
  - Also, to help users avoid double-counting, AidData does not populate any fields related to transaction amounts (Amount\_Original\_Currency, Adjusted\_Amount\_Original\_Currency, Amount\_Constant\_USD\_2023, Adjusted\_Amount\_Constant\_USD\_2023, Amount\_Nominal\_USD, and Adjusted\_Amount\_Nominal\_USD) for projects/activities with a Flow\_Type of "Debt rescheduling." However, users who wish to undertake analysis of debt reschedulings can find detailed information about the terms and conditions of these reschedulings in the Narrative\_Description field of the projects/activities that are assigned to "Debt rescheduling" in the Flow\_Type field.
- **Flow Class:** The Flow Class field provides the backbone for distinguishing between different types of official financial flows from China and it is the 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 development finance flows to low- and middle-income countries, as defined by the OECD-DAC. Within this group, 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, captures

loans and grants directed to countries that the OECD-DAC defines as ineligible for ODA and OOF, such as Russia, countries acceding to the European Union, and several post-Soviet states. These OFIC flows fall outside the official development finance framework but are nonetheless official financial commitments from China. The distinction between the CLG-LMIC and CLG-HIC datasets hinges on this classification: CLG-LMIC 1.0 includes records with flow class designations of ODA, OOF, and Vague (ODA or OOF), while CLG-HIC 1.0 consists exclusively of OFIC flows. Users comparing financial and in-kind commitments from Chinese official sector institutions with that of other sources of development finance that are categorized according to OECD-DAC definition and measurement criteria (e.g., bilateral and multilateral donors reporting to the OECD-DAC) should focus on ODA, OOF, and Vague (ODA or OOF) records within the CLG-LMIC 1.0 dataset for true “apples-to-apples” comparisons. The CLG-HIC 1.0 dataset in comparison provides a unique level of detail of all official finance in high-income countries or countries otherwise outside of the ‘development finance’ framework. Users interested in analyzing flows to countries of all income levels, with all flow class designations, should use the combined CLG-Global 1.0 dataset.

- **World Bank Income Status:** The `WB_Income_Group_Host_Country` field captures the income status of the host country for each project or activity at the time the Chinese official commitment (or pledge) was made, based on the World Bank’s annual classification system. This field allows users to analyze Chinese development finance across the full income spectrum, from low-income to high-income countries, and to explore how China’s lending and grant-making strategies vary depending on the economic status of the host country. This variable differs from the `OECD_Income_Status_Host_Country` field in that the OECD’s income classifications are reviewed every three years. The World Bank classification therefore provides an annually-updated alternative for analysis. To see the complete picture of financial or in-kind commitments from Chinese official sector institutions across all income levels, users should use the combined CLG-Global 1.0 version of the dataset.
- **Adjusted\_Amount:** This field captures the “adjusted” monetary amount that a funding agency committed (or pledged) in its original currency of denomination. AidData recommends using this field to calculate the cumulative stock of official financial flows from China over multiple years—when one or more host countries secured “rollover” emergency rescue loans and/or swap borrowings from the People’s Bank of China (PBOC) to refinance their maturing debts. For grants and non-emergency loans, the amounts that are recorded in this field are identical to the amounts that are recorded in the ‘Amount’ field (which is not labeled as “Adjusted”). See Section 1.4 for a more detailed definition of the adjusted amount fields, and see Section 2 for further details regarding Chinese lending instruments.

While users of the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets may rely on additional fields to identify the subset of transfers (flows) they are interested in better understanding within the ‘Records’ tabs, the above-mentioned fields should be carefully considered before conducting any analysis.

Additional factors users should consider when using the 1.0 versions of the CLG-LMIC, CLG-HIC, and CLG-Global Records tabs include the following:

- Country of Activity and DRA Country of Incorporation: A key innovation in these datasets is the introduction of two distinct measures of “destination” for each Chinese loan commitment record, which together provide a more nuanced picture of where financing ultimately flows—either as a pass-through jurisdiction or as a final destination. The first, `Country_of_Activity` (formerly known as ‘Recipient’ in GCDF 3.0), identifies the host country where the project or activity supported by the loan or grant physically takes place. For example, if a loan finances the construction of a power plant in Kenya, the `Country_of_Activity` will be coded as Kenya, regardless of where the borrowing institution is legally domiciled. The second, `DRA_Country_of_Inc`, captures the jurisdiction where the direct receiving agency (DRA) of the loan is legally incorporated. This distinction is important because loans often flow *through* the country of incorporation before reaching its final destination in the host country where the project occurs. To enhance analytical value, AidData also flags whether each destination (`Country_of_Activity` and `DRA_Country_of_Inc`) corresponds to an offshore financial center (OFC). Because OFCs can carry special tax and legal implications for cross-border financing, this additional coding helps users better understand potential motivations behind loan structuring and the role of intermediary jurisdictions. Importantly, the `DRA_Country_of_Inc` field reflects the jurisdiction at the time of the loan commitment, as recorded in the `Commitment_Date` field, ensuring temporal accuracy even when organizations have changed their country of incorporation over time. While the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets provide both `Country_of_Activity` and `DRA_Country_of_Inc`, the first criteria for inclusion in either dataset of a given record is that the `Country_of_Activity` is one of the 217 covered countries. Companies headquartered and publicly traded in China or Hong Kong often establish borrowing vehicles incorporated overseas to avoid mainland China’s profit repatriation tax, leading to what has been dubbed “round-tripping”—where these offshore Chinese-controlled entities borrow debt or make dividend payments and other distributions to offshore parent companies in order to finance activities within China. All cases of round-tripping would have a `Country_of_Activity` of China, Hong Kong, or Macau, and are thus excluded from the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets (see Section 2.5.2, Box 2 for more information).
- Graduating Countries: For countries that transitioned from ODA/OOF-eligibility to ineligibility between 2000 and 2023, financial and in-kind donations are distributed across both the CLG-LMIC 1.0 and CLG-HIC 1.0 datasets. The CLG-LMIC 1.0 dataset captures all records committed in years when the country of activity qualified as ODA-eligible, while the CLG-HIC 1.0 dataset captures all records committed in years when the same country was no longer ODA-eligible, based on the OECD-DAC historical list of ODA-eligible countries.
- Refinances Chinese Official Debt: The datasets include a marker (`Refinances_Chinese_Official_Debt`) that identifies whether a given loan commitment from a Chinese government or state-owned entity was used to refinance all or part of an existing loan from a Chinese government or state-owned entity (captured elsewhere in the dataset). If users wish to exclude or isolate refinancing operations that replaced or restructured earlier loans from Chinese government and state-owned entities, they can use the `Refinances_Chinese_Official_Debt` field to do so.

- Syndicated Loan Amount and Syndicated Loan Share:** For users who wish to analyze the contributions of Chinese state-owned creditors to syndicated loans, several factors should be considered. Users should not aggregate the values in the syndicated loan amount fields (Syndicated\_Loan\_Amount, Syndicated\_Loan\_Amount\_Nominal\_USD, and Syndicated\_Loan\_Amount\_Constant\_USD\_2023) across project/activity records. Due to the way in which the data are organized (where each record captures a financial contribution from one official sector creditor to a given loan event), the syndicated loan amount for the same loan event will be duplicated across records in the dataset whenever multiple Chinese state-owned creditors provided contributions to the same loan event. In cases where there are multiple tranches of a syndicated loan, the syndicated loan amount fields record the total value of the specific tranche to which the Chinese state-owned creditor contributed (whenever known), rather than the full face value of the multi-tranche facility, and the record is assigned to a letter (e.g., A, B, C) in the Loan\_Event\_Tranche field. For example, if it is known that ICBC contributed to the first tranche of a syndicated loan facility, the syndicated loan amount fields will record the face value of the tranche to which ICBC contributed, and the Loan\_Event\_Tranche field will be set to "A" to indicate that this contribution was to one of the tranches of a multi-tranche facility. Due to these considerations, additional data processing is required if users wish to identify the full face value of all of the syndicated loans to which Chinese state-owned creditors contributed. Users should also consider the loan tranche when using the Syndicated\_Loan\_Share field for analysis. Because the syndicated loan amount fields capture the contribution from a Chinese state-owned creditor to a specific tranche (whenever applicable), the Syndicated\_Loan\_Share field reflects the percentage contribution of the Chinese state-owned creditor to that particular tranche rather than to the full multi-tranche facility. In cases where Chinese state-owned creditors contributed to multiple, separate tranches assigned to the same Loan\_Event\_ID, aggregating the Syndicated\_Loan\_Share field without considering the Loan\_Event\_Tranche may result in percentage values that exceed 100% for a given loan event ID.

### Box 1: Use & Interpretation of Constant 2023 USD Values in CLG-Global 1.0

AidData's China's Global Loans and Grants Dataset, Version 1.0 reports financial commitment amounts and syndicated loan commitment amounts in three forms: the nominal amount of the commitment in its original currency of denomination, the USD nominal equivalent, and the USD constant equivalent. With each new release, AidData updates the constant (base) year to reflect the most recent commitment year included in the dataset. In the 1.0 versions of the CLG-HIC and CLG-LMIC datasets, the constant year has been updated to 2023 as their temporal coverage includes financial commitments made between 2000 and 2023.

Representing values in constant USD terms is a standard practice in financial analysis when flows are being measured over time, as it ensures comparability across years. Calculating all flows in constant terms requires the application of a deflator to each financial value based on the financing country and the year of commitment. Constant values account for inflation and deflation, which affect the purchasing power of money.

The nominal values of financial commitments in the years when they take place do not indicate how much those sums could buy at other points in time. By adjusting nominal amounts to constant prices that are anchored to a base year, one can meaningfully compare financial flows over time. This approach allows for the identification of real changes in aid and credit volumes rather than changes that are simply the result of shifting price levels in the financing country.

China's economic conditions in the base year—namely, inflation or deflation—directly influence the constant values presented in the datasets. For example, in 2023, China experienced deflation, with an annual average of -0.58% in 2023, according to World Bank data. The prevailing level of deflation or inflation in the base year determines how nominal values from previous years are adjusted to reflect their real (inflation- or deflation-adjusted) equivalents in constant terms.

#### Inflation vs. Deflation in Constant Price Calculations:

→ Inflation reduces the value of money over time. When a country experiences inflation, the same amount of money buys fewer goods and services in the future. Therefore, past values are upwardly adjusted to reflect their lower purchasing power compared to the base year.

→ Deflation increases the value of money over time. In a deflationary environment, such as China in 2023, prices generally fall, and the purchasing power of money increases. Therefore, past values are downwardly adjusted when converting to the base year because money in the base year is more valuable than in the prior year.

#### Application to China's 2023 Deflator:

Deflation in China in 2023 resulted in GDP deflators for both 2022 and 2023 that exceed 1.0. This means that when a 2022 nominal value is converted into constant 2023 terms, the adjusted value is lower than the original value. In practical terms, financial commitments in 2023 had greater purchasing power than in 2022, so when 2022 financial commitments are expressed in 2023 constant prices, their commitment values fall. This outcome reflects the fact that a 2022 commitment amount could buy fewer goods and services than the same nominal commitment amount could buy in 2023.

### 1.3.2 Using the Borrower Ownership Tab

Users should take several special considerations into account when analyzing the 'Borrower Ownership' tab. Because ownership trees often contain multiple branches, a single direct receiving agency may be represented by several rows in the dataset. In cases where ownership stakes are not disclosed, AidData applies specific assumptions to estimate percentages, such as treating sole identified owners as wholly owning the institution or dividing stakes equally among known owners. These assumptions are clearly flagged in the Parent\_Ownership\_Estimated field. Where information about ownership chains is incomplete, the Parent\_Ownership\_Incomplete field indicates the presence of missing shareholders or untraced ownership links. Additionally, the type, nationality, or incorporation status of borrowers and parent owners may change over time; the dataset captures these attributes as

they were at the time of the loan commitment, and thus the same entities may have different values dependent on the commitment date.

Information in the 'Borrower Ownership' tab is also used to populate the following fields in the main 'Records' tabs: Chinese\_Group\_UBO, Chinese\_Group\_UBO\_Count, Chinese\_Group\_UBO\_Type, Host\_Country\_UBO, Host\_Country\_UBO\_Count, and Host\_Country\_UBO\_Type. When a parent owner has over 25% shareholding in the Direct\_Receiving\_Agency field (as identified in the Parent\_Ownership\_Percentage field in the 'Borrower Ownership' Records tab), then the parent owner qualifies as an Ultimate Beneficial Owner (UBO) and the Ultimate\_Beneficial\_Owner variable is set to "Yes." Then, if the parent owners that are designated as UBOs have a Parent\_Owner\_Nationality of China, Macau, or Hong Kong, the UBO\_Chinese\_Group field in the 'Borrower Ownership' tab is set to "Yes," which in turn sets the Chinese\_Group\_UBO in the 'Records' tab to "Yes." Similarly, if a parent owner is identified as a UBO and the Parent\_Owner\_Nationality (as identified in the 'Borrower Ownership' tab) is the same as the Country\_of\_Activity, then the Host\_Country\_UBO field is set to "Yes" in the 'Records' tab.

Information in the 'Borrower Ownership' tab is also used to populate the following fields: Credit\_Enhancement\_from\_DRA\_Related\_Org, Related\_Credit\_Enhancement\_Provider, Related\_Credit\_Enhancement\_Provider\_Org\_Type, Related\_Credit\_Enhancement\_Provider-Origin, Related\_Credit\_Enhancement\_Provider\_Relation\_to\_DRA, and Related\_Credit\_Enhancement\_Type. Because underlying data used to create the 'Borrower Ownership' tab includes, by virtue of tracking the ultimate parent owners *through* intermediaries, use of it allows the related credit enhancement fields to precisely identify related organizations and the nature of their relationships, i.e. a given organization coded as a Parent\_Owner in 'Borrower Ownership' would be coded as a "Parent Owner" in the Related\_Credit\_Enhancement\_Provider\_Relation\_to\_DRA field and all other fields would be populated based on that organization's characteristics present in the tab.

The 'Borrower Ownership' tab can be used for a variety of analytical purposes. Researchers can use it to assess the extent to which official sector lending from China is channeled through state-owned versus privately-owned borrowers, or to examine whether borrowing institutions are domestically incorporated or foreign-registered. It can also be used to evaluate the role of offshore financial centers in structuring loan transactions, or to study cross-border patterns of ownership and control. The 'Borrower Ownership' tab only shows ownership for AidData records with a Flow\_Type designation of "Loan." Furthermore, the data file includes ownership data for records that were formally approved, active, and completed along with umbrella records and records marked with a status of suspended, cancelled, or pledged. Users should consider filtering using the Recommended\_for\_Aggregates, Status, or Umbrella fields in the data file when analyzing data in the 'Borrower Ownership' tab to suit their needs for analysis. For more information regarding the application of the Recommended\_for\_Aggregates, Status, and Umbrella fields for analysis, see Section 1.3.1.

## 1.4 - Field Definitions

The CLG-Global 1.0 dataset—and the constituent CLG-LMIC 1.0 and CLG-HIC 1.0 datasets—includes two sets of records capturing related, but distinct, information. The main set of records is contained in the CLG-Global 1.0 'Records' tab of the CLG-Global .xlsx file. The

subsidiary set of records is contained in the CLG-Global 1.0 'Borrower Ownership' tab of the same .xlsx file.

### 1.4.1 Field Definitions for the CLG-Global 1.0 Records Tab

This tab of data contains 175 separate fields (variables) to document a detailed picture of each Chinese officially financed project/activity. Field names and definitions are provided in the table below.

Field Name	Description
AidData_Record_ID	This field provides the unique identification number that AidData has assigned to every project/activity record in the dataset.
Recommended_for_Aggregates	This field identifies projects/activities that AidData recommends including in analysis that requires the aggregation of projects/activities supported by official financial (or in-kind) commitments from China, including analysis of monetary amounts and project/activity counts. It is useful for identifying formally approved, active, and completed Chinese officially financed projects/activities—and excluding all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the formal approval (official commitment) stage. The field is set to "Yes" for all projects/activities with a status designation of Pipeline: Commitment, Implementation, and Completion that have not also been designated as umbrella agreements. It is set to "No" for all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the official commitment stage (i.e. those projects/activities with a status designation of Pipeline: Pledge, Suspended, and Canceled). Additionally, to avoid double-counting, the field is set to "No" for all umbrella agreements. For more information on umbrella agreements, see the description of the "Umbrella" field in this file. Also, note that not all projects/activities with a Recommended_for_Aggregates value of "Yes" identify a financial transaction value (since some transactions are difficult to monetize, such as in-kind donations, technical assistance, scholarships, and training activities).
Parent_ID	This field captures the linkages between project/activity records. All project/activity records that are related to each other are assigned a common parent identification (ID) number. Reasons for assigning a common parent ID number include: (1) linking all records related to one project, including multiple phases of the same project, or one distinct activity (such as separate loans that support the acquisition of shares in the same company); (2) linking all records that capture PPG loans in a given country affected by China's participation in the G20's Debt Service Suspension Initiative (DSSI) or other separate debt suspension initiatives; (3) linking instances of recurring scholarships/technical assistance to a particular country; (4) linking Confucius Institute-sponsored activities in a particular country; (5) linking records that capture financing from the same



	<p>special fund (e.g., the China Co-Financing Fund for Latin America and the Caribbean); (6) linking overarching financing agreements and financing for subsidiary projects/activities; (7) linking serial borrowing (e.g., working capital facilities); (8) linking a refinancing to the loans that were refinanced, and (9) linking a loan to its upsizing. A short description of the nature of the linkage can be found in the Parent_ID_Description field. The Parent_ID field is not used to create a linkage between project/activity records where multiple official sector financiers from China contributed to the same syndicated loan and/or contributed to multiple tranches of the same loan; these linkages are instead established through the Loan_Event_ID field. Nor is the Parent_ID field used to create a linkage between an instance of debt rescheduling/debt forgiveness and the corresponding loan(s) being rescheduled/forgiven; such records are linked through the Rescheduled_Loan_Record_ID and Rescheduling_Event_ID fields.</p>
Parent_ID_Description	<p>This field provides a brief description of each parent identification (ID) number, identifying the way in which records are linked together under the common number.</p>
Loan_Event_ID	<p>This field captures the unique identification (ID) number for each Loan Event, where a Loan Event is the commitment or pledge of a bilateral or syndicated loan. When multiple project/activity records pertain to the same Loan Event, those project/activity records share a Loan Event ID number, in effect linking them together. Multiple project/activity records may be linked together via a Loan Event ID when (a) multiple official sector financiers from China contributed to the same syndicated loan and their respective contributions to the loan are captured via separate records, and/or (b) one or more official sector financiers from China contributed to more than one tranche of the same syndicated loan and different loan tranches are captured via separate records.</p>
Loan_Event_Tranche	<p>This field captures the specific loan tranche to which a Chinese state-owned creditor contributed in cases where a contribution was made to a syndicated loan with multiple tranches. Each tranche of a syndicated loan is designated as a letter (e.g., A, B, C). If the tranche letter is known from the loan's sources, then the assigned Loan_Event_Tranche matches the tranche letter indicated in sources. If the tranche letter is unknown, AidData assigns the Loan_Event_Tranche manually starting with A and proceeding chronologically with the letters of the alphabet. As such, tranche letters represented in Loan_Event_Tranche do not necessarily correspond to the seniority of a given tranche.</p>
Loan_Event_Description	<p>This field provides a brief description of each Loan Event identification (ID) number, including as many of the following details as necessary to distinguish between loan events: the year in which the loan contract was signed, the number of lenders (bilateral or syndicated/club loan), the loan commitment amount, the financier, and/or the purpose of the financing.</p>

Rescheduled_Loan_Record_ID	Whenever the project/activity record captures a debt restructuring event (i.e., the Flow_Type field is set to “Debt Rescheduling” or “Debt Forgiveness”), this field provides the AidData Record identification (ID) number for the corresponding original loan commitment (wherein the Flow_Type field is set to “Loan”) that was affected by the debt restructuring. If multiple loans were affected by the debt restructuring, then the AidData Record ID numbers are pipe-delimited in this field. If the original loan that was rescheduled or forgiven is not included in the dataset, then the field is empty in the debt restructuring record. Reasons the original loan may not be included in the dataset include if the commitment year of the original loan is outside the scope of the dataset (i.e., it was committed prior to 2000), or if there is insufficient information to determine the specific loan that was affected by the debt restructuring event. Please refer to the Narrative_Description field for detailed information regarding the rescheduled or forgiven loan for each debt restructuring event record.
Rescheduling_Event_ID	Whenever the project/activity record captures a loan (i.e., the Flow_Type field is set to “Loan”) that was subsequently rescheduled or forgiven, this field provides the AidData Record identification (ID) number of the corresponding debt restructuring event (wherein the Flow_Type field is set to “Debt Rescheduling” or “Debt Forgiveness”). If the loan was affected by multiple debt restructuring events, then the AidData Record ID numbers are pipe-delimited in this field. Note that the dataset only includes project/activity records for debt restructuring events completed between 2000 and 2023. Please refer to the Narrative_Description field for detailed information regarding the debt restructuring of each loan record, including information regarding debt restructuring events that may have occurred after 2023 and prior to the publication of this dataset (November 2025).
Umbrella	This field identifies projects and/or activities that fall within umbrella agreements (with a “Yes” designation) in two circumstances. The first circumstance is when a financial agreement was signed by at least one party in the donor/creditor country and one party in the receiving country, but funds were not allocated for a specific purpose (or set of purposes) until a subsequent date. These types of umbrella agreements include economic and technical cooperation agreements (ETCAs) issued by China’s Ministry of Commerce (MOFCOM), master facility agreements issued by China Eximbank and China Development Bank, and framework agreements issued by a variety of official sector institutions in China. Due to the nature of the TUFF data collection process, the subsidiary transactions and projects/activities approved and financed under these types of umbrella agreements are likely captured elsewhere in the dataset. The second circumstance is when a single project/activity is financed by multiple Chinese government or Chinese state-owned institutions. In these cases, AidData creates one umbrella record to record the full amount of the financial commitment for the project/activity and a linked set of subsidiary project/activity records to capture the respective financial

	commitments of each Chinese government or Chinese state-owned institution. All umbrella agreements in the dataset are assigned a designation of "No" in the Recommended_for_Aggregates field to help users avoid double counting.
Financier_Country	This field captures the country from which the financial or in-kind transfer originated.
Country_of_Activity	This field captures the host country where the project/activity supported by the financial or in-kind transfer takes place. For example, a loan to finance the construction of a power plant in a given country will have its Country_of_Activity field set to that country, even if the borrowing institution is not legally domiciled (incorporated) in the same country. If the project/activity takes place in multiple host countries, the Country_of_Activity field records the corresponding geographical region to which these countries belong. In previous iterations of the TUFF methodology, this field was known as Recipient.
Country_of_Activity_ISO3	This field captures the three-letter code for the country identified in the Country_of_Activity field, according to the standards set by the International Organization for Standardization (ISO). In cases where the Country_of_Activity field records a geographical region rather than an individual country (such as "Africa, Regional"), the Country_of_Activity_ISO3 field is empty.
Region_of_Activity	This field captures the geographical region to which the country of activity belongs: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region.
DRA_Country_of_Inc	This field captures the jurisdiction where the direct receiving agency of a given financial or in-kind transfer is legally domiciled/incorporated. In cases where the direct receiving agency is a multilateral institution or a multinational non-governmental organization, the DRA_Country_of_Inc field is set to the geographical region that represents the member countries of the institution: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region. In cases where an entity is registered under the laws of the European Union and not any specific country, the DRA_Country_of_Inc is set to "Europe, regional." If AidData is unable to determine the DRA_Country_of_Inc for a given direct receiving agency, AidData sets the field to "Unknown." In cases of multiple direct receiving agencies, if the agencies all share the same country of incorporation, then the DRA_Country_of_Inc field is set to that country. However, if there are multiple direct receiving agencies with differing countries of incorporation, this field is set to "Multiple Jurisdictions." In cases where this field is set to "Multiple Jurisdictions," users can refer to the Direct_Receiving_Agencies_Incorporation field for a pipe-delimited list of all countries of incorporation for the direct receiving agencies. Some organizations that served as direct receiving agencies changed their country of incorporation over the years covered in the dataset. The DRA_Country_of_Inc field captures the agency's country of incorporation at the time of the financial commitment, as recorded in the

	Commitment_Date field. If there is no direct receiving agency assigned to the given record, the DRA_Country_of_Inc field is empty.
DRA_Country_of_Inc_ISO3	This field captures the three-letter code for the country identified in the DRA_Country_of_Inc field, according to the standards set by the International Organization for Standardization (ISO). In cases where the DRA_Country_of_Inc field is set to "Multiple Jurisdictions" or records a geographical region, the DRA_Country_of_Inc_ISO3 field is empty.
DRA_Country_of_Inc_OFC	This field provides a marker of whether the entity identified in the Direct_Receiving_Agencies field was legally domiciled (incorporated) in a country (as captured in the DRA_Country_of_Inc field) that was classified as an offshore financial center (OFC) during the year of the loan commitment. It is set to "Yes" if the country was an OFC in that year, according to the OFC list maintained by the Bank for International Settlements (BIS). If the country was not classified by the BIS as an OFC, the field is empty. This field is also empty if the DRA_Country_of_Inc field is set to "Unknown" or a geographical region.
Commitment_Year	This field captures the year in which an official financial commitment (or official commitment to provide in-kind support) was codified through the signing of a formal agreement by an official sector donor/lender in China and one or more entities in a host country or a set of host countries. Whenever possible, this field is based on the precise calendar day when the official commitment was issued, which is captured in the Commitment_Date field. In the event an official commitment was made for a project/activity that entered implementation, but the official commitment year is not identifiable, AidData records the first year of project/activity implementation as a proxy for the official commitment year. In the event an official commitment was made for a project/activity that has not yet reached implementation, and the official commitment year is not identifiable, AidData records the year in which the underlying commercial contract (supported by the official commitment) was issued. If this information is unavailable, AidData records the first year in which an informal pledge was made as a proxy for the official commitment year. For projects/activities with a status designation of Pipeline: Pledge (i.e. cases in which an official commitment was not made), AidData records the year in which the informal pledge was made.

Implementation_Start_Year	<p>This field captures the year in which a project/activity supported by an official financial (or in-kind) commitment from China began implementation. Whenever possible, this field is based on the precise calendar day when project/activity implementation began, which is captured in the Actual_Implementation_Start_Date field. For projects/activities that involve the construction of buildings or infrastructure, the Implementation_Start_Year field seeks to capture the first year of construction. In cases when the first year of construction is unavailable but a proxy for the first year of construction (e.g., the year in which a formal groundbreaking ceremony took place, a project/activity commencement order was issued to the contractor responsible for implementation, or a project/activity implementation agreement was signed) can be identified, AidData records the proxy for the first year of construction. For projects/activities that do not involve construction but involve the provision of personnel, training, analytical/advisory support, equipment, supplies, or commodities, the Implementation_Start_Year field captures the first year in which some type of support was delivered to an entity in the host country. For projects/activities that only involve financial transactions (e.g., cash donations, loans issued to shore up a country's foreign exchange reserves, forgiveness or rescheduling of outstanding debts), the Implementation_Start_Year field captures the year in which the first disbursement was made (or the year in which new terms and conditions went into effect for a previously signed loan agreement).</p>
Completion_Year	<p>This field captures the year in which a project/activity supported by an official financial (or in-kind) commitment from China was completed. Whenever possible, this field is based on the precise calendar day when a project/activity was completed, which is captured in the Actual_Completion_Date field. For projects/activities that involve the construction of buildings or infrastructure, the Completion_Year field seeks to capture the last year of construction. In cases when the last year of construction is unavailable but a proxy for the last year of construction (e.g., a road or railway is opened for use, a power plant reaches its commercial operation date and begins selling electricity to customers) can be identified, AidData records the proxy for the last year of construction. For projects/activities that do not involve construction but involve the provision of personnel, training, analytical/advisory support, equipment, supplies, or commodities, the Completion_Year field captures the last year in which some type of support was delivered to an entity (or set of entities) in the host country. For projects/activities that only involve financial transactions (cash donations, loans issued to shore up foreign exchange reserves, forgiveness or rescheduling of outstanding debts), the Completion_Year field captures the year in which the last disbursement was made (or the year in which new terms and conditions went into effect for a previously signed loan agreement).</p>
Title	<p>This field briefly describes the name or nature of the project/activity. In some cases, the identification numbers of other transactions that are linked to the project/activity are also recorded in this field. All records that</p>

	are linked together are assigned a common identification number in the Parent_ID, Loan_Event_ID, Rescheduling_Event_ID, and/or Rescheduled_Loan_ID fields, depending on the nature of the linkage(s) between the records.
Narrative_Description	This field provides a detailed summary of the main purposes and activities of the project/activity; the funding, receiving, and implementing agencies involved in the project/activity; the terms and conditions of the financial transaction(s) supporting the project/activity; the timing of project/activity implementation and completion; the challenges that arose during project/activity implementation and how funding, receiving, and implementing agencies responded to these challenges; and main achievements and shortcomings of the project/activity. For loan-financed projects/activities, AidData also records the monetary value and timing of underlying commercial contracts, disbursements, and repayments in this field.
Staff_Comments	This field captures comments from AidData staff that clarify the assumptions, logic, and evidence used to address challenging coding and categorization determinations. It also provides foreign translations of project/activity titles (used for source identification purposes), information about related transactions and projects/activities, and information about the ownership structures of funding, receiving, and implementing agencies.
Status	This field identifies the latest status of a project/activity. Each project/activity is assigned to one of six categories: Pipeline: Pledge, Pipeline: Commitment, Implementation, Completion, Suspended, Cancelled. A project/activity assigned to the "Pipeline: Pledge" category is one that an official sector institution in China indicated it was interested in supporting (or willing to consider supporting) but did not result in an official commitment. Projects/activities assigned to this category include those that are identified in letters of intent, term sheets, memoranda of understanding, and non-binding announcements. All projects/activities given a status designation of Pipeline: Commitment, Implementation, Completion, Suspended, or Cancelled reached the official commitment stage (i.e., a binding, written agreement that governs the provision of financial or in-kind support for a specific purpose was signed by an official sector donor or lender in China and an entity in a host country). A project/activity assigned to the "Pipeline: Commitment" category is one that is backed by an official commitment but has not yet entered implementation. A project/activity assigned to the "Implementation" category is one that is backed by an official commitment and has begun implementation with financial or in-kind support from the source of the commitment. A project/activity assigned to the "Completion" category is one that is backed by an official commitment and that reached completion with financial or in-kind support from the sources of the commitment. Projects/activities assigned to the "Suspended" and "Cancelled" categories are those that were backed by an official commitment but subsequently suspended or canceled. The coding of the

	'Status' field in the dataset is based on sources that were available as late as October 2025.
Intent	<p>This field seeks to measure the primary purpose of the project/activity. Each project/activity is assigned to one of five categories: Development, Commercial, Representational, or Mixed. Projects/activities assigned to the "Development" category are those that are primarily oriented towards the promotion of economic development and welfare in the host country. Projects/activities assigned to the "Commercial" category are those that primarily seek to promote the commercial interests of the country from which the financial transfer originated (e.g., encouraging the export of Chinese goods and services), and projects/activities that primarily seek to promote the commercial interests of companies from countries other than the host country (e.g., the acquisition of an ownership stake in a company). Projects/activities assigned to the "Representational" category are those that primarily seek to promote a bilateral relationship with another country or promote the language, culture, or values of the country from which the financial transfer originated (e.g., the establishment of a Confucius Institute or Chinese cultural center). If a project/activity is assigned to the "Mixed" category, this designation indicates that it was not possible for AidData to identify the primary purpose of the project/activity and the project/activity has multiple purposes (i.e., some combination of development, commercial, and/or representational intent).</p>
Flow_Type	<p>This field captures the type of financial or in-kind transfer supporting the project/activity. Each project/activity is assigned to one of seven categories: Loan, Debt forgiveness, Debt rescheduling, Grant, Scholarships/training in the donor country, Free-standing technical assistance, or Vague TBD. For projects/activities that are assigned to the "Loan" category, the dataset includes a host of other variables that capture the type of loan, the borrowing terms, the use of credit enhancements, and the involvement of co-financiers, among other things. In cases of debt forgiveness, the "Umbrella" field is set to "Yes" if the original loan commitment could be captured elsewhere in the dataset as a record. This safeguard is in place to avoid double-counting. If the original loan commitment was issued before 2000 (when the dataset's period of observation begins), then the "Umbrella" field is set to "No." As such, if users are interested in isolating all cases of debt forgiveness, AidData recommends turning the Recommended_for_Aggregates filter off and then using the Flow_Type field to identify all records assigned to the "Debt forgiveness" category (irrespective of whether they are coded as umbrella agreements). Also, to help users avoid double-counting, AidData does not populate any fields related to transaction amounts (Amount_Original_Currency, Adjusted_Amount_Original_Currency, Amount_Constant_USD_2023, Adjusted_Amount_Constant_USD_2023, Amount_Nominal_USD, and Adjusted_Amount_Nominal_USD) for projects/activities assigned to the "Debt rescheduling" category. However, users who wish to undertake analysis of debt reschedulings can</p>

	find detailed information about the terms and conditions of these reschedulings in the Narrative_Description field of the projects/activities that are assigned to the "Debt rescheduling" category.
Flow_Type_Simplified	This field captures the type of financial or in-kind transfer supporting the project/activity in a smaller number of categories than the Flow_Type field in order to facilitate the aggregation of flows based on certain criteria. Each flow is assigned to one of four categories: Grant, Loan, Debt rescheduling, and Vague. Unlike the Flow_Type field, the "Grant" category in this field includes records with "Grant," "Debt forgiveness," "Scholarships/training in the donor country," and "Free-standing technical assistance" designations.
OECD_ODA_Concessionality_Threshold	This field identifies the concessionality threshold applied to any loan record to determine if it met the concessionality threshold to qualify as ODA. It is only populated when the loan supports a project/activity in a host country that is ODA- and OOF- eligible during the year when the financial commitment was made. This field is not populated whenever the OECD_Income_Status_Host_Country field is set to "High income or otherwise ODA ineligible." The concessionality threshold is based on the year in which the project/activity secures a commitment from an official sector institution in China, the income level of the borrowing host country, and the receiving agency type. For all loans issued between 2000 and 2017, the threshold is 25% (using a unified 10% discount rate). For loans issued between 2018 and 2023, the threshold is determined based on the following criteria. For loans to official sector institutions, the following concessionality thresholds apply: (1) least-developed countries and low-income countries: a minimum grant element of 45% (calculated using a 9% discount rate); (2) lower-middle income countries: a minimum grant element of 15% (calculated using a 7% discount rate); and (3) upper-middle income countries: a minimum grant element of 10% (calculated using a discount rate of 6%). For loans to private sector institutions (for all ODA eligible host countries, regardless of the income level of the host country), the following concessionality threshold applies: a minimum grant element of 25% (using a unified 10% discount rate).



Flow_Class	<p>Based on the OECD-DAC methodology between 2000-2023 to measure Official Development Assistance (ODA) and Other Official Flows (OOF), this field assigns projects/activities to one of four flow class categories: ODA, OOF, Vague (ODA or OOF), or Official Flows to Ineligible Countries (OFIC). Projects/activities are assigned 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 host country (i.e., have development intent). Second, the project/activity must take place in a country that qualifies for ODA based on its income level and as assigned by the OECD-DAC. 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 threshold). For official commitments issued (flows reported) between 2000 and 2017, AidData follows the OECD's traditional cash-flow methodology to define ODA, which included a threshold level of 25% grant element with a discount rate of 10% for all loans in ODA/OOF-eligible countries. For official commitments issued (flows reported) in 2018 and subsequent years, AidData uses the OECD's grant-equivalent methodology, which relies upon a tiered concessional threshold system for loans in ODA-eligible countries. Under the grant-equivalent methodology, the threshold concessional for loans to the official sector in the country of activity 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). Users can refer to the OECD_ODA_Concessional_Threshold field to identify the threshold used for a particular loan record in the dataset when the country of activity is an ODA/OOF-eligible country. Projects/activities in ODA/OOF-eligible countries that are supported by an official financial or in-kind transfer but do not meet all three of the criteria for ODA are assigned to the "OOF" category. Projects/activities in ODA/OOF-eligible countries that are backed by an official commitment but cannot be reliably categorized as ODA or OOF because of insufficiently detailed information are assigned to the "Vague (ODA or OOF)" category. Projects/activities in this residual category primarily consist of (a) those with an unspecified flow type (i.e., values of "Vague TBD" in the Flow_Type field); and (b) those financed with development intent loans for which AidData lacks the borrowing terms (interest rates, grace periods, or maturity dates) needed for concessional determinations. Users who would like to use one concessional threshold for the entire time period (or a subset) can use the relevant grant element calculator to re-classify ODA and OOF loan records where necessary. The final flow class category is Official Flows to Ineligible Countries (OFIC). Projects/activities are assigned to the "OFIC" category when the country of activity is not eligible for ODA or OOF, as defined by the OECD-DAC. OFIC commitments do not qualify as ODA or OOF but they do represent official sector financial commitments from China to countries that are high-income or otherwise ineligible to be</p>
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	represented in the OECD-DAC's ODA and OOF statistics. Users seeking to compare Chinese ODA and OOF flows to the developing world with ODA and OOF flows from other official (bilateral and multilateral) sources should exclude OFIC commitments from their analysis.
Sector_Code	This field provides a 3-digit sector code based upon the primary sectoral focus of the project/activity. It is based upon the OECD's sector categorization scheme. There are 24, three-digit OECD sector codes: 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), transport and storage (210), communications (220), energy (230), banking and financial services (240), business and other services (250), agriculture, forestry and fishing (310), industry, mining, and construction (320), trade policies and regulation (330), general environmental protection (410), other multisector (430), general budget support (510), developmental food aid/food security assistance (520), other commodity assistance (530), action relating to debt (600), emergency response (720), reconstruction relief and rehabilitation (730), disaster prevention and preparedness (740), and unallocated/unspecified (998).
Sector_Name	This field provides a sector name based upon the primary sectoral focus of the project/activity. It is based upon the OECD's sector categorization scheme. There are 24, three-digit OECD sector codes: 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), transport and storage (210), communications (220), energy (230), banking and financial services (240), business and other services (250), agriculture, forestry and fishing (310), industry, mining, and construction (320), trade policies and regulation (330), general environmental protection (410), other multisector (430), general budget support (510), developmental food aid/food security assistance (520), other commodity assistance (530), action relating to debt (600), emergency response (720), reconstruction relief and rehabilitation (730), disaster prevention and preparedness (740), and unallocated/unspecified (998).
Infrastructure	This field provides a marker of whether a project/activity is an infrastructure project. In this dataset, infrastructure projects refer to those that involve physical construction activities (e.g., roads, railways, pipelines, transmission lines, fiber optic networks). More specifically, they include those that involve (1) building a new physical structure, (2) rehabilitating or adding onto an existing physical structure, and/or (3) maintaining an existing physical structure. AidData does not include projects/activities that involve the provision of cash, technical assistance, scholarships, equipment, or supplies in its definition of infrastructure projects. The field is set to "Yes" if a project/activity can be classified as an infrastructure project.

COVID	This field provides a marker of whether it is known that the project/activity is part of China's global COVID-19 response efforts. The field is set to "Yes" if the purpose of the project/activity is related to COVID-19 control, including providing information, education and communication as well as activities or materials enabling testing, prevention, immunization, treatment, or care.
Funding_Agencies_Parent	This field is designed to facilitate aggregate analysis across the dataset by identifying the parent owners of the diverse set of funding agencies that administer China's overseas grant-giving and lending portfolio. This field provides the name of the organization that is the parent owner of the organization recorded in the Funding_Agencies field. For state-owned companies and state-owned banks, the parent owner identified in this field represents the final state-owned company or state-owned bank majority shareholder, rather than the ultimate government agency shareholder(s); in some cases, this means that the funding agency and funding agency parent will appear as the same organization (e.g., Bank of China is recorded as its own funding agency parent). If there is no single majority shareholder of the funding agency, then the parent owner is identified as the final owner before there is dispersed ownership; in some cases, this means that the funding agency and funding agency parent will appear as the same organization (e.g., Sicomines SARL is majority owned by a consortium of Chinese state-owned companies with no single majority shareholder, and as such it has been recorded as its own funding agency parent). If the funding agency is a government agency, then the funding agency parent is set to one of the five following categories to facilitate aggregate analysis: (1) PRC Central Government, (2) PRC Subnational Government, (3) PRC Public University, (4) Unspecified PRC Public Sector Institution, or (5) PRC Central Bank. If there are multiple funding agencies associated with the project/activity record, then the parent owners recorded in this field are pipe-delimited.
Funding_Agencies	This field captures the name of the Chinese state-owned institution that issued the official financial or in-kind commitment. For projects/activities assigned to the "Pipeline: Pledge" category in the 'Status' field, this field captures the name of the Chinese state-owned institution that issued the pledge. If multiple Chinese funding agencies are involved, the entries are pipe-delimited.
Funding_Agencies_Type	This field captures the type of funding agency that issued the commitment or pledge. Each funding agency is assigned to one of seven categories (types): Government Agency, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Bank, State-Owned Company, or State-Owned Fund. If multiple official sector funding agencies from China are involved, the entries recording their types are pipe-delimited. Some entities that served as the Funding_Agencies changed their type over the years covered in the dataset. The Funding_Agencies_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.

Lending_from_Overseas_Branch_or_Subsidary	This field provides a marker for all loan records where the Chinese state-owned institution that issued the loan commitment is based outside mainland China. This field is set to "Yes" if the lender is based in Hong Kong, Macau, or any country other than the People's Republic of China. This field is empty if the lender recorded in the Funding_Agencies field is based in mainland China.
Overseas_Jurisdiction	This field identifies the jurisdiction of the funding agency for loan records whenever the Chinese state-owned institution that issued the loan commitment is based outside of mainland China. For example, this field is set to "United Kingdom" in cases where the London Branch of Bank of China issued a loan commitment. This field is only populated when the Lending_from_Overseas_Branch_or_Subsidary field is set to "Yes."
Overseas_Jurisdiction_ISO3	This field captures the three-letter code for the country identified in the Overseas_Jurisdiction field, according to the standards set by the International Organization for Standardization (ISO). In cases where the Overseas_Jurisdiction field records a geographical region rather than an individual country (such as "Africa, Regional"), the Overseas_Jurisdiction_ISO3 field is empty.
Cofinanced	This marker indicates whether a separate funding agency (belonging to the financier country or another country) provided funding for the project/activity.
Cofinancing_Agencies	This field provides the names of the cofinancing agencies providing funding for the project/activity. If multiple cofinancing agencies are involved, the entries are pipe-delimited.
Cofinancing_Agencies_Type	This field captures the type of cofinancing agency that provided funding, as well as the agency's country of origin. Each cofinancing agency is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each cofinancing agency is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Chinese State-Owned Commercial Bank). If multiple cofinancing agencies are involved, the entries are pipe-delimited. Some organizations that served as cofinancing agencies changed their agency type over the years covered in the dataset. The Cofinancing_Agencies_Type field captures their agency type at the specific point in time of the financial commitment, as recorded in the Commitment_Date field.

Direct_Receiving_Agencies	This field provides the name of the agency designated to receive and manage the financial or in-kind transfer. For projects/activities that are financed with loans, the receiving agency is the entity responsible for debt repayment. If a receiving agency (borrower) on-lends the proceeds of a loan to an additional entity or entities, then the borrower is captured in the Direct_Receiving_Agencies field and the additional entity or entities which receive loans from the borrower is captured in the Indirect_Receiving_Agencies field. If more than one entity is responsible for receiving and managing incoming grant funds or an in-kind transfer, all of these entities are identified in the Direct_Receiving_Agencies field (as pipe-delimited entries).
Direct_Receiving_Agencies_Type	This field captures the type of agency designated to receive and manage the financial or in-kind transfer, as well as the agency's country of origin. Each direct receiving agency is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Recipient Government Agency). If multiple direct receiving agencies are involved, the entries are pipe-delimited. Some entities that served as the Direct_Receiving_Agencies changed their type over the years covered in the dataset. The Direct_Receiving_Agencies_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Direct_Receiving_Agencies_Incorporation	This field captures the jurisdiction where the direct receiving agency of a given official financial flow or in-kind transfer is legally domiciled (incorporated). In cases where the direct receiving agency is a multilateral institution or a multinational non-governmental organization, the Direct_Receiving_Agencies_Incorporation field is set to the geographical region that represents the member countries of the institution: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region. In cases where an entity is registered under the laws of the European Union and not any specific country, the Direct_Receiving_Agencies_Incorporation field is set to "Europe, regional." If AidData is unable to determine the Direct_Receiving_Agencies_Incorporation field for a given direct receiving agency, AidData codes the field as "Unknown." If there are multiple direct receiving agencies, their countries of incorporation are pipe-delimited, regardless of whether those countries of incorporation differ from each other (unlike the DRA_Country_of_Inc field, which displays "Multiple Jurisdictions" in such scenarios). Some organizations that served as direct receiving agencies changed their country of incorporation over the years covered in the dataset. The Direct_Receiving_Agencies_Incorporation field captures an agency's country of incorporation type at the specific point in time of the financial commitment, as recorded in the Commitment_Date field. If there is no direct receiving agency assigned to

	the given record, the Direct_Receiving_Agencies_Incorporation field is empty.
Indirect_Receiving_Agencies	This field provides the name of the agency or agencies that receive and manage a financial transfer (loan) from the entity captured in the Direct_Receiving_Agencies field (as part of an on-lending arrangement). If multiple indirect receiving agencies are involved, the entries are pipe-delimited.
Indirect_Receiving_Agencies_Type	This field captures the type of agency that received a financial transfer from the entity captured in the Direct_Receiving_Agencies field, as well as the indirect receiving agency's country of origin. Each indirect receiving agency is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each indirect receiving agency is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g. Recipient Government Agency). If multiple indirect receiving agencies are involved, the entries are pipe-delimited. Some entities that served as the Indirect_Receiving_Agencies changed their type over the years covered in the dataset. The Indirect_Receiving_Agencies_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Onlending	This field provides a marker of whether it is known that the loan involves an on-lending arrangement, which is an arrangement in which a receiving agency (borrower) uses the proceeds of a loan to lend to one or more additional entities. In an on-lending arrangement, the borrower is captured in the Direct_Receiving_Agencies field, and the entity or entities which receive a loan from the borrower is captured in the Indirect_Receiving_Agencies field. The 'Onlending' field is set to "Yes" if the loan involves an on-lending arrangement.
Receiving_Agency_JVSPV	This field provides a marker of whether the direct or indirect receiving agency of the financial or in-kind transfer is a joint venture or special purpose vehicle. The Receiving_Agency_JVSPV field is set to "Yes" if the direct or indirect receiving agency is a joint venture or special purpose vehicle. Otherwise, the field is empty.
Implementing_Agencies	This field provides the name of the agency responsible for implementing the project/activity. If more than one agency is responsible for implementing the project/activity, all such agencies are identified in the Implementing_Agencies field (as pipe-delimited entries).

Implementing_Agencies_Type	This field captures the type of agency that is responsible for implementing the project/activity, as well as the agency's country of origin. Each implementing agency is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each implementing agency is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Chinese State-Owned Company). Some entities that served as the Implementing_Agencies changed their type over the years covered in the dataset. The Implementing_Agencies_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Guarantee_Provided	This field provides a marker of whether it is known that a loan repayment guarantee was issued by a third-party (accountable agency). It assumes a value of "Yes" whenever a sovereign or corporate guarantee is issued in support of a loan.
Guarantor	This field provides the name of the agency that provided a repayment guarantee in the event the borrower (i.e., direct receiving agency) cannot meet its debt repayment obligations.
Guarantor_Agency_Type	This field captures the type of agency that issued a guarantee, as well as the agency's country of origin. Each guarantor is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each agency (guarantor) is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Recipient Government Agency). Some entities that served as the Guarantor_Provider changed their type over the years covered in the dataset. The Guarantor_Agency_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Insurance_Provided	This field provides a marker of whether it is known that a third-party (accountable agency) provided a credit insurance policy to the borrower (receiving agency). For example, it assumes a value of "Yes" whenever a loan is backed by a credit insurance policy from China Export & Credit Insurance Corporation (Sinosure).
Insurance_Provider	This field provides the name of the agency that provided a credit insurance policy to ensure repayment in the event the borrower (i.e., direct receiving agency) cannot meet its debt repayment obligations.

Insurance_Provider_Agency_Type	<p>This field captures the type of agency that provided a credit insurance policy, as well as the agency's country of origin. Each insurance provider is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each agency (insurance provider) is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Chinese State-Owned Company). Some entities that served as the Insurance_Provider changed their type over the years covered in the dataset. Insurance_Provider_Agency_Type captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.</p>
Collateralized	<p>This field provides a marker of whether it is known that one or more specific assets or revenue streams (future receivables) could be used by the creditor(s) to secure the repayment of the loan if the borrower defaulted on its repayment obligations. To identify and code collateralized debt transactions, AidData follows the World Bank and IMF 2020 guidance note, "Collateralized Transactions: Key Considerations for Public Lenders and Borrowers" and its 2023 update (World Bank and IMF 2020, 2023). The 'Collateralized' field assumes a value of "Yes" if a loan is collateralized through a formal security interest in a specific asset or revenue stream. It also assumes a value of "Yes" if a loan is supported by a "quasi-collateral" arrangement that grants the creditor <i>de facto</i> (effective) control over an asset or revenue stream ("quasi-collateral") rather than a formal security interest. Formal security interests include liens, pledges, fixed charges, floating charges, assignments, and mortgages. Quasi-collateral arrangements include those in which the borrower agrees to deposit cash in an escrow account—such as a revenue account, collection account, sales collection account, proceeds account, debt service reserve account, debt payment reserve account, payment account, or special account—and grant the lender control and priority access to the account, including the ability to exercise statutory set-off rights. This approach is consistent with the one used in the following publication: Gelpern, A., Haddad, O., Horn, S., Kintzinger, P., Parks, B. C., &amp; C. Trebesch. (2025). How China Collateralizes. AidData Working Paper #136. Williamsburg, VA: AidData at William &amp; Mary.</p>
Collateral_Provider	<p>This field provides the name of the agency that provided one or more sources of collateral (e.g., an assignor, mortgagor, pledgor, transferor, lienee) that could be used by the creditor(s) to secure the repayment of the loan if the borrower defaulted on its repayment obligations.</p>



Collateral_Provider_Agency_Type	This field captures the type of agency that provided collateral, as well as the agency's country of origin. Each collateral provider is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each agency that provided collateral is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Recipient Private Sector). Some entities that served as the Collateral_Provider changed their type over the years covered in the dataset. The Collateral_Provider_Agency_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Security_or_Collateral_Agent	This field provides the name of the security agent or collateral agent that was appointed to enforce rights against the collateral in the event that the borrower defaults on its debt repayment obligations.
Security_or_Collateral_Agent_Type	This field captures the type of security agent or collateral agent, as well as its country of origin. Each security agent or collateral agent is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Each security agent or collateral agent is also categorized based on whether it is from the financier country, the recipient (host) country, or another country. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Chinese State-Owned Commercial Bank). Some entities that served as the Security_or_Collateral_Agent changed their type over the years covered in the dataset. The Security_or_Collateral_Agent_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field.
Collateral	This field provides a qualitative description of the specific assets or revenue streams (future receivables) that the creditor could use to secure the repayment of a loan if the borrower defaulted on its repayment obligations.
Commodity_backed	This field provides a marker of whether one or more underlying sources of security (collateral) for the loan includes a commodity asset or commodity revenue stream. A loan can be secured (collateralized) with up to thirty-three types of commodity assets or revenue streams: aluminium, bauxite, cacao, chromite, coal, copper, cobalt, fertilizer, gas (including liquified natural gas), gold, grain, iron (including iron ore), lead, lithium (including lithium carbonate), magnetite, molybdenum, nickel, niobium, oil, other chemical, phosphate, pegmatite, platinum, potash, potassium sulfate, pulp, salt, sesame, silver, spodumene concentrate, steel, tobacco,

	or zinc. AidData codes all pre-export finance (PXF) facilities—that involve commodity exports—as commodity-backed loans since they are almost always secured by (1) an assignment of rights by the producer under an ‘offtake contract’ (i.e., a sale and purchase contract between the producer and a buyer of that producer of goods or commodities), and (2) a collection account charge over a bank account into which proceeds due to the producer from the buyer of the goods or commodities under the offtake contract are credited.
Commodity	This field captures the specific commodity supporting the security (collateral) package in cases when the underlying source of security (collateral) was a commodity asset or commodity revenue stream. A loan can be secured with up to thirty-three types of commodity assets or revenue streams: aluminium, bauxite, cacao, chromite, coal, copper, cobalt, fertilizer, gas (including liquified natural gas), gold, grain, iron (including iron ore), lead, lithium (including lithium carbonate), magnetite, molybdenum, nickel, niobium, oil, other chemical, phosphate, pegmatite, platinum, potash, potassium sulfate, pulp, salt, sesame, silver, spodumene concentrate, steel, tobacco, or zinc. If multiple commodities support the sector (collateral) package, the entries recording the commodities are pipe-delimited.
Amount_Original_Currency	This field captures the monetary amount that the funding agency committed (or pledged) in its original currency of denomination. For projects/activities that were at some point supported by an official commitment (i.e., projects/activities with status designations of Pipeline: Commitment, Implementation, Completion, Suspended, Cancelled), this field captures the original commitment amount. For projects/activities with status designations of Pipeline: Pledge, this field captures the amount of funding that was pledged.
Original_Currency	This field captures that currency of denomination associated with the monetary amount that the funding agency committed (or pledged), as recorded in the Amount_Original_Currency field.
Amount_Estimated	This marker designates whether AidData estimated the monetary amount that the funding agency committed (or pledged), as captured in the Amount_Original_Currency field. The field is set to "Yes" when the Amount_Original_Currency field is estimated by AidData. It is otherwise set to "No," which indicates that AidData has reported the actual monetary amount that the funding agency committed (or pledged) based on explicit, official source documentation. There are a number of circumstances under which AidData estimates transaction (financial commitment) amounts. Examples include: (1) If the precise face value of a Preferential Buyer's Credit (PBC) or Buyer's Credit Loan (BCL) from China Eximbank is unknown, but the total cost of the commercial (EPC) contract is known, AidData assumes that the face value of the PBC/BCL is equivalent to 85% of the total commercial (EPC) contract cost; (2) If the face value of a syndicated loan (involving one or more official sector creditors from China) is known and the total number of participants in the loan syndicate is known, AidData assumes that each bank provided equal

	contributions to the syndicated loan; (3) If material is transferred in-kind and there is no credible reporting on the monetary value of the in-kind transfer, AidData calculates the monetary value of the in-kind materials by multiplying the number of units of donated material by the market value of those materials (in unit cost terms). Whenever a transaction (financial commitment) amount has been estimated, AidData includes an explanation in the Narrative_Description and/or Staff_Comments field.
Amount_Constant_USD_2023	This field captures the monetary value of the official commitment (or pledge) issued by the funding agency in constant 2023 U.S. dollars. To calculate this value, AidData first converts the financial commitment (or pledge) amount in its original currency of denomination to nominal U.S. dollars at the average exchange rate in effect during the commitment (or pledge) year, and then converts this amount to constant 2023 U.S. dollars using the OECD's deflation methodology to adjust for inflation and ensure comparability over time and space. See Box 1 and Appendix D in the TUFF 4.0 methodology for additional details regarding deflation procedures.
Amount_Nominal_USD	This field captures the monetary value of the official commitment (or pledge) issued by the funding agency in nominal U.S. dollars. It is one of the inputs used to calculate financial commitment (and pledge) amounts in constant 2023 U.S. dollars, as recorded in the Amount_Constant_USD_2023 field.

Adjusted_Amount_Original_Currency	<p>This field captures the “adjusted” monetary amount that a funding agency committed (or pledged) in its original currency of denomination. AidData recommends using this field to calculate the cumulative stock of official financial flows from China over multiple years—when one or more host countries secured “rollover” emergency rescue loans and/or swap borrowings from the People’s Bank of China (PBOC) to refinance their maturing debts. For grants and non-emergency loans, the amounts that are recorded in this field are identical to the amounts that are recorded in the Amount_Original_Currency field. However, for emergency rescue loans and swap borrowings from the PBOC (with de jure maturities of one year or less), this field excludes so-called “rollover” amounts that refinance maturing debts. The monetary amounts in the Adjusted_Amount_Original_Currency field are calculated, whenever possible, by taking the difference between the level of outstanding debt in the current year and the previous year. This approach is consistent with the one used to derive net (new) PBOC swap borrowings in the following publication: Horn, S., Parks, B., Reinhart, C. M., and Trebesch, C. 2023. China as an International Lender of Last Resort. NBER Working Paper No. 31105. Cambridge, MA: National Bureau of Economic Research (NBER). In cases when this approach cannot be applied but there is evidence of the same lender providing a series of short-term emergency rescue loans (with identical face values and de jure maturities of 1 year or less) to the same borrower that are repaid on their original contractual maturity dates and subsequently reissued in consecutive years, the Adjusted_Amount_Original_Currency field records the face value of the original loan commitment in the first year but not the face values of the loan commitments in subsequent years. For projects/activities that were at some point supported by an official commitment (i.e., projects/activities with status designations of Pipeline: Commitment, Implementation, Completion, Suspended, Cancelled), the Adjusted_Amount_Original_Currency field captures the original commitment amount. For projects/activities with status designations of Pipeline: Pledge, the Adjusted_Amount_Original_Currency field is not populated, insofar as these projects/activities are not recommended for aggregates.</p>
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Adjusted_Amount_Constant_USD_2023	<p>This field captures the “adjusted” monetary amount of the official commitment (or pledge) issued by the funding agency in constant 2023 U.S. dollars. To calculate this value, AidData first converts the “adjusted” financial commitment (or pledge) amount in its original currency of denomination—as recorded in the Adjusted_Amount_Original_Currency field—to nominal U.S. dollars at the average exchange rate in effect during the commitment (or pledge) year. AidData then converts this “adjusted” monetary amount to constant 2023 U.S. dollars using the OECD’s deflation methodology to account for inflation and ensure comparability over time and space. See Box 1 and Appendix D in the TUFF 4.0 methodology for additional details regarding deflation procedures. AidData recommends using the Adjusted_Amount_Constant_USD_2023 field to calculate—in constant 2023 U.S. dollars—the cumulative stock of official financial flows from China over multiple years—when one or more host countries secured “rollover” emergency rescue loans and/or swap borrowings from the People’s Bank of China (PBOC) to refinance their maturing debts. For grants and non-emergency loans, the amounts that are recorded in this field are identical to the amounts that are recorded in the Amount_Constant_USD_2023 field. However, for emergency rescue loans and swap borrowings from the PBOC (with de jure maturities of one year or less), this field excludes so-called “rollover” amounts that refinance maturing debts. The monetary amounts in the Adjusted_Amount_Original_Currency field are calculated, whenever possible, by taking the difference between the level of outstanding debt in the current year and the previous year. This approach is consistent with the one used to derive net (new) PBOC swap borrowings in the following publication: Horn, S., Parks, B., Reinhart, C. M., and Trebesch, C. 2023a. China as an International Lender of Last Resort. NBER Working Paper No. 31105. Cambridge, MA: National Bureau of Economic Research (NBER). In cases when this approach cannot be applied but there is evidence of the same lender providing a series of short-term emergency rescue loans (with identical face values and de jure maturities of 1 year or less) to the same borrower that are repaid on their original contractual maturity dates and subsequently reissued in consecutive years, the Adjusted_Amount_Original_Currency field records the face value of the original loan commitment in the first year but not the face values of the loan commitments in subsequent years.</p>
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Adjusted_Amount_Nominal_USD	<p>This field captures the “adjusted” monetary amount of the official commitment (or pledge) issued by the funding agency in nominal U.S. dollars. It is one of the inputs used to calculate financial commitment (and pledge) amounts in constant 2023 U.S. dollars, as recorded in the Adjusted_Amount_Constant_USD_2023 field. AidData recommends using the Adjusted_Amount_Nominal_USD field to calculate—in nominal U.S. dollars—the cumulative stock of official financial flows from China over multiple years—when one or more host countries secured “rollover” emergency rescue loans and/or swap borrowings from the People's Bank of China (PBOC) to refinance their maturing debts. For grants and non-emergency loans, the amounts that are recorded in this field are identical to the amounts that are recorded in the Amount_Nominal_USD field. However, for emergency rescue loans and swap borrowings from the PBOC (with de jure maturities of one year or less), the Adjusted_Amount_Nominal_USD field excludes so-called “rollover” amounts that refinance maturing debts. The monetary amounts in the Adjusted_Amount_Original_Currency field are calculated, whenever possible, by taking the difference between the level of outstanding debt in the current year and the previous year. This approach is consistent with the one used to derive net (new) PBOC swap borrowings in the following publication: Horn, S., Parks, B., Reinhart, C. M., and Trebesch, C. 2023a. China as an International Lender of Last Resort. NBER Working Paper No. 31105. Cambridge, MA: National Bureau of Economic Research (NBER). In cases when this approach cannot be applied but there is evidence of the same lender providing a series of short-term emergency rescue loans (with identical face values and de jure maturities of 1 year or less) to the same borrower that are repaid on their original contractual maturity dates and subsequently reissued in consecutive years, the Adjusted_Amount_Original_Currency field records the face value of the original loan commitment in the first year but not the face values of the loan commitments in subsequent years.</p>
Financial_Distress	<p>This field identifies whether, for a given loan, there is an indication that the borrowing institution (a) sought and/or secured a rescheduling of the loan’s terms to address a repayment challenge, or (b) demonstrated other signs of financial distress during the loan’s repayment period. Examples of financial distress include the borrowing institution accruing principal or interest arrears, defaulting on its repayment obligations, experiencing bankruptcy, or seeking/securing a rescheduling of the loan’s repayment terms to address a repayment challenge. Other examples include Sinasure making indemnity payments under the loan’s insurance policy or lower-than-expected levels of revenue generation from the project/activity funded by the loan. The Financial_Distress field is based on the project/transaction life-cycle information that is contained in the Narrative_Description field. It is only coded for loans with status designations of Pipeline: Commitment, Implementation, Completion, Suspended, and Cancelled. Umbrella records are not coded.</p>

Financial_Distress_Onset_Year	<p>This field captures the year in which the borrowing institution initially encountered difficulties in repaying the loan or demonstrated other signs of financial distress during the loan's repayment period. It is coded only for loans that are identified as being financially distressed in the 'Financial Distress' field. For loans that are included in Version 2.0 of AidData's Chinese PPG Loan Performance Dataset, the first date of estimated or observed arrears is used as the financial distress onset year – or the first date of restructuring (whichever comes first). For financially distressed loans without observed arrears or restructuring events, the loan performance information in the Narrative_Description field was reviewed to identify the year of financial distress onset. Likewise for the loans that are excluded from Version 2.0 of AidData's Chinese PPG Loan Performance Dataset, the loan performance information in the Narrative_Description field was reviewed to identify the year of financial distress onset.</p>
Commitment_Date	<p>This field seeks to capture the day on which an official financial commitment (or official commitment to provide in-kind support) was codified through the signing of a formal agreement by an official donor/lender in China and one or more entities in a host country or a set of host countries. Whenever possible, this field is based on the precise calendar day on which the official commitment was made. However, in cases when AidData is only able to identify the month and year in which the formal agreement was signed (e.g., May 2018), the Commitment_Date field is set to the first day of the month (e.g., 01/01/2018). In cases when AidData is only able to identify the year in which the formal agreement was signed, the Commitment_Date field is set to the first day of the first month (e.g., 01/01/2018). In the event an official commitment was made for a project/activity that entered implementation, but the official commitment year is not identifiable, AidData records the first year of project/activity implementation as a proxy for the official commitment year. In the event an official commitment was made for a project/activity that has not yet reached implementation, and the official commitment year is not identifiable, AidData records the year in which the underlying commercial contract (supported by the official commitment) was issued. If this information is unavailable, AidData records the first year in which an informal pledge was made as a proxy for the official commitment year. For projects with a status designation of Pipeline: Pledge (i.e., cases in which an official commitment was not made), AidData records the date on which the informal pledge was made.</p>
Commitment_Date_Estimated	<p>For projects with a status designation of Pipeline: Commitment, Implementation, Completion, Suspended, and Cancelled, this marker designates whether AidData estimated the commitment date or reported the actual date on which the official commitment was made. This field is set to "Yes" when the Commitment_Date field is estimated by AidData. It is otherwise set to "No," which indicates that AidData has reported the actual commitment date. For projects/activities with status designations of</p>

	Pipeline: Pledge, this marker designates whether AidData estimated the pledge date or reported the actual date on which the informal pledge was made.
Planned_Implementation_Start_Date	This field seeks to capture the day on which a project/activity supported by an official financial (or in-kind) commitment from China was originally scheduled to begin implementation. Whenever possible, this field is based on the precise calendar day when the project/activity was originally scheduled to begin implementation. However, in cases when AidData is only able to identify the month and year in which project/activity implementation was scheduled to begin (e.g., May 2018), the Planned_Implementation_Start_Date field is set to the first day of the month (e.g., 05/01/2018).
Actual_Implementation_Start_Date	This field seeks to capture the day on which a project/activity supported by an official financial (or in-kind) commitment from China began implementation. Whenever possible, this field is based on the precise calendar day when project/activity implementation began. However, in cases when AidData is only able to identify the month and year in which project/activity implementation began (e.g., May 2018), the Actual_Implementation_Start_Date field is set to the first day of the month (e.g., 05/01/2018). For projects/activities that involve the construction of buildings or infrastructure, the Actual_Implementation_Start_Date field seeks to capture the first day of construction. In cases when the first day of construction is unavailable but a proxy for the first day of construction (e.g., the date on which a formal groundbreaking ceremony took place, a project/activity commencement order was issued to the contractor responsible for implementation, or a project/activity implementation agreement was signed) can be identified, AidData records the proxy for the first date of construction. For projects/activities that do not involve construction but involve the provision of personnel, training, analytical/advisory support, equipment, supplies, or commodities, the Actual_Implementation_Start_Date field captures the first day on which some type of support was delivered to an entity (or set of entities) in the host country. For projects/activities that only involve financial transactions (cash donations, loans issued to shore up a country's foreign exchange reserves, forgiveness or rescheduling of outstanding debts), the Actual_Implementation_Start_Date field captures the day on which the first disbursement was made (or the day on which new terms and conditions went into effect for a previously signed loan agreement).
Actual_Implementation_Start_Date_Estimated	This marker designates whether AidData estimated the implementation start date or reported the actual date on which project/activity implementation began. The field is set to "Yes" when the Actual_Implementation_Start_Date field is estimated by AidData. It is otherwise set to "No," which indicates that AidData has reported the actual implementation start date.



Deviation_from_Planned_Implementation_Start_Date	This field captures the difference between the Planned_Implementation_Start_Date and the Actual_Implementation_Start_Date when values are recorded for both variables. It captures the difference as the number of days, whereby positive values represent cases where the project/activity started implementation ahead of schedule and negative values represent cases where the project/activity started implementation behind schedule.
Planned_Completion_Date	This field seeks to capture the day on which a project/activity supported by an official financial (or in-kind) commitment from China was originally scheduled to reach completion. Whenever possible, this field is based on the precise calendar day when the project/activity was originally scheduled to reach completion. However, in cases when AidData is only able to identify the month and year in which a project/activity was scheduled to reach completion (e.g., May 2018), the Planned_Completion_Date field is set to the first day of the month (e.g., 05/01/2018).
Actual_Completion_Date	This field seeks to capture the day on which a project/activity supported by an official financial (or in-kind) commitment from China was completed. Whenever possible, this field is based on the precise calendar day when a project/activity was completed. However, in cases when AidData is only able to identify the month and year in which a project/activity was completed (e.g., May 2018), the Actual_Completion_Date field is set to the first day of the month (e.g., 05/01/2018). For projects/activities that involve the construction of buildings or infrastructure, the Actual_Completion_Date field seeks to capture the last day of construction. In cases when the last day of construction is unavailable but a proxy for the last day of construction (e.g., a road or railway is opened for use, a power plant reaches its commercial operation date and begins selling electricity to customers) is available, AidData records the proxy for the last day of construction. For projects/activities that do not involve construction but involve the provision of personnel, training, analytical/advisory support, equipment, supplies, or commodities, the Actual_Completion_Date field captures the last day on which some type of support was delivered to an entity (or set of entities) in the host country. For projects/activities that only involve financial transactions (cash donations, loans issued to shore up foreign exchange reserves, forgiveness or rescheduling of outstanding debts), the Actual_Completion_Date field captures the day on which the last disbursement was made (or the day on which new terms and conditions went into effect for a previously signed loan agreement).
Actual_Completion_Date_Estimated	This marker designates whether AidData estimated the project/activity completion date or reported the actual date on which project/activity implementation was completed. This field is set to "Yes" when the Actual_Completion_Date field is estimated by AidData. It is otherwise set to "No," which indicates that AidData has reported the actual completion date.

Deviation_from_Planned_Completion_Date	This field captures the difference between the Planned_Completion_Date and the Actual_Completion_Date when values are recorded for both variables. It captures the difference as the number of days, whereby positive values represent cases where the project/activity was completed ahead of schedule and negative values represent cases where the project/activity was completed behind schedule.
Maturity	This field captures the total number of years it will take the borrower to repay a loan, as specified in the original loan agreement. These de jure maturity values are inclusive of grace periods. Users should keep in mind that the rescheduling of a loan can result in a de facto maturity that is substantially different from its de jure maturity. In cases when a loan's maturity is modified after an official commitment is issued, AidData captures the maturity modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Grace_Period	This field captures the number of years for which the borrower (receiving agency) is not expected to make principal repayments to the creditor (funding agency), as specified in the original loan agreement. Users should keep in mind that the rescheduling of a loan can result in a de facto grace period that is substantially different from its de jure grace period (especially for short-term loans that are rolled over year over year). In cases when a loan's grace period is modified after an official commitment is issued, AidData captures the grace period modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Interest_Rate_Type	This field identifies whether a loan or debt rescheduling record used a variable interest rate (where the interest rate for the loan is tied to a floating rate such as LIBOR or SHIBOR), a fixed interest rate, or whether the interest structure is unknown.
Fixed_Interest_Rate	This field captures the rate of interest (in percentage terms) that applies to a loan that uses a fixed interest rate structure, as specified in the original loan agreement. Users should keep in mind that the rescheduling of a loan can result in a de facto interest rate that is substantially different from its de jure interest rate. In cases when a loan's interest rate is modified after an official commitment is issued, AidData captures the interest rate modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Reference_Rate	For loans that use a variable interest rate structure, this field captures the reference rate that is used to calculate the loan's interest rate. This field identifies 19 reference rates: BADCOR, BADLARPP ARS, BBSW, BBSYB, BKBM, BRL Interbank, China LPR, CIRR, CMB, EURIBOR, HIBOR, JIBAR, JIBOR, LIBOR, SHIBOR, SIBOR, SOFR, SONIA, or WIBOR. If the loan uses another reference rate, it is recorded as "Other" in the field, with the name of the reference rate recorded in the Narrative_Description field. If it is known that the loan uses a variable interest rate structure (i.e. the Interest_Rate_Type field is set to "Variable Interest Rate"), but the underlying source documentation cannot confirm the reference rate used,

	then this field is set to "Unknown."
Loan_Tenor	For loans that use a variable interest rate structure, the loan tenor signifies the maturity length of the underlying interbank loans being used to generate a given reference rate. Loan tenors captured in this field include 12-month, 6-month, 3-month, and 1-month.
Margin_on_Reference_Rate	This field captures the additional interest (in percentage terms) that applies to a loan that uses a variable interest rate structure, as specified in the original loan agreement. The margin is a percentage added on top of the reference rate to determine the loan's total (all-in) interest rate during a given payment period.
Interest_at_T0	This field captures the rate of interest (in percentage terms) that applies to a loan, as specified in the original loan agreement on the date the loan agreement was signed. In cases when the interest rate is tied to a reference rate such as LIBOR or EURIBOR, AidData calculates the value of the reference rate on the calendar day when the official commitment took place. Users should keep in mind that the rescheduling of a loan can result in a de facto interest rate that is substantially different from its de jure interest rate. In cases when a loan's interest rate is modified after an official commitment is issued, AidData captures the interest rate modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Management_Fee	This field captures the management fee (in percentage terms) that applies to the loan, as specified in the original loan agreement. A management fee is a one-time, lump sum fee that is charged as a percentage of the face value of the loan. In cases when a loan's management fee is modified after an official commitment is issued, AidData captures the management fee modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Commitment_Fee	This field captures the commitment fee (in percentage terms) that applies to the loan, as specified in the original loan agreement. A commitment fee is a fee that a borrower must pay to compensate the lender for its commitment to lend; it is usually payable semi-annually and the size of the fee is usually based on a fixed percentage of the undisbursed loan amount. In cases when a loan's commitment fee is modified after an official commitment is issued, AidData captures the commitment fee modification through a separate record in the dataset that is given a flow type designation of "Debt rescheduling."
Insurance_Fee_Percent	This field captures the insurance fee (premium) that applies to the loan, as specified in the original loan agreement. It is measured as a percentage of total estimated debt service (i.e., the loan's principal plus total estimated interest payments over the lifetime of the loan). The insurance fee/premium is typically payable in a single lump sum, but in some cases it is payable in installments at different points in time or rolled into the principal of the loan.

Insurance_Fee_Nominal_USD	This field captures the nominal USD value of the insurance fee (premium) that applies to the loan, as specified in the original loan agreement. The nominal USD value of the insurance fee/premium is usually based on a percentage of total estimated debt service (i.e., the loan's principal plus total estimated interest payments over the lifetime of the loan). The insurance fee/premium is typically payable in a single lump sum, but in some cases it is payable in installments at different points in time or rolled into the principal of the loan.
Default_Interest_Rate	This field captures the default (penalty) interest rate applied to the loan in the event of default (i.e., non-payment of principal, interest, or fees on their scheduled payment dates).
First_Loan_Repayment_Date	This field captures the date on which the first loan repayment should be made by the borrower (as specified in the original loan agreement). It is automatically calculated by adding the grace period to the commitment date.
Last_Loan_Repayment_Date	This field captures the date on which the final loan repayment should be made by the borrower (as specified in the original loan agreement). It is automatically calculated by adding the maturity to the commitment date.
Grant_Element_OECD_Cash_Flow	This field captures the grant element of the loan according to the OECD cash-flow methodology, at the time that the original loan agreement was signed. To calculate the grant element of a loan, which is a measure that varies from 0 percent to 100 percent, AidData calculates the discounted cost (or “net present value”) of the future debt service payments that will be made by the borrower. This calculation requires information about the loan’s face value, maturity length, grace period, and interest rate. When AidData has access to the loan's face value, maturity length, grace period, and interest rate, it uses the OECD’s grant element calculator from the cash-flow methodology (assuming a fixed, 10 percent discount rate, two repayments per year, and equal principal repayments). In theory, a grant element calculator can generate values above 100% or below 0%. However, AidData bounds grant element values so that they cannot assume values that exceed 100% or negative values (since negative values imply lending terms that are “less favorable than market terms,” which does not logically make sense because market terms are risk-adjusted prices agreed to by willing buyers and sellers of credit). This field is empty for countries that are not ODA-eligible.

Grant_Element_OECD_Grant_Equiv	This field captures the grant element of the loan according to the OECD grant-equivalent methodology, at the time that the original loan agreement was signed. To calculate the grant element of a loan, which is a measure that varies from 0 percent to 100 percent, AidData calculates the discounted cost (or "net present value") of the future debt service payments that will be made by the borrower. This calculation requires information about the loan's face value, maturity length, grace period, and interest rate. When AidData has access to the loan's face value, maturity length, grace period, and interest rate, it uses the OECD's grant element calculator from the grant-equivalent methodology, assuming (a) a fixed discount rate which depends on the host country income level (9% for LDCs and other LICs and 6% for UMICs), (b) two repayments per year, and (c) equal principal repayments. In theory, a grant element calculator can generate values above 100% or below 0%. However, AidData bounds grant element values so that they cannot assume values that exceed 100% or negative values (since negative values imply lending terms that are "less favorable than market terms," which does not logically make sense because market terms are risk-adjusted prices agreed to by willing buyers and sellers of credit). This field is empty for countries that are not ODA-eligible.
Grant_Element_IMF	This field captures the grant element of the loan according to the current (post-2013) World Bank/IMF methodology, at the time that the original loan agreement was signed. To calculate the grant element of a loan, which is a measure that varies from 0 percent to 100 percent, AidData calculates the discounted cost (or "net present value") of the future debt service payments that will be made by the borrower. This calculation requires information about the loan's face value, maturity length, grace period, and interest rate. When AidData has access to the loan's face value, maturity length, grace period, and interest rate, it uses the IMF's post-2013 grant element calculator (assuming a fixed, 5 percent discount rate, two repayments per year, and equal principal repayments). In theory, a grant element calculator can generate values above 100% or below 0%. However, AidData bounds grant element values so that they cannot assume values that exceed 100% or negative values (since negative values imply lending terms that are "less favorable than market terms," which does not logically make sense if market terms are risk-adjusted prices agreed to by willing buyers and sellers of credit).
Number_of_Lenders	This field captures whether the loan record has one or more lenders by way of two categories: Bilateral Loan or Syndicated/Club Loan. A bilateral loan is issued by one lender to a single borrower. A syndicated loan or club loan is issued by a consortium ("syndicate" or "club") of lenders to a single borrower.
Syndicated_Loan_Amount	This field captures the total face value of a syndicated/club loan to which one or more Chinese state-owned creditors contributed (or pledged a contribution). If a syndicated/club loan has multiple tranches, the amount in this field will reflect the total value of the specific tranche to which one or more Chinese state-owned creditors contributed (when the breakdown

	in the monetary values of different tranches is known). For example, if a record captures a contribution to the USD-denominated tranche of a loan, and the value of the USD-denominated tranche is known, then the total value of the USD-denominated tranche is captured in this field. If a syndicated/club loan has multiple tranches and the breakdown in tranche value is unknown, this field still reflects the full value of the syndicated loan. If the full value of a syndicated/club loan is unknown, this field is empty.
Syndicated_Loan_Currency	This field captures the currency of denomination associated with the monetary amount recorded in the Syndicated_Loan_Amount field.
Syndicated_Loan_Amount_Nominal_USD	This field captures the monetary value of the syndicated loan amount in nominal U.S. dollars. It is one of the inputs used to calculate the syndicated loan amount in constant 2023 U.S. dollars, as recorded in the Syndicated_Loan_Amount_Constant_USD_2023 field.
Syndicated_Loan_Amount_Constant_USD_2023	This field captures the monetary value of the syndicated loan amount in constant 2023 U.S. dollars. To calculate this value, AidData first converts the syndicated loan amount in its original currency of denomination to nominal U.S. dollars at the average exchange rate in effect during the commitment (or pledge) year, and then converts this amount to constant 2023 U.S. dollars using the OECD's deflation methodology to adjust for inflation and ensure comparability over time and space. See Box 1 and Appendix D in the TUFF 4.0 methodology for additional details regarding deflation procedures.
Syndicated_Loan_Share	This field is calculated by dividing the value in the Amount_Original_Currency field by the value in the Syndicated_Loan_Amount field, and it is expressed as a percentage. It captures the share of the full face value of a syndicated/club loan to which the funding agency in a given project/activity record contributed (or pledged a contribution). If a syndicated/club loan has multiple tranches, and the funding agency's contribution (or pledged contribution) to the specific tranche is known, then the Syndicated_Loan_Share field represents the share of the funding agency's contribution (or pledged contribution) to the specific tranche.
Export_Buyers_Credit	This field provides a marker of whether it is known that the loan record is classifiable as an Export Buyer's Credit, which is a loan that is issued by Chinese state-owned policy banks or Chinese state-owned commercial banks to facilitate a borrowing institution's acquisition of goods/services from a Chinese supplier. The field is set to "Yes" if the loan record is classifiable as an Export Buyer's Credit.

Suppliers_Credit_or_Export_Sellers_Credit	This field provides a marker of whether it is known that the loan record is classifiable as either an Export Seller's Credit or a Supplier's Credit. An Export Seller's Credit is a loan issued by a Chinese state-owned bank to a Chinese company for the purpose of increasing its exports. The proceeds of export seller's credits are to be used by borrowers (Chinese exporters) to finance their foreign sales. Chinese exporters usually secure export seller's credits when they need liquidity to offer a supplier's credit to an overseas buyer. If a Chinese company extends a loan to a borrower and the borrower is expected to use the loan proceeds to purchase goods and services from that Chinese company, then the loan is a supplier's credit (also known as a seller's credit or vendor financing). The field is set to "Yes" if the loan record is classifiable as either Export Seller's Credit or Supplier's Credit.
Interest_Free_Loan	This field provides a marker of whether it is known that the loan record is classifiable as an Interest-Free Loan, which is a loan that is issued to a borrower without any interest accruing. The borrower is only responsible for repaying the loan's principal amount. The field is set to "Yes" if the loan record is classifiable as an Interest-Free Loan.
Refinancing	This field provides a marker of whether it is known that the loan record captures debt refinancing, which is a new loan for the purpose of repaying one or more existing loans/debts. The field is set to "Yes" if the loan is used for debt refinancing.
Refinances_Chinese_Official_Debt	This field provides a marker that the proceeds of the loan were used or intended to be used, in whole or part, to repay previous loan(s) that were provided by one or more official sector lenders from China, including repaying syndicated loans that Chinese state-owned creditors contributed to. It is set to "Yes" when the loan proceeds are explicitly reported as being allocated to repay or restructure one or more earlier loans from Chinese state-owned creditors. The field is empty when (a) there is no evidence that the loan was used or intended to be used for refinancing purposes, and (b) there is evidence that the loan was used or intended to be used to repay loans from creditors other than Chinese state-owned creditors. If users wish to exclude or isolate refinancing operations that replaced or restructured earlier loans from Chinese state-owned creditors, they can use the Refinances_Chinese_Official_Debt field to do so.
Investment_Project_Loan	This field provides a marker of whether it is known that the loan record is classifiable as an Investment Project Loan (IPL), which is a loan that is provided to finance the provision of goods, works, or services to support a public or private investment project. The field is set to "Yes" if the loan record is classifiable as an IPL.
M_A	This field provides a marker of whether it is known that the loan record is classifiable as a Mergers and Acquisitions (M&A) Loan, which is a loan that is issued to a borrower to facilitate its acquisition of an equity stake in a company and/or to facilitate the consolidation of multiple companies (i.e., a merger). The field is set to "Yes" if the loan record is classifiable as a M&A Loan.

Working_Capital	This field provides a marker of whether it is known that the loan record is classifiable as a Working Capital Loan, which is a loan that provides funds for a borrower's day-to-day operations but not for making capital investments or facilitating the acquisition of long-term assets. The field is set to "Yes" if the loan record is classifiable as a Working Capital Loan.
EPCF	This field provides a marker of whether it is known that the loan record involves an Engineering, Procurement and Construction Plus Finance (EPC+F or EPCF) Agreement arrangement. In a typical EPC+F arrangement, a project owner in the host country has selected a Chinese company as its engineering, procurement, and construction (EPC) contractor, and a Chinese bank issues a loan to that EPC contractor but with a sovereign guarantee from the host government. The field is set to "Yes" if the loan record involves an EPC+F arrangement.
Lease	This field provides a marker of whether it is known that the loan record captures a lease agreement. A lease is a contractual arrangement calling for the lessee (user) to pay the lessor (owner) for use of an asset. The lessor is the legal owner of the asset, while the lessee obtains the right to use the asset in return for regular rental payments. Under a capital lease (a financial arrangement where the lessee/borrower uses an asset and pays regular installments plus interest to the lender/lessor), rental payments are usually classified as interest and obligation payments, similarly to a mortgage (with the interest calculated each rental period on the outstanding obligation balance). The field is set to "Yes" if the loan record captures a lease agreement.
FXSL	This field provides a marker of whether it is known that the loan record captures a borrowing under a Foreign Currency Swap Line (FXSL). An FXSL agreement is an agreement between the central banks of two countries to exchange cash flows in different currencies at predetermined rates over a specified period of time. Central banks participate in these agreements to (a) facilitate bilateral trade settlements using their national currencies (rather than relying upon a third-party currency such as the U.S. dollar), (b) manage demands from their local banks, and (c) provide liquidity to support financial market stability. The party that draws down on the swap line becomes the borrower and the other party becomes lender. During the term of the swap, the party that draws down on the swap line makes either fixed or floating interest payments on the principal amount. If both parties draw down on the swap line, then both parties exchange fixed or floating interest payments on the principal amounts. The field is set to "Yes" if the loan record captures a FXSL borrowing.



BOP	This field provides a marker of whether it is known that the loan record captures a Balance of Payments (BoP) Loan. BoP Loans—including Liquidity Support Facilities (LSFs) and Foreign Currency Deposit Loans—are typically provided to a central bank or finance ministry. Under these types of borrowing arrangements, the creditor explicitly authorizes the borrower to use the proceeds of the loan to (a) shore up foreign exchange reserves, (b) repay existing debts, and/or (c) finance general budgetary expenditures. The field is set to "Yes" if the loan record captures a BoP Loan.
CC_IRS	This field provides a marker of whether it is known that the loan record captures a Cross-Currency Interest Rate Swap. A cross-currency interest rate swap is an off-balance sheet way of hedging against interest rate risk and foreign exchange risk. In a typical cross-currency interest rate swap agreement, both parties to the transaction are simultaneously lending to each other. That is to say, each party is both a lender and a borrower. The field is set to "Yes" if the loan record captures a Cross-Currency Interest Rate Swap.
RCF	This field provides a marker of whether it is known that the loan record involves a Revolving Credit Facility (RCF) arrangement. In a typical RCF arrangement, the lender commits funding up to a certain level, but unlike a "term loan" (that is repaid in regular payments over a set period of time), the borrower can draw down, repay, and redraw on an irregular/as-needed basis. It provides liquidity for day-to-day operations, and the borrower is charged an annual commitment fee on unused amounts (a "facility fee"). The field is set to "Yes" if the loan record involves a RCF arrangement.
GCL	This field provides a marker of whether it is known that the loan record is classifiable as a Government Concessional Loan (GCL), which is an RMB-denominated loan that the Export-Import Bank of China (China Eximbank) issues to government institutions on below-market terms (typically 20-year maturities, 5-year grace periods, and 2% interest rates) to facilitate their acquisition of goods/services from a Chinese supplier. The proceeds of a GCL can be used by government borrowing institutions to finance up to 100% of the total cost of a commercial contract with a Chinese supplier. The field is set to "Yes" if the loan record is classifiable as a GCL.
PBC	This field provides a marker of whether it is known that the loan record is classifiable as a Preferential (Export) Buyer's Credit (PBC), which is a USD-denominated or EUR-denominated loan that the Export-Import Bank of China (China Eximbank) issues to government institutions to facilitate their acquisition of goods/services from a Chinese supplier. The borrowing terms of these loans vary, but they are offered with fixed rather than floating (market) interest rates (such as LIBOR or EURIBOR), which are usually more generous than prevailing market rates. China Eximbank has a policy of allowing borrowers to use PBC proceeds to finance 85% of the total cost of a commercial contract with a Chinese supplier. China Eximbank usually requires that the remaining 15% of the commercial

	contract cost be financed with "counterpart funding" from the borrowing institution. The field is set to "Yes" if the loan record is classifiable as a PBC.
PxF_or_Commodity_Prepayment	This field provides a marker of whether it is known that the loan record involves a Pre-Export Financing (PxF) or Commodity Prepayment Financing arrangement, which is an arrangement in which a commodity (e.g., oil) producer gets up-front cash from a customer in return for a promise to repay the customer with that commodity (possibly at a discount) in the future. PxF funds may be advanced by a lender or syndicate of lenders to a commodity producer to assist the company in meeting either its working capital needs (e.g., to cover the purchase of raw materials and costs associated with processing, storage and transport) or its capital investment needs (e.g., investment in plant and machinery and other elements of infrastructure). The field is set to "Yes" if the loan record involves a PxF or Commodity Prepayment Financing arrangement.
Interbank_Loan	This field provides a marker of whether it is known that the loan record is classifiable as an Inter-Bank Loan, which is a loan issued by one bank (lender) to another bank (borrower). All inter-bank loans are by nature on-lending arrangements, and are captured as such in the 'Onlending' field. The field is set to "Yes" if the loan record is classifiable as an Inter-Bank Loan.
Overseas_Project_Contracting_Loan	This field provides a marker of whether it is known that the loan record is classifiable as an Overseas Project Contracting Loan, which is a loan issued by the Export-Import Bank of China (China Eximbank) to a Chinese company to help it finance an overseas project contract. This loan can be denominated in USD or RMB. Per China Eximbank policy, the contract cost that is financed with the loan should not be lower than 1 million USD, and goods and services exported from China under the contract should not be lower than 15% of contract cost. The field is set to "Yes" if the loan record is classifiable as an Overseas Project Contracting Loan.
DPA	This field provides a marker of whether it is known that the loan record involves a Deferred Payment Agreement (DPA) arrangement. In a typical DPA arrangement, the Chinese company that the project owner in the host country has selected as its engineering, procurement, and construction (EPC) contractor is also a lender to the project owner. The Chinese company assigns receivables under its EPC contract with the project owner to one or more Chinese banks. Upon assignment of receivables, the Chinese bank or banks will release funds to the Chinese company so it can discharge its obligations under the DPA as a lender. The field is set to "Yes" if the loan record involves a DPA arrangement.

Shareholder_Loan	<p>This field provides a marker of whether it is known that the loan is a shareholder loan. A shareholder loan is a loan made by a shareholder to a company in which it owns a share. This includes companies in which the shareholder is a direct owner, as well as companies in which it is an indirect owner. It also includes loans where the lender of record and the direct receiving agency are both subsidiaries of a common shareholder.</p>
Exploration_Development_Carry	<p>This field provides a marker of whether it is known that the loan is a debt obligation arising from an exploration/development carry agreement. In the context of oil and gas exploration/development, a “carry” agreement is a financial arrangement where one party agrees to finance the exploration or development costs for a project, while another party receives an interest in the project’s future profits without initially contributing to the costs. Carry agreements are often incorporated into Joint Development Agreements (JDAs), which outline the terms of cooperation between parties in an oil and gas project. If one shareholder in a joint venture lacks the financial capacity to make its required equity contribution, it can borrow this amount from one or more shareholders in the same joint venture. This borrowing is known as “carry” because the equity contributions of one joint venture partner are being funded—or “carried”—by another. Such debts are repaid with the joint venture’s future project profits or dividends. Exploration/development carry is also known as “equity debt” because one shareholder is providing a loan (cash advance) to another shareholder to help it meet its required equity contributions. All exploration/development carry borrowings should be automatically coded as shareholder loans, although not all shareholder loans are exploration/development carry borrowings.</p>
Repurchase_Transaction	<p>This field provides a marker of whether it is known that the loan is a repurchase transaction. A repurchase agreement is a transaction in which the borrower temporarily lends a security to the creditor for cash with an agreement to buy it back in the future at a predetermined price. Ownership of the security does not change hands in a repurchase transaction. For this reason, repurchase agreements are treated as collateralized loans. All repurchase transactions should be automatically coded as BOP borrowings and Rescue loans, although not all BOP and Rescue loans are repurchase transactions. For more information, see Rivetti, D. 2021. Debt Transparency in Developing Economies. Washington DC: World Bank Group.</p>

Project_Finance	<p>This field provides a marker of whether it is known that the loan record involves a Non-Recourse or Limited-Recourse Project Finance transaction. When a project is financed with a limited-recourse or non-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 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. In a standard, limited-recourse or non-recourse 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 project. This entity is often 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). The field is set to “Yes” if the loan record involves a Non-Recourse or Limited-Recourse Project Finance transaction.</p>
FDI_Loan	<p>For loan records, this field provides a marker of whether the financing supports a cross-border investment activity. This field is set to “Yes” if any of the following loan type fields are set to “Yes”: (1) the M&amp;A field; (2) the Project_Finance field; (3) the Shareholder_Loan field; or (4) the Exploration_Development_Carry field. In cases where the Working_Capital field is set to “Yes” when the Project_Finance field is also set to “Yes”, the FDI_Loan field is empty.</p>
FDI_Type	<p>In cases where the FDI_Loan field is set to “Yes,” this field indicates the type of cross-border investment activity that the financing supports by way of two categories: Greenfield or Brownfield. It is set to “Greenfield” in cases where the financing supports the creation of new productive capacity—such as the construction of new physical infrastructure. It is set to “Brownfield” in cases where the financing supports the acquisition, expansion, or rehabilitation of existing assets or enterprises. It is also set to “Brownfield” for all loans that have the M&amp;A field set to “Yes,” indicating that the loan supported a merger or acquisition. It is set to “Greenfield” for all loans that have the Project_Finance field set to “Yes,” except those that also have the M&amp;A field set to “Yes,” in which case the loan is assigned to the “Brownfield” category. For loans where either the Exploration_Development_Carry or Shareholder_Loan field is set to “Yes,” AidData reviews each record and assigns it to the appropriate category based on the primary purpose of the cross-border investment activity that the financing supported.</p>
Involving_Multilateral	<p>This field provides a marker of whether it is known that the loan involves a multilateral (inter-governmental) organization in one or more of the following capacities: as (a) a loan administrator (such as the Africa Growing Together Fund or the China Co-Financing Fund for Latin America and Caribbean), (b) a co-financier (through a syndicated loan, club loan, or parallel co-financing arrangement), (c) an insurer (such as the World Bank Group's Multilateral Investment Guarantee Agency), and/or (d) a financial</p>

	or technical adviser. The field is set to "Yes" if the record involves a multilateral organization.
Involving_Non_Chinese_Financier	This field provides a marker of whether it is known that the loan involves co-financing agencies that are not of Chinese origin. The field is set to "Yes" if there is at least one co-financing agency from a country other than China.
Short_Term	This field provides a marker of whether it is known that the loan is classifiable as a short-term loan. The field is automatically set to "Yes" if the loan's de jure maturity is 1 year or less. Users should keep in mind that loans with de jure maturities of 1 year or less may be "rolled over" or otherwise rescheduled, resulting in longer de facto maturities.
Rescue	This field provides a marker for rescue loan records. Rescue lending (also known as bailout lending) is defined as any loan that allows a government or majority state-owned debtor to (i) service existing debts, (ii) finance general budgetary expenditures and/or (iii) shore up foreign reserves. Any loan in the dataset that meets at least one of two criteria is designated as a rescue loan: (1) any loan where the FXSL or the BOP marker is checked, and (2) any loan where AidData's Sector Code and Sector Name fields are set to 510 and General Budget Support, respectively. However, in the time period covered by the dataset, loans to four sovereign debtors that met the first criterion (PBOC swap line borrowings by the central banks of Malaysia, Thailand, Singapore, and South Korea) are not classified as rescue lending, as there is no evidence that these drawdowns occurred during periods of macroeconomic distress.

Level_of_Public_Liability	<p>This field captures the extent to which the host government may eventually be liable for debt repayment on a given liability. It is only populated when the Flow_Type field is set to "Loan" or "Debt rescheduling." Each record with one of those flow types has their Level_of_Public_Liability field assigned to one of six categories: "Central government debt," "Central government-guaranteed debt," "Other public sector debt," "Potential public sector debt," "Private debt," or "Unallocable." The value in this field is hierarchically and automatically determined based on the following criteria:</p> <p>(1) The loan record is classified as "Central government debt" if it is an official sector loan to a central government institution in the host country, measured by whether there is at least one receiving agency (direct or indirect) from the host country classified as a government agency;</p> <p>(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 any entity that benefits from a sovereign (central government) repayment guarantee, as determined in the 'Guarantor' and the Guarantor_Agency_Type fields;</p> <p>(3) If the loan record does not meet the first (1) or second (2) criteria, it is classified as "Other public sector debt" if (a) it is an official sector loan to a state-owned entity (such as a state-owned bank or a state-owned enterprise) in the host 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 host country that is backed by a repayment guarantee from a state-owned entity other than the central government in the host country (such as a state-owned bank, or a state-owned enterprise) as determined in the 'Guarantor' and the Guarantor_Agency_Type fields; or (c) it is an official sector loan to a special purpose vehicle (SPV) or joint venture (JV) that is majority-owned (greater than 50%) by one or more public sector institutions (government agencies or state-owned companies) in the host 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 host country (such as a city/municipal government, a state-owned bank, or a state-owned enterprise), with the 'Borrower Ownership' tab of the dataset used to determine the percentage of shares held by the direct receiving agency's ultimate parent owners and their respective organization types and countries of origin;</p> <p>(4) If the loan record does not meet the first (1), second (2), or third (3) criteria, it is classified as "Potential public sector debt" if it is an official sector loan to any entity, such as a private sector company or a JV/SPV, that is minority-owned by one or more public sector institutions in the host country, with the 'Borrower Ownership' tab of the dataset used to determine the percentage of shares held by the direct receiving agency's ultimate parent owners and their respective organization types and countries of origin;</p> <p>(5) If the loan record does not meet the first (1), second (2), third (3), or fourth (4) criteria, it is classified as "Private debt" if (a) it is an official sector</p>
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	<p>loan to at least one direct receiving agency legally incorporated in the host country, as recorded in the Direct_Receiving_Agencies_Incorporation field, or (b) at least one direct receiving agency has <i>any</i> amount (over 0%) of ownership by an ultimate parent owner legally incorporated in the host country, as determined using the information on a given direct receiving agency's ultimate parent owners available from the 'Borrower Ownership' tab of the dataset;</p> <p>(6) If the loan record does not meet the first (1), second (2), third (3), fourth (4), or fifth (5) criteria, then it is classified as "Unallocable".</p>
PPG_Debt_Status	<p>This field classifies each loan record according to whether it qualifies as public or publicly-guaranteed (PPG) debt, as defined by the World Bank's International Debt Statistics (IDS). A loan record is coded as "PPG Debt" if its Level_of_Public_Liability designation is "Central government debt," "Central government-guaranteed debt," or "Other public sector debt." A loan record is coded as "Non-PPG Debt" if its Level_of_Public_Liability designation is "Potential public sector debt," "Private debt," or "Unallocable."</p>
Total_Source_Count	<p>This field provides a count of the total number of sources used to create the project/activity record (including official and other source types).</p>
Official_Source_Count	<p>This field provides a count of the total number of official sources used to create the project/activity record. Official source types include Donor/Recipient Official Source, Implementing/Intermediary Organization Source, and Other Official Source (non-Donor, non-Recipient, non-Implementing).</p>
Original_Agreement	<p>This field provides a marker of whether at least one of the sources underpinning the project/activity record is classified as an original agreement (i.e., an agreement between two parties related to a grant, loan, or debt restructuring captured in the dataset).</p>
Original_Agreement_Title	<p>This field briefly describes the name or nature of the original agreement source(s) in cases where the Original_Agreement field is set to "Yes." If the project/activity record is supported by multiple original agreements, the entries in this field are pipe-delimited.</p>
Original_Agreement_Type_General	<p>This field captures general category types for original agreement sources. Each original agreement source is assigned to one of five general category types: Debt-Related Contract, Grant Agreement, Commercial Agreement, Investment Agreement, or Other Official Agreement. The "Other Official Agreement" category captures original agreements that cannot be assigned to one of the other categories. If the project/activity record is supported by multiple original agreements, the entries in this field are pipe-delimited.</p>
Original_Agreement_Type_Specific	<p>This field captures the specific type of original agreement, which is more granular than the five general categories provided in the Original_Agreement_Type_General field. Sources that are assigned to the "Debt-Related Contract" general type are assigned to one of the following twenty-nine options as their specific type: Account Charge</p>

	<p>Agreement, Agreement on Pledge of Participation Interest, Assignment of Account Agreement, Assignment of Guarantor's Compensations Proceeds Agreement, Assignment of Receivables Agreement, Assignment of Shareholder Loan Agreement, Common Terms Agreement, Intercreditor Agreement, Currency Swap Agreement, Debenture Deed, Debt Cancellation Agreement, Debt Restructuring Agreement, Deed of Covenant, Deed of Security, Escrow Account Agreement, Repayment Mechanism Arrangement Agreement, Four-Party Agreement, Framework Agreement, Guarantee Agreement, Implementation Agreement, Loan Agreement, Mortgage Agreement, On-Lending Agreement, Share Pledge Agreement, Supplementary Agreement to a Loan Agreement, Commitment Letter, Deed of Release, Deed of Novation, or undetermined. Sources that are assigned to the "Grant Agreement" type are assigned to one of the following four options as their specific type: Economic and Technical Cooperation Agreement (ETCA), Letters of Exchange, Implementation Agreement or Undetermined. Sources that are assigned to the "Commercial Agreement" general type are assigned to one of the following four options as their specific type: Commercial Contract, Commodity Sales and Purchase Agreement, Power Purchase Agreements (PPA), or undetermined. Sources that are assigned to the "Investment Agreement" general type are assigned to one of the following eight categories as their specific type: Concession Agreement, Share Purchase Agreement, Investor Agreement, Sponsor Support Agreement, Deed of Release, Deed of Novation, Subscription and Contribution Agreement, or Undetermined. Sources that are assigned to the "Other Official Agreement" general type are assigned the same value as their specific type. If a project/activity record is supported by multiple original agreements, the entries in this field are pipe-delimited.</p>
Original_Agreement_URL	<p>This field provides the URL link for the underlying source for the original agreement. If the project/activity record is supported by multiple original agreements, the entries in this field are pipe-delimited.</p>
All_Source_URLs	<p>This field provides URLs to the sources that were used to create the project/activity record. The entries are pipe-delimited</p>
All_Source_Titles	<p>This field provides the titles of the source articles, reports, and websites used to create the project/activity record. The entries are pipe-delimited.</p>
All_Source_Publishers	<p>This field provides the names of the publishers of the source articles, reports, and websites used to create the project/activity record. The entries are pipe-delimited.</p>
All_Source_Types	<p>This field identifies the type of sources that were used to create the project/activity record. The entries are pipe-delimited.</p>
Contact_Name	<p>This field records the names of the people who were involved in the project/activity and/or the financial (or in-kind) transfer for the project/activity whenever this information is available.</p>
Contact_Position	<p>This field records the position titles of the people who were involved in the project/activity and/or the financial (or in-kind) transfer for the</p>



	project/activity whenever this information is available.
ODA_Eligible_Recipient	This field designates whether the host country was eligible for ODA (based on income level and OECD DAC categorizations) in the year that the official commitment was issued. For projects/activities with a status designation of "Pipeline: Pledge," this field designates whether the host country was eligible for ODA (based on income level and OECD DAC categorizations) in the year that the informal pledge was issued. High-income countries (HICs), as categorized by the OECD DAC, by nature, are not ODA-eligible (or OOF-eligible).
OECD_Income_Status_Host_Country	This field provides the income status of the host country for each project/activity at the time that it secured a commitment (or pledge) according to the OECD's ODA Eligibility lists. A country must be classified as high-income for at least three years (according to World Bank designations) before that country is eligible to be removed from the ODA-eligible list of countries. This field records whether a country is low income (LIC), lower middle income (LMIC), upper middle income (UMIC), or high income (HIC). High-income countries are not eligible for ODA (or OOF) in the OECD's classification scheme.
WB_Income_Group_Host_Country	This field provides the income status of the host country for each project/activity at the time of the commitment (or pledge), according to the World Bank's income classification designation available at <a href="https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups">https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups</a> . If the World Bank's designation was unavailable for a given country-year, AidData estimated the classification by collecting GNI per capita data estimates, comparing it against the thresholds for each World Bank income group, and assigning the closest match. In cases where GNI data or classifications were missing, common alternative sources included the ADB, IDB, and, France's CEROM (Comptes économiques rapides pour l'Outre-mer - Fast Economic Accounts for Overseas France) partnership.
Location_Narrative	This field provides a description of the locations of project activities. Whenever possible, AidData captures geographical information that makes it possible to identify (i) the precise physical boundaries and exact locations of buildings and facilities (e.g., schools, hospitals, stadiums, government buildings, power plants, and factories); (ii) the precise geographical scope of special economic zones, industrial parks, mining concessions, protected areas, and plots of land under cultivation; and (iii) the exact routes of linear infrastructure (e.g., roads, bridges, tunnels, railways, power lines, canals, and pipelines). Whenever possible, AidData also records OpenStreetMap and GoogleMaps URLs that capture the geographical locations and features of projects. An important caveat is that AidData is only able to provide precise details for the subset of projects in the dataset that have physical footprints (e.g., roads, railways, transmission lines) or involve activities at specific locations (e.g., medical teams stationed at a given hospital, equipment given to park rangers to patrol a protected area). Less precise location information may also be recorded for projects, such as the general area or administrative zone

	associated with a project.
Chinese_Group_UBO	This field provides a marker for all loan records of whether the direct receiving agency (borrowing institution) has an ultimate beneficial owner (UBO) with a nationality of China, Macau, or Hong Kong, as indicated in the Parent_Owner_Nationality field in the 'Borrower Ownership' tab for the corresponding AidData record. UBOs are parent owners that have, directly or indirectly, an aggregate of over 25% shareholding in the borrowing institution. This field is set to "Yes" for loan records if they meet the following criteria: (1) The direct receiving agency has at least one parent owner with a nationality of China, Macau, or Hong Kong; and (2) that parent owner has a large enough aggregate ownership stake in the direct receiving agency to be considered an UBO. Otherwise, this field is empty. In cases where there are multiple direct receiving agencies (borrowers), the Chinese_Group_UBO field is set to "Yes" if a Chinese group holds an aggregate of over 25% shareholding in at least one of the borrowing institutions. See the 'Borrower Ownership' tab for the corresponding AidData record to see the names and categories of the relevant UBOs.
Chinese_Group_UBO_Count	For all loan records where the Chinese_Group_UBO field is set to "Yes," this field provides the number of parent owners of the direct receiving agency (borrowing institution) that have greater than 25% aggregate shareholding (i.e., are considered ultimate beneficial owners) and have a nationality of China, Macau, or Hong Kong. In cases where there are multiple direct receiving agencies (borrowers), the Chinese_Group_UBO_Count field provides the number of parent owners that have greater than 25% shareholding in any one of the borrowing institutions and have a nationality of China, Macau, or Hong Kong. See the 'Borrower Ownership' tab for the corresponding AidData record to see the specific names and categories of the relevant UBOs.
Chinese_Group_UBO_Type	For all loan records where the Chinese_Group_UBO field is set to "Yes," this field captures a simplified measure of the type of Chinese group that has greater than 25% aggregate shareholding (i.e., is considered an ultimate beneficial owner) of the direct receiving agency (borrowing institution). Each Chinese UBO is assigned to one of four types (channels): Public Sector, Private Sector, Multilateral, or NGO/CSO/Foundation. These types are derived from the eleven categories used for each organization in the dataset, with the following assignment allocation: Government Agency (Public Sector), State-Owned Bank (Public Sector), State-Owned Policy Bank (Public Sector), State-Owned Commercial Bank (Public Sector), State-Owned Company (Public Sector), State-Owned Fund (Public Sector), Intergovernmental Organization (Multilateral), Special Purpose Vehicle/Joint Venture (Private Sector), Private Sector (Private Sector), NGO/CSO/Foundation (NGO/CSO/Foundation), or Miscellaneous Agency Type (Private Sector). If there are multiple Chinese UBOs, and all of them belong to the same type category, then the field will show that respective type. If there are multiple Chinese UBOs, and they belong to different type categories, then the entries with the

	respective types are pipe-delimited. See the 'Borrower Ownership' tab for the respective record to see the specific names and categories for the relevant UBOs.
Host_Country_UBO	This field provides a marker for all loan records of whether the direct receiving agency (borrowing institution) has an ultimate beneficial owner (UBO) with a nationality that matches the Country_of_Activity, as indicated in the Parent_Owner_Nationality field in the 'Borrower Ownership' tab for the corresponding AidData record. UBOs are parent owners that have, directly or indirectly, an aggregate of over 25% shareholding in the borrowing institution. This field is set to "Yes" for loan records if they meet the following criteria: (1) The direct receiving agency has at least one parent owner with a nationality that matches the Country_of_Activity; and (2) that parent owner has a large enough aggregate ownership stake in the direct receiving agency to be considered an UBO. Otherwise, this field is empty. In cases where there are multiple direct receiving agencies (borrowers), the Host_Country_UBO field is set to "Yes" if a host country entity holds an aggregate of over 25% shareholding in at least one of the borrowing institutions. See the 'Borrower Ownership' tab for the corresponding AidData record to see the names and categories of the relevant UBOs.
Host_Country_UBO_Count	For all loan records where the Host_Country_UBO field is set to "Yes," this field provides the number of parent owners of the direct receiving agency (borrowing institution) that have greater than 25% aggregate shareholding (i.e., are considered ultimate beneficial owners) and have a nationality of that matches the Country_of_Activity. In cases where there are multiple direct receiving agencies (borrowers), the Host_Country_UBO_Count field provides the number of parent owners that have greater than 25% shareholding in any one of the borrowing institutions and have a nationality that matches the Country_of_Activity. See the 'Borrower Ownership' tab for the corresponding AidData record to see the specific names and categories of the relevant UBOs.
Host_Country_UBO_Type	For all loan records where the Host_Country_UBO field is set to "Yes," this field captures a simplified measure of the type of host country entity that has greater than 25% aggregate shareholding (i.e., is considered an ultimate beneficial owner) of the direct receiving agency (borrowing institution). Each host country UBO is assigned to one of four types (channels): Public Sector, Private Sector, Multilateral, or NGO/CSO/Foundation. These types are derived from the eleven categories used for each organization in the dataset, with the following assignment allocation: Government Agency (Public Sector), State-Owned Bank (Public Sector), State-Owned Policy Bank (Public Sector), State-Owned Commercial Bank (Public Sector), State-Owned Company (Public Sector), State-Owned Fund (Public Sector), Intergovernmental Organization (Multilateral), Special Purpose Vehicle/Joint Venture (Private Sector), Private Sector (Private Sector), NGO/CSO/Foundation (NGO/CSO/Foundation), or Miscellaneous Agency Type (Private Sector). If there are multiple host country UBOs, and all of them belong to the same

	<p>type category, then the field identifies that respective type. If there are multiple host country UBOs, and they belong to different type categories, then the entries with the respective types are pipe-delimited. See the 'Borrower Ownership' tab for the respective record to see the specific names and categories for the relevant UBOs.</p>
Credit_Enhancement_from_DRA_Related_Org	<p>This field provides a marker of whether a credit enhancement was provided by an organization related to the direct receiving agency(s) (borrowing institution). It is set to "Yes" for loan records if (1) one or more of the accountable agencies in the Guarantor, Insurance_Provider, Collateral_Provider, or Security_or_Collateral_Agent fields for the relevant AidData record are present in the ownership tree of the direct receiving agency at any level (including the base organization, i.e., the direct receiving agency itself); (2) or if the Direct Receiving Agency(s) of the relevant AidData record is an owner of one or more of the accountable agencies (i.e. if the direct receiving agency is in the ownership tree of one or more of the accountable agencies); or (3) if one or more of the accountable agencies is in the ownership tree of one of the parent owners of the Direct Receiving Agency(s). If the record does not meet at least one of these three conditions, the field is empty.</p>
Related_Credit_Enhancement_Provider	<p>This field captures the name(s) of the organization(s) that provided or supported the provision of a credit enhancement for cases in which the Credit_Enhancement_from_DRA_Related_Org field is set to "Yes." The Credit_Enhancement_from_DRA_Related_Org field is set to "Yes" for a given loan record if at least one of the following three conditions is met: (1) one or more of the accountable agencies in the Guarantor, Insurance_Provider, Collateral_Provider, or Security_or_Collateral_Agent fields for the relevant AidData record are present in the ownership tree of the direct receiving agency at any level (including the base organization, i.e., the direct receiving agency itself); (2) or if the Direct Receiving Agency(s) of the relevant AidData record is an owner of one or more of the accountable agencies (i.e. if the direct receiving agency is in the ownership tree of one or more of the accountable agencies); or (3) if one or more of the accountable agencies is in the ownership tree of one of the parent owners of the Direct Receiving Agency(s). If multiple organizations meeting this criteria supported the provision of a credit enhancement, the entries denoting their names are pipe-delimited.</p>
Related_Credit_Enhancement_Provider_Org_Type	<p>This field captures the organization type of each entity recorded in the Related_Credit_Enhancement_Provider field. Each credit enhancement provider is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Some entities that served as the Related_Credit_Enhancement_Provider changed their type over the years covered in the dataset. The</p>

	Related_Credit_Enhancement_Provider_Org_Type field captures the entity's type at the time of the financial or in-kind transfer, as recorded in the Commitment_Date field. If multiple organizations are identified, the entries in this field are pipe-delimited.
Related_Credit_Enhancement_Provider_Origin	This field captures the origin of each organization recorded in the Related_Credit_Enhancement_Provider field. Each organization is assigned to one of three categories related to its country of origin: China (People's Republic of), Host Country, or Other. If multiple organizations are identified, the entries in this field are pipe-delimited.
Related_Credit_Enhancement_Provider_Relation_to_DRA	This field captures how each organization recorded in the Related_Credit_Enhancement_Provider field is related to the direct receiving agency through the ownership structure. It assumes one of five values: (1) "Direct Receiving Agency" if the direct receiving agency itself is acting as the Related_Credit_Enhancement_Provider, (2) "Parent Owner" if the organization is a top-level ultimate parent owner of the direct receiving agency, (3) "Intermediate Owner" if the organization owns a direct or indirect stake in the direct receiving agency, but is not the final, top-level parent owner, (4) "DRA Subsidiary" if the organization is owned by the direct receiving agency, or (5) "Other Related Org" if the organization is owned by one of the ultimate parent owners of the direct receiving agency. If multiple organizations are identified, the entries in this field are pipe-delimited.
Related_Credit_Enhancement_Type	This field captures the type of credit enhancement provided by the organization identified in the Related_Credit_Enhancement_Provider field. It assumes one of three values: (1) Guarantee, where a third party promises repayment if the borrower defaults; (2) Collateral, where specific assets are pledged or secured through a collateral issuer or security agent; or (3) Insurance, where a policy protects the lender against credit risk. If multiple organizations are identified and/or the same organization provides multiple types of credit enhancements, their credit enhancement types are recorded as pipe-delimited entries.
Source_Quality_Score	This metric varies on a scale of 1 to 5, with 1 indicating that the project/activity record is exclusively underpinned by unofficial sources and 5 indicating reliance upon multiple, official sources.
Data_Completeness_Score	This metric varies on a scale of 0 to 5, with 5 indicating that the basic fields of the project/activity record are complete. The "threshold" for a score of 5 is similar to the key fields in the OECD-DAC's Creditor Reporting System: an actual rather than estimated commitment year, a non-missing transaction amount, a flow type/flow class that is not defined as "Vague," and identifiable funding, implementing, and receiving agencies.

Implementation_Detail_Score	This metric varies on a scale of 0 to 5, with higher scores indicating that more implementation details have been captured in the project/activity record. The following implementation details are considered: whether the implementing agency (or agencies), implementation start and completion dates (actual or planned), and geographical locations of the project/activity are specified; and whether the project/activity has a specified sector allocation. Project Implementation Scores are only calculated for project/activity records with a Recommended_for_Aggregates value of "Yes" and a 'Status' value of "Implementation" or "Completion."
Loan_Detail_Score	This metric varies on a scale of 0-5, with higher values indicating that more financial transaction details are captured in the project/activity record. Loan Detail Scores are only calculated for project/activity records with a Recommended_for_Aggregates value of "Yes" and a Flow_Type designation of "Loan." A score of 5 indicates that a loan's interest rate, maturity, transaction value, loan type, funding agencies, and receiving agencies are all specified (i.e., not missing).
Source_Dataset	This field identifies the AidData China's Loans and Grants (CLG) dataset from which each record originates. The CLG dataset has two components: China's Loans and Grants to Low- and Middle-Income Countries (CLG-LMIC), Version 1.0 and China's Loans and Grants to High-Income Countries (CLG-HIC), Version 1.0. For users who combine the two datasets, or download the pre-merged China's Global Loans and Grants (CLG-Global), Version 1.0, this field specifies the original dataset of each record.

### 1.4.2 Field Definitions for the Borrower Ownership Tab

This tab of data contains 32 separate fields (variables) to document a detailed picture of each borrower's ultimate parent owners related to a loan recorded in the CLG-Global 1.0 'Records' tab. Field names and definitions are provided in the table below.

Field Name	Description
AidData_Record_ID	This field provides the unique identification number that AidData has assigned to every project/activity record in the dataset.

Recommended_for_Aggregates	This field identifies projects/activities that AidData recommends including in analysis that requires the aggregation of projects/activities supported by loan commitments from official sector institutions in China, including analysis of monetary amounts and project/activity counts. It is useful for identifying formally approved, active, and completed projects/activities—and excluding all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the formal approval (official commitment) stage. The field is set to "Yes" for all projects/activities with a status designation of Pipeline: Commitment, Implementation, and Completion. It is set to "No" for all canceled projects/activities, suspended projects/activities, and projects/activities that never reached the official commitment stage (i.e. those projects/activities with a status designation of Pipeline: Pledge, Suspended, and Canceled). Also, note that not all projects/activities with a Recommended_for_Aggregates value of "Yes" identify a financial transaction value (since some transactions are difficult to monetize or lack information on the amount of the transaction).
Country_of_Activity	This field captures the host country where the project/activity supported by the loan commitment takes place. For example, a loan to finance the construction of a power plant in a given country will have its Country_of_Activity field set to that country, even if the borrowing institution is not legally domiciled (incorporated) in the same country. If the project/activity takes place in multiple host countries, the Country_of_Activity field records the corresponding geographical region to which these countries belong. In previous iterations of the TUFF methodology, this field was known as Recipient.
Country_of_Activity_ISO3	This field captures the three-letter code for the country identified in the Country_of_Activity field, according to the standards set by the International Organization for Standardization (ISO). In cases where the Country_of_Activity field records a geographical region rather than an individual country (such as "Africa, Regional"), the Country_of_Activity_ISO3 field is empty.
Direct_Receiving_Agency	This field provides the name of the receiving agency (borrowing institution) accepting the loan commitment.
DRA_Type	This field captures the type of entity designated to receive and manage the loan commitment. Each direct receiving agency is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Some entities that served as the Direct_Receiving_Agency changed their type over the years covered in the dataset. The DRA_Agencies_Type field captures the entity's type at the time of the loan commitment, as recorded in the Commitment_Date field.

DRA_Org_ID	This field provides the unique organization identification number that AidData has assigned to the entity recorded in the Direct_Receiving_Agency field.
DRA_Count	This field captures the number of direct receiving agencies (borrowing institutions) that are identified in the AidData_Record_ID field.
DRA_Incorporation	This field captures the jurisdiction where the direct receiving agency (borrowing institution) of the loan is legally domiciled (incorporated). In cases where the direct receiving agency is a multilateral institution or a multinational non-governmental organization, the DRA_Incorporation field is set to the geographical region that represents the member countries of the institution: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region. In cases where an entity is registered under the laws of the European Union and not any specific country, the DRA_Incorporation field is set to "Europe, regional." If AidData is unable to determine the DRA_Incorporation for a given direct receiving agency, AidData sets the field to "Unknown." Some organizations that served as direct receiving agencies changed their countries of incorporation over the years covered in the dataset. The DRA_Incorporation field captures the agency's country of incorporation at the time of the loan commitment, as recorded in the Commitment_Date field.
DRA_Incorporation_ISO3	This field captures the three-letter code for the country identified in the DRA_Incorporation field, according to the standards set by the International Organization for Standardization (ISO). In cases where the DRA_Incorporation field is set to "Multiple Jurisdictions" or records a geographical region, the DRA_Country_of_Inc_ISO3 field is empty.
DRA_Incorporation-Origin	This field captures whether the direct receiving agency is incorporated in China, in the host country where the project/activity supported by the loan commitment takes place (as captured in the Country_of_Activity field), or in another country. It assumes one of three values: China (People's Republic of), Host Country, or Other.
DRA_Incorporation-OFC	This field provides a marker of whether the entity identified in the Direct_Receiving_Agency field was legally domiciled/incorporated in a country (as captured in the DRA_Incorporation field) that was classified as an offshore financial center (OFC) during the year of the loan commitment. It is set to "Yes" if the country was an OFC in that year, according to the OFC list maintained by the Bank for International Settlements (BIS). If the country was not classified by the BIS as an OFC, the field is empty. This field is also empty if the DRA_Incorporation field is set to "Unknown" or a geographical region.
Parent_Owner	This field provides the name of one of the organizations that AidData has identified as an ultimate parent owner of the direct receiving agency (borrowing institution). A parent owner is the final organization in a branch of an ownership tree of a given direct receiving agency (borrowing institution). In cases where AidData is unable to reliably ascertain the ultimate parent owner(s) for a given branch of the ownership tree beyond



	<p>a certain point, the final, immediately preceding organization in the branch is recorded as the Parent_Owner, and the Parent_Ownership_Incomplete field is set to “Yes”. When a direct receiving agency (borrowing institution) has owners that lead to multiple organizations qualifying as a parent owner, each parent owner is recorded in a separate row, regardless of its ownership stake in the direct receiving agency (borrowing institution). All of the parent owners for a given direct receiving agency (borrowing institution) and AidData record ID are captured via separate rows, which reflect a branch of ownership from the direct receiving agency to the identified parent owner. As such, it is not unusual for one AidData record ID to have multiple rows with the same parent owner, as these each reflect different branches from the direct receiving agency that share a common owner.</p>
Parent_Owner_Type	<p>This field represents the type of entity identified in the Parent_Owner field. Each parent owner is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. Some entities that served as a parent owner changed their type over the years covered in the dataset. The Parent_Owner_Type field captures their type at the time of the loan commitment, as recorded in the Commitment_Date field.</p>
Parent_Owner_Channel	<p>This field captures the ownership channel of the entity recorded in the Parent_Owner field, with each parent owner assigned to one of four categories: Public Sector, Private Sector, Multilateral, or NGO/CSO/Foundation. These types are derived from the eleven categories used for each organization in the dataset, with the following assignment allocation: Government Agency (Public Sector), State-Owned Bank (Public Sector), State-Owned Policy Bank (Public Sector), State-Owned Commercial Bank (Public Sector), State-Owned Company (Public Sector), State-Owned Fund (Public Sector), Intergovernmental Organization (Multilateral), Special Purpose Vehicle/Joint Venture (Private Sector), Private Sector (Private Sector), NGO/CSO/Foundation (NGO/CSO/Foundation), or Miscellaneous Agency Type (Private Sector). Some entities that served as a parent owner changed their type and associated ownership channel over the years covered in the dataset. The Parent_Owner_Channel field captures their ownership channel at the time of the loan commitment, as recorded in the Commitment_Date field.</p>
Parent_Owner_Org_ID	<p>This field provides the unique organization identification number that AidData has assigned to the entity recorded in the Parent_Owner field.</p>
Parent_Ownership_Percentage	<p>This field captures the level of ownership (represented as a percentage) that the entity identified in the Parent_Owner field holds in the entity identified in the Direct_Receiving_Agency field. For ownership structures with multiple levels, the percentage of parent ownership is calculated by multiplying the ownership shares of the specific immediate owner of the direct receiving agency across the intermediate owners that own that</p>

	entity until the calculations reach the highest level.
Parent_Ownership_Estimated	<p>This field provides a marker of whether the level of ownership (represented as a percentage) that the ultimate parent owner holds in the direct receiving agency has been estimated at some point along in its ownership branch, with a “Yes” designation in cases where an estimation was made. There are a number of circumstances under which AidData estimates ownership percentages and its coders are instructed to follow specific guidance. Examples of estimated ownership percentages include: (1) An assumption of whole (100%) ownership in cases where AidData identifies only one owner entity of a given institution, and although the precise ownership stake is not specified, certain details (such as the name or purpose of the entity) make it apparent that the identified owner has control over it; (2) An assumption of a majority (50.001%) and minority (49.999%) ownership split in cases where there are only two known owner entities, and it is known that a certain entity holds a majority or controlling stake in an institution, but the exact percentage of their shareholding is unknown; and (3) An assumption of equal ownership percentages across all known shareholders in cases where AidData has identified all of the owners of a given institution (normally a special purpose vehicle) but lacks information on their ownership stakes (e.g., four owners would be estimated to hold 25% each). In cases where ownership shares—whether estimated or actual—result in repeating decimals (e.g., 33.3333333%), AidData allocates the values in a way that ensures the total sums to exactly 100%. To do so, AidData chooses an owner entity randomly and rounds up its ownership percentage alone to ensure that all of the ownership percentages sum to 100%. For example, if there are three ownership entities, two may be coded as 33.33333% and one as 33.33334%.</p>
Parent_Ownership_Incomplete	<p>This field indicates if a parent owner’s ownership tree is incomplete. Specifically, the field provides a marker of whether there is missing data regarding the intermediate or ultimate parent owner for the corresponding ownership branch of the direct receiving agency, as captured in the row of data for the corresponding AidData record. Whenever the ownership data that AidData uncovered was incomplete for a given ownership branch, this field is set to “Yes”; otherwise, it is empty. For example, if it is known that the Chinese state-owned enterprise Sinohydro owns 55% of a joint venture company (the direct receiving agency) for a project, but it is unclear which entities own the remaining 45%, the flag is set to “Yes,” and the values for variables related to the 45% shareholding are assigned according to the immediately preceding institution in the ownership branch (e.g., the name of the Parent_Owner would be the same as the name of the direct receiving agency in this case, because the 45% shareholder(s) is unknown). In other cases, the field is set to “Yes” because of a deliberate choice by AidData to not record all shareholders of an institution due to the fact that they do not meet AidData’s recording requirements (such as for publicly traded companies with thousands of small shareholders).</p>

	existing alongside a parent owner with a sizeable stake in said company).
Parent_Owner_Nationality	This field captures the nationality of a given Parent_Owner, which is typically represented by the country where the entity is operationally headquartered. The country where an entity is operationally headquartered is the country where the organization is actually based and managed, i.e. where its principal executive offices are located. In some cases, such as holding companies owned by individuals from one country, AidData codes the country to which those individuals belong, to the best extent possible, as the Parent_Owner_Nationality (i.e., a British billionaire's holding company in the British Virgin Islands would have a Parent_Owner_Nationality designation of the United Kingdom). In cases where the parent owner is a multilateral institution or a multinational non-governmental organization, the Parent_Owner_Nationality field is set to the geographical region which represents the member countries of the institution: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region. If AidData is unable to determine the Parent_Owner_Nationality for a given parent owner, this field is set to "Unknown." Some organizations that served as a Parent_Owner changed their country of headquarters over the years covered in the dataset. The Parent_Owner_Nationality field captures their nationality at the time of the loan commitment, as recorded in the Commitment_Date field.
Parent_Owner_Nationality_ISO3	This field captures the three-letter code for the country identified in the Parent_Owner_Nationality field, according to the standards set by the International Organization for Standardization (ISO). In cases where the Parent_Owner_Nationality field records a geographical region, the Parent_Owner_Nationality_ISO3 field is empty.
Parent_Owner_Nationality_Origin	This field captures whether the parent owner's nationality is in China, in the host country where the project/activity supported by the loan commitment takes place (as captured in the Country_of_Activity field), or in another country. It assumes one of three values: China (People's Republic of), Host Country, or Other.
Parent_Owner_Incorporation	This field captures the jurisdiction where the parent owner of a given direct receiving agency (borrowing institution) is legally domiciled/incorporated. In cases where the direct receiving agency is a multilateral institution or a multinational non-governmental organization, the Parent_Owner_Incorporation field is set to the geographical region which represents the member countries of the institution: Africa, Americas, Asia, Europe, Middle East, Oceania, or Multi-Region. In cases where an entity is registered under the laws of the European Union and not any specific country, the Parent_Owner_Incorporation is set to "Europe, regional." If AidData is unable to determine the Parent_Owner_Incorporation for a given parent owner, this field is set to "Unknown." Some entities that served as parent owners changed their country of incorporation over the years covered in the dataset. The Parent_Owner_Incorporation field captures the parent owner's country of incorporation at the time of the loan commitment, as recorded in the Commitment_Date field.

Parent_Owner_Incorporation_ISO3	This field captures the three-letter code for the country identified in the Parent_Owner_Incorporation field, according to the standards set by the International Organization for Standardization (ISO). In cases where the Parent_Owner_Incorporation field records a geographical region, the Parent_Owner_Incorporation_ISO3 field is empty.
Parent_Owner_Incorporation_Origin	This field captures whether the parent owner's country of incorporation is in China, in the host country where the project/activity supported by the loan commitment takes place (as captured in the Country_of_Activity field), or in another country. It assumes one of three values: China (People's Republic of), Host Country, or Other.
Parent_Owner_OFC	This field provides a marker of whether the entity identified in the Parent_Owner field was legally domiciled/incorporated in a country (as captured in the Parent_Owner_Incorporation field) that was classified as an offshore financial center (OFC) during the year of the loan commitment. It is set to "Yes" if the country was an OFC in that year, according to the OFC list maintained by the Bank for International Settlements (BIS). If the country was not classified by the BIS as an OFC, the field is empty. This field is also empty if the Parent_Owner_Incorporation field is set to "Unknown" or a geographical region.
Ultimate_Beneficial_Owner	This field provides a marker of whether a given Parent_Owner meets the criteria to be considered an ultimate beneficial owner (UBO). In order to be an UBO, a given Parent_Owner must have an aggregate ownership stake, as captured in the Parent_Ownership_Percentage field, in the direct receiving agency of over 25%, regardless of whether it is owned directly or indirectly by the Parent_Owner. As parent owners can appear multiple times for one direct receiving agency (representing multiple branches that lead to the same parent owner), when determining this field AidData considers each ownership stake a parent owner holds in a direct receiving agency; if these stakes add up to over 25%, the parent owner is considered an UBO. There can be no more than three unique Parent_Owners identified as UBOs for a given direct receiving agency, since ownership stakes must add up to 100% and each UBO must own over 25%. The field is set to "Yes" if the given Parent_Owner is an UBO and is empty if it is not.
UBO_Chinese_Group	This field provides a marker of whether the direct receiving agency has an UBO that has a nationality of China, Macau, or Hong Kong for cases in which the Ultimate_Beneficial_Owner field is set to "Yes." The UBO_Chinese_Group field is set to "Yes" if the UBO, as identified in the Parent_Owner field, has a Parent_Owner_Nationality of China, Macau, or Hong Kong. Otherwise, this field is empty.

Commitment_Date	<p>This field seeks to capture the day on which an official loan commitment was codified through the signing of a formal agreement by an official donor/lender in China and one or more entities in a host country or a set of host countries. Whenever possible, this field is based on the precise calendar day on which the official commitment was made. However, in cases when AidData is only able to identify the month and year in which the formal agreement signed (e.g., May 2018), the Commitment Date field is set to the first day of the month (01/01/2018). In cases when AidData is only able to identify the year in which the formal agreement was signed, the Commitment Date field is set to the first day of the first month (e.g. 01/01/2018). In the event an official commitment was made for a project/activity that entered implementation, but the official commitment year is not identifiable, AidData records the first year of project/activity implementation as a proxy for the official commitment year. In the event an official commitment was made for a project/activity that has not yet reached implementation, and the official commitment year is not identifiable, AidData records the year in which the underlying commercial contract (supported by the official commitment) was issued. If this information is unavailable, AidData records the first year in which an informal pledge was made as a proxy for the official commitment year. For projects with a status designation of Pipeline: Pledge (i.e., cases in which an official commitment was not made), AidData records the date on which the informal pledge was made.</p>
Commitment_Date_Estimated	<p>For projects/activities with a status designation of Pipeline: Commitment, Implementation, Completion, Suspended, and Cancelled, this marker designates whether AidData estimated the commitment date or reported the actual date on which the official commitment was made. The field is set to "Yes" when the Commitment_Date field is estimated by AidData. It is otherwise set to "No," which indicates that AidData has reported the actual commitment date. For projects/activities with status designations of Pipeline: Pledge, this marker designates whether AidData estimated the pledge date or reported the actual date on which the informal pledge was made.</p>
Status	<p>This field identifies the latest status of a project/activity. Each project/activity is assigned to one of six categories: Pipeline: Pledge, Pipeline: Commitment, Implementation, Completion, Suspended, or Cancelled. A project/activity assigned to the "Pipeline: Pledge" category is one that an official sector institution in China indicated it was interested in supporting (or willing to consider supporting) but did not result in an official commitment. Projects/activities assigned to this category include those that are identified in letters of intent, term sheets, memoranda of understanding, and non-binding announcements. All projects/activities given a status designation of Pipeline: Commitment, Implementation, Completion, Suspended, or Cancelled reached the official commitment stage (i.e., a binding, written agreement that governs the provision of loan commitments for a specific purpose was signed by an official sector donor or lender in China and an entity in a host country). A</p>

	<p>project/activity assigned to the "Pipeline: Commitment" category is one that is backed by an official commitment but has not yet entered implementation. A project/activity assigned to the "Implementation" category is one that is backed by an official commitment and has begun implementation with loan commitments from the source of the commitment. A project/activity assigned to the "Completion" category is one that is backed by an official commitment and that reached completion with loan commitments from the sources of the commitment. Projects/activities assigned to the "Suspended" and "Cancelled" categories are those that were backed by an official commitment but subsequently suspended or canceled. The coding of the 'Status' field in the dataset is based on sources that were available as late as October 2025.</p>
Umbrella	<p>This field identifies projects and/or activities that fall within "umbrella" agreements (with a "Yes" designation) in two circumstances. The first circumstance is when a financial agreement was signed by at least one party in the donor/creditor country and one party in the receiving country, but funds were not allocated for a specific purpose (or set of purposes) until a subsequent date. These types of umbrella agreements include Economic and Technical Cooperation Agreements (ECTA) issued by China's Ministry of Commerce (MOFCOM), master facility agreements issued by China Eximbank, lines of credit issued by China Development Bank, and Framework Agreements issued by a variety of official sector institutions in China. Due to the nature of the TUFF data collection process, the subsidiary transactions and projects/activities approved and financed under these types of umbrella agreements are likely captured elsewhere in the dataset. These umbrella records are included in the datasets to clarify linkages between projects/activities and to capture relevant activities without double-counting financial amounts or project counts. The second circumstance is when a project/activity involves debt forgiveness of a loan that is likely in the dataset. More details about when the Umbrella field is set to "Yes" for debt forgiveness projects/activities can be found below in the discussion of the Flow_Type variable. As a general rule, no umbrella records should be included in financial analysis or analysis of project counts as doing so will almost certainly result in double-counting. All umbrella agreements in the dataset are assigned a designation of "No" in the Recommended_for_Aggregates field to help users avoid double counting.</p>
Source_Dataset	<p>This field identifies the AidData China's Loans and Grants (CLG) dataset from which each record originates. The CLG dataset has two components: China's Loans and Grants to Low- and Middle-Income Countries (CLG-LMIC), Version 1.0 and China's Loans and Grants to High-Income Countries (CLG-HIC), Version 1.0. For users who combine the two datasets, or download the pre-merged China's Global Loans and Grants (CLG-Global), Version 1.0, this field specifies the original dataset of each record.</p>

## Section 2 - Capturing Official Sector Grants and Loans from China

With the 4.0 version of the TUFF methodology, we seek to identify overseas projects/activities supported by financial or in-kind transfers from official sector institutions in China (i.e., Chinese government and state-owned institutions). With respect to temporal coverage, we aim to identify all projects/activities backed by official commitments that took place over a 24-year period (2000-2023), with details on the timing of implementation over a 26-year period (2000-2025). AidData's three datasets—China's Loans and Grants to Low- and Middle-Income Countries Dataset, Version 1.0 (CLG-LMIC 1.0); China's Loans and Grants to High-Income Countries Dataset, Version 1.0 (CLG-HIC 1.0); and China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0)—differ with respect to spatial coverage. Project/activity records are part of either the CLG-LMIC 1.0 or CLG-HIC 1.0 dataset based on whether or not the host country (Country\_of\_Activity) is eligible for Official Development Assistance (ODA) and Other Official Flows (OOF) in the year the official financing commitment (or informal pledge) was made, according to the ODA eligibility lists maintained by the OECD-DAC (see Section 1.1).

With respect to spatial coverage, CLG-LMIC 1.0 aims to capture projects/activities in every low-income, lower-middle income, and upper-middle income country and territory across every major world region, including Africa, Asia, Oceania, the Middle East, Latin America and the Caribbean, and Central and Eastern Europe as designated by the country's ODA eligibility status in a given year.<sup>26</sup> In total, the CLG-LMIC 1.0 dataset covers 150 countries: 142 countries where Chinese government-financed projects/activities were identified, and 8 countries where systematic searches were undertaken but no Chinese government-financed projects/activities were identified. The CLG-HIC 1.0 dataset aims to capture projects/activities in every country and territory that was classified as high-income or otherwise ineligible for ODA flows (as classified by the OECD). This includes countries and territories across every major world region with countries fitting this requirement, including North America, Europe, Asia, the Middle East, and the Caribbean. In total, AidData's CLG-HIC 1.0 dataset covers 84 countries: 72 countries where Chinese government-financed projects/activities were identified, and 12 countries where systematic searches were undertaken but no Chinese government-financed projects/activities were identified. The 1.0 version of the CLG-Global dataset combines the two datasets, aiming to capture the full portfolio of Chinese state-backed loans and grants between 2000 and 2023.

Our goal is to capture a comprehensive and detailed picture of projects/activities that benefit from financial or in-kind support from official sector institutions in China, including grant-giving, lending, and debt restructuring. These scope parameters align with the OECD's definition of Official Development Assistance (ODA) and Other Official Flows (OOF) in terms of the types of

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<sup>26</sup> Host countries are included in the CLG-HIC 1.0 dataset during the years that they are ineligible to receive ODA/OOF, and they are assigned to AidData's new Official Flows to Ineligible Countries (OFIC) flow class. Users should note that there are cases in which some host country-income designations do not align with ODA/OOF eligibility status. For example, the World Bank designated Russia as both a lower-middle-income and an upper-middle-income country during years in which the OECD designated it as ineligible for ODA/OOF. Users interested in analyzing the data according to host country income groups should refer to the WB\_Income\_Group\_Host\_Country field.

financiers and flows that are included in the dataset.<sup>27</sup> The only type of financing from Chinese official sector institutions that we do not seek to capture is Official Investment, although we do capture debt financing that facilitates overseas investment activities.

The challenge of measuring official financial flows from China is not only capturing the full range of flows, but also classifying these flows accurately and in ways that make comparisons between different financiers valid. To make the study of financial and in-kind transfers from China more comparable with those from OECD-DAC donors and creditors, the 4.0 version of the TUFF methodology uses OECD definitions and measurement criteria, as outlined in the OECD-DAC Directives. We use these standards to classify each project/activity according to its source of financing, type of financing, intent, and level of concessionality.

## 2.1 - Measuring Concessionality and Intent

For host countries that are eligible to receive ODA/OOF in a given year, AidData designates each financial and in-kind transfer (“flow”) from an official sector institution as Official Development Assistance (ODA) or Other Official Flows (OOF). The OECD’s Development Assistance Committee (DAC) has used these 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). The sum of ODA and OOF is sometimes referred to as Official Financial Flows, Official Financing, or Overseas Development Finance. 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. In alignment with the OECD-DAC’s own definitions, AidData classifies each project/activity record in the CLG-LMIC 1.0 dataset as either ODA or OOF. This unique feature of the CLG-LMIC 1.0 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 flow data to the OECD-DAC).

The criteria for whether a flow 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.<sup>28</sup> 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.

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<sup>27</sup> AidData has assigned flows to countries that are ineligible to receive ODA/OOF (according to OECD-DAC categorization) to AidData’s new Official Flows to Ineligible Countries (OFIC) flow class. For more information, see Section 1.3.

<sup>28</sup> An additional criteria is that the flow must be provided by official agencies, including state and local governments or their executive agencies. AidData’s CLG-LMIC 1.0 dataset only tracks official Chinese agencies, so this criteria is always met.



While the first two criteria have remained consistent since the concept of ODA was introduced more than five decades ago, the OECD-DAC recently made changes to the third (concessionality) criterion. 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. 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).<sup>29</sup>

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:

**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 recipient country. 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) and projects/activities that primarily seek to promote the commercial interests of companies from countries other than the host country (e.g., the acquisition of an ownership stake in a company). 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). Flows with “military intent” are those that seek to promote the security interests of the country from which the financial transfer originates or strengthen the lethal force capabilities of military institutions in the recipient country – flows with military intent are excluded from the CLG-Global 1.0 dataset.

**ODA Income Classification:** AidData reports the income classification group of the borrowing country. Flows to countries not eligible for ODA/OOF in a given year are automatically assigned to AidData’s Official Flows to Ineligible Countries (OFIC) category.

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<sup>29</sup> According to the OECD, the method for calculating the ODA grant equivalent for loans to private sector institutions has not yet been formalized, and discussions to do so are currently ongoing at the OECD-DAC. Until an agreement has been formalized, the pre-2018 concessionality definition still applies.

### Concessionality:

- 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 eligibility list.
- 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 the 2018 definition), and (3) supports a country that is ODA-eligible according to the OECD-DAC's ODA eligibility list.

By definition, whenever the host country is ODA/OOF eligible, any international official sector flows not classified as ODA are classified as OOF. The OOF flows in the 1.0 version of AidData's CLG-LMIC dataset largely consist of export credits and non-concessional loans.

In some cases, we are not able to determine if an international 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 or OOF).

## 2.2 - Measuring Emergency Rescue Loans and the Cumulative Stock of Official Financial Flows from China

Emergency rescue loans represent an increasingly important part of China's overseas lending portfolio (Horn et al. 2023, 2023b; Parks et al. 2023, 2025). 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). It is also not unusual for financially-distressed countries to receive short-term emergency rescue loans from the same Chinese creditor in a series of consecutive years (Horn et al. 2023a). 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.<sup>30</sup> 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 relatively new 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. 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.<sup>31</sup> However, most of China's short-term emergency rescue loans

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<sup>30</sup> AidData's CLG-HIC 1.0, CLG-LMIC 1.0, and CLG-Global 1.0 datasets capture the full range of China's international rescue lending operations.

<sup>31</sup> The reporting directives of the OECD's Creditor Reporting System (CRS) specify that "[l]oans with a maturity of one year or less are not reportable in DAC statistics" (OECD 2021: 51). Similarly, governments that participate in the World Bank's Debtor Reporting System (DRS) are asked to report

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.<sup>32</sup>

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-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets include 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).<sup>33</sup> These amounts are reported in their original currencies of denomination, nominal USD, and constant 2023 USD via the `Adjusted_Amount_Original_Currency`, `Adjusted_Amount_Nominal_USD`, and `Adjusted_Amount_Constant_USD_2023` variables.

Users of CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets can estimate "rollover" loan amounts (in their original currencies of denomination) by subtracting the values in the `Adjusted_Amount_Original_Currency` field from the values in the `Amount_Original_Currency` field. Nominal USD "rollover" loan amounts can be estimated by subtracting the values in the `Adjusted_Amount_Nominal_USD` field from the values in the `Amount_Nominal_USD` field. Constant 2023 USD "rollover" loan amounts can be estimated by subtracting the values in the `Adjusted_Amount_Constant_USD_2023` field from the values in the `Amount_Constant_USD_2023` field.

Additionally, the datasets include a variable (the `Rescue` field) that identifies emergency rescue loans from official sector lenders in China. Consistent with the method of measurement that was first introduced in Horn et al. (2023a), this variable captures any loan that allows a government or majority state-owned debtor to (1) service existing debts, (2) finance general budgetary expenditures and/or (3) shore up foreign reserves. Any loan in the dataset that meets at least one of two criteria is designated as a rescue loan: (1) any loan where either the `FXSL` or the `BOP` marker is checked, and (2) any loan where AidData's `Sector Code` and `Sector Name` fields are set to 510 and General Budget Support, respectively. However, over the 2000-2023 period, four sovereign debtors that met the first criterion (PBOC swap line borrowings by the central banks of Malaysia, Thailand, Singapore, and South Korea) were not

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their long-term debt repayment obligations to external creditors on an annual basis. Long-term debt is defined in the DRS reporting manual as debt "with an original contractual or extended maturity of more than one year [...]" (World Bank 2000: 4).

<sup>32</sup> 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. (2023a) provide evidence that the *de facto* maturity of the average PBOC swap line borrowing is 3.5 years.

<sup>33</sup> Whenever possible, for each emergency rescue loan (PBOC swap borrowing) of the rollover variety, we calculate a transaction amount that excludes the rollover amount by taking the difference between the level of outstanding debt in the current year and the previous year. This approach is consistent with the one taken by Horn et al. (2023) to derive net (new) PBOC swap borrowings. In cases when this approach cannot be applied but there is evidence of the same lender providing a series of short-term emergency rescue loans (with identical face values and *de jure* maturities of 1 year or less) to the same borrower that are repaid on their original contractual maturity dates and subsequently reissued in consecutive years, we record the face value of the original loan commitment in the first year but not the face values of the loan commitments in subsequent years.

classified as rescue lending, as there is no evidence that these drawdowns occurred during periods of macroeconomic distress (Horn et al. 2023a).

## 2.3 - Categorizing China's Overseas Lending to Different Types of Borrowers

The Level\_of\_Public\_Liability field in the CLG-LMIC 1.0, CLG-HIC 1.0, and CLG-Global 1.0 datasets captures the extent to which the host government may eventually be liable for debt repayment on a given liability. It is only populated when the Flow\_Type is set to "Loan" or "Debt rescheduling". Each loan record with one of those flow types has their Level\_of\_Public\_Liability field assigned to one of six categories: "Central government debt", "Central government-guaranteed debt", "Other public sector debt", "Potential public sector debt", "Private debt", or "Unallocable". The field 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 host country 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 any entity that benefits from a sovereign (central government) repayment guarantee, as determined in the Guarantor and the Guarantor\_Agency\_Type fields.
3. If the loan record does not meet the first (1) or second (2) criteria, it is classified as "Other public sector debt" if (a) it is an official sector loan to a state-owned entity (such as a state-owned bank, or a state-owned enterprise) in the host 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 host country that is backed by a repayment guarantee from a state-owned entity other than the central government in the host country (such as a state-owned bank, or a state-owned enterprise) as determined in the Guarantor and the Guarantor\_Agency\_Type fields, OR (c) it is an official sector loan to a special purpose vehicle (SPV) or joint venture (JV) majority-owned (greater than 50%) by one or more public sector (government agencies or state-owned companies) institutions in the host 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 host country (such as a city/municipal government, a state-owned bank, or a state-owned enterprise) determining the ownership using the information on a given direct receiving agency's ultimate parent owners available from the 'Borrower Ownership' tab of the dataset.
4. If the loan record does not meet the first (1), second (2), or third (3) criteria, it is classified as "Potential public sector debt" if it is an official sector loan to any entity, such as a private sector company or a SPV/JV, that is minority-owned by one or more public sector institutions in the host country, determining the ownership using the information on a given direct receiving agency's ultimate parent owners available from the 'Borrower Ownership' tab of the dataset.

5. If the loan record does not meet the first (1), second (2), third (3), or fourth (4) criteria, it is classified as "Private debt" if (a) it is an official sector loan to at least one direct receiving agency legally incorporated in the host country, per the Direct\_Receiving\_Agencies\_Incorporation field, or (b) at least one direct receiving agency has any amount (over 0%) of ownership by an ultimate parent owner legally incorporated in the host country, as determined using the information on a given direct receiving agency's ultimate parent owners available from the 'Borrower Ownership' tab of the dataset.
6. If the loan record does not meet the first (1), second (2), third (3), fourth (4), or fifth (5) criteria, then it is classified as "Unallocable".

The second and third criteria use information on guarantees from the Guarantor and the Guarantor\_Agency\_Type fields. The third, fourth, and fifth criteria use information on a given direct receiving agency's parent owners (namely their country of legal incorporation and nationality), to assess the level of public liability. This information is stored in the 'Borrower Ownership' tab, in a data collection process explained in Section 5.

In addition to the Level\_of\_Public\_Liability field, there is a simplified field, PPG\_Debt\_Status, which will convey whether a given loan record qualifies as public and publicly-guaranteed (PPG) debt, as defined by the World Bank's International Debt Statistics (IDS). A loan record is coded as "PPG Debt" if its Level\_of\_Public\_Liability designation is "Central government debt," "Central government-guaranteed debt," or "Other public sector debt." A loan record is coded as "Non-PPG Debt" if its Level\_of\_Public\_Liability designation is "Potential public sector debt," "Private debt," or "Unallocable."

## 2.4 - Identifying when China's Overseas Borrowers are Experiencing Financial Distress

The 1.0 versions of AidData's CLG-Global, CLG-LMIC, and CLG-HIC datasets include a Financial\_Distress flag that identifies whether, for a given loan, there is an indication that the borrowing institution (a) sought and/or secured a rescheduling of the loan's terms to address a repayment challenge, or (b) demonstrated other signs of financial distress during the loan's repayment period. This field is set to "Yes" for loans that showed signs of distress (within their originally scheduled repayment periods). Examples of financial distress include the borrowing institution accruing principal or interest arrears, defaulting on its repayment obligations, experiencing bankruptcy, or seeking/securing a rescheduling of the loan's repayment terms to address a repayment challenge specifically (in many commercial loans, maturities and interest rates are modified as part of cost optimization strategies by borrowers; a loan extension can be cheaper than outright refinancing. AidData does not consider these scenarios as evidence indicative of financial distress). Other examples include Sinosure making indemnity payments under the loan's insurance policy or lower-than-expected levels of revenue generation from the project/activity funded by the loan.

The Financial\_Distress field is based on the project/transaction life-cycle information that is contained in the Narrative\_Description field and, in some cases, the absence or presence of

debt rescheduling.<sup>34</sup> Because evidence of a borrower seeking/securing a rescheduling of the loan's repayment terms to address a repayment challenge results in the Financial\_Distress flag being set to "Yes," whenever a loan to a low- or middle-income country is rescheduled, the Financial\_Distress flag is automatically set to "Yes." However, in many commercial loans, maturities and interest rates are modified as part of cost optimization strategies by borrowers; a loan extension can be cheaper than outright refinancing. Therefore, AidData does not automatically consider debt rescheduling as evidence indicative of financial distress in high income countries—the purpose of the debt rescheduling must also be considered.

AidData's CLG-Global 1.0 dataset (and its constituent datasets) also identifies the year that a borrowing institution initially encountered difficulties in repaying the loan or demonstrated other signs of financial distress during the loan's repayment period via its new Financial\_Distress\_Onset\_Year variable field. The first date on which a borrower accrued arrears is used as the financial distress onset year—or the first date of restructuring (whichever comes first). For financially distressed loans lacking evidence of arrears or restructuring events, information in the Narrative\_Description field was reviewed to identify the year of financial distress onset.

- For example, the \$1.2891 billion syndicated buyer's credit loan to the Government of Angola for the New Angola International Airport (NAIA) Construction Project is marked as financially distressed with the onset year being 2019 – this is based on evidence in the Narrative\_Description field of work on the project being halted in 2019 due to the borrower institution facing financial problems. Another example is a \$448 million buyer's credit loan for Pakistan's 969MW Neelum-Jhelum Hydroelectric Project from China Eximbank that was restructured in 2020. The loan is therefore marked as financially distressed, with the field Financial\_Distress\_Onset\_Year being set to 2020.

## 2.5 - China's Official Sector Agencies and Instruments

### 2.5.1 - Sources of Official Sector Financing from China

#### 2.5.1.1 - Overview

The OECD defines "Official Financing" as "official transactions [...] undertaken by central, state or local government agencies at their own risk and responsibility, regardless of whether these agencies have raised the funds through taxation or through borrowing from the private sector."<sup>35</sup> The OECD also considers autonomous and semi-autonomous state-owned entities—like KfW, the German state-owned investment and development bank—to be official sector institutions. Therefore, the 4.0 version of the TUFF methodology seeks to capture financial or in-kind commitments from all Chinese government and state-owned entities, including central government agencies (like the Ministry of Commerce, the Ministry of Foreign

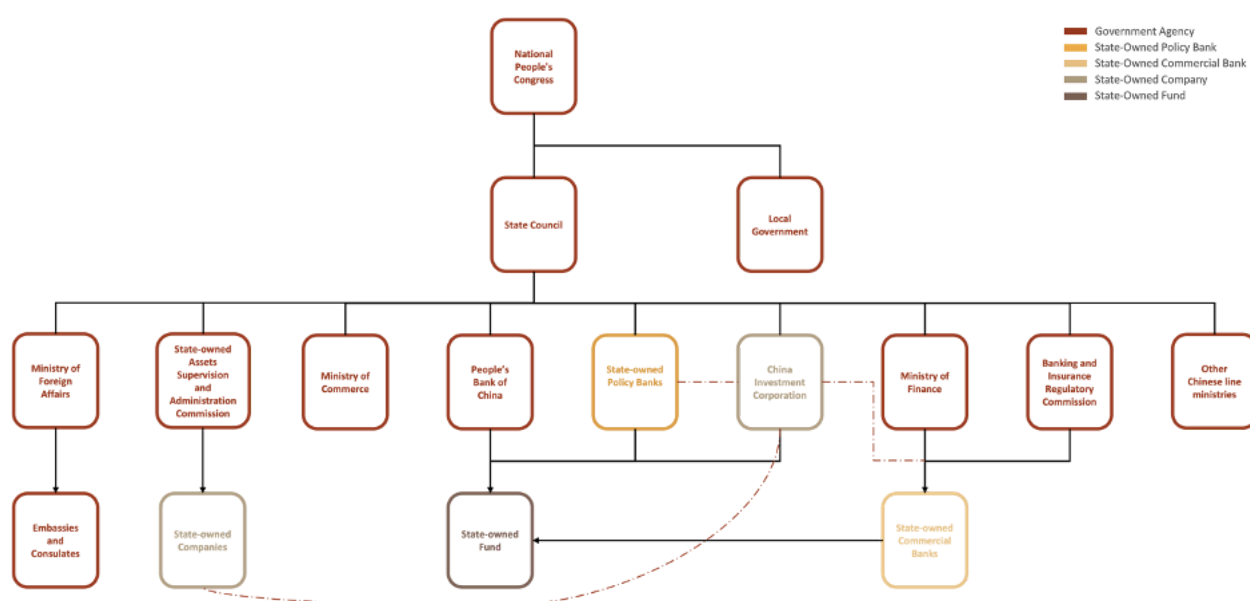
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<sup>34</sup> For some types of analysis in the *Belt and Road Reboot* report, Parks et al. (2023) modifies the financial distress measure to more clearly differentiate between repayment risks and repayment risk mitigation efforts. Instead of using all loan records where the "Financial Distress" variable is set to "Yes," they exclude all observations for which the only source of evidence of the borrower having difficulty making repayments or experiencing financial distress is an attempted or actual debt rescheduling.

<sup>35</sup> See the OECD's September 2024 Converged Statistical Reporting Directives at [https://one.oecd.org/document/DCD/DAC\(2024\)40/FINAL/en/pdf](https://one.oecd.org/document/DCD/DAC(2024)40/FINAL/en/pdf)

Affairs, and the Ministry of Agriculture), regional and local government agencies (like Chongqing Municipal Health Commission and Tianjin Municipal Government), state-owned enterprises (like CNPC, CMEC, CATIC, and CRBC), state-owned policy banks (like China Development Bank and China Eximbank), state-owned commercial banks (like ICBC, BOC, and CCB),<sup>36</sup> and state-owned funds (like the Silk Road Fund).<sup>37</sup> The specific agency or set of agencies that provide financial or in-kind support is captured in the Funding\_Agency field. Each funding agency is also assigned to one of six Funding\_Agency\_Type categories: Government Agency, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Bank, State-Owned Company, and State-Owned Fund.

Figure 2.1: Chinese Official Sector Agencies



<sup>36</sup> AidData classifies the following institutions as Chinese state-owned commercial banks: China Construction Bank Corporation (CCB), Industrial and Commercial Bank of China (ICBC), Bank of China (BOC), China Bank of Communications (BoCom or BoComm), Agricultural Bank of China, Postal Savings Bank of China (PSBC), China Bohai Bank, Bank of Shanghai, China CITIC Bank, China Merchants Bank, Huaxia Bank Co., Ltd., and China Everbright Bank Co., Ltd. This group of banks includes so-called shareholding commercial banks that are subsidiaries of state-owned enterprises (e.g., China CITIC Bank) and city commercial banks (i.e., Bank of Shanghai).

<sup>37</sup> We consider institutions to be “state-owned” if the government has a controlling ownership stake. Due to a lack of agreement about whether Huawei Technologies Co., Ltd. (“Huawei”) should be treated as an official sector institution, we do not include projects financed with aid or debt from Huawei or any of its subsidiaries in AidData’s China’s Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0). AidData published a separate Global Huawei Finance Dataset in September 2021 that captures 153 Huawei-financed projects worth \$1.4 billion in 64 countries from commitment years 2000-2017.

### 2.5.1.2 - China's Ministry of Commerce (MOFCOM)

MOFCOM is the lead administrator of the country's interest-free (or "zero-interest") loan and grant program for developing countries.<sup>38</sup> While there are many different Chinese government institutions that provide small-scale grants and donations, MOFCOM is the primary Chinese government institution responsible for providing large-scale, RMB-denominated grants to host government institutions that support the construction, maintenance, upgrading, or expansion of infrastructure and other physical assets (like schools, hospitals, convention centers, and government buildings).<sup>39</sup>

As part of its outreach to other countries, MOFCOM officials often meet with government counterparts in developing countries and sign Economic and Technical Cooperation Agreements (ETCAs, in Chinese: 经济技术合作协议). When MOFCOM signs an ETCA with a foreign government, it is issuing an official grant or interest-free loan *commitment*. The interest-free loan commitments that are issued via ETCAs are typically denominated in RMB with the following borrowing terms: 20 year maturities, 10 year grace periods, and 0% interest rates.<sup>40</sup> Counterpart funding is not required, and when borrowers have difficulty repaying their debts to the Chinese government, these are often the first loans to be forgiven or rescheduled (Morris et al. 2020).

ETCAs are often signed with recipient governments for unspecified purposes (or generically worded purposes, such as economic development or disaster relief and reconstruction). Then, a bank account is set up between a Chinese state-owned bank (usually China Development Bank or Bank of China) and the host country's central bank or finance ministry to facilitate the transfer of funds. In many cases, a bank/loan agreement and/or "letters of exchange" are subsequently signed (sometimes multiple years after the original ETCA was signed). However, not every ETCA is implemented in this way. Sometimes, the ETCA, the bank account agreement, and letters of exchange are simultaneously approved. The vast majority of Chinese government grants and interest-free loans are funded through ETCAs, so AidData coders are informed that if a project/activity is financed by a Chinese government grant or interest-free loan, there is a high likelihood that the project/activity was funded through an ETCA (and supplemental online searches will most likely be necessary to determine if that project/activity was funded through an ETCA and the specific date when the ETCA was signed).<sup>41</sup>

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<sup>38</sup> In August 2021, China International Development Agency (CIDCA), MOFCOM, and the Ministry of Foreign Affairs (MOFA) reviewed and approved a new set of foreign aid administration measures. These measures specify that, as of October 1, 2021, CIDCA will be responsible for all planning, policymaking, regulatory, and supervisory functions that support the country's foreign aid program. MOFCOM will continue to implement foreign aid projects, among other line ministries (including MOFA). See [http://www.cidca.gov.cn/2021-08/31/c\\_1211351312.htm](http://www.cidca.gov.cn/2021-08/31/c_1211351312.htm)

<sup>39</sup> An illustrative MOFCOM grant agreement can be accessed here: <https://www.dropbox.com/s/fv965ko40q88pp7/01.12.2020.%20ENG.pdf?dl=0>. MOFCOM grants and interest-free loans usually support projects with development intent, although there are some cases when it finances projects with representational, commercial, or military intent.

<sup>40</sup> An illustrative MOFCOM loan agreement can be accessed here: [https://www.documentcloud.org/documents/20485643-cmr\\_2011\\_518](https://www.documentcloud.org/documents/20485643-cmr_2011_518). Based on the OECD-DAC concessionality calculator, these loans usually have a grant element of approximately 75% (Malik 2021).

<sup>41</sup> In many cases, MOFCOM's support for a specific project that is financed with the grant or loan proceeds from previously signed ETCAs will be codified in "letters of exchange," an "exchange of notes," or an "implementation agreement." For illustrative financing agreements that followed the signing of ETCAs, see <https://www.dropbox.com/s/fv965ko40q88pp7/01.12.2020.%20ENG.pdf?dl=0>



Although ETCAAs represent official financial commitments, AidData coders are instructed to treat them as “umbrella” agreements—meaning that ETCAAs are effectively framework agreements that govern follow-on grants and zero-interest loans for specific projects, but those projects are not specified at the time of ETCA signing. Also, recipient governments often sign multiple ETCAAs over time, which means that one of the most challenging tasks associated with ETCAAs is accurately tracking all of the subsidiary projects that they have funded.<sup>42</sup> AidData coders are instructed to track down the exact ETCA that is financing a project/activity if it is reported that the project/activity was financed through an ETCA.

AidData has several coding guidelines that are specific to ETCAAs:

- The funding agency for an ETCA that has committed a grant or interest-free loan should always be coded as “China Ministry of Commerce.” When a funding agency is not explicitly identified in the source materials, AidData coders are instructed to assign “China Ministry of Commerce” as the funding agency if the following criteria are met: (1) The grant or zero-interest loan is denominated in RMB, (2) the receiving agency is a government institution from the developing country, (3) the project/activity has development intent, (4) the project/activity involves the provision of large-scale funding for infrastructure or a physical asset. Chinese government grant- and loan-financed project activities/events that involve a MOFCOM representative are treated by AidData coders as evidence that MOFCOM is the funding agency. Additionally, when the underlying source materials used to construct project/activity record descriptions refer to MOFCOM as issuing project design or implementation contracts to Chinese firms or MOFCOM deploying personnel to conduct on-site project inspections or post-project evaluations, AidData coders are instructed to treat this as a evidence that MOFCOM is the funding agency.
- The ETCA should be explicitly identified by its full name in both the title and the project/activity record description. An ETCA should not be referred to as just “an agreement.” AidData coders are instructed to differentiate ETCAAs by specifying the year of signing of an individual ETCA in the record title. They are also instructed to specify the exact date of the ETCA signing in the description field if that information is available (as sometimes multiple ETCAAs are signed in a given year).
- The commitment date of an ETCA should be the date on which the ETCA was signed and countersigned, and not the date on which the ETCA was ratified by the recipient government’s legislature.
- When an ETCA is issued for an unspecified purpose at the time of its signing, AidData coders are instructed to adhere to the following guidelines:
  - It should always be coded as an umbrella record.

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and

<https://www.dropbox.com/s/t86s480xiqyvzih/Supplemental%20Implementation%20Agreement%20for%20China%20Aided%20Ministry%20of%20Foreign%20Affairs%20Construction%20Project.pdf?dl=0>

<sup>42</sup> This is especially true because (a) ETCAAs and subsidiary agreements are often agreed upon in different years, and (b) it is not always immediately obvious that a project was funded by a particular ETCA (which itself may have been signed years ago).

- The status of the ETCA should be coded as an official commitment and not as a pledge.
- If it is found that the funds committed through the ETCA supported multiple, subsidiary projects, those projects should be created as separate records, and linked back to the ETCA umbrella record using a Parent ID.
- If it is found that the funds committed through the ETCA supported a single project, then the ETCA record should not be marked as an umbrella record, and all of the other record fields should be populated/updated.
- When specific projects are identified at the time of the ETCA signing, AidData coders are instructed to adhere to the following guidelines:
  - If multiple projects are specified, then AidData coders are instructed to create one umbrella record for the ETCA, and one record for each of the specified projects. Umbrella records should be status-coded as official commitments. These records should be linked together with a common Parent ID.
  - If there is only one specific project receiving the full amount of funding that was committed through the ETCA, then AidData coders are instructed to create only one record (non-umbrella), with a description that specifies that the financial commitment for the project came from an ETCA.

### 2.5.1.3 - Export-Import Bank of China

The Export-Import Bank of China (or “China Eximbank”) is one of two state-owned policy banks in China that provide overseas financing. It is designated as China’s official export credit agency and recognized as an official bilateral creditor. China Eximbank is also unique in that it is responsible for the implementation of the “two preferential loans” program, which consists of Government Concessional Loans (GCLs) and the Preferential Buyer’s Credits (PBCs). These are sometimes referred to in Chinese as 两优贷款. In addition to the loans provided through this program, AidData captures Buyer’s Credit Loans (BCLs), Overseas Investment Loans, and Overseas Project Contracting Loans from China Eximbank. These lending instruments are described in greater detail below with the specific guidelines that AidData coders use to classify projects that are financed with these instruments.

**Government Concessional Loans (GCLs):** The GCL (in Chinese: 优惠贷款) is a loan that China Eximbank issues to foreign governments maintaining diplomatic ties with China.<sup>43</sup> These RMB-denominated loans are granted on below-market terms (typically 20-year maturities, 5-year grace periods, and 2% interest rates).<sup>44</sup> China’s Ministry of Finance calculates the difference between the interest rates attached to these loans and the central bank’s benchmark rate and reimburses China Eximbank accordingly.<sup>45</sup> GCL proceeds can be used by borrowing institutions to finance up to 100% of the total cost of a commercial contract with a Chinese supplier. China Eximbank does not expect the borrowing institution to provide any

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<sup>43</sup> An illustrative GCL can be found accessed here:

[https://www.documentcloud.org/documents/20485597-cmr\\_2011\\_172](https://www.documentcloud.org/documents/20485597-cmr_2011_172)

<sup>44</sup> See Morris et al. (2020) and Export-Import Bank of China (n.d.).

<sup>45</sup> See

<https://www.dropbox.com/s/ctvqu1jmopny6vw/392125599-Key-Points-of-Evaluation-pptx.pdf?dl=0>

“counterpart funding.” The Chinese government characterizes the GCL as a form of foreign aid. Similar to preferential buyer’s credits, GCLs will usually be explicitly identified as such in official sources.<sup>46</sup>

AidData has several coding guidelines that are specific to GCLs:

- **Currency:** The currency of denomination should be represented in RMB, unless the only information about the transaction amount is denominated in USD (or another currency).
- **Flow Type:** All GCLs should be coded as loans.
- **GCL Flag:** GCLs are flagged as such in the corresponding ‘GCL’ field as part of the TUFF 4.0 credit instrument categorization scheme.
- **Intent:** AidData coders are instructed to categorize the intent variable according to the primary purpose of the project/activity being financed with a GCL. Even though the Chinese government refers to GCLs as foreign aid, GCL-financed projects may be coded as having development, commercial, representational, or mixed intent. GCL-financed projects may also have military intent, in which case they are excluded from the CLG-Global 1.0 dataset.
- **Title and Description:** If a project/activity is financed with a GCL, AidData coders are instructed to make this clear in the project/activity record title and description. That is to say, if a GCL agreement was signed, it should be described as such and not simply referred to as a “loan agreement.”

**Preferential Buyer’s Credit (PBC) and Nonpreferential Buyer’s Credit Loan (BCL) Program:** PBCs (In Chinese: 优惠出口买方信贷) are USD-denominated loans that are granted to foreign government institutions.<sup>47</sup> When China Eximbank issues a PBC, it provides a loan to a foreign government institution (in a country that maintains diplomatic ties with China) and that government institution uses the loan proceeds to buy goods or services from a Chinese supplier. The borrowing terms of these loans vary, but they are offered with fixed rather than floating interest rates that are usually more generous than prevailing market rates.<sup>48</sup> China Eximbank has a policy of allowing borrowers to use PBC proceeds to finance 85% of the total cost of a commercial contract (often an Engineering, Procurement, and Construction contract) with a Chinese supplier. China Eximbank usually requires that the remaining 15% of the commercial contract cost be financed with “counterpart funding” from the borrowing institution. There are cases when China Eximbank deviates from this norm (e.g., by allowing a borrower to use up to 95% of the proceeds of a PBC to finance a commercial contract), but

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<sup>46</sup> For example, the loan agreement ID number may contain the abbreviation “GCL” (referring to Government Concessional Loan)—e.g., CHINA EXIMBANK GCL NO.1 (2011) TOTAL NO. (351).

<sup>47</sup> An illustrative PBC agreement can be found accessed here:

[https://www.documentcloud.org/documents/20488747-phl\\_2018\\_422](https://www.documentcloud.org/documents/20488747-phl_2018_422)

<sup>48</sup> See Morris et al. (2020) and Export-Import Bank of China (n.d.).

most PBCs adhere to this policy. Similar to GCLs, PBCs will usually be explicitly identified as such in official sources.<sup>49</sup>

China Eximbank also has a (non-preferential) buyer's credit loan (BCL) program that shares many of the same features as the PBC program.<sup>50</sup> However, BCLs can be denominated in USD or EUR; they are usually priced at a floating market interest rate (LIBOR, EURIBOR, or SOFR) plus a margin; they often have shorter maturity lengths and grace periods than PBCs; and the borrowers need not be government institutions.<sup>51 52</sup>

AidData has several coding guidelines that are specific to PBCs and BCLs:

- **Transaction amount:** If the precise face value of the PBC or BCL is unknown but the total cost of the commercial (EPC) contract is known, AidData coders are instructed to assume that the face value of the PBC/BCL is equivalent to 85% of the total EPC cost. AidData coders are also instructed to note any such assumptions were made in the Narrative\_Description field or Staff\_Comments field.
- **Flow Type:** All PBCs and BCLs should be coded as loans.
- **Export Buyer's Credit Flag:** PBCs and BCLs are both flagged as export buyer's credit in the corresponding field.
- **PBC Flag:** As part of the TUFF 4.0 credit instrument categorization scheme, all preferential buyer's credit records are flagged as such in the corresponding 'PBC' field. For all PBC records, the Export\_Buyers\_Credit field will automatically be set to "Yes."
- **Currency:** Eximbank PBCs are exclusively denominated in USD, so AidData coders are instructed to populate the amount field and the currency field accordingly.
- **Intent:** PBCs and BCLs are trade promotion instruments. As such, projects financed with PBCs and BCLs should never be given a development intent designation. The possible intent values for PBCs and BCLs (as well as export seller's credits) are mixed or commercial. If a PBC/BCL is sufficiently concessional and it is financing a project/activity that seeks to improve economic development or welfare in the host country, AidData coders are instructed to code it as having mixed intent (i.e., both commercial intent and development intent). However, in cases when a PBC or BCL supports a project/activity

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<sup>49</sup> For example, a PBC agreement ID number may contain the abbreviation "PBC" (referring to Preferential Buyer's Credit)—e.g., CHINA EXIMBANK PBC NO. (2016) 33 TOTAL NO. (421). Buyer's credit loans are usually referred to with the abbreviation "BCL" in official sources. However, among buyer's credit loans that were issued by China Eximbank in the early 2000s, it is not uncommon to see the abbreviation "BLA" in official sources.

<sup>50</sup> See <https://www.dropbox.com/s/mlg5lz5fqnh8aef/China%20Eximbank%20Pitch%20Deck.pdf?dl=0>

<sup>51</sup> Following concerns about LIBOR manipulation and its planned discontinuation, new reference rates have been adopted—most notably, the Secured Overnight Financing Rate (SOFR). SOFR, published by the Federal Reserve Bank of New York, differs fundamentally from LIBOR in that it is based on actual overnight secured transactions collateralized by U.S. Treasury securities, whereas LIBOR was based on banks' estimates of unsecured borrowing costs. Consequently, many sovereign loans previously tied to LIBOR now use SOFR plus an additional spread that aims to ensure minimal economic disruption for borrowers and lenders during this benchmark transition.

<sup>52</sup> An illustrative BCL agreement can be found accessed here:

[https://www.documentcloud.org/documents/20488172-ecu\\_2010\\_444](https://www.documentcloud.org/documents/20488172-ecu_2010_444)

that *only* has commercial intent (for example, a loan to help a shipping company acquire vessels that will allow it to move ocean containers from country to country, a loan to help a company finance its general operations, or a loan to help a company service its existing debts), AidData coders are instructed to designate the project/activity as having commercial intent.

- **Title and Description:** If a project/activity is financed with a PBC or BCL, AidData coders are instructed to make this clear in the record title and narrative description. That is to say, if a PBC or BCL agreement was signed, it should be described as such and not simply referred to as a “loan agreement” or an “export credit agreement.”

**Overseas Investment Loans Program:** Overseas Investment Loans (In Chinese: 境外投资贷款) are RMB and foreign-currency denominated loans issued by China Eximbank to support Chinese enterprises’ overseas investments.<sup>53</sup> The proceeds of these loans can be used to fund acquisitions, fixed asset investments, and overseas equity investments approved by Chinese authorities.<sup>54</sup> These loans can also be used for working capital needs and be used to cover fees associated with overseas investments. The face value of an overseas investment loan can cover up to 70% of total contract value.

AidData has several coding guidelines that are specific to Overseas Investment Loans:

- **Flow\_Type:** The Flow\_Type field should be coded based on the nature of financing (debt), not how loan proceeds are used (equity/investment). As such, AidData coders are instructed to assign these loans to the Flow\_Type category of “Loan” (rather than “FDI”). These loans enable equity investments (FDI), but they are not themselves FDI.
- **M\_A Flag:** All Overseas Investment Loans should be flagged as Mergers and Acquisitions (M&A) Loans in the corresponding M\_A field.
- **Intent:** The intent of Overseas Investment Loans should always be coded as commercial since they enable commercial investments.
- **Title and Description:** If a project is financed with an Overseas Investment Loan, AidData coders are instructed to make this clear in the project/activity record title and description. That is to say, if an Overseas Investment Loan agreement was signed, it should be described as such and not simply referred to as a “loan agreement.”

**Overseas Project Contracting Loans** (In Chinese: 对外承包工程贷款): These loans are provided by China Eximbank to help Chinese companies finance overseas project contracts.<sup>55</sup> They can be denominated in USD or RMB. Per China Eximbank policy, the contract cost that is financed by the loan should not be lower than 1 million USD. Goods and services exported from China under the contract should not be lower than 15% of contract cost.

AidData has several coding guidelines that are specific to Overseas Project Contracting Loans:

- **Flow\_Type:** The Flow\_Type field should always be set to loan.

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<sup>53</sup> See the following website for more information about Overseas Investment Loans:

[http://english.eximbank.gov.cn/Business/CreditB/SupportingCrossBI/201810/t20181016\\_6967.html](http://english.eximbank.gov.cn/Business/CreditB/SupportingCrossBI/201810/t20181016_6967.html)

<sup>54</sup> See <https://www.dropbox.com/s/r5xhu7zdzqiebbn3/2.EXIM-Bank.pptx?dl=0>

<sup>55</sup> See <https://www.dropbox.com/s/r5xhu7zdzqiebbn3/2.EXIM-Bank.pptx?dl=0>

- **Overseas Project Contracting Loan Flag:** Under the credit instrument categorization scheme used in the 4.0 version of the TUFF methodology, all Overseas Project Contracting Loans are flagged as such in the corresponding field.
- **Intent:** The intent of Overseas Project Contracting Loans should be coded as mixed when they seek to facilitate the export of Chinese goods and services and promote economic development or welfare in the host country through the project that is being financed. The intent of Overseas Project Contracting loans should be coded as commercial if the loans only seek to facilitate the export of Chinese goods and services.
- **Title and Description:** If a project is financed with an Overseas Project Contracting Loan, AidData coders are instructed to make this clear in the record title and narrative description. That is to say, if an Overseas Project Contracting Loan agreement was signed, it should be described as such and not simply referred to as a “loan agreement.”

In addition to the types of loans that we have described, China Eximbank provides a range of other loans for various purposes (some concessional, some not). These include export seller's credits, which are loans to a Chinese company that the Chinese company may on-lend to a buyer/borrower who wishes to buy goods or services from that company. These types of loans from China Eximbank can be denominated in local or foreign currency.<sup>56</sup>

#### 2.5.1.4 - China Development Bank (CDB)

CDB is one of two state-owned policy banks in China that provides overseas financing. It has a wide array of lending instruments, including but not limited to term loans, bridge loans, revolving credit facilities, working capital loans, commodity-backed loans, club loans, syndicated loans, and buyer's credits. Its RMB-denominated and foreign-currency denominated loans are generally provided on less concessional terms than China Eximbank loans because, unlike China Eximbank, CDB must maintain its own balance sheets and lend without receiving official subsidies from the state.<sup>57</sup> Historically, the base interest rate on a CDB loan has been tethered to the (floating) London Interbank Offered Rate (LIBOR) or Euro Interbank Offered Rate (Euribor), with an additional margin incorporated to account for borrower-specific risk and repayment capacity (Morris et al. 2020). Following LIBOR's discontinuation, SHIBOR and SOFR tethered loans from CDB have also been documented. While “all-in” interest rates on CDB loans usually fall somewhere in the 4.5% to 6% range, maturities and grace periods can vary widely. Loans from CDB are granted to both government agencies and companies. Debt collateralization is often required by the bank as a way to limit repayment risk. Whereas 29% of China Eximbank's overseas lending portfolio is collateralized, 70% of CDB's overseas lending portfolio is collateralized (Malik et al. 2021). China Development Bank also engages in inter-bank lending far more frequently than China Eximbank.<sup>58</sup>

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<sup>56</sup> This means that export seller's credits may be denominated in RMB. See Section 2.5.3.3 for more guidance regarding how export seller's credits are coded.

<sup>57</sup> An illustrative CDB loan agreement can be found at [https://www.documentcloud.org/documents/20488181-ecu\\_2010\\_462\\_1\\_of\\_2](https://www.documentcloud.org/documents/20488181-ecu_2010_462_1_of_2)

<sup>58</sup> Inter-bank lending involves one bank providing a loan to another, typically with higher interest rates and short maturities.

CDB is characterized by the Chinese government as a bank that follows commercial lending practices. However, using the OECD's grant element calculator, AidData has found that some of its loans do qualify as concessional loans.<sup>59</sup> CDB's lending portfolio has also become significantly concessional over time (see Malik et al. 2021).

AidData has several coding guidelines that are specific to China Development Bank loans:

- **Intent:** AidData codes the intent of all loans according to the purpose of the project/activity that is being financed. Even though the Chinese government claims that CDB follows commercial lending practices, loans from CDB can be coded as having development, commercial, representational, military, or mixed intent, depending on the primary purpose of the project/activity that is being financed – flows with military intent are excluded from the CLG-Global 1.0 dataset.
- **ETCAs:** As the bank accounts that are used to disburse ETCA funds are often opened with CDB, there is a risk of CDB being identified as the funding agency responsible for providing grants or interest-free loans through ETCAs. This is incorrect. AidData coders are therefore instructed to consistently identify MOFCOM as the funding agency responsible for providing grants or interest-free loans through ETCAs.

#### 2.5.1.5 - State-Owned Commercial Banks

AidData defines Chinese state-owned commercial banks as Chinese banks that are majority-owned by the Chinese government or one of its subsidiaries. The three largest state-owned commercial banks are the Industrial and Commercial Bank of China (ICBC), the Bank of China (BOC), and the China Construction Bank Corporation (CCB). There are some banks that are not officially designated as Chinese state-owned commercial banks but that are consistent with AidData's definition.<sup>60</sup> AidData classifies the following institutions as Chinese state-owned commercial banks: China Construction Bank Corporation (CCB), Industrial and Commercial Bank of China (ICBC), Bank of China (BOC), China Bank of Communications (BoCom or BoComm), Agricultural Bank of China (ABC), Postal Savings Bank of China (PSBC), China Bohai Bank, Bank of Shanghai, China CITIC Bank, China Merchants Bank, Huaxia Bank Co., Ltd., and China Everbright Bank Co., Ltd. This group of banks includes so-called shareholding commercial banks that are subsidiaries of state-owned enterprises (e.g., China CITIC Bank) and city commercial banks (i.e., Bank of Shanghai).

Loans from Chinese state-owned commercial banks include term loans, bridge loans, revolving credit facilities, working capital loans, commodity-backed loans, club loans, syndicated loans, and buyer's credits.<sup>61</sup> They are typically denominated in USD or EUR. They are generally provided on less concessional terms than China Eximbank loans because, unlike China Eximbank, these institutions must maintain their own balance sheets and lend without receiving official subsidies from the state. The base interest rate on a loan from Chinese state-owned

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<sup>59</sup> See Section 2.1 for a detailed description on how AidData determines loan concessionality.

<sup>60</sup> For example, China Merchants Bank is officially classified as a joint-stock commercial bank, but its parent company, China Merchants Group, is under the direct supervision of State-owned Assets Supervision and Administration Commission of the State Council (SASAC) and is classified as a state-owned enterprise. As such, China Merchants Bank fits AidData's definition of a state-owned enterprise, but has been coded as a state-owned commercial bank for the purposes of analysis.

<sup>61</sup> See, for example, <https://www.dropbox.com/s/ekjqc9ubp1bdb7/ICBC%20Pitch%20Deck.pdf?dl=0>

commercial banks historically have been tethered to the (floating) London Interbank Offered Rate (LIBOR) or Euro Interbank Offered Rate (Euribor), with an additional margin incorporated to account for borrower-specific risk and repayment capacity. Maturities and grace periods vary widely. These loans are granted to both government agencies and companies.<sup>62</sup>

#### 2.5.1.6 - People's Bank of China (PBOC)

In recent years, China has ramped down its lending for infrastructure projects and ramped up emergency rescue lending operations (Horn et al. 2023a, 2023b). The People's Bank of China (PBOC)—China's central bank—is by far the most important financier of international emergency rescue lending operations, which it provides in the form of drawdowns under foreign currency swap line (FXSL) agreements.

An FXSL agreement—also known as a bilateral currency swap (BCS) agreement or a central bank liquidity swap agreement—is an agreement between the central banks of two countries to exchange cash flows in different currencies at predetermined rates over a specified period of time. Central banks participate in these agreements to facilitate bilateral trade settlements using their national currencies (rather than relying on a third-party currency such as the U.S. dollar), manage demands from their local banks, and provide liquidity support to financial markets. The party that draws down on the swap line becomes the borrower and the other party becomes lender. During the term of the swap, the party that draws down on the swap line makes either fixed or floating interest payments on the principal amount. If both parties draw down on the swap line, then both parties exchange fixed or floating interest payments on the principal amounts.<sup>63</sup>

AidData has several coding guidelines that are specific to FXSL agreements:

- **Drawdowns under FXSL Agreements:** AidData should not capture the signing of FXSL agreements as records in the dataset. Rather, it should only capture drawdowns (borrowings) under FXSL agreements.
- **Funding Agency:** An FXSL agreement is by definition an agreement between the central banks of two countries. As such, PBOC should be the funding agency for all FXSL agreements.
- **Receiving Agency:** The receiving agency of all borrowings via FXSL agreements should be the central bank of the host country.
- **Flow\_Type:** The Flow\_Type field should be set to "Loan".
- **FXSL flag:** Under the credit instrument categorization scheme used in the 4.0 version of the TUFF methodology, all drawdowns under FXSL agreements are flagged as such in the corresponding 'FXSL' field.

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<sup>62</sup> See Morris et al. (2020).

<sup>63</sup> More detailed information about currency swaps with the PBOC can be found at <https://www.imf.org/-/media/Files/Publications/WP/2021/English/wpia2021210-print-pdf.ashx> and <https://thechinaguys.com/the-rise-of-the-renminbi-the-reality-of-bilateral-swap-agreements/> and <https://www.imf.org/external/pubs/ft/bop/2017/pdf/17-25a.pdf>.



- **Collateralization:** AidData should treat drawdowns under FXSL agreements with the PBOC as collateralized loans because, in a FXSL arrangement, the currency of the borrower is held as collateral while the lender receives interest on the amount drawn down by the borrower until repayment is made. The Collateralized field should be set to "Yes" for all such records.
- **Collateral Provider:** The receiving agency should be coded as the Collateral\_Provider.
- **Collateral:** The source of collateral should be recorded as the receiving agency's deposit in a bank account accessible to PBOC (e.g., "SBE deposit of Pakistani rupees equivalent to RMB 5 billion in a bank account accessible to the PBOC").
- **Intent:** The intent for all drawdowns under FXSL agreements should be coded as "Mixed."
- **Sector:** The sector for all drawdowns under FXSL agreements should be coded as "Banking and Financial Services."
- **Title:** AidData coders are instructed to make it clear in the title field if the record captures a drawdown under an FXSL agreement. The title should adhere to a format in line with the following example: "SBP makes RMB 5 billion drawdown under currency swap agreement with PBOC in Fiscal Year 2013."

AidData has several coding guidelines that are specific to PBOC funds administered by intergovernmental organizations:

- **Funding Agency:** The funding agency for the record should be the People's Bank of China.
- **Co-Financing Agencies:** If the fund supports co-financed projects/activities, then the intergovernmental organization which administers the fund and/or any other organizations providing financing in support of the project/activity should be included in the Cofinancing\_Agencies field.
- **Implementing Agencies:** The fund (e.g. CHC) should be included in the Implementing\_Agencies field with the Organization Type set to "Intergovernmental Organization," along with any other organizations involved in the implementation of the project/activity.
- **Flow\_Type:** The Flow\_Type field should be set to "Loan" because PBOC exclusively supports lending activities.
- **Umbrella Record:** Coders should create an umbrella record which captures the total allocation made by PBOC to the fund. The specific projects/activities financed through the fund should be captured as separate non-umbrella records.
- **Parent ID:** Coders should create a common Parent ID to link records under the fund, and all projects/activities supported by the fund should be assigned to this Parent ID.<sup>64</sup>

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<sup>64</sup> For example, all projects/activities financed from the China Co-Financing Fund for Latin America and the Caribbean are assigned to Parent ID 8.

- **Title and Description:** If a project/activity is financed through one of these funds, AidData coders are instructed to refer to the name of the fund (or an abbreviated version thereof) in brackets at the start of the title (e.g. “[China Co-Financing Fund]”).

### 2.5.1.7 - Funding Agency Parent

China relies on a diverse set of state-owned institutions to administer its overseas grant-giving and lending portfolio. In the 4.0 version of the TUFF methodology, AidData has introduced a new variable that identifies the parent owners of all the funding agencies in the dataset, enabling users to analyze flows from a common parent organization. This field is useful for the aggregation of flows from state-owned companies and state-owned banks with multiple subsidiaries. For example, AidData has identified 20 subsidiaries of Bank of China, in addition to the main Bank of China branch, that provided overseas lending during the 2000-2023 period.

AidData has coding guidelines for the different funding agency types:

- **Government agencies:** To facilitate aggregation of flows from Chinese government agencies, AidData has assigned government agencies to one of the five following categories: (1) PRC Central Government, (2) PRC Subnational Government, (3) PRC Public University, (4) Unspecified PRC Public Sector Institution, or (5) PRC Central Bank.
- **State-owned companies and state-owned banks:** The parent owner identified in this field represents the final state-owned company or state-owned bank majority shareholder, rather than the ultimate government agency shareholder(s). In some cases, this means that the funding agency and funding agency parent will appear as the same organization (e.g., Bank of China is recorded as its own funding agency parent).
  - If there is no single majority shareholder of the funding agency, then the parent owner is identified as the final owner before there is dispersed ownership. In some cases, this means that the funding agency and funding agency parent will appear as the same organization (e.g., Sicomines SARL is majority owned by a consortium of Chinese state-owned companies with no single majority shareholder, and as such it has been recorded as its own funding agency parent).

Parent owners are identified for all funding agencies associated with a given project/activity record. In cases where there are multiple funding agencies, the parent owners are pipe-delimited in the Funding\_Agency\_Parent field.

### 2.5.1.8 - Overseas Branch/Subsidiary

China increasingly relies on its overseas affiliates to finance projects/activities. Overseas affiliates of Chinese creditors include subsidiaries (distinct legal entities) and branches. To better track the geographic origin of the Chinese state-owned institutions that finance overseas projects/activities, the 4.0 version of the TUFF methodology introduces a marker for all loans provided by institutions based outside mainland China, along with a field that provides the jurisdiction of the funding agency (Lending\_from\_Overseas\_Branch\_or\_Subsubsidiary and Overseas\_Jurisdiction). Due to the data structure—wherein subsidiaries are captured as unique funding agencies (in the Funding\_Agencies field) but branches are not—users of the CLG-Global 1.0 dataset (and its constituent datasets) should be aware that it cannot currently distinguish between multiple overseas branches within the same jurisdiction. For example, the New York Branch and the Chicago Branch of Bank of China would both appear in the dataset

as “Bank of China” in the Funding\_Agencies field and “United States” in the Overseas\_Jurisdiction field.

To lay the foundation for these new variables in the CLG-Global 1.0 dataset, AidData staff and research assistants took various steps to systematically review existing project/activity records to identify cases in which the financing was provided by an overseas branch or subsidiary, and to assign the correct country value in the Overseas\_Jurisdiction field. AidData completed a string search in the Narrative\_Description field with over 1,000 keywords to check for numerous possible variations of the names of overseas branches and subsidiaries of major Chinese state-owned banks, as well as any mention of the word “branch.”<sup>65</sup> After the string search was completed, AidData researchers manually reviewed all records to remove false positive matches, and to assign the correct country value in the Overseas\_Jurisdiction field. Along with the review of records that returned positive keyword matches, AidData researchers completed a review of all the state-owned institutions that financed loan records in the dataset (as indicated in the Funding\_Agencies field) to identify any cases where the institution was an overseas subsidiary (i.e., an affiliate of a Chinese state-owned institution that was incorporated outside mainland China).

With the adoption of the TUFF 4.0 methodology, AidData now has several coding guidelines that are specific to overseas branches/subsidiaries:

- Each subsidiary is captured as a distinct funding agency, while branches are not captured as distinct funding agencies.
  - For branches, coders should code the parent company as the funding agency, set the Overseas\_Branch\_or\_Subsiary field to “Yes” in cases where the branch is located outside mainland China, and select the appropriate country value for the Overseas\_Jurisdiction of the branch.
  - For subsidiaries, coders should code the subsidiary as the funding agency, set the Overseas\_Branch\_or\_Subsiary field to “Yes,” and select the appropriate country value for the Overseas\_Jurisdiction of the subsidiary.

Example of a funding agency versus a branch:

- Bank of China has both a London Branch and a United Kingdom subsidiary that share the same jurisdiction (the United Kingdom) in the dataset.
  - Bank of China (UK) Limited (BOCUK) is a wholly-owned subsidiary of Bank of China and legally incorporated in the United Kingdom.
    - Project/activity records capturing a financial flow from Bank of China (UK) Limited should have the Funding\_Agencies field set to “Bank of China (UK) Limited,” the Overseas\_Branch\_or\_Subsiary field set to “Yes,” and the Overseas\_Jurisdiction field set to “United Kingdom.” Coders should note in the title and the narrative description the name of the Bank of China subsidiary [e.g., Bank of China (UK)] that provided the financing.

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<sup>65</sup> The major Chinese state-owned banks that finance projects/activities overseas include Bank of China, the Industrial and Commercial Bank of China, China Construction Bank, Bank of Communications, Agricultural Bank of China, China Development Bank, and the Export-Import Bank of China. Lists of their overseas branches and subsidiaries were identified from the main bank websites. Branch/subsidiary name variations that AidData identified for its search string to review existing project/activity records, include, for example, the following for the Hong Kong Branch of China Development Bank: China Development Bank Hong Kong, China Development Bank (Hong Kong), CDB Hong Kong, CDB (Hong Kong), (CDB) Hong Kong, (CDB) (Hong Kong).

- Bank of China (London Branch) is an overseas branch of Bank of China, and it is not a distinct legal entity.
  - Project/activity records capturing a financial flow from Bank of China (London Branch) should have the Funding\_Agencies field set to "Bank of China," the Overseas\_Branch\_or\_Subsiary field set to "Yes," and the Overseas\_Jurisdiction field set to "United Kingdom." Coders should note in the title and the narrative description the name of the Bank of China branch [e.g., Bank of China (London Branch)] that provided the financing.

## 2.5.2 - Tracking the Destinations of Official Sector Financing from China

### *Direct\_Receiving\_Agencies and Indirect\_Receiving\_Agencies*

Our ultimate objective is to capture the provision of financial (excluding equity investments) and in-kind transfers of goods and services from official sector institutions in China to any entity overseas. Therefore, consistent with OECD-DAC guidelines, we seek to capture Chinese official sector financial flows and in-kind flows to public sector and private sector agencies in recipient countries, including but not limited to government agencies, state-owned banks, state-owned companies, private companies, and special purpose vehicles (including joint ventures). To capture the specific entities responsible for receiving and managing these incoming financial and in-kind transfers, the CLG-Global 1.0 Dataset (and its constituent datasets) includes a Direct\_Receiving\_Agencies field and an Indirect\_Receiving\_Agencies field. The Direct\_Receiving\_Agencies field provides the name of the agency designated to receive and manage the financial or in-kind transfer. For projects/activities that are financed with loans, the receiving agency is the entity responsible for debt repayment. If a receiving agency (borrower) on-lends the proceeds of a loan to an additional entity or entities, then the borrower is captured in the Direct\_Receiving\_Agencies field and the additional entity or entities which receive loans from the borrower is captured in the Indirect\_Receiving\_Agencies field. If more than one entity is responsible for receiving and managing incoming grant funds or an in-kind transfer, all of these entities are identified in the Direct\_Receiving\_Agencies field (as pipe-delimited entries).

Each receiving agency is also assigned to one of nine organization type categories in the Direct\_Receiving\_Agencies\_Type and Indirect\_Receiving\_Agencies\_Type fields: Government Agency, State-Owned Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type. The organization type is preceded by one of three descriptors regarding the country of origin: Chinese, Recipient, or Other (e.g., Recipient Government Agency), which is determined by the ownership of the direct receiving agency (see Section 3.3 for additional information).

### *Country\_of\_Activity*

AidData codes the Country\_of\_Activity field (formerly known as Recipient in previous datasets) based on where the project/activity took place (or is scheduled to take place), whenever possible, and not where the borrowing institution is legally incorporated/domiciled. For example, a loan to a Cyprus-incorporated company to construct a highway in Egypt would have its Country\_of\_Activity field set to Egypt. The OECD income bracket of the

Country\_of\_Activity field (at the time the project/activity was committed) is used to determine whether a loan or grant is included in the CLG-HIC 1.0 or CLG-LMIC 1.0 dataset.<sup>66</sup>

For loans supporting mergers and acquisitions, AidData generally codes the Country\_of\_Activity field to reflect the country in which the acquired asset(s) resides, which is not always the same as the seller of said assets. The seller of the assets has no bearing on the Country\_of\_Activity field. For example, a loan to acquire a stake in a mine in Australia from a Canadian company would set the Country\_of\_Activity field to Australia. In many cases, mergers and acquisitions involve assets across multiple jurisdictions. In these cases, AidData codes the Country\_of\_Activity based on whichever country hosts the headquarters of the acquired asset or, if not appropriate (i.e., when the acquired asset is a portfolio of physical locations), AidData will generally code the Country\_of\_Activity field based on whichever country hosts the majority of the assets. In cases where no one country can accurately reflect the Country\_of\_Activity, AidData codes the field as the corresponding region. In cases where the acquired company is a holding company for an asset based elsewhere (i.e., a British Virgin Islands-incorporated company whose sole purpose is to hold a stake in a Canada-based mining company), AidData codes the Country\_of\_Activity field based on where that asset belongs.

For loans that are issued for working capital or refinancing purposes, when the proceeds are tied to a geographic location or set of geographic locations, the corresponding jurisdiction is identified as the Country\_of\_Activity. If the proceeds are tied to a portfolio of geographic locations that cuts across multiple jurisdictions, AidData will generally identify the Country\_of\_Activity as whichever jurisdiction hosts the majority of the assets. In the rare cases where no one jurisdiction can accurately reflect the Country\_of\_Activity, AidData identifies the regional grouping best characterizes the geographic locations of the assets. When loans for working capital or refinancing are not tied to a geographic location but are being used by a specific borrower, AidData generally identifies the Country\_of\_Activity as the jurisdiction where the company is headquartered. When the borrower is incorporated/domiciled in one jurisdiction, but headquartered in another jurisdiction, AidData codes the latter as the Country\_of\_Activity. Some companies have co-headquarters in multiple jurisdictions, requiring further research to determine which most accurately captures the Country\_of\_Activity. In such cases, AidData weighs principal executive offices, where leadership is actually based, over the strict legal headquarters (which often exist as part of the legal incorporation).

If the borrower(s) is an overseas subsidiary of another company, AidData identifies the Country\_of\_Activity as the jurisdiction where the overseas subsidiary is actually based and conducts business (unless there is evidence that the proceeds are being used for the entire company, in which case the parent's country of headquarters is identified as the Country\_of\_Activity). For example, if the borrower was solely a Canadian subsidiary of an American company, the Country\_of\_Activity would be Canada. In cases where multiple borrowers that belong to the same corporate group are all based in different jurisdictions and the proceeds are for working capital and refinancing, AidData identifies the Country\_of\_Activity as the country of headquarters for the overall corporate group. For example, when the borrowers are Toyota Corporation's foreign subsidiaries, all based in different countries, AidData codes the Country\_of\_Activity as Japan.

In cases where the project/activity is not taking place in a particular jurisdiction (e.g., when a shipping vessel or an airplane is being purchased to facilitate trade/travel between multiple

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<sup>66</sup> See Section 1.1 Scope Parameters for more information.

countries), AidData codes the Country\_of\_Activity by identifying the owner of the borrowing institution (receiving agency) and its country of origin. If the borrowing institution is wholly-owned or majority-owned by an entity in Country A, AidData identifies Country A as the recipient country. If the borrowing institution is legally incorporated in Country B and is a publicly traded company (not majority-owned by a company or resident from one country), AidData identifies Country B as the recipient. AidData Record ID#62763 is one example of this type of record.

AidData's Country\_of\_Activity guidance is meant to accurately capture the overseas jurisdiction of the project/activity and ensure that no projects or activities outside the scope of the dataset are included. It is also designed to ensure that all "round-tripping" projects and activities are excluded (see Box 2 for more details).

### Box 2: Round-Tripping

"Round-tripping" is a popular tactic used by Chinese companies involving 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 Fertő forthcoming). 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.

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. Hong Kong and Macau are also recipients of round-tripping. To illustrate how cross-border loans from Chinese state-owned banks facilitate roundtrip investments, consider this example: a Chinese state-owned bank (Shanghai Pudong Development Bank) provides 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 a consortium of Chinese and non-Chinese companies to partly finance the privatization of 58.com Inc. (a Cayman Islands-incorporated online classified ads marketplace operator headquartered in China). The purpose of this transaction was to facilitate investment inside mainland China.

Because Country\_of\_Activity is the first criteria for inclusion in any records in either dataset, the 1.0 version of AidData's CLG-Global Dataset does not track round-tripping,

because it definitionally excludes the records with a Country\_of\_Activity set to the “Greater China” jurisdictions of China, Macau, or Hong Kong. It does capture loans to offshore vehicles of Greater China companies, but only when they ultimately support jurisdictions outside of “Greater China.” CLG-Global 1.0 also excludes all financing where the Country\_of\_Activity is the Republic of China (Taiwan).

### *Country of Incorporation*

The jurisdiction where the Direct Receiving Agency (DRA) of a loan is legally incorporated is captured in the DRA\_Country\_of\_Inc field.<sup>67</sup> This distinction is important because loans often flow through the country of incorporation before reaching the final destination in the host country where a project/activity takes place. In the previous example of a loan to a Cyprus-incorporated company to build a highway in Egypt, the DRA\_Country\_of\_Inc field would be set to Cyprus (the pass-through jurisdiction), while the Country\_of\_Activity field would be set to Egypt (the final destination). To provide users with more analytic options, AidData also flags whether each destination (Country\_of\_Activity and DRA\_Country\_of\_Inc) corresponds to an offshore financial center (OFC).

## 2.5.3 - China’s Official Sector Financing Mechanisms

### 2.5.3.1 - AidData’s Flow Type Categorization

In an effort to capture all financial or in-kind commitments from Chinese government or state-owned institutions, we record a wide range of projects and activities that benefit from transfers (“flows”) of goods, services, or funding from official sector institutions in China. These flows include loans, grants, technical assistance, scholarships or training provided in China to citizens of other countries, debt forgiveness, and debt rescheduling. In the 4.0 dataset, these types of activities and flows are captured as a record’s Flow\_Type. Below is an overview of each Flow\_Type category:

- **Grant:** The donation of money or an in-kind donation of goods from a government or state-owned institution in China. Chinese grant assistance commonly includes donations of supplies or equipment, the provision of humanitarian aid or disaster relief, the establishment of a Confucius Institute within the host country, or financing for the construction of a government building, school, hospital, or sports stadium.
- **Technical Assistance:** The formal provision of skills training, instruction, consulting services, and information sharing by state-owned entities and experts from China.
- **Scholarships:** Funding from a government or state-owned institution in China that allows a citizen from the host country to study at a Chinese university or other educational institution.

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<sup>67</sup> The DRA\_Country\_of\_Inc field reflects the jurisdiction at the time of the loan commitment, as recorded in the Commitment\_Date field, ensuring temporal accuracy even when organizations have changed their country of incorporation over time.

- **Training in Donor Country:** Training programs and activities that are sponsored by a government or state-owned institution in China held for host country citizens in China. Training provided by Chinese entities outside of China is classified as technical assistance.
- **Loan:** A financial transfer from a government or state-owned institution in China to an overseas entity under certain terms and conditions of repayment. See Section 2.5.3.3 for a detailed description of the types of loans/credit instruments included in the 1.0 version of the CLG-Global dataset.
- **Debt Forgiveness:** The total or partial cancellation of debt owed by a borrowing institution in the host country to a Chinese government or state-owned entity.
- **Debt Rescheduling:** Changes to the terms of a loan issued by a government or state-owned institution in China, such as interest rate, grace period, or maturity date. This is usually meant to ease the repayment burden of a borrower institution in the host country.

To facilitate the aggregation of flow types based on certain criteria, there is a Flow\_Type\_Simplified field in the 4.0 version of the dataset. The table below displays a side-by-side comparison of the two flow type fields.

Flow_Type	Flow_Type_Simplified
Free-standing Technical Assistance	Grant
Grant	
Scholarships/Training	
Debt Forgiveness	
Loan	Loan
Debt Rescheduling	Debt Rescheduling
Vague	Vague

### 2.5.3.2 - Financing Agreements

Official sector institutions in China have developed several different types of “standard” financing agreements. These agreement types are described in greater detail below, with coding guidance for each type of agreement.



Framework Agreement (In Chinese: 框架协议): This is a non-binding agreement that memorializes the intent of the lender and the prospective borrowing institution. These agreements typically precede the signing of an actual loan agreement and sometimes identify the expected face value of the loan and its borrowing terms. Framework agreements often correspond to a single project/activity that will be financed with a single loan, but they can also serve as umbrella agreements through which multiple projects will be financed. Under a framework agreement, the borrowing institution (receiving agency) typically must request and secure approval for a specific loan from the official sector financing institution in China before the transfer of funds can occur.<sup>68</sup>

AidData coders are instructed to follow several coding guidelines that are specific to framework agreements (in 3 different scenarios):

- *Scenario 1: Only a framework agreement is signed.* If there is no evidence of a subsequent financing agreement being signed or a subsidiary project being approved under the framework agreement, the framework agreement should be coded as an umbrella project. The financing amount that is referenced in the framework agreement should be coded as the transaction amount. If the financing amount is unknown, the transaction amount should be set to missing. If only a framework agreement was signed, the status field should be coded as Pipeline: Pledge. If a framework agreement was signed for a single project, it should not be coded as an umbrella project.
- *Scenario 2: A single financing agreement for the full financial amount referenced in the framework agreement is signed.* The status field should be coded as Pipeline: Commitment. The commitment year field should be set to the year in which the financing agreement was signed and not the year in which the framework agreement was signed.
- *Scenario 3: Multiple projects are financed under the framework agreement.* The framework agreement should be retained as an umbrella record, and separate (linked) records should be created for any subsequent financing agreements and subsidiary projects.

Economic and Technical Cooperation Agreements (In Chinese: 经济技术合作协定): See Section 2.5.1.2 for coding guidance.<sup>69</sup>

Letters of Intent: Letters of Intent (and “term sheets”) are usually pre-commitment documents that are issued unilaterally by official sector institutions in China to indicate interest in financing a project/activity or an intention to finance a project/activity.<sup>70</sup> Sometimes letters of intent from

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<sup>68</sup> By way of illustration, a concessional loan framework agreement can be accessed via [https://www.dropbox.com/s/oc69pos782xj3sx/China\\_Framework%20agreement%20on%20concessional%20loan%20for%20Malekula%20and%20Tanna%20roads\\_09112018.pdf?dl=0](https://www.dropbox.com/s/oc69pos782xj3sx/China_Framework%20agreement%20on%20concessional%20loan%20for%20Malekula%20and%20Tanna%20roads_09112018.pdf?dl=0)

<sup>69</sup> An illustrative ETCA can be found here:

<https://www.dropbox.com/s/pfuan0lxsmxosg/Law%20for%2010%20million%20yuan%20loan%20in%202009.pdf?dl=0>

<sup>70</sup> An illustrative pre-commitment document is accessible via

[https://www.dropbox.com/s/r608h03z7pjy4hy/2015.06.08%20ICBC%20\\_%20Amu%20Power%20Term%20Sheet.pdf?dl=0](https://www.dropbox.com/s/r608h03z7pjy4hy/2015.06.08%20ICBC%20_%20Amu%20Power%20Term%20Sheet.pdf?dl=0)

official sector institutions in China are characterized as a memorandum of understanding (MOU).<sup>71</sup>

AidData coders are instructed to follow one guideline that is specific to letters of intent (and term sheets): The status field should be set to Pipeline: Pledge.

**Letters of Exchange** (In Chinese: 项目换文 or 换文): Letters of Exchange constitute an agreement between the Chinese government and a recipient government institution regarding one or more specific projects. These documents provide explanations, detailed elaborations, or amendments to projects financed with Chinese government grants or interest-free loans (usually from MOFCOM) that have been agreed upon by both governments. Letters of Exchange are sometimes referred to as an Exchange of Notes. Letters of Exchange can supplement an existing agreement, or serve as a stand-alone agreement.<sup>72</sup>

AidData coders are instructed to follow several guidelines that are specific to Letters of Exchange:

- Letters of exchange provide formal documentation that codifies and elaborates the Chinese government's official commitment to support a specific project. While the projects described in Letters of Exchange are sometimes funded with the grant or loan proceeds from an ETCA, they can also be supported through separate, stand-alone funding (usually from MOFCOM).
- Letters of Exchange provide evidence that an official commitment has taken place. Therefore, the status field should be set to Pipeline: Commitment (unless there is evidence that the project in question has progressed beyond the official commitment stage).
- If an ETCA was signed prior to the signing of Letters of Exchange, the project described in the Letters of Exchange should be linked to the ETCA record via Parent ID.

### 2.5.3.3 - Credit Instrument Type

The dataset includes variables which allow users to isolate the following 29 specific types of credit instruments: (1) bilateral loans (Number\_of\_Lenders field), (2) syndicated/club loans (Number\_of\_Lenders field), (3) export buyer's credits (Export\_Buyers\_Credit field), (4) supplier's credits/export seller's credits (Suppliers\_Credit\_or\_Export\_Sellers\_Credit field), (5) interest-free loans (Interest\_Free\_Loan field), (6) loans for debt refinancing purposes (Refinancing field) including a marker for whether the refinanced debt was originally provided by a Chinese official sector lender (Refinances\_Chinese\_Official\_Debt field), (7) investment project loans

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<sup>71</sup> An illustrative MOU from China Eximbank can be accessed here:

<https://www.dropbox.com/s/l9hnqq9bzwxb61w/2015%20China%20Eximbank%20Loan%20for%20Central%20Termoelectica%20Manuel%20Belgrano%20Project%20in%20Argentina.pdf?dl=0>

<sup>72</sup> For more information about different types of Letters of Exchange, see Subsection 3 (国际发展援助换文) of

[https://books.google.com/books?id=vFP1e9HQXNcC&pg=PA230&lpg=PA230&dq=%E6%94%BF%E5%BA%9C%E9%A1%B9%E7%9B%AE%E6%8D%A2%E6%96%87&source=bl&ots=TR03fKDb\\_y&sig=ACfU3U2dSs4DLDFLynnQB0MQDGG1LyGoJw&hl=en&sa=X&ved=2ahUKEwjX-aD3vqToAhUDmHIEHfAJA-AQ6AEwAHoECAkQAQ#v=onepage&q=%E6%94%BF%E5%BA%9C%E9%A1%B9%E7%9B%AE%E6%8D%A2%E6%96%87&f=false](https://books.google.com/books?id=vFP1e9HQXNcC&pg=PA230&lpg=PA230&dq=%E6%94%BF%E5%BA%9C%E9%A1%B9%E7%9B%AE%E6%8D%A2%E6%96%87&source=bl&ots=TR03fKDb_y&sig=ACfU3U2dSs4DLDFLynnQB0MQDGG1LyGoJw&hl=en&sa=X&ved=2ahUKEwjX-aD3vqToAhUDmHIEHfAJA-AQ6AEwAHoECAkQAQ#v=onepage&q=%E6%94%BF%E5%BA%9C%E9%A1%B9%E7%9B%AE%E6%8D%A2%E6%96%87&f=false)

(Investment\_Project\_Loan field), (8) loans that support a merger or acquisition (M\_A field), (9) working capital loans (Working\_Capital field), (10) Engineering, Procurement, and Construction Plus Finance arrangements (EPCF field), (11) lease agreements (Lease field), (12) foreign currency swap borrowings (FXSL field), (13) loans for balance of payments (BOP) support (BOP field), (14) cross-currency interest-rate swaps (CC\_IRS field), (15) revolving credit facilities (RCF field), (16) government concessional loans (GCL field), (17) preferential buyer's credits (PBC field), (18) pre-export financing or commodity prepayment financing arrangements (PxF\_or\_Commodity\_Prepayment field) (19) inter-bank loans (Interbank\_Loan field), (20) overseas project contracting loans (Overseas\_Project\_Contracting\_Loan field), (21) deferred payment agreements (DPA field), (22) non-recourse or limited-recourse project finance transactions (Project\_Finance field), (23) short-term loans (Short\_Term field), (24) emergency rescue loans (Rescue field), (25) commodity-backed loans (Commodity\_backed field), (26) repurchase transactions (Repurchase\_Transaction field), (27) exploration/development "carry" loans (Exploration\_Development\_Carry field), (28) shareholder loans (Shareholder\_Loan field), and (29) loans that support cross-border investment activities (FDI\_Loan).

Detailed definitions and coding instructions for the credit instrument variables are provided below.

### *Number of Lenders*

- **Bilateral loan**
  - A loan issued by one lender to a borrower. A bilateral loan can coexist with co-financiers, but these co-financing institutions must provide financing via legally separate mechanisms, i.e. an entirely separate loan agreement.
  - The full loan amount can be offered in several tranches that need not have identical terms (e.g., Tranche A is a term loan with a 2% interest rate and a 10 year maturity, Tranche B is a working capital loan with a 4% interest rate and (23) a 5 year maturity; Tranche C is a bridge loan with a 7% interest rate and a 1 year maturity).
  - Nearly all of the official sector Chinese lenders—Chinese state-owned policy banks and commercial banks, as well as other lenders including China's Ministry of Commerce and other state-owned enterprises—participate in bilateral loans.
  - If there is only one funding agency, no co-financing agencies, and the Flow\_Type = "Loan," then the Number\_of\_Lenders field auto-populates as "Bilateral Loan," because the record is likely a bilateral loan. However, AidData coders can manually change it to "Syndicated/Club Loan" (such as in cases where it is known a Chinese bank participated in a syndicated loan, but the specific lenders are unknown).
- **Syndicated Loan or Club Loan**
  - A loan issued by a consortium ('syndicate' or 'club') of lenders to a borrower, known in Chinese as 银团贷款.
  - Syndicated loans are offered by a group of lenders and are an attractive option when one lender does not have the capacity to finance a large project/activity

on its own and/or wishes to share credit risk. The full loan amount can be offered in several tranches that need not have identical terms (e.g., Tranche A is a term loan with a 2% interest rate and a 10 year maturity, Tranche B is a working capital loan with a 4% interest rate and a 5 year maturity; Tranche C is a bridge loan with a 7% interest rate and a 1 year maturity); nor does each member of the syndicate need to participate in each tranche. Lenders can also sell their shares of a syndicated loan in the secondary market. China's state-owned policy banks and commercial banks are the main official sector financing institutions in China that participate in syndicated loans.

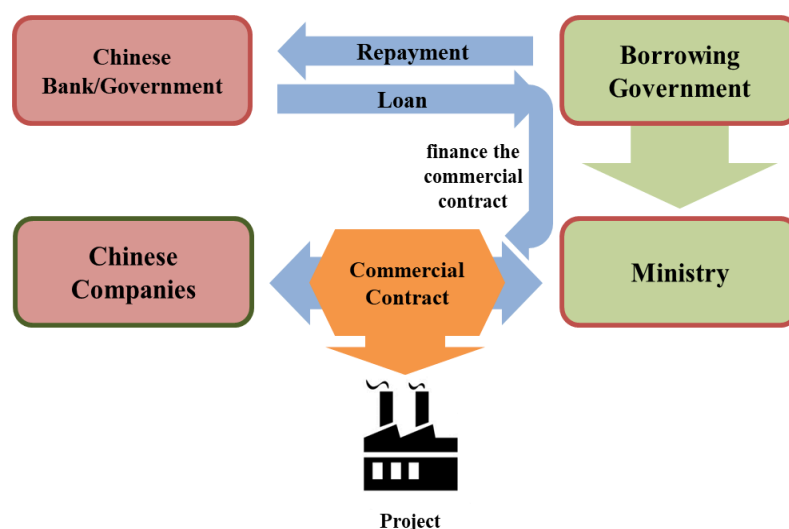
- For further information on syndicated loan coding, please see section 2.5.3.4.

### *Credit Instrument Definitions*

- **Export Buyer's Credit**

- A loan that is issued by Chinese state-owned policy banks and Chinese state-owned commercial banks to overseas borrowing institutions to facilitate their acquisition of goods and services from a Chinese supplier (i.e. export promotion).
- These loans are typically denominated in USD or EUR; they are usually issued with a floating market interest rate (such as LIBOR or EURIBOR) plus a margin; they often have shorter maturity lengths and grace periods than preferential buyer's credits (PBCs); and the borrowers need not be government institutions.
- The lender usually authorizes the borrower to use the proceeds from the export buyer's credit to finance 85% of the total cost of a commercial contract with a Chinese supplier.
- In a typical export buyer's credit (loan) agreement, there are four parties (see Figure 2.2):
  1. Chinese State-Owned Bank (Lender)
  2. Chinese Company (Supplier)
  3. Foreign Government (Borrower)
  4. Foreign Government Ministry or SOE (Importer)

Figure 2.2: The Structure of a Typical Export Buyer's Credit from China



- Between these four parties, two agreements are concluded: (1) a commercial contract between the Chinese supplier and the foreign importer, and (2) a loan agreement between the Chinese state-owned bank and foreign borrower to partially finance the commercial contract. Typically, the borrower can use the proceeds of the loan to finance up to 85% of the total cost of the commercial contract between the Chinese supplier (exporter) and the foreign importer. However, this percentage can be higher or lower than 85%, depending on the policies and practices of the official sector financing institution in China. The borrower is expected to provide counterpart funding to cover the percentage of the total cost of the commercial contract that is not covered by the loan. Counterpart funding is sometimes used to provide an advance payment to the Chinese supplier so that project implementation can commence before the loan agreement is finalized.
- The signing of the commercial contract usually predates the loan agreement, but discussions/negotiations with the Chinese state-owned bank are often underway at the time that the commercial contract is signed (or being negotiated). Consequently, it is not unusual for the foreign importer or Chinese supplier to publicly reference a loan agreement *before it is finalized*. AidData coders are therefore instructed not to automatically treat the signing of a commercial contract (that a foreign importer or Chinese supplier says will be financed by a Chinese state-owned bank) as evidence that an official financial commitment has taken place (i.e., a loan agreement has been signed).
- China Eximbank provides two types of export buyer's credit facilities: preferential buyer's credits (PBC) and buyer's credit loans (BCLs). Sinosure provides credit insurance for both credit instruments.<sup>73</sup> China Development Bank and multiple Chinese state-owned banks also provide export buyer's credits.

<sup>73</sup> The full name of Sinosure (中国出口信用保险公司) is China Export & Credit Insurance Corporation.

- Export buyer's credits are frequently referred to as "buyer's credits," buyer's credit loans," and BCLs. In Chinese, export buyer's credits are referred to as 优惠出口买方信贷.
- *Determining if a loan record is an export buyer's credit.* Export buyer's credits are usually identified as such in source materials, but this is not always the case.<sup>74</sup> If a loan is not explicitly identified as an export buyer's credit, AidData coders are instructed to mark a loan as an export buyer's credit only if it meets four criteria:
  - i. The loan is denominated in USD or EUR.
  - ii. The borrower is a foreign company or foreign government.
  - iii. The face value of the loan is explicitly identified in an official source, and it is not estimated or assumed.
  - iv. The reported face value of the loan is worth less than 100% of the commercial contract cost.
- AidData coders are also instructed that the following conditions provide evidence that a loan may be an export buyer's credit, but none of these conditions should be considered to be sufficient to assume so:
  - i. The loan is covered by buyer's credit insurance.
  - ii. The loan is insured by Sinasure, and the insurance appears to be credit insurance rather than investment insurance.<sup>75</sup>
  - iii. The proceeds of the loan are to be used by the borrower to procure goods, equipment, or services from a Chinese company.
- AidData coders are instructed to follow several coding guidelines when working with export buyer's credits:
  - i. **Credit Instrument Categorization:** The Export\_Buyers\_Credit field should be coded as "Yes" for any loan that is an export buyer's credit.
  - ii. **Intent:** Export buyer's credits can either have commercial intent or mixed intent.
    - Commercial intent should be identified when there is no evidence that the project/activity is seeking to improve economic development or welfare in the host country.

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<sup>74</sup> They are usually identified in official source materials as "buyer's credits" or "buyer's credit loans" rather than "export buyer's credits."

<sup>75</sup> If there is evidence of Chinese investment, then the provision of investment insurance from Sinasure cannot be ruled out. See <https://www.dropbox.com/s/uziiuht4wtuyzsg/Sinasure%20pitch%20deck.pdf?dl=0> and <https://www.dropbox.com/s/g4wvemp0txonztm/CDB%20and%20Sinasure%20Pitch%20Deck.pdf?dl=0>

- Mixed intent should be identified when there is at least some evidence that the project/activity is seeking to improve economic development or welfare in the host country.
  - Export buyer's credits should never be coded as having only development intent as they are explicitly designed to promote the export of Chinese goods and services.
- Title and Description: If an export buyer's credit (loan) agreement was signed, it should be explicitly identified as such in the record title and description and not referred to as simply a "loan agreement."
- Supplier's Credit/Export Seller's Credit
  - An export seller's credit (In Chinese: 出口卖方信贷) is a loan issued by a Chinese state-owned bank (usually China Eximbank) to a Chinese company for the purpose of increasing its exports. The proceeds of export seller's credits are to be used by borrowers (Chinese exporters) to finance their foreign sales. Chinese exporters usually secure export seller's credits when they need liquidity to offer a supplier's credit to an overseas buyer. Export seller's credits can be denominated in both local and foreign currency.
  - If a Chinese company extends a loan to a borrower and the borrower is expected to use the loan proceeds to purchase goods and services from that Chinese company, then the loan is a supplier's credit. Supplier's credits are also known as seller's credits or vendor financing.
  - Supplier's credits from Chinese state-owned enterprises (e.g. ZTE, CATIC, NORINCO, AVIC International, and Poly Technologies) are granted to both public and private sector customers. Their terms vary widely, but they usually have shorter maturities and grace periods, and interest rates are typically tethered to LIBOR or EURIBOR plus a margin.<sup>76</sup>
  - There are typically 2 scenarios involving supplier's credits (issued by Chinese state-owned enterprises) and export seller's credits (issued by Chinese state-owned banks):
    - i. *Scenario 1.* A Chinese state-owned enterprise (exporter) provides supplier's credit to a buyer (borrower) in the host country for the purchase of its goods and/or services. This scenario involves 1 agreement (i.e., the supplier's credit agreement).
    - ii. *Scenario 2.* A Chinese state-owned bank provides an export seller's credit to a Chinese state-owned enterprise (exporter) to finance its sales to a buyer in the host country. The Chinese state-owned enterprise, in turn, uses the proceeds of the export seller's credit to issue a supplier's credit to the buyer (borrower) in the host country. This scenario involves 2 agreements (i.e., the supplier's credit agreement between the Chinese

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<sup>76</sup> An illustrative supplier's credit agreement can be accessed at [https://www.documentcloud.org/documents/20488282-gha\\_2019\\_485](https://www.documentcloud.org/documents/20488282-gha_2019_485)

state-owned enterprise and the buyer/borrower in the host country and the export seller's credit agreement between the Chinese state-owned enterprise and the Chinese state-owned bank).

- AidData coders are instructed to follow several coding guidelines that are specific to supplier's credits and export seller's credits:
  - i. **Credit Instrument Categorization:** The Suppliers\_Credit\_or\_Export\_Sellers\_Credit field should be coded as "Yes" for any loan that is a supplier's credit or export seller's credit.
  - ii. When a Chinese supplier receives an export seller's credit from a Chinese state-owned policy bank (or any other Chinese state-owned bank) and uses the proceeds of the export seller's credit to on-lend to its foreign customers, it is ultimately funding from the Chinese government that is being transferred to the host country. The funding agency in this case should only be coded as the bank that provides the export seller's credit. The Chinese supplier that receives the export seller's credit should be coded as the direct receiving agency and the foreign customer in the host country that in turn receives the supplier's credit from the Chinese supplier should be coded as the indirect receiving agency.
  - iii. In the event that a supplier's credit is provided by a Chinese state-owned enterprise (supplier) and there is no evidence of the provision of an export seller's credit from a Chinese state-owned bank to that Chinese supplier, then the Chinese state-owned enterprise should be coded as the funding agency and the foreign customer (borrower) that received the supplier's credit should be coded as the direct receiving agency.
  - iv. **Intent:** Supplier's credits and export seller's credits can either have commercial intent or mixed intent.
    - Commercial intent should be coded when there is no evidence that the project/activity is seeking to improve economic development or welfare in the host country.
    - Mixed intent should be coded when there is evidence that the project/activity is seeking to improve economic development or welfare in the host country.
    - Supplier's credits and export seller's credits should never be coded as having only development intent since they explicitly promote the export of Chinese goods and services.
- **Title and Description:** When a supplier's credit/export seller's credit agreement is issued, it should be explicitly identified as such in the record title and description and not referred to as simply a "loan agreement."
- **Cross-Currency Interest Rate Swap (CC IRS)**



- A cross-currency interest rate swap (CC IRS) is an off-balance sheet way of hedging against interest rate risk and foreign exchange risk. In a typical cross-currency interest rate swap agreement, both parties to the transaction are simultaneously lending to each other. That is to say, each party is both a lender and a borrower, because they are lending to each other. The parties to the transaction can lend to each other at different interest rates.
- Cross-currency interest rate swaps are sometimes referred to simply as “hedging arrangements,” “interest rate swaps,” or “cross-currency swaps.”
- AidData coders are instructed to follow several coding guidelines that are specific to cross-currency interest rate swaps:
  - i. **Flow\_Type:** The Flow\_Type of cross-currency interest rate swaps is “Loan”.
    - For purposes of capturing *outbound* official financial flows from China, AidData codes cross-currency interest rate swaps as one-way loans from China, and the record title, maturity period, interest rate, currency, etc. should be reflective of this.
  - ii. **Credit Instrument Categorization:** The CC\_IRS field should be coded as “Yes” for any loan that is a CC IRS.
  - iii. **Transaction Amount:** The transaction amount for cross-currency interest rate swap records is the lending amount that the Chinese creditor extends to the recipient as part of the swap.
  - iv. **Interest Rate:** The “hedge interest rate payable” of the CC IRS should be coded as the interest rate, as it represents the interest rate that the borrower has to pay the Chinese bank.
    - The “hedge interest rate receivable” is the interest rate the Chinese bank has to pay to the *recipient lender*.
  - v. **Intent:** CC IRS loans should be coded as having commercial intent.
    - Cross-currency interest rate swaps are a form of corporate financing and such they represent transactions with commercial intent, such as helping local companies hedge against foreign exchange risk and interest rate risks associated with foreign currency-denominated borrowings).
  - vi. **Funding agency:** The Chinese state-owned bank involved in the cross-currency interest rate should be coded as the funding agency.
  - vii. **Staff Comments:** Coders are to use the Staff\_Comments field to describe the inbound financial flow to China (i.e. the amount that the recipient lent to the Chinese lender, the borrowing terms of that loan, and the currency of denomination).
- **Deferred Payment Agreement (DPA)**

- In a typical DPA, the Chinese company that the project owner in the host country has selected as its engineering, procurement, and construction (EPC) contractor is furthermore a lender to the project owner. The Chinese company assigns receivables under its EPC contract with the project owner to one or more Chinese banks. Upon assignment of receivables, the Chinese bank(s) will release funds to the Chinese company so it can discharge its obligations under the DPA as a lender.
- DPAs are sometimes referred to as receivables loans, receivables financing (finance), accounts receivable financing (finance), or A/R financing (finance). In Chinese, they are known as 应收账款融资. These other terms are used because the accounts receivable of a company (i.e., unpaid invoices) are being used as collateral to unlock working capital—typically in the form of a bank loan (“receivables loan”). Sellers often face cash flow problems when their buyers do not make full payment at the due date of the invoice. A DPA—or receivables financing arrangement—addresses this problem by allowing them to sell their outstanding invoices to a bank at a discounted rate. This approach allows the seller to receive the remaining invoice amount before the due date of the invoice. The bank either gets its money back at invoice maturity through the seller (acting as a collecting agent) or directly from the debtor.
- AidData coders are instructed to follow several coding guidelines that are specific to deferred payment agreements:
  - i. Flow Type: The Flow\_Type of DPAs is “Loan”.
  - ii. Credit Instrument Categorization: The ‘DPA’ field should be coded as “Yes” for any loan that is a DPA.
  - iii. Intent: DPAs can either have commercial intent or mixed intent.
    - Commercial intent should be coded when there is no evidence that the project is seeking to improve economic development or welfare in the host country.
    - Mixed intent should be coded when there is evidence that the project is seeking to improve economic development or welfare in the host country.
    - DPAs should never be coded as having only development intent since they explicitly promote a Chinese company’s business interests.
- Engineering, Procurement and Construction (EPC) Plus Finance (EPC+F or EPCF) Agreement
  - In a typical EPC+F (EPCF) arrangement (in Chinese: 融资+EPC), a project owner in the host country has selected a Chinese company as its engineering, procurement, and construction (EPC) contractor, and a Chinese bank issues a loan to that EPC contractor but with a sovereign guarantee from the host government.

- AidData coders are instructed to follow several coding guidelines that are specific to EPCFs:
  - i. Flow Type: The Flow\_Type of EPCFs is “Loan”.
  - ii. Credit Instrument Categorization: The EPCF field should be coded as “Yes” for any loan that is an EPCF.
  - iii. Intent: EPCFs can either have commercial intent or mixed intent.
    - Commercial intent should be coded when there is no evidence that the project is seeking to improve economic development or welfare in the host country.
    - Mixed intent should be coded when there is evidence that the project is seeking to improve economic development or welfare in the host country.
    - EPCFs should never be coded as having only development intent since they explicitly promote a Chinese company’s business interests.
- Foreign Currency Swap Line (FXSL)
  - An FXSL agreement—also known as a bilateral currency swap (BCS) agreement or a central bank liquidity swap agreement (双边货币互换协议 in Chinese)—is an agreement between the central banks of two countries to exchange cash flows in different currencies at predetermined rates over a specified period of time. Central banks participate in these agreements to (a) facilitate bilateral trade settlements using their national currencies (rather than relying upon a third-party currency such as the U.S. dollar), (b) manage demands from their local banks, and (c) provide liquidity to support financial market stability. The party that draws down on the swap line becomes the borrower and the other party becomes lender. During the term of the swap, the party that draws down on the swap line makes either fixed or floating interest payments on the principal amount. If both parties draw down on the swap line, then both parties exchange fixed or floating interest payments on the principal amounts.
  - China’s central bank—the People’s Bank of China (PBOC)—is the only official sector lending institution in China that issues FXSL agreements.
  - See Section 2.5.1.6 for a more detailed description of FXSL agreements, including the guidelines AidData coders should follow.
- Government Concessional Loan (GCL) [*Only from China Eximbank*]
  - An RMB-denominated loan that China Eximbank issues to government institutions on below-market terms (typically 20-year maturities, 5-year grace periods, and 2% interest rates) to facilitate their acquisition of goods/services from a Chinese supplier. The proceeds of a GCL can be used by government borrowing institutions to finance up to 100% of the total cost of a commercial

contract with a Chinese supplier. China Eximbank does not expect the borrowing institution to provide any “counterpart funding.”

- In Chinese, GCLs are referred to as 优惠贷款.
- See Section 2.5.1.3 for a more detailed description of GCLs, including the guidelines AidData coders should follow.
- **Inter-Bank Loan**
  - A loan issued by one bank (lender) to another bank (borrower). All inter-bank loans should also be coded as on-lending arrangements, but the opposite is not true (i.e., not all on-lending arrangements should be treated as inter-bank loans).
  - In Chinese, inter-bank lending is known as 同业拆借.
  - AidData coders are instructed to code the Interbank\_Loan field in the Loan Categorization section as “Yes” for any loan that is an inter-bank loan.
- **Balance of Payments (BoP) Loan, Liquidity Support Facility (LSF), or Foreign Currency Deposit Loan**
  - A loan issued by a Chinese state-owned policy bank, a Chinese state-owned commercial bank, or China’s State Administration of Foreign Exchange (SAFE) to a central bank or finance ministry in another country that explicitly authorizes the borrower to use the proceeds of the loan to (a) shore up foreign exchange reserves, (b) repay existing debts, and/or (b) finance general budgetary expenditures.
  - BOP loans, LSFs, and foreign currency deposit loans usually have short maturities and high interest rates. They are often referred to as “rescue” or “emergency” loans (see Horn et al. 2023a, 2023b). In Chinese, they are sometimes referred to as “sovereign loans” (主权贷). They do not support individual projects or investments.
  - AidData coders are instructed to follow several coding guidelines that are specific to BoP Loans, LSFs, and Foreign Currency Deposit Loans.
    - i. **Credit Instrument Categorization:** The BOP field should be coded as “Yes” for any loan that is a BoP Loan, LSF, or Foreign Currency Deposit Loan.
    - ii. **Receiving Agency:** The receiving agency should always be either the central bank or finance ministry of a given host country.
- **Interest-Free Loan [Automatically Populated]**
  - A loan that is issued to a borrower without any interest accruing. The borrower is only responsible for repaying the loan's principal amount.
  - China's Ministry of Commerce (MOFCOM) is the lead administrator of the country's interest-free (or “zero-interest”) loan program, often through Economic

and Technical Cooperation Agreements (ETCAs). However, MOFCOM is not the only official sector institution in China that offers interest-free loans. For a full discussion of interest-free loans from the Ministry of Commerce, see Section 2.5.1.2 MOFCOM section.

- In Chinese, interest-free loans are referred to as 无息贷款、零息贷款、or 免息贷款.
- The Interest\_Rate\_Type field for interest-free loans should be set to "Fixed", the Fixed\_Interest\_Rate should be coded as "0" and the Interest\_Free\_Loan field should be coded as "Yes".

- **Investment Project Loan**

- A loan that is provided to finance the provision of goods, works, or services to support a public or private investment project. These types of loans usually involve building, rehabilitating, or upgrading physical assets and infrastructure.
- These types of loans are sometimes referred to as capital expenditure (capex) loans, project loans, or investment loans.
- AidData coders are instructed to code the Investment\_Project\_Loan field in the Loan Categorization section as "Yes" for any loan determined to be an Investment Project Loan.

- **Lease**

- A lease is a contractual arrangement calling for the lessee (user) to pay the lessor (owner) for use of an asset. The lessor is the legal owner of the asset, while the lessee obtains the right to use the asset in return for regular rental payments. Under a capital lease (a financial arrangement where the lessee/borrower uses an asset and pays regular installments plus interest to the lender/lessor), rental payments are usually classified as interest and obligation payments, similarly to a mortgage (with the interest calculated each rental period on the outstanding obligation balance).
- Many Chinese state-owned commercial and policy banks (i.e. ICBC's wholly owned subsidiary ICBC Financial Leasing Co., Ltd.) have their own leasing arms and subsidiaries that provide financial leasing services.
- AidData coders are instructed to follow several coding guidelines that are specific to leases:
  - i. **Flow Type:** The Flow\_Type of leases is "Loan".
  - ii. **Credit Instrument Categorization:** The 'Lease' field should be coded as "Yes" for any lease project.
  - iii. **Funding Agency:** The specific leasing company involved in the transaction (lessor) and not its banking parent (e.g. China Development Bank Leasing Co., Ltd. instead of its parent CDB).

- iv. **Receiving Agency:** The lessee should be coded as the receiving agency of a lease agreement.
- v. **Title:** The title should explicitly state the transaction is a lease (e.g. "ICBC Leasing leases 6 Airbus A321 passenger jets to Transaero").
- vi. **Maturity:** The maturity period for leases is the length of the lease agreement.
- vii. **Staff Comments:** The following should be added to the Staff\_Comments field: "AidData treats this lease as a loan. A lease is a contractual arrangement calling for the lessee (user) to pay the lessor (owner) for use of an asset. The lessor is the legal owner of the asset, while the lessee obtains the right to use the asset in return for regular rental payments. Under a capital lease (a financial arrangement where the lessee/borrower uses an asset and pays regular installments plus interest to the lender/lessor), rental payments are usually classified as interest and obligation payments, similarly to a mortgage (with the interest calculated each rental period on the outstanding obligation balance)."

- **Sale-and-leaseback agreements**

- Sale-and-leaseback agreements (SLBs)—also known as purchase-and-leaseback agreements (PLBs), sale-leaseback agreements, and leasebacks— are specific types of lease agreements in which the original owner sells an asset to a leasing entity, which, in turn, leases the asset back to the original owner, allowing the original owner to raise upfront capital for the asset, without taking on a loan, while still continuing to operate it, using the rental payments to repay the value of the asset. At the end of a SLB, the original owner typically has an option or obligation to repurchase the asset from the leasing entity. SLBs are generally considered to be off-balance-sheet hybrid debt products.<sup>77</sup>
- SLBs can be conducted for a variety of assets including real estate (i.e. a freehold property), equipment (e.g. a drilling rig), and vehicles (e.g. an aircraft or container ship).
- AidData coders are instructed to follow several coding guidelines that are specific to SLBs:
  - i. **Flow Type:** The Flow\_Type of SLBs is "Loan".
  - ii. **Funding Agency:** The specific leasing company involved in the transaction and not its banking parent (e.g. China Development Bank Leasing Co., Ltd. instead of its parent CDB).
  - iii. **Credit Instrument Categorization:** The 'Lease' field should be coded as "Yes" for any SLB agreement.

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<sup>77</sup> See <https://www.nreionline.com/mag/sale-leaseback-king-balance-sheet-financing> and <https://www.investopedia.com/terms/l/leaseback.asp>

- iv. **Transaction Amount:** The value of the SLB agreement, i.e. the purchase consideration paid by the leasing company to the original owner for the asset.
- v. **Receiving Agency:** The lessee should be coded as the receiving agency of a lease agreement.
- vi. **Maturity:** Length of the SLB agreement.
- vii. **Title:** The title should explicitly state the transaction is a SLB, (e.g. "ICBC Financial Leasing enters into three sale and leaseback agreements worth \$93.15 million USD with Star Bulk Carriers Corp").
- viii. **Description:** If the SLB includes details on the existence of a bareboat charter or security, these should be included in the description.
- ix. **Collateral and Accountable Agencies:** Should the lessor or another entity provide security for the SLB, that entity should be coded as the "Collateral Provider", and a description of the collateral should be entered into the "Collateral" field.
- x. **Start Implementation and End Implementation Dates:** The start and end date of a sale-leaseback agreement is similar to the loan commitment date and end date, and so does not correspond to the database's Actual Implementation Start Date and Actual Completion Date fields (which should capture actual implementation start and end date). As such, start and end dates for sale-leaseback agreements should not be included.
- xi. **Staff Comments:** The following should be added to the Staff\_Comments field: "Sale and leaseback (or sale-leaseback) agreements are generally considered to be off-balance-sheet hybrid debt products."

- **Mergers and Acquisitions (M&A) Loan**

- A loan that is issued to a borrower to facilitate its acquisition of an equity stake in a company and/or to facilitate the consolidation of multiple companies (i.e., a merger).
- M&A loans—also known as "acquisition loans" or "acquisition financing" or 并购贷款 in Chinese—are typically issued to Chinese companies with short maturities and high interest rates. They are sometimes referred to as "bridge loans" because they provide short-term cash flow until a borrower can secure permanent financing or remove an existing obligation (although not all bridge loans are M&A loans).
- One particular type of M&A loan is China Eximbank's Overseas Investment Loan (In Chinese: 境外投资贷款), which is used to support Chinese enterprises' overseas investments. These loans can be used to fund acquisitions, fixed asset investments, and overseas equity investments approved by the Chinese authorities. For further information and coding instructions on the Overseas Investment Loan, see Section 2.5.1.3.

- AidData coders are instructed to follow several coding guidelines that are specific to M&A loans.
  - i. **Credit Instrument Categorization:** The “M\_A” field should be coded as “Yes” for any loan that is an M&A.
  - ii. **Intent:** M&A loans have commercial intent, as they support purely commercial interests.
- **Preferential (Export) Buyer’s Credit (PBC)**
  - A USD-denominated loan that China Eximbank issues to government institutions to facilitate their acquisition of goods/services from a Chinese supplier. The borrowing terms of these loans vary, but they are offered with fixed rather than floating (market) interest rates (such as LIBOR or EURIBOR), which are usually more generous than prevailing market rates. China Eximbank has a policy of allowing borrowers to use PBOC proceeds to finance 85% of the total cost of a commercial contract with a Chinese supplier. China Eximbank usually requires that the remaining 15% of the commercial contract cost be financed with “counterpart funding” from the borrowing institution.
  - In Chinese, PBCs are referred to as 优惠出口买方信贷.
  - For further information and coding instructions on the PBC, see Section 2.5.1.3.
- **Pre-Export Financing (PxP) or Commodity Prepayment Financing**
  - A PxP facility is an arrangement in which a commodity (e.g. oil) producer gets up-front cash from a customer in return for a promise to repay the customer with that commodity (possibly at a discount) in the future. PxP funds may be advanced by a lender or syndicate of lenders to a commodity producer to assist the company in meeting either its working capital needs (for example, to cover the purchase of raw materials and costs associated with processing, storage and transport) or its capital investment needs (for example, investment in plant and machinery and other elements of infrastructure).
  - PxP facilities are also known as commodity prepayment financing arrangements. In Chinese, PxP facilities are known as 出口前融资 or 预出口融资.
  - AidData coders are instructed to follow several coding guidelines that are specific to PxPs:
    - i. **Flow Type:** The Flow\_Type of PxPs is “Loan”.
    - ii. **Credit Instrument Categorization:** The PxP\_or\_Commodity\_Prepayment field should be coded as “Yes” for any loan that is a PxP or commodity prepayment financing.
    - iii. **Intent:** PxPs can either have commercial intent or mixed intent.



- Commercial intent should be coded when there is no evidence that the project is seeking to improve economic development or welfare in the host country.
  - Mixed intent should be coded when there is evidence that the project is seeking to improve economic development or welfare in the host country.
  - PxFs should never be coded as having only development intent since they promote commercial interests, often imports to China.
- iv. Collateralization: PxF facilities are coded as collateralized because they are almost always secured by (1) an assignment of rights by the producer under an 'offtake contract' (i.e., a sale and purchase contract between the producer and a buyer of that producer of goods or commodities), and (2) a collection account charge over a bank account into which proceeds due to the producer from the buyer of the goods or commodities under the offtake contract are credited.
  - PxF facilities that involve commodity exports are also coded as Commodity-Backed.
- On-Lending Arrangement
  - An arrangement in which a borrower uses the proceeds of a loan to lend to one or more additional entities.
  - Also known as a "re-lending" arrangement.
  - AidData coders are instructed to follow several coding guidelines that are specific to loans with on-lending.
    - i. Credit Instrument Categorization: The 'Onlending' field should be coded as "Yes" for any loan that includes on-lending.
    - ii. Receiving agencies: The direct borrower of the loan (i.e. the institution that signed the loan contract with a Chinese bank) should be coded as a direct receiving agency. Any entities that the direct borrower on-lends to should be added coded as indirect receiving agencies.
- Revolving Credit Facility (RCF)
  - In a typical RCF arrangement, the lender commits funding up to a certain level, but unlike a "term loan" (that is repaid in regular payments over a set period of time), the borrower can draw down, repay, and redraw on an irregular/as-needed basis; an RCF provides liquidity for day-to-day operations; it functions like a credit card, except that the borrower is charged an annual commitment fee on unused amounts (a "facility fee").
  - RCFs are commonly known as "revolvers" and "revolving loans."

- AidData coders are instructed to code the 'RCF' field in the Credit Instrument Categorization section as "Yes" for any loan that is a revolving credit facility.
- **Debt Refinancing**
  - A new loan for the purpose of repaying one or more existing loans/debts.
  - Debt refinancing can occur when a borrower decides to change the source of its financing for a project or activity (e.g., to a different bank, or from a loan to a bond).
  - AidData coders are instructed to code the 'Refinancing' field in the Credit Instrument Categorization section as "Yes" for any loan intended to refinance existing debt.
- **Refinances Chinese Official Debt**
  - A loan used to specifically refinance debt provided by one or more official sector lenders from China, including repaying or replacing syndicated loans to which Chinese state-owned creditors contributed.
  - This flag should be checked if any of the proceeds of the loan are being used to refinance previous loans from China, even if that was one use of the loan proceeds.
  - AidData coders are instructed to the Refinances\_Chinese\_Official\_Debt field in the Credit Instrument Categorization as "Yes" if the loan is paying existing debt from Chinese official creditors.
- **Working Capital Loan**
  - A loan that provides funds for a borrower's day-to-day operations (including general corporate purposes) but not for making capital investments or facilitating the acquisition of long-term assets.
  - AidData coders are instructed to code the Working\_Capital field in the Credit Instrument Categorization section as "Yes" for any loan intended for working capital purposes.
- **Non-Recourse or Limited-Recourse Project Finance Transaction**
  - When a project is financed with a limited-recourse or non-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 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. In a standard, limited-recourse or non-recourse 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 project. This entity is often 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).

- In a non-recourse or limited recourse project finance arrangement, the borrowing institution is always a special purpose vehicle (SPV) or joint venture (JV).
- Unlike non-recourse or limited recourse project finance arrangements, the repayment of a full-recourse sovereign loan (i.e. a loan directly to a government agency) does not depend upon the financial viability of a project or the cash flow generated by any particular asset. A sovereign government borrower guarantees the repayment of the loan, regardless of whether the asset supported by the loan generates enough revenue to facilitate repayment, and the creditor has a legal right to seize any and all assets of the borrower until the full amount of the debt is covered (i.e. it has “full recourse” to the assets of the borrowing government).
- Limited-recourse and no-recourse project finance transactions usually involve a mix of equity from the project sponsor<sup>78</sup> (also known as equity investors or project founders) and debt from banks/financial institutions. Common debt-to-equity ratios are 90:10, 80: 20, and 70:30. More often than not, project sponsors have limited financial means and cannot on their own provide the total capital required for the construction, development and operation of the project/asset.
- An example of a limited-recourse project finance transaction that is supported by an official sector financing institution in China is the China-Laos Railway Project (captured via AidData Record IDs #33726 and #85304).<sup>79</sup> To implement this project, three Chinese state-owned companies and a Lao state-owned enterprise established a joint venture (SPV) called the Laos-China Railway Company Limited (LCRC). The LCRC was established as a limited liability corporation (LLC) to finance, design, construct, and manage a 418 kilometer railway between the Chinese city of Kunming and the Laotian capital of Vientiane on a public-private partnership (PPP) basis. The total cost of the China-Laos Railway Project is \$5.9 billion—equivalent to roughly one-third of Laos’ GDP—and it is being financed according to a 60:40 debt-to-equity ratio (\$3.54 billion of debt and \$2.36 billion of equity). LCRC directly secured \$3.54 billion of debt financing from China Eximbank, and the Government of Laos and the Chinese Government contributed \$730 million and \$1.63 billion of equity financing, respectively. In order to make its \$730 million equity contribution to the project, the Government of Laos secured a \$480 million loan from China

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<sup>78</sup> In a public-private partnership (PPP) context, the terms project sponsor, project owner and concessionaire are often used interchangeably. That being said, a concessionaire is slightly different (from a typical project sponsor/owner) because its ownership of the project is time-limited (as determined by the concession agreement). So, ownership of the project can return to the host government at the end of the concession agreement.

<sup>79</sup> For an illustrative loan agreement issued by official sector financing institutions in China in support of a limited-recourse project finance transaction, see [https://www.documentcloud.org/documents/20488803-sle\\_2017\\_468](https://www.documentcloud.org/documents/20488803-sle_2017_468)

Eximbank and it agreed to provide \$250 million of its own funding (in annual installments). The \$3.54 billion debt secured by LCRC, which is jointly owned by three Chinese state-owned companies that collectively hold a 70% equity stake and one Lao state-owned enterprise that owns a 30% equity stake, is not backed by a sovereign guarantee.

- In Chinese, no-recourse or limited-recourse project finance transactions are known as 项目融资.
- AidData coders are instructed to follow several coding guidelines that are specific to limited-recourse and no-recourse project finance transactions:
  - i. **Credit Instrument Categorization:** The Project\_Finance field should be coded as "Yes" for any loan that is a limited-recourse and no-recourse project finance transaction.
  - ii. **Receiving Agency:** The direct receiving agency should have an organization type of "Joint Venture/Special Purpose Vehicle".
  - iii. **Description:** The ownership of the JV/SPV involved in the project finance must be explicitly stated in the description.
  - iv. **Estimation of Transaction Amount:** If the debt component of the project was exclusively financed by an official sector financing institution from China and no information on the exact amount of debt financing is identified, coders should use the debt-to-equity ratio and the total project cost to estimate the transaction (debt financing) amount. For example, if the total project cost is 100 million USD and the project is financed through a debt-equity ratio of 80:20, and the debt financing is exclusively provided by an official sector financing institution from China. The transaction amount should be coded as 80 million USD.
- **Overseas Project Contracting Loan**
  - A loan issued by China Eximbank to a Chinese company to help it finance an overseas project contract. This loan can be denominated in USD or RMB. Per China Eximbank policy, the contract cost that is financed with the loan should not be lower than 1 million USD, and goods and services exported from China under the contract should not be lower than 15% of contract cost.
  - In Chinese, overseas project contracting loans are referred to as 对外承包工程贷款.
  - For further information and coding instructions on the Overseas Project Contracting Loan, see Section 2.5.1.3.
- **Shareholder Loan**
  - A shareholder loan is a loan made by a shareholder to a company in which it owns a share. This includes companies in which the shareholder is a direct owner, as well as companies in which it is an indirect owner. It also includes loans

where the lender of record and the Direct Receiving Agency are both subsidiaries of a common shareholder

- The Shareholder\_Loan field should be coded as “Yes” for any loan made by a shareholder or indirect owner of the borrowing institution.
- **Exploration/Development Carry**
  - In the context of oil and gas exploration/development, a “carry” agreement is a financial arrangement where one party agrees to finance the exploration or development costs for a project, while another party receives an interest in the project’s future profits without initially contributing to the costs. Carry agreements are often incorporated into Joint Development Agreements (JDAs), which outline the terms of cooperation between parties in an oil and gas project. If one shareholder in a joint venture lacks the financial capacity to make its required equity contribution, it can borrow this amount from one or more shareholders in the same joint venture. This borrowing is known as “carry” because the equity contributions of one joint venture partner are being funded—or “carried”—by another. Such debts are repaid with the joint venture’s future project profits or dividends. Exploration/development carry is also known as “equity debt” because one shareholder is providing a loan (cash advance) to another shareholder to help it meet its required equity contributions.
  - AidData coders are instructed to code all exploration/development carry borrowings as shareholder loans.
- **Repurchase Transaction (Repo Borrowings)**
  - A repurchase (“repo”) agreement is a transaction in which the borrower temporarily lends a security to the creditor for cash with an agreement to buy it back in the future at a predetermined price. Ownership of the security does not change hands in a repurchase transaction. For this reason, repurchase agreements are treated as collateralized loans. For more information, see Rivetti (2021)
  - AidData coders are instructed to follow the following guidance while coding repurchase transactions:
    - i. All repurchase transactions are coded as Balance of Payments (BOP) and Rescue loans.
    - ii. All repurchase transactions are coded as collateralized.
- **FDI Lending**
  - The FDI\_Loan captures financing supports a cross-border investment activity.
  - This field is set to “Yes” if any of the following credit instrument fields are set to “Yes”: 1) the M\_A field; 2) the Project\_Finance field; 3) the Shareholder\_Loan field; or 4) the Exploration\_Development\_Carry field. In cases where the Working\_Capital field is set to “Yes” when the Project\_Finance field is set to “Yes”, the FDI\_Loan field will be left blank.

- The FDI\_Type indicates the type of cross-border investment activity that the financing supports by way of two categories: "Greenfield" or "Brownfield." "Greenfield" is for cases where the financing supports the creation of new productive capacity—such as the construction of new physical infrastructure, and thus is coded when the Project\_Finance field is set to "Yes" (except those that have M\_A field is set to "Yes"). It is set to "Brownfield" in cases where the financing supports the acquisition, expansion, or rehabilitation of existing assets or enterprises and is coded when the M\_A field is set to "Yes". For loans with the Exploration\_Development\_Carry or Shareholder\_Loan fields set to "Yes," AidData reviewed each record and assigned it to the appropriate category based on the primary purpose of the cross-border investment activity that the financing supported.
- Collateralized Lending
  - Collateral is a right to an asset or a revenue stream that a creditor can rely upon to secure repayment in the event that a borrower defaults on its payment obligations. Collateral can come in many forms including "cash, stocks, and negotiable bonds; irrevocable letters of credit; certificates of deposit; assignment of receivables such as export earnings, electricity generation charges, road tolls, and telecoms receipts; as well as physical assets such as buildings, ports, and industrial plants. [...] Collateral can be (i) an existing or future asset (stock) or (ii) a future flow or stream. The latter case, also called future receipts or future receivables, can be defined as a financial amount (e.g. USD) or a physical amount of goods to be delivered (e.g. barrels of crude oil)" (IMF and World Bank 2020: 4, 6).
  - In a legal sense, collateralized debt "entails a borrower granting liens over specific existing assets or future receivables to a lender as security against repayment of the loan" (IMF and World Bank 2020: 4). However, collateralized debt "also includes arrangements that do not constitute granting of a formal security interest, but that have an equivalent effect." For example, regardless of whether a formal security interest is granted over an escrow account (or a so-called "revenue account," "special account," or "proceeds account") with a minimum cash balance requirement, *a loan is de facto (rather than de jure) collateralized if the account is controlled by the lender* (Gelpert et al. 2022).
  - According to the IMF and the World Bank (2020: 6), "[c]ollateral can be related or unrelated to the purpose of the loan. Collateralized debt is considered to have 'related collateral' if the loan is used to purchase or construct a new asset (e.g. an airplane, an oil platform), and the asset or the future receipts it is expected to generate (e.g., airline ticket sales, the revenues from the sale of oil) serve as collateral to secure the debt. An example of 'unrelated collateral' is a budget loan collateralized with oil receivables."
  - An example of a collateralized loan is the buyer's credit loan (BCL) that China Eximbank issued to the Government Ghana for the Bui Dam Construction Project (ID#183). It was collateralized with (a) net revenue from a Power Purchase Agreement (PPA) between Bui Power Authority, an organization with a mandate to plan, execute and manage the Bui Hydroelectric Project, and the Electricity

Company of Ghana (ECG) for the purchase of the energy to be generated from the Bui hydroelectric power plant, and (b) receivables from the Ghana Cocoa Board's sale of cocoa beans to Genertec International Corporation of Beijing.

- Sometimes official sector lenders in China will demand an escrow account (or a so-called "revenue account," "special account," or "proceeds account") as a form of collateral (Gelpern et al. 2022). These are often offshore bank accounts (located in the lending country) into which project revenues or the proceeds from export sales are deposited. The funds held in the account can then be used to service the loans and/or serve as collateral (sometimes called a "security package").
  - i. For example, as a guarantee for a \$1 billion China Eximbank loan, the Republic of Congo is required to keep a minimum deposit balance equivalent to 20% of total outstanding China Eximbank loans in an escrow account (that China Eximbank controls) from the proceeds of its oil sales to China.
- Collateral requirements in loan agreements do not affect the way that a loan's grant element is calculated. However, they do influence the favorability of lending terms in a broader sense. If two loans have identical interest rates, maturities, grace periods, and fees, but one requires the borrower to provide a source of collateral that China can seize in the event of default (e.g., foreign currency earnings in an escrow account, a revenue-generating infrastructure asset) and the other does not, the borrower would almost certainly consider the loan with the collateral requirement to be less favorable than the one without such a requirement (Morris et al. 2020).
- *Determining whether a loan involves collateralization.* When source materials do not specify if a loan is collateralized, AidData coders are instructed to follow several guidelines to determine if the loan is collateralized in a de facto or de jure sense:
  - If a source indicates that the borrower granted a formal lien or security interest to the lender, the loan should be coded as collateralized.
  - If a source mentions a source of "security" for the loan or characterizes the loan as "securitized," this should be treated as evidence that the borrower granted security interest to the lender and the loan should be coded as collateralized (e.g., "The escrow account will provide a source of security for the loan.").
  - If a source indicates that a security agent was appointed (to enforce rights against the collateral in the event that the borrower defaults on its repayment obligations), the loan should be coded as collateralized.
  - If a special account, escrow account, revenue account, or proceeds account (into which the borrower is required to deposit project-related revenues or unrelated revenues) is mentioned, and the account is either (a) controlled by the Chinese lender or (b) located in China, then the loan should be coded as (de facto) collateralized. Under these conditions, it is

not difficult for the Chinese lender to seize or debit the account without the consent of the borrower. However, when the account is controlled by the borrower or a third party (or the account is located in the borrower country or a third country), the Chinese lender does not have a de facto source of collateral.

- All pre-export finance (PXF) facilities should be coded as collateralized since they are almost always secured by (1) an assignment of rights by the producer under an 'offtake contract' (i.e., a sale and purchase contract between the producer and a buyer of that producer of goods or commodities), and (2) a collection account charge over a bank account into which proceeds due to the producer from the buyer of the goods or commodities under the offtake contract are credited.
- If the word 'guarantee' is mentioned in relation to the repayment of the loan by a non-English language source, this *may* indicate collateralization. In languages other than English, collateralized debt arrangements are sometimes referred to as 'guarantee' or 'guaranteed.' However, in English, a (third-party) guarantee is a concept that is distinct from collateralization. Whenever a loan guarantee is issued, an entity other than the primary borrower (or 'the primary obliger') agrees to repay the loan if the primary obliger goes into default. So if the primary obliger is a government line ministry, subnational government, or state-owned enterprise and a sovereign guarantee is issued in support of the loan, that means that a central government entity (usually the Ministry of Finance) has agreed to serve as the loan guarantor. As such, whenever a guarantee is issued, there has to be an additional entity responsible for repayment in the event that the primary obliger goes into default. It is possible for a loan to be both guaranteed (in the English-language sense) and collateralized. China Eximbank's 2004 MLFA with the Government Angola was guaranteed by Sonangol (the country's state-owned oil company) and collateralized with future revenues from the sale of oil exports.
- If the word 'guarantee' is mentioned in relation to a specific asset/revenue stream, it is most likely referring to collateral. A third-party repayment guarantee (e.g., a sovereign guarantee or corporate guarantee) is not related to a specific asset or revenue stream. The issuance of a third-party repayment guarantee allows the creditor to secure repayment by pursuing *any* assets or revenue streams controlled by the guarantor in the event of default (assuming the assets/revenue streams in question are not protected by sovereign immunity). E.g., "The Government of Togo agreed to establish an airport fee (RDIA) to guarantee the repayment of the PBC and the GCL." In this case the airport fee reported is a form of loan collateral, instead of a third-party guarantee.
- If a source refers to a lending arrangement that is following the 'Angola model' or the 'resources-for-loan' model, this should be treated as evidence of collateralization. The resources-for-loan model pioneered by



China Eximbank in Angola, or the 'Angola model,' involves collateralization. In Chinese, the resources-for-loan model is sometimes called “互惠贷款” (reciprocal loan) or “资源与贷款合作框架协议” or “‘资源、信贷、项目’一揽子合作模式” or “‘石油、信贷、工程’一揽子合作模式” (oil-backed loan) or “安哥拉模式.”<sup>80</sup>

- AidData coders are also instructed to follow several additional guidelines that are specific to collateralized loans:
  - The 'Collateralized' field should be set to “Yes” and the specific source(s) of collateral should be identified in the 'Collateral' field.
  - The organization(s) responsible for providing the collateral should be populated in the Collateral\_Provider field.
  - The organization(s) responsible for acting as a Security/Collateral Agent, if identified, should be coded as the Security\_or\_Collateral\_Agent.
  - Collateralization should not be used to determine a project's intent designation or concessionality designation.
- Commodity-backed loans
  - When one or more of the underlying sources of security (collateral) for a loan include a commodity asset or commodity revenue stream, the loan is coded as commodity-backed.
  - A loan can be secured (collateralized) with up to thirty-three types of commodity assets or revenue streams: aluminium, bauxite, cacao, chromite, coal, copper, cobalt, fertilizer, gas (including liquified natural gas), gold, grain, iron (including iron ore), lead, lithium (including lithium carbonate), magnetite, molybdenum, nickel, niobium, oil, other chemical, phosphate, pegmatite, platinum, potash, potassium sulfate, pulp, salt, sesame, silver, spodumene concentrate, steel, tobacco, or zinc.
  - For each commodity-backed loan, the specific commodity asset(s) or commodity revenue stream(s) that were included in the security (collateral) package are identified in the Commodity field.
  - AidData coders are instructed to follow several coding guidelines when coding commodity-backed loans:
    - All pre-export finance (PXF) facilities—that involve commodity exports—are coded as commodity-backed loans, insofar as they are almost always secured by (1) an assignment of rights by the producer under an 'offtake contract' (i.e., a sale and purchase contract between the producer and a buyer of that producer of goods or commodities), and (2) a collection account charge over a bank account into which

<sup>80</sup> See <https://www.dropbox.com/s/r5xhu7zdzqiebbn3/2.EXIM-Bank.pptx?dl=0>

proceeds due to the producer from the buyer of the goods or commodities under the offtake contract are credited.

- Master Loan Facility Agreements and Credit Lines

- Master loan facilities and lines of credit are not loan agreements and are not treated as such in the 4.0 methodology. They are agreements designed to support multiple subsidiary projects with multiple loans that must be individually approved by the lender. In a typical master loan facility agreement or credit line agreement, the lender and borrower first agree on the types of allowable projects and the terms and conditions of lending. Then, the borrower prepares individual project loan applications to give to the lender for approval under the parameters established in the master facility agreement. Master loan facilities and lines of credit typically identify the total amount of funding that can be accessed, the types of projects that can be supported, and the borrowing terms (e.g., interest rate, maturity, grace period) for subsidiary projects under the agreement. Master loan facilities are sometimes called master facilities, master loan agreements, or framework agreements.<sup>81</sup>
- A single loan can have multiple purposes or components. The key distinction between a single loan with multiple components and a master loan facility is that the latter involves subsidiary loan agreements that must be individually approved by the lender.
- AidData coders are instructed to follow several guidelines that are specific to master loan facilities and lines of credit:
  - *Scenario 1: If the master loan facility (or line of credit) is for unspecified purposes, and there is information about how much has been drawn down from the facility. Create one umbrella record for the master loan facility, and one subsidiary record for the drawn down amount.*
  - *Scenario 2: If the master loan facility (or line of credit) is for specified purposes, and coders know the exact number of subsidiary projects/activities financed through the facility. Create one umbrella record for the master loan facility, and subsidiary records for each project/activity that was financed through the facility with separate transaction amounts.*
  - *Scenario 3: If the master loan facility (or line of credit) is for specified purposes, and coders are unable to identify all subsidiary projects/activities financed through the facility (i.e., coders only find information on one or a few of the subsidiary projects/activities financed through the facility). Create one record to capture the entire transaction amount and set the umbrella field to "No." For any subsidiary projects/activities financed by the facility that coders are able to find, create subsidiary records for each project/activity that was financed*

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<sup>81</sup> These should not be confused with "facility agreements," which is a shorthand term that is often used by (Chinese state-owned) banks to refer to loan (or export credit) agreements. See, for example, [https://www.documentcloud.org/documents/20488803-sle\\_2017\\_468](https://www.documentcloud.org/documents/20488803-sle_2017_468)

through the facility but do not record their specific transaction amounts to avoid duplication of transaction amounts.

- *Scenario 4: If the master loan facility (or line of credit) is for unspecified purposes, and there is evidence that the facility has been completely (100%) drawn down. Create one record to capture the entire transaction amount and set the umbrella field to "No."*
- *Scenario 5: If the master loan facility (or line of credit) is for unspecified purposes, and we are confident that (1) there is no risk of duplication with existing flows, (2) the financing is going to one specific recipient entity, (3) there is little to no chance of coders identifying the specific, subsidiary projects/activities funded through the facility, and (4) there is no evidence that the financing was provided through a cooperation agreement. Create one record to capture the entire transaction amount and set the umbrella field to "No."*
- *Scenario 6: If the master loan facility (or line of credit) is provided to the Central Bank of the host country. Create one record to capture the entire transaction amount and set the umbrella field to "No."*

#### 2.5.3.4 - Syndicated Loans

Syndicated lending has become an increasingly common credit instrument in China's overseas financing portfolio. This presents a unique challenge for the aggregation and sorting of loans given the dataset's structure, which captures each contribution from a Chinese lender to a syndicated loan separately. The TUFF methodology structures data at the financial contribution level, wherein one row of data represents a financial commitment from a Chinese official sector institution to support a project/activity overseas.

- In CLG-Global 1.0 (and its constituent datasets), AidData has 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_Event_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").
- AidData coders are instructed to follow several coding guidelines that are specific to syndicated loans:
  - *Scenario 1: Each official sector financing institution from China and its financial commitment amount to the syndicate is known.*
    - In this scenario, separate records should be created for each official sector financing institution from China. The transaction amounts in these records should be populated with the financial amount that each official sector financing institution from China committed to the syndicated loan. All of the records should be linked through the narrative description field

- (referencing each AidData Record ID number) and they should be assigned to the same Loan Event ID. For each record, the official sector financing institution from China should be coded as the funding agency and other lenders that participate in the syndicate should be coded as co-financing agencies.
- If the overall amount of the syndicated loan or tranche is known, the Syndicated\_Loan\_Amount field should be populated with the overall amount of the loan or the overall amount of the tranche. See “Scenario 4” below for further information.
  - *Scenario 2: Every official sector financing institution from China (or some of official sector financing institutions from China in the syndicate) is known but the individual financial contributions (commitments) of each participant in the syndicate are unknown.*
    - In this scenario, AidData coders are instructed to (a) assume that each known official sector financing institution from China contributed (committed) an equal amount to the syndicated loan and (b) estimate the contributions (commitments) of each financier by dividing the total face value of the loan with the total number of known financiers in the syndicate. For each record, the official sector financing institution from China should be coded as the funding agency, and other lenders that participate in the syndicate should be coded as co-financing agencies. All records for the syndicate should be assigned to the same Loan Event ID.
    - If the overall amount of the syndicated loan or tranche is known, the Syndicated\_Loan\_Amount field should be populated with the overall amount of the loan or the overall amount of the tranche. See “Scenario 4” below for further information.
  - *Scenario 3: Every official sector financing institution from China (or the total number of official sector financing institutions from China in the syndicate) is unknown and the individual financial contributions (commitments) of each participant in the syndicate are also unknown.*
    - AidData coders are instructed to create one record for each known financier with no transaction amount. For each record, the official sector financing institution from China should be coded as the funding agency, and other lenders that participate in the syndicate should be coded as co-financing agencies. All records for the syndicate should be assigned to the same Loan Event ID.
    - If the overall amount of the syndicated loan or tranche is known, the Syndicated\_Loan\_Amount field should be populated with the overall amount of the loan or the overall amount of the tranche. See “Scenario 4” below for further information.
  - *Scenario 4: The syndicated loan is composed of at least two tranches.*
    - Coders are instructed to designate each tranche of the syndicated loan as a letter (e.g. A, B, C). If the tranche letter is known from the loan record’s sources, then the assigned Loan\_Event\_Tranche letter should match the tranche letter indicated in sources. If the tranche letter is unknown, coders manually assign the Loan\_Event\_Tranche in alphabetical order. Each record capturing a contribution to that tranche

- should then be assigned both to the overall syndicated loan's Loan Event ID and the tranche's Loan\_Event\_Tranche letter.
- If a loan record captures a contribution to a tranche and the tranche information is known, the Syndicated\_Loan\_Amount field should be populated with the overall value of the tranche as opposed to the full value of the loan. If a syndicated/club loan has multiple tranches and the breakdown in tranche value is unknown, coders should code the full value of the syndicated loan. If the full value of a syndicated/club loan is unknown, the Syndicated\_Loan\_Amount field is left blank.
- *Scenario 5: Dual-currency tranches with contributions in different currencies*
  - If a tranche of a syndicated loan is denominated in one currency (e.g. Euros), but contributions from lenders (including China) are reported in a different currency (e.g. USD) in the contract or sources, coders are instructed to create a record for that tranche using the currency denomination in which contribution amounts are available. Coders should also flag the Amount\_Estimated field because the original currency is different from the reported one.
  - If the loan has multiple tranches that are denominated in multiple different currencies, and it is known that a Chinese bank contributed to all of them, projects should be created for each tranche denominated in the respective currencies.

## Section 3 - TUFF 4.0 Data Collection Process

The TUFF 4.0 data collection process is undertaken in three stages, which vary by some degree depending on the income level of the host country. The difference in approach for collecting data on host countries of varying income levels is primarily attributable to a difference in source availability, the types of sources that contain information, and the varying level of complexity of the financial transactions.

### 3.1 - Data Collection for Low- and Middle-Income Countries

The TUFF 4.0 data collection process for low- and middle-income countries is undertaken in three stages: (1) project identification, (2) project verification and enhancement, (3a) project-level data quality assurance, and (3b) quality assurance of the dataset as a whole. In this section, we document each of the stages, which were followed to construct the 1.0 version of AidData's CLG-LMIC dataset.

#### 3.1.1 - Stage 1: Identifying New Projects and Sources

The objective of Stage 1 is to first identify the universe of Chinese loan- and grant-financed projects and/or activities.<sup>82</sup> This is done one-by-one for each country of activity (host country),

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<sup>82</sup> In early iterations of the TUFF methodology, AidData relied on global databases of news reports (Factiva, DNA) to identify Chinese ODA- and OOF-financed activities during stage 1. Then, during the project verification and enhancement stage (Stage 2), AidData would use additional sources to find and verify project details. These additional sources in Stage 2 often included "official" sources—such as official publication from Chinese government agencies or data and documentation from host country

so Stage 1 is repeated for each of the 150 countries included in the CLG-LMIC 1.0 dataset (i.e., countries for which systematic searches are completed, although projects/activities are not identified for all 150 countries).

Stage 1 is completed in three steps:

1. Coders review a catalogue of official sources that AidData faculty and staff have assembled in order to (a) identify projects/activities that are supported by official sector institutions in China and consistent with OECD-DAC definitions of ODA and OOF; and (b) document any basic/foundational information about these projects/activities (e.g., funding agency, receiving agency, commitment year, transaction amount) that is specified by these official sources. Coders then create a unique record in AidData's data management platform for each project/activity with a unique identification number (AidData\_Record\_ID) and populate as many fields as possible for those records with the information that is provided by the official sources.
2. Coders review a fixed and pre-processed set of media articles from Factiva/DNA in order to identify (a) any additional projects/activities that are supported by official sector institutions in China and consistent with OECD-DAC definitions of ODA and OOF; and (b) any additional details about the projects/activities exclusively identified via Factiva/DNA and the projects/activities jointly identified by official sources and Factiva/DNA.
3. AidData faculty and staff conduct supplemental searches to identify any major sources of Chinese ODA or OOF—and specific Chinese ODA- and OOF-financed projects—that were not identified during the first two steps of Stage 1.

A description of each of these steps is detailed in the next section.

### 3.1.1.1 - Official Country Profiles for Low- and Middle-Income Countries

Before Stage 1 is initiated, AidData faculty and staff create or update an Official Country Profile (OCP) for each host country with diplomatic relations with China as of the final year of the temporal commitment year scope covered (136 out of 150 countries as of 2023). The OCP is a catalogue of all known sources that may provide information about Chinese ODA- or OOF-financed projects and/or activities in a given host country. Each OCP identifies websites, documents, and datasets from official sources, such as the Chinese government, the host country government, and official sector entities with international aid and debt monitoring responsibilities (e.g., the World Bank and the IMF). On average, each host country's OCP includes around 100 sources.

- Each OCP includes key Chinese government sources, such as the Chinese Embassy and Economic and Commercial Counselor (ECCO) websites in the given host country, MOFCOM investment guides, and the annual reports of Chinese state-owned banks and state-owned companies. These sources typically demonstrate that a project/activity exists; provide precise official commitment dates and project implementation start and

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government agencies. However, the 3.0 and 4.0 versions of the TUFF methodology take a different approach. In Stage 1, we use a large catalogue of official sources (that cover 136 countries) to identify projects, and then supplement the list of Chinese officially-financed projects/activities that are identified via official sources with media-based sources to identify any remaining missing flows.

end dates (e.g., the calendar days on which the loan agreement was signed and construction started/ended); identify an official project title (in Mandarin Chinese); and provide information about the funding agency, the receiving agency, and/or the nature of the flow type (e.g., a preferential buyer's credit from China Eximbank was issued to the Ministry of Finance in the host country to support the project).

- Every country's OCP identifies key host country government sources, such as the Ministry of Foreign Affairs website, the debt registry and budget documents of the Ministry of Finance, government registers and gazettes that publish information about foreign loan and grant agreements, the government's aid and debt information management system, and the websites of legislative and executive oversight institutions in host countries (e.g. Public Accounts Committee, Office of the Auditor General). These sources often identify official commitment dates, funding agencies, receiving agencies, transaction amounts, borrowing terms, information about the timing and value of disbursements, information about project implementation progress (including but not limited to construction start and end dates), and official project titles in local languages.
- Official sources that are not from the Chinese government or host country government—like the International Monetary Fund's (IMF) Article IV Staff Reports—also appear in each host country's OCP.
- Additional sources include major implementing organizations and Chinese state-owned enterprises operating in the host country, as well as government-affiliated media and/or major media outlets in the host country. These sources typically provide supplemental information about a project's implementation progress.

Coders are instructed to take a source-specific approach to data collection, which means that they retrieve information from one official source at a time, compiling an initial project list that is de-duplicated as they review additional official sources

Within each OCP, AidData faculty and staff provide coders with specific descriptions of each official source and source-specific instructions, which is important because the sources that are identified in the OCP often contain a great deal of information that is *not* related to Chinese ODA- or OOF-financed projects/activities.<sup>83</sup> Therefore, AidData faculty and staff review each source in advance and specify which particular sections require the attention of coders.

- Source-specific instructions also include guidelines for navigating websites, documents, and datasets, as well as tips for conducting searches in foreign languages:
  - E.g. “肯尼亚” is the Chinese name for Kenya
  - E.g. Google this search term: “<http://dj.china-embassy.org/chn/>” 贷款 (Loan in chinese)

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<sup>83</sup> AidData researchers update the OCPs on an annual basis as additional sources are identified or become available. OCPs for the 2.0 dataset contained about 25 sources each, whereas OCPs for the CLG-LMIC 1.0 dataset include over 100 sources on average. The latest OCPs also contain archived records from previous OCPs so that country-specific data collection information, advice, and challenges can be passed on to future coding teams.

- E.g. Use Ctrl+F in this French-language document to search for “Chine” and “Chinois”
- Coders are instructed to download especially useful sources and add them to OCPs for future rounds of data collection (e.g., a time-stamped export of a host country’s Aid Management Platform).

### 3.1.1.2 - DNA/Factiva Articles

After AidData coders conduct a systematic review of official sources that provide information about Chinese ODA- and OOF-projects/activities in each host country with diplomatic relations with China, they search for additional projects/activities and project-level information through targeted searches in Factiva and Dow Jones DNA for all host countries (including those without diplomatic relations).<sup>84</sup> Factiva—a Dow Jones-owned media database that draws on approximately 33,000 media sources worldwide in 28 languages, including newspapers and radio and television transcripts—is the primary database that AidData has historically used for the systematic review of media articles that report on Chinese ODA- and OOF-financed projects/activities. However, as the scope of our data collection efforts has expanded to a larger number of recipient countries and a wider set of commitment years, we have turned to Dow Jones DNA to more efficiently extract and process media articles when our Factiva queries return more than 1,000 results for a single recipient country in a single commitment year. Whereas Factiva was not designed to support machine learning applications, Dow Jones DNA—a cloud-based content processing and storage platform—makes the entire, 30-year Factiva archive and approximately 1 million income news articles per day accessible to users who wish to use this information in machine learning applications.

We use a standardized set of search criteria to query Factiva and Dow Jones DNA.<sup>85</sup> The queries generate a long list of media articles, but only a subset of these “candidate sources” contain information about Chinese ODA- and OOF-financed projects/activities. We therefore use a machine learning algorithm<sup>86</sup> to identify the subset of DNA articles that are most likely to contain information about Chinese government-financed projects/activities.<sup>87</sup> We refer to this

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<sup>84</sup> Factiva and Dow Jones DNA sources often provide coverage of smaller grants, in-kind contributions, technical assistance and medical team projects. The articles help identify or confirm implementation details of potential projects (e.g., dates of signing or handover ceremonies, officials and ministries present at these ceremonies, and other organizations or contractors involved in the project).

<sup>85</sup> All of these queries rely on a standardized set of keywords (such as grant, loan, and donate), but we run them independently for each host country.

<sup>86</sup> To classify the documents, the machine learning software uses the LGBMClassifier from the lightgbm package, which is a gradient boosting model developed by Microsoft, with balanced TRUE/FALSE files as the training set. To balance these files a targeted artificial data augmentation library was used (NLPAUG), which slightly altered a random selection of the existing TRUE files by replacing a number of words in each selected document with synonyms to generate enough TRUE files to match the number of FALSE files.

<sup>87</sup> To train the machine learning tool, we use large amounts of training data (articles that we identified via Factiva/Dow Jones DNA and then classified as containing or not containing information about projects financed by the official donor/lender of interest) to “teach” the algorithm to accurately classify hundreds of thousands of articles into “relevant” and “irrelevant” categories. Use of this tool significantly reduces the amount of time that researchers would otherwise spend reviewing false positives—articles that contain no information about projects financed by the official donor/lender of interest. To continuously improve the accuracy of the TUFF Robot in classifying articles as either relevant or irrelevant, we update



machine learning tool as the “TUFF Robot.” It combs through millions of search results at a rate of approximately 115,000 results per hour—or 2.7 million results a day. It categorizes search results as either “relevant” or “irrelevant” based on whether they seem to contain information about Chinese ODA- and OOF-financed projects/activities. AidData coders then review each of the Factiva articles returned by the query and Dow Jones DNA records that the machine learning algorithm has classified as “relevant” and make case-by-case determinations about whether those sources do indeed contain information about Chinese ODA- and OOF-financed projects/activities.

For each commitment year, AidData coders review approximately 32,000 articles from Factiva and 16,000 articles from Dow Jones DNA (across the full set of 165 countries in the dataset)<sup>88</sup>. Across 24 commitment years (2000-2023), this amounts to over one million articles. In order to conduct this manual review process, the coder assigned to the OCP for a specific host country will also review the news article search results for that specific country. To conduct this review in a time efficient manner, coders are advised to scan article titles, and if the title indicates the possibility that the article may contain information on Chinese ODA- or OOF-financed activities in the host country, the coder will then scan the text of the article. If the coders identify information related to Chinese ODA- or OOF-financed activities in the text of the article, they conduct a more thorough review and ensure the relevant information from the news report is added to the relevant project/activity records in AidData’s data management platform. In cases where multiple news reports provide the exact same text (e.g., republished stories from the Associated Press), coders are instructed to include only attach one of these sources to the relevant record, with the objective of identifying the article from the original news outlet that reported the information, or otherwise from the donor/creditor country news outlet or recipient country news outlet that would be more closely tied to the project/activity.

When these news databases are queried, AidData coders search for media reports that include (a) some derivation of the name of the country/government from which the financial or in-kind transfer originates; (b) some derivation of the name of the country/government to which the financial or in-kind transfer is directed; and (c) at least one keyword related to financing or development projects, such as “grant,” “loan,” or “medical team.” An illustrative set of search terms for Chinese ODA- and OOF-financed activities in Chile is provided below:

(China or chinese or chin\*) near5 (Chile or Chilean or Chile\* or Santiago) AND (assist\* or grant\* or loan\* or lend\* or lent or donat\* or donor\* or fund\* or invest\* or financ\* or economic package or development package or aid or scholarship\* or capacity building or training\* or joint\* near5 train\* or train\* near5 program\* or technical cooperat\* or exchange\* or medical team\* or experts or provid\* or provision\* or support or debt\* near5 forgive\* or debt\* near5 relie\* or debt\* near5 cancel\* or export credit\* or mixed credit\* or buyer\* credit\* or disburse\* or

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the training set each data collection cycle with all new articles that our team of coders manually sorted during the previous data collection cycle.

<sup>88</sup> In cases where Factiva returns less than 1,000 search results for a single host country in a single commitment year, we prefer to use this database for the systematic review of media articles. This database is designed to have a user-friendly interface which is ideal for this type of manual review process, and coders can easily manage the systematic review of less than 1,000 search results in this interface while working in a time-efficient manner. Performing a systematic review of thousands of search results per host country per commitment year would be too costly and less than ideal for this kind of interface, which is why in cases where Factiva returns more than 1,000 search results for a single host country in a single commitment year we employ the use of Dow Jones DNA and the TUFF Robot.

feasibility stud\* or relief effort\* or disaster relief or humanitarian relief or emergency relief or relief supplies or relief materials or sign\* near5 agreement)

The TUFF Robot uses a similar query for Dow Jones DNA but only includes some derivation of the name of the country/government from which the financial or in-kind transfer originates.

### 3.1.2 - Stage 2: Record Enhancement and Verification

In Stage 2, AidData coders populate as many “empty” dataset fields (i.e., financing and implementation details) as possible for each project/activity record that was identified in Stage 1. They also seek to corroborate key project/activity details by cross-checking them with new sources. Additionally, in Stage 2, AidData coders identify and remove duplicate project/activity records.

#### 3.1.2.1 - De-duplication and Detailed Searches

Stage 2 is undertaken in four steps:

1. Coders review information collected during Stage 1 and conduct duplicate checks to ensure that newly-generated project/activity records capture new/unique projects/activities that are not already captured elsewhere in the data management platform.
2. Coders review and seek to verify the coding and categorization determinations that were made during Stage 1 with the same set of sources that were identified during Stage 1. They also review the Staff\_Comments field to identify key information gaps that need to be addressed.
3. Coders conduct targeted searches with English, Mandarin Chinese, and local language terms. These searches include the following steps:
  - a. With English and Mandarin Chinese terms, search Chinese government sources<sup>89</sup> to verify the existence of the project/activity, dates related to key variables, the flow type, the transaction amount, and the official project/activity title in Mandarin Chinese;
  - b. With English and local language terms, search recipient government sources<sup>90</sup> to verify transaction amounts, borrowing terms, loan disbursements, locational details, and the official project/activity title in local language of the host country;

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<sup>89</sup> One example of using Chinese search terms to identify information from Chinese government sources is as follows: “site:mofcom.gov.cn 中加友谊体育场贷款.” This combination of search terms, which includes the url of a Chinese government site, the project/activity name in Chinese (Sino-Gabon Friendship Stadium), and the word “loan” in Chinese, will yield information about loans provided to fund the Sino-Gabon Friendship Stadium.

<sup>90</sup> One example of using local language search terms to identify information from host country government sources is as follows: “site:gub.uy acuerdo de cooperación económica y técnica China 2009.” This combination of search terms, which includes the url of a host country government site, the type of agreement in Spanish, the word “China” in Spanish, and the year the agreement was signed, will yield information about the Economic and Technical Cooperation agreement signed between the Chinese government and Uruguayan government in 2009.

- c. With English, Mandarin Chinese, and local language terms, search implementing agency sources<sup>91</sup> (e.g. annual reports of Chinese state-owned enterprises) to collect locational details and up-to-date information about the implementation status/progress of the project;
  - d. With English, Mandarin Chinese, and local language terms, search additional official sources (e.g. IMF Article IV report) to cross-check and verify the transaction amount, the commitment date, loan pricing details, and loan disbursement information; and
  - e. With English and local language terms, search local media to collect information about project implementation progress
4. Coders fix broken sources (hyperlinks) that were identified during Stage 1. They also update the Staff\_Comments field to flag unresolved discrepancies and key information gaps that require the attention of Stage 3 (Quality Assurance) coders.

As coders conduct these searches and identify new information, they systematically populate 175 fields for each record. The field-specific coding instructions that are given to AidData coders are detailed in Section 3.3.

### 3.1.3 - Stage 3a: Record-Level Quality Assurance

Once Stage 2 is completed for a given record, it advances to Stage 3a (Quality Assurance, or QA).<sup>92</sup> AidData coders assigned to Stage 3a should assess (a) whether a record's sources, variables, title, and description tell a coherent narrative; (b) whether the record is complete (with respect to the 175 fields in the CLG-LMIC 1.0 dataset); and (c) whether the underlying sources support the coding and categorizations determinations that were made in prior stages. Every newly created or amended record capturing Chinese official finance to low- and middle-income countries that qualifies as ODA or OOF is subjected to Stage 3a.

Stage 3a consists of a series of rigorous and systematic QA procedures that are designed to identify and eliminate common mistakes, coding errors, biases, false assumptions, and information gaps. Stage 3a coders also ensure that there is sufficient evidence from official sources to confirm key project details. AidData staff conduct Stage 3a for (a) countries receiving especially high volumes of Chinese ODA and OOF and (b) countries with many complex transactions. AidData's strongest and most experienced coders quality assure the remaining project/activities records.

- **Logical consistency:** Some fields depend on the coding of other fields. For example, a record's flow class is a function of intent, concessionality, flow type, and funding agency. Therefore, export credits by definition cannot have an ODA-like flow class, regardless of

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<sup>91</sup> One example of using English language search terms to identify information from implementing organizations' sources is as follows: "site:gwcl.com.gh China Kpong Water Supply Expansion Project." This combination of search terms, which includes the url of a local contractor's web page, the name of the financier, and the project name in English, will yield information about the Kpong Water Supply Expansion Project financed by China Eximbank in Ghana.

<sup>92</sup> Records with flow type equal to Foreign Direct Investment (FDI), Joint Venture (JV), or Official Investment undergo Stage 2 but not QA because they are excluded from AidData's final China's Loans and Grants to Low- and Middle-Income Countries Dataset, Version 1.0 (CLG-LMIC 1.0).

concessionality, because they can only have commercial or mixed intent. Stage 3a coders are responsible for resolving these logical inconsistencies.

- **Auto-fill logic:** In 2021, AidData transitioned to a new internal data management platform. One of the most consequential upgrades involved the introduction of “auto-fill logic,” which has reduced the frequency of Stage 1 and Stage 2 coding errors and made it easier for Stage 3a coders to perform logical consistency checks. For example, if Sinosure is coded as an Insurance Provider, then the Insurance Provided field automatically populates to “Yes.” In other cases, the coding of one field limits the coding options for a different field. For instance, if a private entity is coded as the Funding Agency, then only unofficial flow classes can be selected by coders.
- However, the auto-fill logic does not address record titles or descriptions, so Stage 3a coders must carefully scrutinize those fields. For example, if a description field mentions a handover ceremony for a finished project, then the Actual Completion Date field should not be blank and the Status field should be coded as Completed. If the description field mentions linked records, then those project identification numbers should be added to the same Parent ID.
- **Reduce and eliminate double counting:** In light of the fact that the TUFF methodology draws information from a range of sources and tracks Chinese officially-financed projects/activities over time, there is a risk of capturing the same transactions multiple times. AidData staff and coders eliminate instances of double-counting by deactivating duplicates and assigning some records to the Umbrella category.
  - **Duplicate checks:** During Stage 1 and Stage 2, the data management platform is searched for duplicates before further amending or creating records. Stage 3a coders practice strategic filtering and keyword searches to identify and sometimes deactivate duplicate records.
  - **Umbrella:** When a record’s Umbrella field is set to “Yes,” it usually means that it is capturing a signed financial agreement but the funds are not allocated for a specific project/purpose until a subsequent date. Umbrella records serve as a placeholder until separate, subsidiary records are created recording the entire financial breakdown. Stage 3a coders verify whether the umbrella marker is necessary or not.<sup>93</sup>
- **High value checks:** Stage 3a coders are instructed to pay special attention to records with transaction amounts over \$100 million. This means verifying the financial details in official donor/creditor and/or recipient government sources but also ensuring that the record as a whole is as close to correct and complete as possible.
- **Clarify assumptions:** Only AidData staff and coders who have demonstrated the strongest grasp of the TUFF methodology and most reliable judgment are asked to conduct QA activities because this stage requires making judgements that other coders cannot be expected to make. For example, if a loan meets the minimum requirements for assuming that it is an export buyer’s credit, the Stage 3a coder is responsible for

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<sup>93</sup> See Section 1.4 for more details on the Umbrella field.

recognizing that possibility, re-coding fields, and justifying their assumptions in the Narrative\_Description or Staff\_Comments fields.<sup>94</sup>

Once Stage 3a is complete, records are passed on to senior AidData faculty and staff for review and feedback. Those records are then passed back to AidData staff and coders for feedback incorporation and another round of QA. Stage 3a is the last comprehensive record-by-record review before regional and global checks are undertaken.

### 3.1.4 - Stage 3b: Dataset-Level Quality Assurance

Following Stage 3a, AidData staff perform a rigorous set of protocols (Stage 3b) to remove any errors and biases in order to produce the most consistent, complete and replicable dataset possible. These procedures are detailed below:

- **Targeted Review:** After a record-by-record review during Stage 3a, the dataset undergoes another layer of review that focuses on high-value projects/activities (as indicated by especially large commitment amounts). A staff member reviews all records greater than \$1 billion for accuracy and missing information. This review is meant to add an additional layer of scrutiny to ensure no additional data can be identified, field codings are correct, financial values are accurate, and no duplication of records has occurred. In addition, a staff member reviews the dataset for any incorrect inclusions or exclusions of projects/activities that could substantially influence analysis that involves aggregate financial commitment amounts.
- **Data Logical Consistency Checks:** After Stage 3a is completed and the Targeted Review is carried out, AidData staff perform a series of data checks to make sure all fields are correctly coded and to any outstanding information gaps (of special importance to analysts) are addressed. This process includes (1) reviewing variable fields such as Commitment Date, Flow Type, Flow Class, and Sector Code to ensure they were coded correctly; (2) reviewing records with Flow Type designations of Vague TBD; (3) reviewing the flow class of loan projects/records; (4) reviewing any Grants/Technical Assistance/Scholarships with non-ODA/non-OOF/non-Vague OF Flow Class designations for funding agencies that should be set as official funding agencies (thus updating the Flow Class coding); (5) reviewing records that have a status designation of Pipeline: Pledge and Pipeline: Vague *and* specific implementation dates or completion dates; (6) reviewing records with Suspended or Canceled status designations that should have been assigned to the Pipeline: Pledge category (because no financial commitment was ever issued; (7) reviewing records with Pipeline: Commitment status designations where only a framework agreement was signed; (8) reviewing any ETCAs that were assigned to the Pipeline: Pledge or Pipeline: Vague status categories; (9) reviewing any lines of credits that should not be coded as umbrella projects; (10) ensuring consistent coding between official flow type and flow class; (10) ensuring consistent coding of participating organizations (e.g. funding agencies, co-financing agencies), including their organization type and origin designations; (11) ensuring consistent application of coding guidelines to key variable fields (e.g., guidelines to estimate transaction amounts); and (12) reviewing health of record scores for each record and targeting an extra layer of review for records with lower scores on any of the 4 measures (see Appendix E for more details on the Health of Record scores).

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<sup>94</sup> See Section 2.5.3.3 for more details on these minimum requirements.

- **Extended Review:** Once the dataset has gone through all of the previously described steps, it is reviewed by a new set of AidData staff and a different cohort of external coders. These reviewers vet the dataset using various methods, including but not limited to (1) generating descriptive statistics with the dataset to identify anomalies or suspicious results; (2) comparing the dataset and the resulting financial amounts to other published estimates of Chinese development finance (or subsets thereof) to identify significant deviations from other estimates, including White Papers published by the Chinese Government and estimates published by third parties; (3) comparing individual records to official sources to ensure comprehensive and accurate coverage; (4) reviewing individual records for errors or missing data; and (5) identifying biases in the data and identify potential ways to address them.
- **Deflation & Financial Review:** To ensure the financial commitment values are comparable across years, all of these values are calculated in constant 2023 U.S. dollars using the deflation methodology that is described in Appendix D. As part of this process, potential local currency changes and revaluations are identified and the currency exchange rates are adjusted accordingly.

## 3.2 - Data Collection for High-Income Countries

The TUFF 4.0 data collection process for high-income countries is completed in the following stages: (1) source and project identification; (2) project creation, verification and enhancement, and first-level project-level quality assurance; and (3) quality assurance of the dataset as a whole by senior AidData faculty and staff. In this section, we document each of the stages which were followed to construct the 1.0 version of AidData's CLG-HIC dataset.

### 3.2.1 - Stage 1: Identifying New Projects and Sources

The objective of this step is to first identify the universe of Chinese officially financed projects and/or activities. This is done on a host country-by-host country basis, so each step of Stage 1 is repeated for each of the 84 countries and territories included in the CLG-HIC 1.0 dataset (i.e., countries for which systematic searches are completed, although projects/activities are not identified for all 84 countries). Different from the CLG-LMIC 1.0 dataset, the CLG-HIC 1.0 dataset covers countries which have been high-income for decades (traditional Global North countries and resource-endowed countries) and more recently graduated high income countries. Therefore, different approaches are warranted for the project identification process:

1. **Graduating High-Income Countries:** These were previously lower-middle-income countries (e.g. Argentina, Chile, Bahamas) and have attained the World Bank Income Status of High Income over the duration of the 24-year temporal coverage. Therefore, the project identification process is similar to the LMIC identification process, and relies primarily on Chinese and recipient government sources for data extraction. Empirical evidence shows that China provides official development finance, in addition to commercial finance, to these countries. In previous iterations of AidData's datasets tracking Chinese loans and grants, these countries were reported alongside countries that were low- or middle-income countries in 2000.
  - a. Coders review a catalogue of official sources that AidData faculty and staff have assembled in order to (a) identify projects/activities that are supported by official

sector institutions in China and consistent with the definitions of official finance; and (b) document any basic/foundational information about these projects/activities (e.g., funding agency, receiving agency, commitment year, transaction amount) that is specified by these official sources.

2. **Established High-Income Countries:** These countries had a World Bank Income Status of High Income over the entire duration of the 24-year temporal coverage and thus had not been included in the low- and middle-income data collection processes previously conducted by AidData. These countries overwhelmingly receive financial commitments from Chinese official sector institutions in the form of commercial finance to private entities, with occasional public sector borrowings, primarily concentrated in specific jurisdictions. With vast economies and very few single sources for AidData to easily identify multiple projects or activities, the data collection process used for AidData's low- and middle-income country datasets was not appropriate. Therefore, in lieu of Chinese and recipient government sources, AidData utilizes a network of decentralized sources, including the borrowing company's reporting and industry media, as well as specialized search techniques, to identify and create records. AidData continues to utilize Chinese and recipient government (official) sources to identify small-scale Chinese grant projects.

A description of each of these steps is detailed in the next section.

#### 3.2.1.1 Official Country Profiles (OCPs) for Graduating High-Income Countries

Because China has previously provided development finance to these graduating high-income countries and AidData had successfully captured that finance using its LMIC methodology, AidData continues to use that LMIC methodology for project identification for these countries. Prior to the identification stage, AidData faculty and staff create or update an Official Country Profile (OCP) for each host country. The OCP is a catalogue of all known official sources that may provide information about Chinese officially financed projects and/or activities in a given country. Each OCP identifies websites, documents, and datasets from official sources, such as the Chinese government, recipient entities and the government, and official sector entities with international aid and debt monitoring responsibilities (e.g., the World Bank and the IMF). On average, each host country's OCP includes around 100 sources.

- Each OCP includes key Chinese government sources, such as the Chinese Embassy and Economic and Commercial Counselor (ECCO) websites in the given host country, MOFCOM investment guides, and the annual reports of Chinese state-owned banks and state-owned companies. These sources typically demonstrate that a project/activity exists; provide precise official commitment dates and project implementation start and end dates (e.g., the calendar days on which the loan agreement was signed and construction started/ended); identify an official project title (in Mandarin Chinese); and provide information about the funding agency, the receiving agency, and/or the nature of the flow type (e.g., a preferential buyer's credit from China Eximbank was issued to the Ministry of Finance in the host country to support the project).
- Every country's OCP identifies key recipient government sources, such as the Ministry of Foreign Affairs website, the debt registry and budget documents of the Ministry of Finance, government registers and gazettes that publish information about foreign loan and grant agreements, the government's aid and debt information management

system, and the websites of legislative and executive oversight institutions in host countries (e.g. Public Accounts Committee, Office of the Auditor General). These sources often identify official commitment dates, funding agencies, receiving agencies, transaction amounts, borrowing terms, information about the timing and value of disbursements, information about project implementation progress (including but not limited to construction start and end dates), and official project titles in local languages.

- Official sources that are not from the Chinese government or recipient government—like International Monetary Fund’s (IMF) Article IV Staff Reports—also appear in each country’s OCP.
- Additional sources include major implementing organizations and Chinese state-owned enterprises operating in the host country, as well as government-affiliated media and/or major media outlets in the host country. These sources typically provide supplemental information about a project’s implementation progress.

Coders are instructed to take a source-specific approach to data collection, which means that they retrieve information from one official source at a time, compiling an initial project list that is de-duplicated as they review additional official sources

Within each OCP, AidData faculty and staff provide coders with specific descriptions of each official source and source-specific instructions, which is important because these sources often contain a great deal of information that is *not* related to Chinese officially financed projects/activities.<sup>95</sup> Therefore, AidData faculty and staff review each source in advance and specify which particular sections require the attention of coders.

### 3.2.1.2 - Official Country Profiles (OCPs) for Established High-Income Countries

AidData faculty and staff created an Official Country Profile (OCP) for each established high-income or otherwise ODA-ineligible host country, which is reviewed and updated for each cycle of data collection. The OCP is a catalogue of all known sources that may provide information regarding financial or in-kind commitments from Chinese official sector institutions to a given host country. The OCPs for established high-income countries typically rely more on the official reports, media, and other disclosures from the direct receiving agencies (borrowing institutions) as compared to the OCPs for low- and middle-income host countries. The OCPs also include websites, documents, and datasets from Chinese and host country official sources. The CLG-HIC 1.0 version of the dataset marks AidData’s first iteration of systematic data collection for established high-income countries. Key methodological differences between this data collection effort and past methodologies are outlined below, as broken into loans and grants.

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<sup>95</sup> AidData researchers update the OCPs on an annual basis as additional sources are identified or become available. OCPs for the 3.0 dataset contained about 100 sources each, whereas OCPs for the CLG-Global 1.0 dataset included more sources on average. The latest OCPs also contain archived records from previous OCPs so that country-specific data collection information, advice, and challenges can be passed on to future coding teams.



### 3.2.1.2.1 - Loans

Chinese state-backed lenders pursue distinct strategies in established high-income countries compared to lower-income counterparts when it comes to official finance: many financial transactions are commercial in nature and are between a Chinese state-owned lender, often in syndication, and a foreign private entity, rather than a state-owned enterprise or the host government. It follows that the diminished role of the host government in most established high-income countries means that there is almost never a centralized source of comprehensive data on Chinese official lending to said government. As a result, the OCPs for established high-income countries rely more on the media and disclosures from the direct receiving agencies themselves to unlock the more disparate pieces of information on transactions.

To begin the source-gathering process, AidData staff utilize both publicly and privately available information gathered from industry media. The industry media across various sectors such as law, finance, aviation, realty, manufacturing, energy, and mining report large quantities of data, both proprietary and public, describing financial transactions for many companies and entities globally. As Chinese state-owned lenders are globally significant banks and participate in cross-border transactions extensively and these sources tend to cut across geographies, they are among the most useful in identifying potential instances of financial and in-kind commitments from official sector institutions in China.

Then, AidData staff conduct searches in these sources for evidence of financial or in-kind commitments from Chinese official sector institutions in the established high-income countries. AidData staff filters for well-known Chinese state-owned banks such as China Eximbank, China Development, ICBC, Bank of China, etc. These sources often yield partial information on Chinese official financial transactions to companies. AidData staff then build the country OCPs by compiling the individual financial transactions by year and by specific company or entity.

Following an examination of the initial industry media batch, AidData staff then conducts searches on the open Internet to complement the sources from industry media. AidData uses specific search terms to identify financial or in-kind commitments from Chinese official sector institutions, focusing on the state-owned commercial and policy banks, which overwhelmingly provide official financing to established high-income countries. Searches such as “Bank of China” AND “term loan” reveal a plethora of potential loans, and when going by country-of-activity, AidData will include specific search terms to draw out finance (i.e. including a country’s name, its capital city, or a specific industry crucial to its economy). AidData not only uses such methods to find instances of financial commitments from Chinese official sector institutions, but to further enrich cases it has previously identified. For example: AidData finds an international law firm’s website where it states that the firm provided legal support to ICBC for a battery project in Hungary without providing further detail. AidData then conducts targeted searches to find the specific transaction information on the Internet in Mandarin Chinese, English and Hungarian. When there is evidence that a private company received financing from a Chinese official sector institution in a given year, AidData staff endeavor to find more records of financial commitments from Chinese official sector institutions for this company in other years, as many borrowers are serial customers to Chinese banks.

During this process, AidData staff specifically searches from the following sources:

1. **Regulatory agency websites for mandated financial disclosures:** Certain countries have government agencies that record publicly-listed companies’ finances, including

disclosures of debt-related activities (i.e. signing of a loan facility or the pledge of collateral). For instance, the U.S. Securities and Exchange Commission (SEC) provides invaluable insights into financing from Chinese official sector institutions by disclosing information on publicly registered companies. Publicly-listed companies in the U.S. are required to disclose their new debts and credit agreements. To search for a particular financial transaction involving Chinese banks, AidData staff uses the keywords `site:gov.sec "Company name + financial agreement name + date of agreement"`. Example: `site:sec.gov "General Motors" AND "five year revolving credit facility" AND "dated February 22, 2020"`. Other regulatory regimes that AidData conducted specialized searches for included the United Kingdom Companies House and Australian Securities Exchange documents. While regulatory regimes are based in certain jurisdictions that are thus primarily useful in finding activities in the relevant Country\_of\_Activity, it is not unusual for multinational corporations, due to secondary stock listings (such as American depositary receipts (ADRs)) or other legal requirements, to disclose their finances to the regulatory regime of a country that differs from their own legal incorporation and headquarters. For example, while Toyota Motor Corporation is incorporated and based in Japan, due to its New York Stock Exchange listing, it must file to the U.S. SEC. In other cases, the collateral registries of a given country will capture a pledge of collateral in that country to a loan agreement otherwise used in a second country, as lenders and borrowers sometimes prefer more stable, internationally-standard regulatory regimes (particularly the laws of the State of New York and English law) to ensure a loan contract is enforceable.

2. **Company financial reports and press releases:** Certain countries have financial disclosure requirements by type and year. For example, the United States requires publicly-listed companies to issue updates when the companies enter into new credit agreements. AidData staff are instructed to use Ctrl+F search functions in individual companies' submissions such as the Annual Reports, Form 10-Q Quarterly Reports and Form 8-K Current Reports. Example: search "Freeport-McMoran SEC" to access the company's financial disclosure page. Then, if AidData coders have information about a Chinese financial transaction some time in July 2015, coders are instructed to read the quarterly report that covers July 2015 and search for Chinese financing. Coders are instructed to read all 8-K Current Reports in July 2015 to find specific financing details if the quarterly reports do not yield useful information. Alternatively, many established high-income countries (e.g. members of the European Union, Canada, and Saudi Arabia) implement the International Financial Reporting Standards (IFRS) that mandate companies to provide certain information about new loans.
3. **Court documents:** Occasionally, a particular activity will become involved in a lawsuit or other legal proceeding, providing further information on Chinese loans associated with such activity. AidData coders utilize resources such as `govinfo.gov` and `Justia law` to find legal judgments involving Chinese banks and the recipient companies in the United States or conduct open Internet searches with terms likely to capture any proceedings (i.e. hearing, plaintiff, etc. combined with the names of relevant Chinese banks) to uncover these documents.
4. **International and local media:** AidData coders use English, Chinese, and local languages to search for additional information on specific media sites. These supplement industry media searches, but narrow on a particular country to ensure that

each has been adequately scrapped for records. Should AidData find information on a particular loan that would likely be present in the previously-scrapped sources, AidData coders are instructed to return to those sources armed with this new information to ensure there were no errors of omission.

#### 3.2.1.2.2 - Grants and technical assistance

This process is very similar to the LMIC data collection process for Chinese grants. AidData coders are instructed to create a separate tab for non-loan projects. This tab identifies websites, documents, and datasets from official sources, such as the Chinese government and the recipient entity and the government, including Chinese Embassy websites. Additionally, wider searches on the open Internet, using search phrases such as “China” AND “Donation” AND “[country name]” supplement the OCP process and any blindspots innate to those repositories.

### 3.2.2 - Stage 2: Record Creation, Enhancement, Verification, and First Round Review

In this step, AidData coders utilize the sources to check for duplicate projects or activities and create unique records. The coders are instructed to populate all dataset fields and seek to corroborate key project details by cross-checking them with new sources. AidData staff also conduct the first round of review for individual projects.

#### 3.2.2.1 - De-duplication and Record Creation

1. Coders review the project information collected and conduct duplicate checks to ensure that the records they seek to create are not already captured elsewhere in the data management platform (for CLG-HIC 1.0, as a novel dataset, most of the countries included had no existing records, meaning duplication risk was substantially only present for the newly identified cases of financing, not existing ones).
2. Coders create the individual records and seek to verify the coding and categorization determinations with the same set of newly identified sources.
3. Coders conduct more searches with English, Mandarin Chinese, and local language terms to fill in missing variables or resolve any disputes between sources.

For graduating high-income countries, the searches are identical to the method used in LMIC methodology, and include the following steps:

- a. With English and Mandarin Chinese terms, search Chinese government and state-owned media sources<sup>96</sup> to verify the existence of the project/activity, dates related to key variables, the flow type, the transaction amount, and the official project title in Mandarin Chinese;

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<sup>96</sup> One example of using Chinese search terms to identify information from Chinese government sources is as follows: “site:mofcom.gov.cn 匈塞铁路贷款.” This combination of search terms, which includes the url of a Chinese government site, the project name in Chinese (Hungarian-Serbian railroads), and the word “loan” in Chinese, will yield information about loans provided to fund the Hungarian-Serbian railroads.

- b. With English and local language terms, search recipient government sources<sup>97</sup> to verify transaction amounts, borrowing terms, loan disbursements, locational details, and the official project title in local language of the host country;
- c. With English, Mandarin Chinese, and local language terms, search implementing agency sources<sup>98</sup> (e.g. annual reports of relevant Chinese state-owned enterprises) to collect locational details and up-to-date information about the implementation status/progress of the project;
- d. With English, Mandarin Chinese, and local language terms, search additional official sources to cross-check and verify the transaction amount, the commitment date, loan pricing details, and loan disbursement information; and
- e. With English and local language terms, search local media to collect information about project implementation progress.

For established high-income countries, the searches include the following steps:

- a. For corporate finance: with English and local language terms, search for financial commitments from Chinese official sector institutions in other years for the specific company or entity. When a Chinese bank provides loans to a company in one year, it is likely that it provides financing in other years. Coders should read documents including in-country legal reporting (for example United States Securities and Exchange Commission (SEC) filings for the borrowing company's self-reported information.
- b. For infrastructure finance: with English, Mandarin Chinese, and local language terms, search for more information about the projects and ensure the existing coding is correct.
4. Coders are also to populate the Staff\_Comments field and flag unresolved discrepancies and key information gaps that require the attention of Quality Assurance coders.

As coders conduct these searches and identify new information, they systematically populate 175 fields for each record. That process and the field-specific coding instructions that are given to AidData coders are detailed in Section 3.3.

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<sup>97</sup> One example of using local language search terms to identify information from recipient government sources is as follows: "site:gub.uy acuerdo de cooperación económica y técnica China 2009." This combination of search terms, which includes the url of a recipient government site, the type of agreement in Spanish, the word "China" in Spanish, and the year the agreement was signed, will yield information about the Economic and Technical Cooperation agreement signed between the Chinese government and Uruguayan government in 2009.

<sup>98</sup> One example of using English language search terms to identify information from implementing organizations' sources is as follows: "site:gwcl.com.gh China Kpong Water Supply Expansion Project." This combination of search terms, which includes the url of a local contractor's web page, the name of the financier, and the project name in English, will yield information about the Kpong Water Supply Expansion Project financed by China Eximbank in Ghana.

### 3.2.2.2 - Project-Level Quality Assurance

Once a record is created and verified, it advances to Quality Assurance (QA). Highly trained AidData staff assigned to this step should assess (a) whether a record's sources, variables, title, and description tell a coherent narrative; (b) whether the record is complete (with respect to the 175 fields in the 4.0 dataset); and (c) whether the underlying sources support the coding and categorizations determinations that were made in prior stages.

The process consists of a series of rigorous and systematic QA procedures that are designed to identify and eliminate common mistakes, coding errors, biases, false assumptions, and information gaps. The coders also ensure that there is sufficient evidence from official sources to confirm key project details. AidData staff conduct for (a) countries receiving especially high volumes of financial and in-kind commitments from official sector institutions in China and (b) and countries with many complex transactions. AidData's strongest and most experienced coders quality assure the remaining project/activities records.

- **Logical consistency:** Some fields depend on the coding of other fields. For example, the presence of an agency with the role `Collateral_Provider` automatically marks the 'Collateralized' field as True. Quality Assurance coders are responsible for resolving these logical inconsistencies.
  - **Auto-fill logic:** In 2021, AidData transitioned to a new internal data management platform. One of the most consequential upgrades involved the introduction of "auto-fill logic," which has reduced the frequency of Stage 1 and Stage 2 coding errors and made it easier for Quality Assurance coders to perform logical consistency checks. For example, if Sinosure is coded as an Insurance Provider, then the Insurance Provided field automatically populates to "Yes." In other cases, the coding of one field limits the coding options for a different field. For instance, if a private entity is coded as the Funding Agency, then only unofficial flow classes can be selected by coders.
  - However, the auto-fill logic does not address record titles or descriptions, so quality assurance coders must carefully scrutinize those fields. For example, if a description field mentions a handover ceremony for a finished project, then the Actual Completion Date field should not be blank and the Status field should be coded as Completed. If the description field mentions linked records, then those record identification numbers should be added to a common Parent ID.
  - For established high-income countries, the Loan categorization section on AidData's management platform is crucial. Quality Assurance coders must carefully scrutinize those fields, as in many cases several ones will have to be marked as True. For example, if a description field mentions the loan is a revolving credit facility loan that refinances Chinese debt, the "RCF", "Refinancing" and "Refinances Chinese Official Debt" flags must be checked.
- **Reduce and eliminate double counting:** In light of the fact that the TUFF methodology draws information from a range of sources and tracks Chinese officially-financed projects/activities over time, there is a risk of capturing the same transactions multiple times. AidData staff and coders eliminate instances of double-counting by deactivating duplicates and assigning some records to the Umbrella category.

- Duplicate checks: During the earlier portion of data collection, the data management platform is searched for duplicates before further amending or creating records. Quality assurance coders practice strategic filtering and keyword searches to identify and sometimes deactivate duplicate records.
- Umbrella: When a record's Umbrella field is set to "Yes," it usually means that it is capturing a signed financial agreement but the funds are not allocated for a specific project/purpose until a subsequent date. Umbrella records serve as a placeholder until separate, subsidiary records are created recording the entire financial breakdown. Quality Assurance coders verify whether the umbrella marker is necessary or not.<sup>99</sup>
- High value checks: quality assurance coders are instructed to pay special attention to records with transaction amounts over \$100 million. This means verifying the financial details in official donor/creditor and/or recipient government sources but also ensuring that the record as a whole is as close to correct and complete as possible.
- Clarify assumptions: Only AidData staff and coders who have demonstrated the strongest grasp of the TUFF methodology and most reliable judgment are asked to conduct QA activities because this stage requires making judgements that other coders cannot be expected to make. For example, if a loan meets the minimum requirements for assuming that it is an export buyer's credit, the Quality Assurance coder is responsible for recognizing that possibility, re-coding fields, and justifying their assumptions in the Narrative\_Description or Staff\_Comments fields.<sup>100</sup>

Once project-level quality assurance is complete, records are passed on to senior AidData faculty and staff for review and feedback. Those records are then passed back to AidData staff and coders for feedback incorporation and another round of QA. This is the last comprehensive record-by-record review before regional and global checks are undertaken.

### 3.2.3 - Stage 3: Dataset-Level Quality Assurance

Following Quality Assurance, AidData staff perform a rigorous set of protocols to remove any errors and biases in order to produce the most consistent, complete and replicable dataset possible. These procedures are detailed below:

- Targeted Review: After a record-by-record review during Quality Assurance, the dataset undergoes another layer of review that focuses on high-value projects/activities (as indicated by especially large commitment amounts). A staff member reviews all records greater than \$1 billion for accuracy and missing information. This review is meant to add an additional layer of scrutiny to ensure no additional data can be identified, field codings are correct, financial values are accurate, and no duplication of records has occurred. A staff member will also review any records still marked as "suspicious" after the QA stage and update records as needed. In addition, a staff member reviews the dataset for any incorrect inclusions or exclusions of projects/activities that could substantially influence analysis that involves aggregate financial commitment amounts.

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<sup>99</sup> See Section 1.4 for more details on the Umbrella field.

<sup>100</sup> See Section 2.5.3.3 for more details on these minimum requirements.

- Data Logical Consistency Checks:** After Quality Assurance is completed and the Targeted Review is carried out, AidData staff perform a series of data checks to make sure all fields are correctly coded and to any outstanding information gaps (of special importance to analysts) are addressed. This process include (1) reviewing variable fields such as Commitment Date, Flow Type, Flow Class, and Sector Code that were not coded; (2) reviewing records with Flow Type designations of Vague TBD; (3) reviewing the flow class of loan projects/records; (4) reviewing any Grants/Technical Assistance/Scholarships with non official finance flow class designations for funding agencies that should be set as official funding agencies (thus updating the Flow Class coding); (5) reviewing records that have a status designation of Pipeline: Pledge and Pipeline: Vague *and* specific implementation dates or completion dates; (6) reviewing records with Suspended or Canceled status designations that should have been assigned to the Pipeline: Pledge category (because no financial commitment was ever issued); (7) reviewing records with Pipeline: Commitment stage designations where only a framework agreement was signed; (8) reviewing any ETCAs that were assigned to the Pipeline: Pledge or Pipeline: Vague status categories; (9) reviewing any lines of credits that should not be coded as umbrella projects; (10) ensuring consistent coding between official flow type and flow class; (10) ensuring consistent coding of participating organizations (e.g. funding agencies, co-financing agencies), including their organization type and origin designations; (11) ensuring consistent application of coding guidelines to key variable fields (e.g., guidelines to estimate transaction amounts); and (12) reviewing health of record scores for each record and targeting an extra layer of review for records with lower scores on any of the 4 measures (see Appendix E for more details on the Health of Record scores).
- Extended Review:** Once the dataset has gone through all of the previously described steps, it is reviewed by a new set of AidData staff and a different cohort of external coders. These reviewers vet the dataset using various methods, including but not limited to (1) generating descriptive statistics with the dataset to identify anomalies or suspicious results; (2) comparing the dataset and the resulting financial amounts to other published estimates of Chinese loans and grants (or subsets thereof) to identify significant deviations from other estimates, including estimations from the Bank of International Settlements (BIS); (3) comparing individual records to official sources to ensure comprehensive and accurate coverage; (4) reviewing individual records for errors or missing data; and (5) identifying biases in the data and identify potential ways to address them.
- Deflation & Financial Review:** To ensure the financial commitment values are comparable across years, all of these values are calculated in constant 2023 U.S. dollars using the deflation methodology that is described in Appendix D. As part of this process, potential local currency changes and revaluations are identified and the currency exchange rates are adjusted accordingly.

### 3.3 - Coding Guidance for Dataset Variables

AidData coders seek to accurately populate all 175 fields (variables) according to the TUFF 4.0 methodology for each record. See Section 1.4 for a complete set of field names and

definitions. AidData coders are instructed to adhere to the following guidelines in order to populate variable fields:

- **Umbrella marker (Yes/No):** There are two primary reasons a project and/or activity record's Umbrella field can be set to "Yes": (1) to avoid double counting commitment amounts across the dataset; and (2) to capture an overarching agreement/pledge of funding that ultimately leads to multiple, subsidiary projects (such as a master loan facility, an Economic and Technical Cooperation Agreement (ETCA), or a framework agreement). The most common types of umbrella projects involve (a) debt forgiveness of loans that were contracted (or may have been contracted) during the 2000-2023 period (and thus may be captured elsewhere in the dataset); and (b) grants/interest-free loans issued through ETCA's for unspecified purposes/projects (which since multiple, unknown projects may have been financed through these agreements, which creates a risk of double-counting of other projects and commitment amounts). There are also a few exceptions where AidData coders confirmed the complete disbursement of a large line of credit, but could not identify the full range of sub-projects.<sup>101</sup> Umbrella records should be linked to related project/activity records through an AidData Parent ID (or IDs) and the description fields by a reference to their unique identification numbers (AidData\_Record\_ID).
- **Commitment Year:** The commitment year field captures the year in which an official financial commitment (or official commitment to provide in-kind support) was codified through the signing of a formal agreement by an official donor/lender in China and one or more entities in a host country or a set of host countries. Whenever possible, this field is based on the precise calendar day when the official commitment was issued, which is captured in the Commitment\_Date field. However, in some cases, the official commitment date is unknown. In such cases, the commitment year is based on whichever proxy is used for the commitment date. The process for identifying a proxy date is explained in the 'Commitment Date/Commitment Date Estimated' section. For projects/activities that are assigned to the "Pipeline: Pledge" status category, the commitment year will reflect the year in which the informal pledge was announced.
- **Commitment Date/Commitment Date Estimated:** The Commitment\_Date field captures the date on which an official donor/lender in China and one or more entities in a host country or set of host countries makes an official financial commitment (or official commitment to provide in-kind support) by signing a formal agreement. When the month, day, and year of the formal signed commitment are all known, it is recorded in the commitment date field. If the precise month, day, and/or year is unknown, AidData use the following proxies to estimate the commitment date: (1) The first day of a known month in a known year if we do not know the day (i.e. 04/01/2017); (2) January 1st of a known year if we do not know the month or day (i.e. 01/01/2017); (3) the first day, first month, and first year of a central bank's financial fiscal year (i.e. the State Bank of Pakistan's financial fiscal year is from July 1 to June 30 so AidData would code July 1 of the first calendar year as the estimated commitment date) if the fiscal year is known but the month, day, and year of the signed financial agreement is unknown; (4) the first year

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<sup>101</sup> In these rare and specific cases (for example, Record ID#66806), AidData coders have marked the main commitment/disbursement project as a non-umbrella project, and removed the transaction amount from any individual subsidiary projects to avoid double-counting. This coding decision will be documented in the Staff\_Comments field.



of project implementation if the month, day, and year of the signed financial agreement are unknown; (5) the year in which the underlying commercial contract (supported by the official financial commitment) was signed if the month, day, and year of the signed financial agreement are unknown; (6) the first year in which an informal pledge was made if the month, day, and year of the signed financial agreement are unknown.

- If any of these proxies are used to estimate the commitment date, the Commitment\_Date\_Estimated field is set to "Yes." For projects that are assigned to the "Pipeline: Pledge" status category, AidData coders are instructed to record the date on which the informal pledge was announced.
- **Title:** In this field, AidData coders are instructed to include the following information when they create or edit a record title: the funding agency name, the flow type (e.g., loan, grant, debt rescheduling, technical assistance), the commitment amount (if applicable), and the formal English-language project title. If a formal English-language project title is unavailable, the purpose of the transfer is identified. For example: "China Eximbank provides \$1.875 billion preferential buyer's credit for Budapest–Kunszentmiklós–Tass–Kelebia Section of Hungarian-Serbian Railway Modernization and Reconstruction Project".
- **Description:** AidData coders are instructed to include the following information when they are creating or editing the description field:
  - *Basic project/activity information.* Coders should identify the funding agencies, direct and indirect receiving agencies, the amount of funding they officially committed for the project/activity, the currency of denomination, the type of financial agreement that was signed, the official commitment date, and a description of the purpose of the funding. Sometimes this is straightforward (e.g., a grant to build a hospital). However, at times, the financial commitment indirectly supports a project/activity (e.g., a loan is issued to a company which then invests in a project/activity). In such cases, coders are instructed to clearly document how the financing is used, and for what purposes.
  - *Financial details.* Coders should identify the specific terms and conditions that govern the financing agreement, the timing and monetary value of commercial contracts and financial disbursements, and the existence of any special arrangements (such as on-lending agreements or offshore escrow accounts into which project revenues must be deposited).
  - *Physical implementation details.* Coders should provide a description of major project/activity events and the precise calendar dates when they took place (e.g., commercial contract signing date, implementation start date, project completion date, commercial operations date, and major milestones such as when a project passes a midterm or final inspection by the funding agency). Additionally, coders should identify all implementing agencies, co-financing agencies, receiving agencies, or accountable agencies.
  - *Financial implementation details.* Whenever possible for loan records, coders should record loan disbursement rate, debt repayment schedule, outstanding debt amount, any events of default, maturity extension, and point to any debt

cancellation or debt restructuring records related to this project/activity. (e.g., The \$2.9 billion USD syndicated facility was fully drawn (disbursed) at its 2009 inception. In 2012, Yancoal Australia repaid \$100 million USD of the \$2.9 billion USD facility to CDB. In 2013, it repaid \$100 million USD; in 2014, it repaid \$99 million USD. As of December 31, 2015, the outstanding balance was down to \$2,600,000,000 USD. In 2017, Yancoal repaid \$150 million USD under the syndicated facility, reducing the balance to \$2.450 billion USD. On September 17, 2018, it repaid \$75 million USD; on October 17, 2018, it repaid \$50 million USD, lowering the outstanding balance to \$1.525 billion USD.)

- *Geographical information.* Coders should record geographical details that accurately and precisely document the project's physical footprint, including location names and types; the position or distance of the project's location vis-à-vis other geographical features. (e.g., The new 12-kilometer long, 19-stop light rail line, known as the CBD and South East Light Rail (CSELR) stretches from the Central Business District (CDB) and south-east Sydney that would run from Circular Quay through Surry Hills to Sydney Central Station on George Street, and then Moore Park before dividing to serve via Alison Road and High Street the Prince of Wales Hospital at Randwick as the L2 Randwick Line and, via Anzac Parade, Kensington and the University of New South Wales in Kingsford as L3 Kingsford Line featuring 19 stops. More detailed locational information can be found at: Inner West Light Rail: <https://www.openstreetmap.org/relation/964748>)
- *Name the sources.* When key project/activity details are provided in the description (e.g., transaction amounts, commitment years), coders should identify the specific source or sources which provide such information. Example: According to the Form 8-K by General Motors Company in August 2018, GMC signed a \$2 billion syndicated loan with 32 international banks, including Bank of China and ICBC for debt refinancing purposes. The loan carries the following borrowing terms: 5 year maturity and an interest rate of LIBOR plus an applicable margin based on the company's credit ratings.
- *Risks, Achievements, Failures, and Setbacks.* Whenever possible, coders should include a detailed overview of the various challenges that arose during project design and implementation (such as controversies, strikes, riots, public protests, wars, corruption scandals, natural disasters, public health restrictions, political transitions, bankruptcies, debt defaults, contractual disputes, lawsuits, and ruptures in diplomatic relations) and how funding, receiving, implementing, and accountable institutions responded to these challenges. Additionally, the description should include information about project achievements and failures, contractor performance vis-à-vis deadlines and deliverables, and findings from project audits and evaluations.
- **Parent\_ID:** This field contains a unique ID meant to capture the linkages between project/activity records. All project/activity records that are related to each other are assigned to a common Parent ID. Coders are instructed to assign records to a common Parent ID number under the following circumstances:
  - *Linking all records related to one project, including multiple phases of the same project, or one distinct activity*

- This type of Parent ID incorporates all loan and grant project activity/records related to a certain project or distinct activity. It links under one identifier various construction phases, any new reconstruction/repair projects, separate loans that support the acquisition of shares in the same company, and/or any grants related to a certain project or activity
- E.g. Parent ID #764 captures loans for the Lusaka Urban Roads Upgrade Project
- *Linking all records that capture PPG loans in a given country affected by China's participation in the G20's Debt Service Suspension Initiative (DSSI) or other separate debt suspension initiatives;*
  - For countries that only have broad country-level debt suspension initiatives and no loan-level suspension records:
    - Coders are instructed to create a Parent ID with the Parent ID Description "China's Debt Suspension Actions in [X country] as part of [X initiative]" and link the initiative level debt suspension records together
      - E.g. Parent ID #3824 connects both of China's broad DSSI suspension period records in 2021 in Dominica. It does not capture any loan-level debt suspension records as none have currently been found.
  - For countries that have broad country-level debt suspension initiative records as well as loan-level suspension records, coders follow a layered approach. Coders create a broader Parent ID as specified above linking all initiative related suspension records for a country of activity together. Then coders should create additional narrower Parent IDs to link relevant loan-level suspension records that fall under the broader country-level suspension records. In a DSSI context, coders are instructed to create a Parent ID for applicable DSSI suspension periods (2020, early 2021 and late 2021) to link all loan-level DSSI records and the broader suspension records in each applicable period.
    - E.g. For Pakistan, the broader Parent ID #3342 with the description "China's short-term debt suspension action in Pakistan in response to COVID-19" connects all 15 records relating to that short-term debt suspension initiative in Pakistan (both the broad suspension records and loan-level records) together. This is the Parent ID that links all records related to the debt suspension initiative together.
      - The narrower Parent ID #3850 "China's Short-term Debt Suspension Actions in response to COVID-19 for DSSI period 2 between January-June 2021" links all loan-level DSSI suspensions that occurred between January-June 2021(13 records) to the relevant broad suspension level record. This is the parent ID that links a specific group of loan-level records together.
- *Linking instances of recurring scholarships/technical assistance to a particular country*
  - E.g. Parent ID #644 capturing the Chinese Ambassador Scholarship in Namibia

- *Linking Confucius Institute-sponsored activities in a particular country*
  - E.g. Parent ID #1554, Activities related to Confucius Institutes in Burundi
- *Linking records that capture financing from the same special fund*
  - E.g. Parent ID #30, Lancang-Mekong Cooperation (LMC) Special Fund
- *Linking overarching financing agreements and financing for subsidiary projects/activities*
  - Coders are instructed to create Parent IDs linking ETCAs and any known subsidiary projects, as well as create Parent IDs for master financing agreements and their sub-records.
    - E.g., Parent ID #1236, borrowings under \$2 billion Master Project Support Agreement (MPSA) with Sinohydro, which links the record capturing Ghana's master financing agreement (record #60154) with resulting subsidiary loan agreements.
- *Linking serial borrowing from the same lender by the same direct receiving agency for the same purpose*
  - This type of Parent ID primarily includes working capital or liquidity support facilities repeatedly provided by one lender to one company.
  - E.g. Parent ID #4156, ICBC pre-export finance loans to Pan American Energy
- *Linking a refinancing to the loans that were refinanced*
  - E.g. Parent ID #2115, Pakistan's serial \$500 million borrowings via SAFE (June 27-June 27)
- *A loan record to another loan record for its upsizing (exclusive to the CLG-HIC 1.0 dataset)*
  - E.g. Parent ID #5168, Upsizing and extension of syndicated loan to Fortescue Metals Group for refinancing and repaying existing debt
- The Parent ID field is not used to create a linkage between project/activity records where multiple official sector financiers from China contributed to the same syndicated loan and/or contributed to multiple tranches of the same loan; these linkages are instead established through the Loan\_Event\_ID field. Nor is the Parent\_ID field used to create a linkage between an instance of debt rescheduling/debt forgiveness and the corresponding loan(s) being rescheduled/forgiven; coders are instructed to capture such linkages through the Rescheduled\_Loan\_Record\_ID and Rescheduling\_Event\_ID fields.
- When creating a Parent ID, coders are instructed to write a short description of the linkage in the Parent\_ID\_Description field.
- **Loan\_Event\_ID:** This field captures the unique identification number for each Loan Event, where a Loan Event is the commitment or pledge of a bilateral or syndicated loan. In cases where an AidData Record is capturing a bilateral loan, coders are instructed to create a Loan Event ID that will only apply to that AidData Record. For example, Loan Event ID #6808, "China Eximbank provides RMB 400 million loan for Phase 3 of Nouadhibou Fishing Port Project" contains only Record ID #97756, the aforementioned China Eximbank loan.

Similarly, in cases where an AidData Record is capturing a contribution by a Chinese state-owned funder to a syndicated loan, and there is no other contribution made to that syndicated loan by another Chinese state-owned lender, coders are instructed to

create a Loan Event ID that will only apply to that AidData Record. As an example, Loan Event ID #7520, "CCB contribution to August 2022 \$1.35 billion USD syndicated sustainability-linked revolving credit facility to Brambles for refinancing purposes" contains only Record ID #101866, which captures China Construction Bank's contribution to a syndicated loan that had no other Chinese state-owned lender participation.

When multiple project/activity records pertain to the same Loan Event, those project/activity records share a Loan Event ID number, in effect linking them together. Multiple project/activity records should be linked together via a Loan Event ID when:

- Multiple state-owned financiers from China contributed to the same syndicated loan and their respective contributions to the loan are captured via separate records. For example, Loan Event ID #813, "Bank of China and ICBC contributions to USD 1.5 billion syndicated pre-export term facility agreement for general corporate purposes for Sociedade Nacional de Combustiveis de Angola" contains two records, Record IDs #105643 and #105667 which respectively capture Bank of China and ICBC's contributions to the term facility.
- One or more state-owned financiers from China contributed to more than one tranche of the same syndicated loan, and different loan tranches are captured via separate records. An example would be Loan Event ID #482 "December 2022 £710 million GBP syndicated loan to PD Ports for refinancing purposes in the United Kingdom" which contains Record IDs #101115, #101116, and #101117 which capture ICBC's contributions to three different tranches of the 710 million GBP syndicated loan.
- There are multiple Chinese state-owned sector institutions contributing to multiple tranches of the same syndicated loan. For example, Loan Event ID #544, "March 2022 \$4.4 billion AUD syndicated loan for the acquisition of Sydney Airport Group in Australia" collects four records that capture two banks' contributions to two tranches of one loan. Record IDs #101970 and #101971 capture Bank of China and ICBC's contributions to the 2.4 billion tranche of a 4.4 billion loan. #101972 and #101973 capture the same banks' contributions to the 2 billion tranche of the same 4.4 billion loan.

If a loan is refinanced or "upsized," this is considered a distinct Loan Event and coders are instructed to create a new Loan Event ID for the refinancing or upsizing; coders should not apply the same Loan Event ID as the original commitment. Instead, they are instructed to link the original loan record(s) to the refinancing or upsizing records via a Parent ID.

When creating a Loan Event ID, coders are instructed to write a short description of the Loan Event in the Loan\_Event\_Description field, to include the lender(s) involved, the purpose of the loan, and additional information regarding commitment year, number of lenders, and/or tranches involved, as necessary.

- **Loan\_Event\_Trache:** When a coder creates a Loan Event ID capturing contributions to multiple tranches, they must also add a letter denoting the tranche that will appear in the Loan\_Event\_Trache field. Coders are instructed

to designate each tranche of the multi-tranche loan as a letter (e.g. A, B, C). If the tranche letter is known from the loan record's sources, then the assigned Loan\_Event\_Tranche letter should match the tranche letter indicated in sources. If the tranche letter is unknown, coders assign the Loan\_Event\_Tranche manually starting with A and going chronologically down the letters of the alphabet. Each record capturing a contribution to that tranche should then be assigned both to the overall syndicated loan's Loan Event ID and the tranche's Loan\_Event\_Tranche letter.

- **Staff\_Comments:** This field is used to identify the assumptions, logic, and evidence that coders used to address coding and categorization determinations. It also provides contextual information and source materials that users (and future AidData coders) may find helpful if and when they seek to collect supplementary information about the project/activity (or revisit previous coding and categorization determinations). More specifically, this field seeks to document:
  - *Discrepancies between sources:* Coders should explicitly identify discrepancies across different sources when they relate to key fields (such as the commitment year, the transaction amount, the funding agency, the receiving agency, and loan pricing details). They should also specify how they adjudicated between competing sources and resolved discrepancies. Example: "Media X's "Acquisition of 26.25% in Curtis Island LNG's Mixed-Use Infrastructure" reports that ICBC contributed \$55 million AUD and HSBC contributed \$171.06 million AUD. Media Y's "Curtis Island LNG stake sale, Australia" reports ICBC contributed \$171.06 million AUD and that HSBC contributed \$54.63 million AUD. As the latter source was in an article format, AidData assesses it to be the more valid of the two sources; it is possible Media X erred in its data entry, confusing HSBC with ICBC. As such, AidData has coded ICBC's contribution as \$171.06 million AUD. However, the cause of the discrepancy between \$54.63 million AUD and \$55 million AUD is unknown; since the latter number was used to calculate \$2.287 billion AUD, AidData has coded the project on that reported contribution amount. These issues merit further investigation."
  - *Project titles in English, Chinese, and local languages.* Example: This project is also known as the Hinkley Point C Nuclear Power Plant Project The Chinese project title is 英国欣克利角C ("HPC") 核电项目 or Hinkley Point C 核电项目 .
  - Any assumptions, logic, and evidence used to calculate the transaction amount, interest rate, or other financial detail variables. For example: "The individual contributions of China Eximbank, and Credit Suisse AG to the syndicated loan are unknown. For the time being, AidData has estimated the contribution of the China EXIM bank by assuming that the two lenders contributed equal amounts (\$42,000,000) to the loan syndicate." or "The individual contributions of the syndicate members are unknown. For the time being, AidData has estimated the contribution of the four Chinese state-owned banks by assuming that the thirteen lenders contributed equal amounts (\$76,923,076.92) to the loan syndicate."
  - Specific justifications for challenging coding and categorization determinations. Example: "AidData has coded this transaction as a collateralized loan because

ICBC was selected as the security agent (i.e. collateral agent) for the loan. When lenders take collateral as security for their loans, a collateral/security agent is often appointed to enforce rights against the collateral in the event of the borrower's default under the loan."

- *Issues that were not fully resolved and/or that require further investigation.*  
Example: "According to the financial reports published by JP EPS, it contracted a \$35,938,868.58 loan with the Chinese Government on June 25, 2010 to finance the imports of goods and services—including transformers, transmission lines, conveyors and bulldozers—from China. This loan also has an 11 year repayment period (between July 21, 2010 and January 21, 2010) and it also carries an interest rate of 6-month LIBOR plus a 1.3% margin. It is unclear if this loan is distinct from the China Eximbank loan that was rescheduled on February 20, 2009. For the time being, in order to err on the side of caution, AidData does not record a separate loan to capture the loan that JP EPS reportedly contracted on June 25, 2010. However, this issue merits further investigation."
- Hyperlinks to uniquely important sources, such as unredacted EPC contracts, unredacted grant and loan agreements, official correspondence between lenders and borrowers, and direct correspondence between AidData and government officials in recipient countries.
- **Status:** AidData coders are instructed to follow a two-step process to make status field determinations. First, coders are instructed to determine if an official commitment has taken place. Second, if an official commitment has taken place, coders are instructed to determine if the project/activity has reached implementation or completion—or if it was subsequently suspended or canceled.
  - Guidance on when to assign records to the Pipeline: Pledge, Pipeline: Commitment, Implementation, or Completed status category:
    - If a commitment from an official sector institution in China took place, and the project/activity was reportedly implemented or completed, assume that the financial or in-kind transfer took place (at least in part) and assign the record to the Implementation or Completion status category.
    - If a pledge was issued by an official sector institution in China, and the project/activity was reportedly implemented or completed, do not assume that the financial or in-kind transfer took place (in part or in whole). Assign the record to the Pipeline: Pledge status category. Additionally, if negotiations with an official sector institution in China are ongoing, keep the record in the Pipeline: Pledge status category. If negotiations with an official sector institution in China do not result in an official commitment, keep the record in the Pipeline: Pledge status category.
    - If a commitment from an official sector institution in China took place but the financial or in-kind transfer never materialized, and the project/activity was reportedly completed (with an alternative source of

financing), the record should either be assigned a status code of Pipeline: Commitment (with an explanation that there is no evidence of disbursements taking place) or a status code of Suspended or Canceled (if there is clear evidence that the official sector institution in China withdrew its support).

- If a project/activity's status is unknown, but sources indicate that an official sector institution from China fully disbursed the funds that it previously committed to the project/activity (with no reports of suspension/cancellation), assign the record to the Completion status category.
- Guidance on when to assign records to the Suspended or Canceled status category:
  - Only projects/activities that previously secured a commitment from an official sector institution in China can be assigned to the Suspended or Canceled status category. A record that was assigned to the Pipeline: Pledge category and never secured a commitment from an official sector institution in China should not be assigned to the Suspended or Canceled status category (even if it is known that the project/activity was never carried out). Such records should remain in the Pipeline: Pledge category.
  - If a loan agreement was signed but subsequently rejected by the parliament or judicial body in the recipient countries, then it should be assigned to the Canceled status category.
  - If a loan agreement was suspended and then a new loan request was made by the borrowing institution, two separate records should be created: one for the suspended loan agreement and another for the new loan request (which should be assigned to the Pipeline: Pledge status category).
  - If financial disbursements took place prior to the cancellation/suspension of a project/activity that previously secured a commitment from an official sector institution in China, coders should record the original financial commitment amount in one record and assign it to the Suspended or Canceled status category, and create a separate record to capture disbursed amount prior to cancellation/suspension and assign it to the Completed status category.
  - If a loan agreement was issued by an official sector institution in China but official sources indicate that no disbursements were ever made, the record should be assigned to the Suspended status category.
  - If no official sources explicitly report a suspension or cancellation of the financing agreement and information about the project/activity's progress is either sparse or absent, coders should seek to identify (1) evidence of the receiving agency (or another entity in the host country) identifying an alternative source of funding to finance the commercial



contract; (2) evidence of the receiving agency (or another entity in the host country) signing a new commercial contract with a different contractor; and (3) whether the financing agreement is recorded from the country's aid/debt information management system (registry). In any of these 3 scenarios, it is possible that the financing agreement was never finalized (i.e., an official commitment never took place), and coders should assign the record to the Pipeline: Pledge status category.

- Intent: Identifying the intent of a project/activity involves the following questions for low-, middle-, and graduating high-income countries:
  - *Does the project/activity seek to improve the economic development or welfare in the host country?* If so, the project/activity should be identified as having development intent, which is consistent with OECD-DAC guidelines. Development intent is determined independently from the concessionality calculation for loans. A project/activity can have development intent and also be non-concessional. Any infrastructure projects that can improve economic development or welfare in host countries that are financed with Chinese debt and without Chinese equity should be coded as development intent, *regardless of whether the debt is offered on concessional or non-concessional terms*. Most projects/activities in low-, middle- and graduating high-income countries will have development intent unless there is specific evidence of commercial, representational, or military intent.
  - *Does the project/activity seek to enhance the commercial interests of the financier country (China)?* If so, the project/activity should be coded as having commercial intent.<sup>102</sup> Loans to help shipping companies acquire vessels that will allow them to move ocean containers from country to country or shipping equipment should be coded as commercial intent as they are designed to support the commercial operations of the companies and not to advance an economic development objective in the host country. A loan to help a company finance its general operations, or a loan to help a company service its existing debts should also be coded as having commercial intent. Working capital loans or "working credit facilities" provide funds for a borrower's day-to-day operations should be coded as commercial intent. Cross-currency interest rate swaps are a form of corporate financing and such they represent transactions with commercial intent.
  - *Does the project/activity seek to disseminate or promote Chinese culture, language, or values?* If so, the project/activity should be coded as having representational intent. Donations of equipment that apparently will be used to spread Chinese culture, language or values should be coded as representational intent. This includes donations of Chinese books on Chinese traditions, donations of lion dance props, and even donations of luxury items from China (e.g., the Hongqi L5 vehicle). Projects to establish or upgrade Confucius Institutes and Chinese cultural centers are considered projects with

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<sup>102</sup> Projects assigned to the "Commercial intent" status category are those that primarily seek to promote the commercial interests of the country from which the financial transfer originated (e.g., encouraging the export of Chinese goods and services).

representational intent. Projects that involve the dispatch of Chinese language instructors to recipient countries are considered projects with representation intent.

- Established high-income countries require a different approach to the intent marker, because most Chinese loans to HICs are considered commercial finance. AidData codes the intent based on three considerations:
  - *Does the project/activity seek to improve only welfare in the host country?* If so, the project/activity should be coded as having development intent, which is consistent with OECD-DAC guidelines. Development intent is determined independently from the concessionality calculation for loans. A project/activity can have development intent and also be non-concessional. Any infrastructure projects that only seek to improve welfare in host countries that are financed with Chinese debt and without Chinese equity should be coded as development intent, *regardless of whether the debt is offered on concessional or non-concessional terms*. Common examples of projects with development intent in HIC include Chinese public actors' donations and loan projects for social welfare housing. Most non-social welfare loan projects should not have development intent.
  - *Does the project/activity seek to enhance the commercial interests of the financier country (China)?* If so, the project/activity should be coded as having commercial intent.<sup>103</sup> Loans to help shipping companies acquire vessels that will allow them to move ocean containers from country to country or shipping equipment should be coded as commercial intent as they are designed to support the commercial operations of the companies and not to advance an economic development objective in the host country. A loan to help a company finance its general operations, or a loan to help a company service its existing debts should also be coded as having commercial intent. Working capital loans or "working credit facilities" provide funds for a borrower's day-to-day operations should be coded as commercial intent. Cross-currency interest rate swaps are a form of corporate financing and such they represent transactions with commercial intent. Most loan projects are assumed to have commercial intent unless there is specific evidence that the loan advances social welfare in the country..
  - *Does the project/activity seek to disseminate or promote Chinese culture, language, or values?* If so, the project/activity should be coded as having representational intent. Donations of equipment that apparently will be used to spread Chinese culture, language or values should be coded as representational intent. This includes donations of Chinese books on Chinese traditions, donations of lion dance props, and even donations of luxury items from China (e.g., the Hongqi L5 vehicle). Projects to establish or upgrade Confucius Institutes and Chinese cultural centers are considered projects with representational intent. Projects that involve the dispatch of Chinese language

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<sup>103</sup> Projects assigned to the "Commercial intent" status category are those that primarily seek to promote the commercial interests of the country from which the financial transfer originated (e.g., encouraging the export of Chinese goods and services).

instructors to recipient countries are considered projects with representation intent.

- **Sector Code/Sector Name:** Based on the OECD's 3-digit sector codes and names, AidData coders should assign each project/activity to the sector that it is meant to support. If the specific activities of a transaction are unknown, the record should be assigned to the sector of the receiving agency (i.e., financing with unspecified purpose to a major oil and gas company should be coded to the energy sector). Records with both unknown activities/purposes and unknown receiving agencies should be assigned to the Unspecified sector (998).
  - In cases where a transaction is provided to a company for general support, general corporate purposes, liquidity, or working capital purposes, the sector is not Business and Other Services (250). The sector should be aligned with the sector of the receiving agency. This is more common, but not exclusive to, in high-income countries. For example, for a loan to a United States-based mining company for working capital purposes, the sector should be coded as Industry, Mining, Construction (320).
  - In cases where recipient companies operate across diverse industries or cannot be mapped to a precise CRS sector, coders should use a general classification such as Business and Other Services (250). This is most common in established high-income countries.
  - Coders are advised to follow this guidance for low-, middle-, graduating high-, and established high-income host countries.
- **Infrastructure:** This flag provides a marker of whether a project/activity is an infrastructure project. AidData coders should check this flag even when the loans only partially support infrastructure and other purposes. In order to populate this field in the 4.0 dataset, staff isolated likely infrastructure projects by identifying all projects with title fields or description fields that included one or more of the following keywords: construct\*, build, rehabilitate\*, upgrade\*, renovate\*, extend\*, restore\*, built, groundbreaking, fiber, power plant, expansion, electrification, hydro\*, instal\*, foundation. All projects that are assigned to the following flow type categories: debt forgiveness, debt rescheduling, scholarships, training, or free-standing technical assistance activities, as well as umbrella records, were also excluded. Coders then performed a manual review of the project/activity records that contained keyword matches to determine whether the infrastructure field should be set to 'Yes' or 'No'. This was followed by a review of all project/activity records without a keyword match (though still excluding debt forgiveness, debt rescheduling, scholarships, training, or free-standing technical assistance activities, as well as umbrella records).

AidData coders were instructed to read project/activity record title and description fields to make their determinations. More specifically, coders were instructed to set the Infrastructure field to 'Yes' if the project involved one of the following:

- Building a new physical structure,
- Rehabilitating or adding onto an existing physical structure, and/or
- Maintaining an existing physical structure.

Coders were instructed to *not* set the infrastructure field to 'yes' when a project/activity involved the provision of cash, technical assistance, scholarships, equipment, or supplies.

- **COVID:** This field provides a marker of whether it is known that the project/activity is part of China's global COVID-19 response efforts. In the 3.0 version of the methodology, this field was populated by first using artificial intelligence (AI) to identify all project/activity records that matched the OECD's 5-digit sector code for COVID-related projects (12264). The COVID field for project/activity records that received this sector designation were systematically set to 'Yes'. Then, based on OECD and World Health Organization data, AidData estimated the financial values for each donation where the COVID marker was set to Yes whenever possible, in the process reviewing the validity of the COVID marker designations. In the 4.0 version of the methodology and for future iterations of the dataset, AidData coders are instructed to evaluate the sources that describe a project/activity for evidence that the purpose of the project/activity is related to COVID-19 control, including providing information, education and communication as well as activities or materials enabling testing, prevention, immunization, treatment, or care.
- **Funding agency:** Only the official sector institution in China providing the financial or in-kind support should be identified as a funding agency. Co-financing agencies should be identified in the co-financing field (regardless of whether they are official sector institutions from China). The transaction (commitment) amount should correspond to the financial or in-kind transfer from only the official sector institution in China identified as the funding agency. If the project/activity was financed by multiple official sector institutions from China, and the respective financial commitments of each institution are known, a separate project/activity record should be created for each commitment amount and corresponding funding agency; all other contributors should be added as co-financing agencies. If, however, the respective financial commitments of each institution are not known (but the total commitment amount from all official sector institutions in China is known), then the Equal Contribution Assumption should be applied (see 'Equal Contribution Assumption' below).
- **Co-financing agency/marker:** If a project has a co-financier, the co-financing field (marker) should be set to "Yes," including in cases where the specific co-financing agencies are unknown. The co-financing agency name(s), organization type(s), and origin(s) should also be identified. Counterpart funding from the recipient agency/company is not considered co-financing.
- **Direct and Indirect Receiving Agency:** The Direct\_Receiving\_Agencies field identifies the agency designated to receive and manage the financial or in-kind transfer. The Indirect\_Receiving\_Agencies field provides the name of the agency or agencies that receive and manage a financial transfer (loan) from the entity captured in the Direct\_Receiving\_Agencies field. If a receiving agency (borrower) on-lends the proceeds of a loan to an additional entity or entities, then the borrower is captured in the Direct\_Receiving\_Agencies field and the additional entity or entities which receive loans from the borrower is captured in the Indirect\_Receiving\_Agencies field. If more than one entity is responsible for receiving and managing incoming grant funds or an in-kind transfer, all of these entities are identified in the Direct\_Receiving\_Agencies field. For seller's credits, the Chinese state-owned enterprise receiving an export seller's credit

from the Chinese state-owned bank should be coded as direct receiving agencies; and the foreign customer (borrower) in the host country which is in turn receiving the supplier's credit from the Chinese state-owned enterprise should be coded as indirect receiving agencies. When a Chinese state-owned enterprise uses its own funds (without any known export seller's credit from a Chinese state-owned bank) to provide a supplier's own financing to a foreign customer (borrower) in the host country, only the foreign customer should be coded as the direct receiving agency. If an official sector institution in China provides a loan to a bank or financial institution in the host country, and that bank or financial institution in-turn uses the proceeds of the loan to on-lend to state-owned companies or agencies in the host country, then the entity who is on-lending the proceeds of the loan should be coded as the direct receiving agency; and the entity (or entities) receiving the loan should all be coded as indirect receiving agencies.

- **Implementing Agency:** The organizations/entities involved in carrying out the project should be identified in this field (and in the description field).
- **Insurance Provider/Insurance Provided:** An insurance provider is a third-party organization (i.e., not the funding agency or the receiving agency) that issues a credit insurance policy to ensure repayment in the event that the borrower (i.e. direct receiving agency) cannot service its debt. A common scenario is one in which Sinosure issues a credit insurance policy in support of an export buyer's credit from a Chinese state-owned bank. However, the insurer need not be an official sector institution in China. If an insurance provider is identified, the Insurance\_Provided field should be set to "Yes" and the specific provider populated in the Insurance\_Provider field. If it is known that a credit insurance policy was taken out for a loan but no insurance provider could be identified, the Insurance\_Provided field should also be set to "Yes". All credit insurance policies correspond to loans; only project/activity records with a Flow\_Type of "Loan" should identify the insurance provider(s). Insurance provider information should also be recorded in the project/activity record's description field.
- **Guarantor/Guarantee Provided:** A guarantor is an agency that provides a repayment guarantee in the event the borrower (i.e. direct receiving agency) cannot meet its debt repayment obligations. By providing a guarantee, the guarantor is promising to repay the loan if the receiving agency (primary borrower) defaults on its repayment obligations. Government agencies from the host country may issue a sovereign guarantee,<sup>104</sup> though guarantees can also come from private companies, state-owned companies, or other types of agencies (in China, the host country, or another country). Coders are provided the following guidance:
  - If a third-party repayment guarantee is issued, the Guarantee\_Provided field should be set to "Yes" and the organization(s) providing the guarantee should be added as agencies, their role set to 'Guarantor'. In the case of a sovereign guarantee, the guarantor should be the recipient government.

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<sup>104</sup> Sovereign guarantees are legally binding commitments by a sovereign government to assume responsibility for servicing a debt on behalf of another entity under specific conditions (e.g. default). A sovereign guarantee represents a contingent liability on the recipient government's balance sheet. Sovereign guarantees can be provided to public or private entities. Sovereign guarantees are also sometimes referred to as government guarantees or public guarantees.

- If the recipient government issues a sovereign guarantee in support of a loan issued to another entity, this information should be recorded in the description field.
- Only project/activity records with a Flow\_Type of "Loan" should identify guarantors and/or set the Guarantee\_Provided field to "Yes".
- The Guarantee\_Provided field may be set to "Yes" even if no guarantor is identifiable, provided source(s) indicate this is the case. However, coders should verify a guarantee was actually provided, rather than collateral.
- Coders should use caution to prevent mistaking the provision of collateral for a guarantee and vice versa. They are instructed that:
  - A guarantee is typically not related to a specific asset or revenue stream. Rather, the issuance of a sovereign guarantee allows the creditor to secure repayment by pursuing *any* assets or revenue streams controlled by the sovereign government in the event of default (assuming the assets/revenue streams in question are not protected by sovereign immunity). If a guarantee is mentioned in relation to a specific revenue stream, it may be a reference to collateral (see section on "Collateralized Lending" in Section 2.5.3.3).
  - If the word 'guarantee' is mentioned in relation to the repayment of the loan by a non-English language source, this *may* indicate collateralization rather than a guarantee as AidData defines it. In languages other than English, collateralized debt arrangements are sometimes referred to as 'guarantee' or 'guaranteed.' However, in English, a (third-party) guarantee is a concept that is distinct from collateralization. Similarly, if a loan is "guaranteed by" a specific asset, this may indicate collateralization rather than a guarantee.
- Collateral Provider/Collateralized: If an entity pledges one or more sources of collateral for a loan that can be seized in the event the borrower defaults on its repayment obligations, it should be identified as an accountable agency. The Collateralized field should also be set to "Yes". When it is known a loan is collateralized, AidData coders should identify the exact source(s) of collateral and populate the Collateral field, describing the nature of the collateral that was pledged. However, coders may set the Collateralized field to "Yes" without knowing the collateral provider and/or the exact collateral pledged if they cannot be identified. Only project/activity records with their Flow\_Type set to "Loan" should identify collateral providers, set the Collateralized field to "Yes", and/or list sources of collateral.
  - In order to identify projects that are collateralized but may not explicitly use the term "collateral" or deviations thereof, AidData coders should reference 'Collateralized Lending' in Section 2.5.3.3.
- Security Agent: The security agent or collateral agent is the organization that was appointed to enforce rights against the collateral in the event that the borrower defaults on its debt repayment obligations. Only project/activity records with Flow\_Type set to

“Loan” should include agencies with the role populated as Security\_or\_Collateral\_Agent.

- **Agency Type:** For each kind of agency involved in a project (i.e., funding, cofinancing, receiving, implementing, or accountable agency), coders are instructed to identify the agency type. Specific considerations for certain agency types include the following:
  - *Government Agency.* These agency type designations are given to any entities that are a part or an extension of the governmental structure (i.e. public universities) in the country (whether in China or in the host country).
  - *State-Owned Policy Bank/State-Owned Commercial Bank.* These agency type designations are only used for Chinese state-owned policy banks and commercial banks that provide overseas funding. The policy banks include China Eximbank and CDB. The state-owned commercial banks include those that are at least 50% owned by the Chinese government. The state-owned commercial banks also include so-called shareholding commercial banks that are subsidiaries of state-owned enterprises (e.g., China CITIC Bank) and city commercial banks (i.e., Bank of Shanghai).
  - *State-Owned Bank.* This agency type designation is only used in recipient countries when the bank is at least 50% owned by the recipient government.
  - *State-Owned Company.* We consider all companies with the state as their largest, controlling shareholder to be state-owned companies. These include companies that are wholly-owned, majority-owned or, in some cases, partially-owned by the state. Wholly-owned subsidiaries of state-owned companies are also coded as state-owned. This definition holds for Chinese and recipient state-owned companies.
  - *Private Sector.* This agency type designation encompasses all companies with no state ownership or where the state was not the largest, controlling shareholder.
  - *State-Owned Fund:* This agency type designation is only used for funds set up and financed by Chinese governmental and state-owned banking entities. Certain funds are region-specific, such as the Africa Growing Together Fund, and the China Co-financing Fund for LAC. Some funds may serve a specific purpose, such as the Silk Road Fund, that is dedicated to providing financing in countries participating in the Belt and Road Initiative. Others are set up to support intergovernmental organizations, such as the People’s Republic of China Poverty Reduction and Regional Cooperation Fund, and China Trust Fund.
  - *Special Purpose Vehicle/Joint Venture.* This agency type designation captures project companies (independent legal entities) that are established to manage the financing and implementation of a particular project. Owner organizations, when known, should be attached to the SPV/JV’s organization record with their ownership stake documented. This information should also be noted in the description field of the record(s) associated with the SPV/JV and in the organization’s description field.

- *Intergovernmental Organization*. This agency type designation captures organizations made up of governments from multiple countries. Coders should ensure funding agencies do not fall in the intergovernmental organization category.
- *NGO/CSO/Foundation*. This agency type designation captures non-governmental organizations, civil service organizations, and foundations. AidData coders are instructed to ensure funding agencies do not fall into the NGO/CSO/Foundation category, as these fall outside the scope of official sector financing.
- *Miscellaneous Agency Type*. This agency type designation captures all other agencies that do not fit in one of the above categories. AidData coders are instructed to use this designation sparingly.
- **Agency Origin:** For each kind of agency involved in a project/activity (i.e., funding, cofinancing, receiving, implementing, or accountable agency), coders are instructed to identify the agency origin. The agency origin is captured in the 'Agency Type' fields (i.e. Guarantor\_Agency\_Type, Implementing\_Agencies\_Type, etc).
  - For example, for a record where a state-owned company involved in project implementation has its origin set to China, the Implementing\_Agencies\_Type variable will be set to 'Chinese State-owned Company'.
  - Specific considerations for certain agency types include the following:
    - The origin field should be set to China if the agency is wholly-owned by the Chinese government or a Chinese company.
    - The agency origin field should be set to Recipient if the agency is wholly-owned by the government or companies in the host country.
    - The agency origin field should be set to Other if (1) the organization is wholly-owned by an entity not from the host country or China; (2) the organization is an intergovernmental organization; (3) the organization is partially owned by an entity from China and an entity from the host country; or (4) the organization is partially owned by an entity from any country/territory other than China and the host country.
- **Transaction Amount:** In most circumstances, only the face values of loans and grants (or the monetary values of in-kind transfers) from official sector institutions in China should be recorded as transaction amounts. When an official commitment amount is identified, AidData coders are instructed to record it as the official transaction amount even if the disbursed amount is different from the official committed amount. However, if an official commitment amount is not provided and a disbursement amount is provided, AidData coders are instructed to record to use the disbursement amount as a proxy for the



official commitment amount.<sup>105</sup> However, this coding rule only applies to completed projects.

- **Amount Estimated:** For the vast majority of project/activity records in the 1.0 version of the CLG-Global dataset, the reported transaction amount is based on information in the primary (hyperlinked) source materials. However, there are a few unique scenarios in which transaction amounts are estimated by AidData coders using information that is provided in the project/activity record itself. In these cases, the Amount\_Estimated field should be set to 'Yes' and a Staff\_Comments should be added explaining how and why the estimate was generated.
  - *Equal Contribution Assumption for Syndicated Loans*
    - If the members of a loan syndicate are known but their individual contributions are not known, AidData coders are instructed to divide the total value of the syndicated loan by the total number of known syndicate members. This value is then used as the (estimated) transaction amount for the individual project/activity record capturing the contribution of an individual syndicate member. This is done to avoid artificially deflating commitment aggregates, as would occur if the financial and in-kind commitments from official sector institutions in China were coded as zero for these projects/activities. When applying the equal contribution assumption, coders should leave an explanation in the Staff\_Comments field explaining the calculation used.
      - Example, AidData Record ID #89485: "The exact size of Bank of China and ICBC's respective financial contributions to the \$8 billion syndicated bridge loan are unknown. For the time being, AidData assumes that all 19 members of the lending syndicate contributed equal amounts (\$421,052,631)." Coders should add one Chinese bank for that project entry as the funding agency (in this case, Bank of China) and all others as the co-financing agencies (see the linked Record #89485 for an example).
    - If coders know some but not all syndicate members, and know the total value of the loan, coders are instructed to estimate individual bank contributions to the syndicated loan based on the total number of known members of the syndicate – even if there are only two or three.
      - For example, in AidData Record ID #98335, it is known that at least twelve banks participated in this syndicate, but the exact number of participants is unknown. AidData applies the equal contribution assumption, and populates the Staff\_Comments field with: "AidData assumes that the twelve known syndicate

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<sup>105</sup> Sometimes there are cost overruns on projects and the Chinese government ends up providing top-up funding beyond the original commitment amount to address these cost overruns. So, in effect, a higher disbursement figure compared to the original commitment amount serves as a proxy for the final official commitment amount *after the top-up funding is included*. There is often an agreement revision/addendum to officially increase the face value of the loan (but we usually don't have access to these agreement revisions/addenda).

members each contributed an equal amount to the syndicate (USD 20,833,333)".

- AidData will not apply the equal contributions assumption if the total transaction/commitment value of the syndicated loan is unknown.
- For each tranche of a loan, the equal contribution assumption is applied independently. This means that if a Chinese bank is not involved in a particular tranche, we do not count it for the purposes of equal contribution assumption calculations.
- If a syndicated loan has multiple tranches but the participation of the Chinese banks to specific tranches is unknown, AidData will assume that all lenders, including the Chinese banks, contributed to each tranche. AidData uses the equal contribution assumption for the value of the entire loan. Furthermore, AidData will take an average of the maturity periods and interest rates (be it reference rates or a fixed interest rate) to account for the entire loan.
- If multiple branches of the same bank are participating in a syndicated loan, each branch counts as a distinct lender. For example, a syndicated loan with DBS Bank and three different branches of ICBC has four members in the syndicate, not two. The same rule applies for subsidiaries, e.g. ICBC London PLC and ICBC are two distinct lenders. As a result, multiple records should be created to capture each branch/subsidiary's contribution.<sup>106</sup>
  - This impacts how the transaction amount is coded for individual Chinese bank branches/subsidiaries. For example, if it is known that ICBC as a bank contributed \$300 million USD to a loan, and there are three branches of ICBC that contributed, but it is not clear how much each branch contributed, each record for the three branches should apply the equal contribution doctrine and record \$100 million as the estimated transaction amount.
- In cases where the Equal Contribution Assumption is applied, AidData coders are instructed to set the Amount\_Estimated field to "Yes".
  - *Imputed Transaction Amounts for In-Kind Donations of COVID-19 Supplies*
    - In the wake of the Coronavirus pandemic, official sector institutions in China began providing in-kind donations of supplies for preventing or mitigating the spread of the COVID-19 virus to recipient countries. This included donations of Personal Protective Equipment (PPE), medical devices, and diagnostic tools. Per the OECD, "Aid in kind...should where possible be valued at prevailing international or national market prices

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<sup>106</sup> If it is known that the funding agency is an overseas branch/subsidiary of a Chinese state-owned bank, coders are instructed to check the "Overseas Branch/Subsidiary" box under Funding Agencies and indicate the country/territory for the entity.

for the goods in question at the time of the transfer.”<sup>107</sup> Therefore, in order to both mitigate undercounting 2020 and 2021 financial commitments and bring our dataset further in line with OECD guidelines vis a vis in-kind donations, AidData has taken steps to impute transaction amounts for in-kind donations of COVID-19 related supplies where possible.

- To do this, AidData identified per-unit prices – specific to the month-year level – for fourteen commonly donated types of supplies using the World Health Organization’s (WHO’s) Emergency Global Supplies Catalogues. These catalogues were produced for the WHO’s COVID-19 Supply Chain System (CSCS) Supply Portal and contain lists of purchasable supplies and their estimated per-unit costs.<sup>108</sup> These estimates were regularly updated, allowing AidData to account for changes in per-unit price over time. In cases where a catalogue was not available for a particular month, the prices from the preceding catalogue most recently available were used. In cases where a catalogue was available for a given month but the specific item donated was not included, an average of that items’ cost in other CSCS catalogues was used.
- Next, AidData took steps to pinpoint all in-kind donations of COVID-related health supplies for which a transaction amount needed to be, and could be, imputed. First, a broad set of potentially eligible donations were identified using a keyword search in internal databases for “COVID”. Additionally, all projects for which the COVID variable field was set to “Yes” were reviewed. Next, AidData coders reviewed these projects to identify which met the following criteria:
  - The number of units donated were known for at least one type of supply
  - No available source provided a monetary value for the donation
  - At least one type of supply donated was included in the WHO’s Emergency Global Supplies Catalogue for COVID-19
- AidData coders then multiplied the per-unit price of the relevant item by the number of units donated in order to calculate the estimated transaction amount. Coders were instructed to code certain specific cases in the following ways:
  - In cases where multiple types of supplies were provided in the same donation, the “units donated times per unit price”

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<sup>107</sup> See [https://one.oecd.org/document/DCD/DAC/STAT\(2023\)9/FINAL/en/pdf](https://one.oecd.org/document/DCD/DAC/STAT(2023)9/FINAL/en/pdf)

<sup>108</sup> The purpose of the CSCS Supply Portal was to allow “national authorities and all implementing partners supporting COVID-19 National Action Plans to request critical supplies” for combatting COVID-19. See <https://www.who.int/docs/default-source/coronaviruse/covid-19-supply-chain-system-requesting-and-receiving-supplies.pdf>

calculation was repeated for each supply type, and their value summed for the total estimated transaction amount.

- In cases where the number of units donated are known for some types of medical supplies but not for others, the transaction amount is based only on the supplies with a known number of donated units.
- In cases where both items that do and do not appear in a price catalogue were donated together, the transaction amount is based only on the known items.
- In cases where a group of donors provided the in-kind donation jointly, with their respective contributions unknown, the total value of the donation was calculated and split according to the Equal Contribution Assumption (see above).
- The Amount\_Estimated field was systematically set to “Yes” for in-kind donations with imputed transaction amounts. Additionally, a staff comment reading the following was systematically populated in the Staff\_Comments field: “AidData has estimated the transaction amount for this donation based on price catalogues from the World Health Organization (WHO). Please see the TUFF Methodology for additional details.” In future iterations of the dataset, coders will be instructed to apply this coding manually to each project/activity record they create for an in-kind COVID-related donation.
- *Other Scenarios:* In all of these cases, AidData coders are instructed to set the Amount\_Estimated field to “Yes” (note: these scenarios are common in lower-middle-income and graduating high-income countries but rare in established high income countries):
  - *Scenario 1 (estimating transaction amounts for preferential or non-preferential export buyers’ credits).* If the underlying source materials confirm that the financing for a project was issued in the form of an export buyer’s credit (buyer’s credit loan) from an official sector institution in China, and the face value of the export buyer’s credit is unknown, coders assume that it is equivalent to 85% of the commercial contract cost. AidData recognizes that Chinese state-owned banks may sometimes deviate from this practice and provide an export buyer’s credit that covers as little as 60% of a commercial contract or as much as 95% of a commercial contract, but for estimation purposes, we adhere to the “85% rule.” If coders record a transaction amount that is estimated based on the 85% rule, they should include an explanation in the Staff\_Comments field that reads “The face value of the buyer’s credit loan is not reported by any of the underlying sources. AidData estimates that the face value by taking 85% of the value of the underlying commercial (EPC) contract supported by the buyer’s credit loan.” AidData coders are instructed to not make any inferences or assumptions based upon the amount of export credit financing that is insured by

Sinosure (since Sinosure typically insures the loan's principal and interest, but the transaction amount field is only intended to capture the loan's principal).<sup>109</sup>

- *Scenario 2 (estimating transaction amounts for government concessional loans from China Eximbank).* If AidData coders are confident that the financing for a project is in the form of a government concessional loan (GCL) from China Eximbank, they can assume that the proceeds of the GCL were used to finance 100% of the commercial (EPC) contract costs and code the transaction amount field accordingly. The absence of a counterpart financing requirement is a core design feature of the GCL lending instrument/program. If AidData coders record a GCL transaction amount that is estimated, they should populate the Staff\_Comments to read "The face value of the government concessional loan is not reported by any of the underlying sources. AidData estimates that the face value by taking 100% of the value of the underlying commercial (EPC) contract supported by the government concessional loan."
- *Scenario 3 (estimating transaction amounts for MOFCOM's interest-free loans).* If AidData coders are confident that the financing for a project is in the form of an interest-free loan from MOFCOM, they can assume that the proceeds of the loan were used to finance 100% of the commercial (EPC) contract cost. The absence of a counterpart financing requirement is a core design feature of MOFCOM's interest-free loan lending instrument/program. Therefore, the transaction amount field can be set to 100% of the commercial contract cost. If AidData coders record a transaction amount that is estimated, they should include an explanation in the Staff\_Comments field that reads "The face value of the interest-free loan is not reported by any of the underlying sources. AidData estimates that the face value by taking 100% of the value of the underlying commercial (EPC) contract supported by the interest-free loan."
- *Scenario 4 (estimating transaction amounts of MOFCOM/Chinese government grants for infrastructure projects).* If AidData coders are confident that an infrastructure project is being financed with a grant from MOFCOM/the Chinese government, they can assume that the grant was used to finance 100% of the commercial (EPC) contract cost. Therefore, the transaction amount field can be set to be 100% of the commercial contract cost. If AidData coders record a transaction amount that is estimated, they should include an explanation in the Staff\_Comments field that reads "The face value of the grant is not reported by any of the underlying sources. AidData estimates that the face value by taking 100% of the value of the underlying commercial (EPC) contract supported by the grant." These fully funded projects are

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<sup>109</sup> If a guarantee was provided for the loan and the guarantee amount is known while the loan's face value is not known, AidData coders are instructed to infer the face value of the loan (commitment amount) from the monetary value of the guarantee. This is because the guarantee amount is equivalent to the face value of the loan (i.e. the loan's principal).

often referred to in official Chinese source materials as “China-aided projects.”

- **Overall syndicated amount:** This field captures the total face value of a syndicated/club loan to which one or more Chinese state-owned creditors contributed (or pledged a contribution) unless a loan record captures a contribution to a tranche. If the record captures a contribution to a tranche, and the tranche information is known, coders should populate the `Syndicated_Loan_Amount` field with the overall value of the tranche as opposed to the full value of the loan. If a syndicated/club loan has multiple tranches and the breakdown in tranche value is unknown, coders should code the full value of the syndicated loan. If the full value of a syndicated/club loan is unknown, the `Syndicated_Loan_Amount` field is left blank.
- **Implementation Dates/Implementation Dates Estimated:** The “Planned Implementation Start Date” field captures the day on which a project/activity supported by an official financial (or in-kind) commitment from China was originally scheduled to begin implementation; the “Actual Implementation Start Date” field records the day on which a project/activity supported by an official financial (or in-kind) commitment from China began implementation. The “Planned Completion Date” field captures the day on which a project/activity was originally scheduled to reach completion; and the “Actual Completion Date” field captures the day on which a project/activity was completed.
  - All of these fields seek to capture precise calendar dates. However, in cases when AidData coders are only able to identify the month and year in which a project implementation start date or completion date took place (or was scheduled to take place), the first day of the month is used as a proxy measure.<sup>110</sup> If any of these proxies are used to estimate the implementation dates, the “Actual Implementation Start Date Estimated” field or the “Actual Completion Date Estimated” should be set to “Yes.”
- **Maturity:** This field captures the total number of years it will take the borrower to repay a loan or export credit, as specified in the original loan or export credit agreement. AidData includes loans with maturities less than 1 year in duration to ensure comprehensive coverage of official financial flows to China. However, users of the 4.0 dataset who wish to exclude these loans from their analysis to ensure strict comparability with OECD-DAC statistics can use the maturity field to filter out loans with values less than 1.
  - In cases where all of the following criteria are met, the maturity may be estimated: (a) there are multiple tranches of a syndicated loan and (b) the maturities of the tranches are known. When these criteria are met, coders are advised to code the average of the known maturity periods and to clarify this calculation in the `Staff_Comments` field.
- **Interest Rate:** The various interest rate fields capture the rate of interest (in percentage terms) that applies to a loan, as specified in the original loan agreement. Loans can have fixed interest rates or variable interest rates. Variable interest rates are also referred to as floating interest rates. These rates are based on market rates that float

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<sup>110</sup> See Section 1.4 for further details.

over time added to a fixed margin. The actual interest paid back is determined by the trends of the market rate over the term of the loan. We are not able to measure these trends in the market rate over the term of the loan; therefore, to calculate the grant element, we instruct AidData coders to convert the variable interest rate to a “fixed” interest rate at a single point in time (Interest Rate At T0). Specific rates (floating interest rates at a single point in time) and the number of basis points<sup>111</sup> (the fixed margin) are sometimes detailed on official documents published by relevant agencies. If a specific rate is not provided in official sources, then AidData coders use the rate at the time that the project agreement was finalized (i.e., the time of the official commitment).

- To calculate the “all in” interest rate of a loan with a floating rather than fixed interest rate, AidData coders anchor the floating market interest rate to the value of the rate at the time the loan was issued. AidData now has a large built-in system of 19 reference rates, or a country-specific benchmark to set rates, over time. After the coder enters the applicable margin to the interest rate, the all-in interest rate at T0(%) will be automatically populated if the reference rate is a common market rate (LIBOR, EURIBOR, SOFR, etc.). Unless otherwise specified, AidData assumes the loan tenor is 6-month because it is the most common category. The loan tenor signifies the maturity length of the underlying interbank loans being used to generate a given reference rate. Loan tenors captured in this field include 12 months, 6 months, 3 months, and 1 month tenors. For loans that have less common reference rates (BADCOR, BBSY, China LPR, etc.), the all-in rate will also be automatically populated when available. For loans with more obscure reference rates, AidData coders should select “Other”; then, coders are instructed to conduct research on the rate online and manually enter the Interest Rate At T0(%) for the time of the loan commitment when possible. If the specific commitment date for a loan or swap is unknown (e.g. estimated as March 2017 or 2017), the all-in interest rate is calculated based on the estimated commitment date. For example, if a loan is estimated to be committed in March 2017’s interest rate is 6-month LIBOR, AidData’s auto-fill logic will estimate the all-in rate using March 01, 2017’s rate.
- Sometimes, the all-in interest is not estimable. Chinese loans to HICs often feature an applicable margin based on the receiving company/entity’s credit rating at the time of commitment. Rating agencies such as Fitch and Moody often release ratings for large international companies. However, credit worthiness ratings for a small company may not be publicly available. Other loans feature an applicable margin based on the consolidated leverage ratio, or the ratio of a borrower’s consolidated total debt to its consolidated earnings, which is often not publicly available. Therefore, these loans’ applicable margins are unknown. Coders should select “Variable Interest Rate” for the Interest Rate Type dropdown menu and the appropriate rate under the reference rate drop down menu and leave Margin on Reference Rate (%) blank. Furthermore, coders should leave an explanation in the Staff\_Comments explaining the reason for not estimating the interest rate.

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<sup>111</sup> 500 basis points = 5%, 100 basis points = 1%, 50 basis points = 0.5%; 3 Month LIBOR + 100 bps = 3 Month LIBOR + 1%.

- **Grant Element:** This field captures the grant element of a loan or export credit at the time that the original loan or export credit agreement was signed. For each loan where AidData coders identify loan pricing details (in particular the maturity and interest rate), AidData uses the OECD's grant element formula to calculate the grant element. If a grace period is available, the grant element formula will include that information. However, if no grace period is available, AidData assumes a grace period of 0 years. In the CLG-HIC 1.0 dataset, the grant element for OFIC loan records are only populated using the IMF's unified discount rate of 5%, because the countries in the CLG-HIC 1.0 dataset are not eligible to receive ODA/OOF according to the OECD reporting directives.<sup>112</sup>
- **Source information:** For each source identified in any stage of data collection or verification, AidData coders are instructed to attach the source to the record. Included in the source material is the public URL where the source can be accessed, title, author(s), published date, publisher name and location, language of source and type of source (including whether it is an official donor or recipient source, a media article, an academic source, etc). The information on a project's sources is published alongside the project information to allow for transparency in how the record was compiled.
- **Original agreement:** Coders are instructed to mark a source as an original agreement when they encounter an original official contract between two parties related to an official financial flow captured in the dataset and to especially capture those that fall into the designated Agreement\_Type categories. Coders first sort the agreement into one of five general categories in the Original\_Agreement\_Type\_General. Coders must then assign a more specific agreement type to the agreement, which is captured in the Original\_Agreement\_Type\_Specific field. For a full list of original agreement types, please see the field definitions in section 1.4.
- **Geographic location:** Coders should record geographical details that accurately and precisely document project/activity's physical footprint, including location names and types; the position or distance of the project/activity's location vis-à-vis other geographical features (e.g., the building is located across the street from the country's parliamentary complex in the capital city); the name, length, and start points and end points of physical infrastructure supported by the project (e.g., the 115.85 kilometer A1 highway runs from Colombo to Kandy); the total land area occupied by the project site (e.g., the industrial park occupies a 10 square kilometer area); and latitude and longitude coordinates of specific project features (e.g., the coordinates of Olkaria IV Geothermal Power Station Kenya at Hells Gate National Park are -0.918056, 36.334444). Whenever possible, coders should record OpenStreetMap URLs that capture the geographical locations and the following features of projects (see section 4.1 for a full description): (i) the precise physical boundaries and exact locations of buildings and facilities (e.g., schools, hospitals, stadiums, government buildings, power plants, and factories) with polygons or points; (ii) the precise geographical scope of special economic zones, industrial parks, mining concessions, protected areas, and plots of land under cultivation via polygons or points; and (iii) the exact routes of linear infrastructure (e.g., roads, bridges, tunnels, railways, power lines, canals, and pipelines) via line vectors.

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<sup>112</sup> See Section 2.1 for further details regarding the calculation of the grant element.



- **Rescheduling\_Event\_ID:** When a loan is restructured, AidData coders are instructed to create a unique rescheduling event that links the debt rescheduling record to the original loan record. To do this, AidData coders search for and add the rescheduling AidData Record ID number(s) under the Rescheduling\_Event\_ID tab on the internal data management system record page for the loan. This creates the relevant Rescheduling\_Event\_IDs for a particular loan record.
- **Rescheduled\_Loan\_Record\_ID:** For most restructurings, there is a corresponding restructured loan record. To create a Rescheduled\_Loan\_Record\_ID AidData coders should search for and add the loan(s) affected by the rescheduling under the Rescheduled\_Loan\_Record\_ID tab to form a connection. If the original loan affected by the restructuring cannot be found, no Rescheduled\_Loan\_Record\_ID should be created. If a coder has already created a Rescheduling\_Event\_ID for a specific loan record, there is no need to add a Rescheduled\_Loan\_Record\_ID to the corresponding rescheduling record as the internal data management system will have already automatically created a matching Rescheduled\_Loan\_Record\_ID.

## Section 4 - Geospatial Data Collection Process

Upon completion of Stage 3 (Quality Assurance, or QA) for a designated region, projects/activities advance to the geospatial data collection stage. This data collection stage is geared towards identifying financial and in-kind transfers that frequently underpin physical assets or activities at specific locations characterized by geographical features, serving as the ultimate destination for the financial transfer (flow). Projects/activities with no geolocation information or geofeatures available or Projects/activities without specific financial destinations are not included in the geospatial data collection process.

To compile projects/activity locations for the 1.0 versions of AidData's CLG-HIC and CLG-LMIC datasets, we leverage existing features from OpenStreetMap (OSM, the world's largest catalogue of open source, community-driven geospatial information), and contribute updates or new features reflecting projects/activities. OSM records countless geographic features, from jurisdictional borders to the exact routes of roads and the precise locations of individual buildings. The geospatial data that are provided by OSM (referred to as features in OSM) fall into three primary categories: nodes, areas, and ways. Below is a description of the four types of OSM geographical features representing physical footprints of Chinese officially financed projects/activities:

OSM Geographical Feature	Example assets/activities
Node (point)	Water wells, oil derricks, wind turbines, statues/monuments, telecommunication towers, and (some) buildings. Also used to represent administrative areas without exact area definitions.
Opened Way (line)	Roads, bridges, tunnels, railways, electricity

	transmission lines, canals, and pipelines
Closed Way (polygon)	Schools, hospitals, airports, seaports, dams, power plants, substations, factories, stadiums, and office buildings, zoos, public parks, protected areas, special economic zones, farms, mining concessions, and industrial parks, as well as administrative areas.
Relationship (Mixed)	A combination of one or more nodes/ways/relationships.

AidData's process for identifying, collecting, and conducting quality assurance on the geofeatures of Chinese officially financed projects/activities involves three stages of workflow.

## 4.1 - Stage 1: Geospatial Data Collection and Precision Level Labeling

To identify OSM features associated with projects/activities, AidData utilizes documentation from established quality assured records and sources to conduct targeted searches. For example, a project description of a hydropower station being built in the east of a city along a river would be cross-referenced with satellite imagery of the area and site photos provided in the project sources to determine its exact location. Coders then search OSM for existing features associated with the hydropower station, edit or add new features if needed, and record the corresponding OSM feature IDs and URLs. Due to limits on the availability of information on open source platforms, it is not always possible to identify or track a precise geofeature. A larger ADM area (or administrative boundaries) may be available in some cases to fill the informational gap. The objective of AidData coders is to identify geofeatures at the most precise level possible. Whenever geofeatures are unavailable at the most precise level, coders follow a hierarchical order (described below) to fill in less precise geolocational information. Below is a description of the various levels of precision that AidData identifies in the dataset, based on the availability of information.

Level of Precision	Feature	Example
Precise	The precise boundary of the feature itself	The boundaries of an airport.
Approximate (5km buffer)	Areas, landmarks near the target feature within a 5km radius.	A power station is not identifiable with existing information but a substation is identifiable in a 5km radius. In this case, the substation would be retrieved and Approximate

		level will be labeled.
ADM 8	Village/City/Town (Refer to the OSM ADM level <sup>113</sup> )	Neither the precise boundary nor a nearby landmark could be identified. A smallest ADM level boundary will be the next priority.
ADM 6	City/County (Refer to the OSM ADM level)	Neither the precise boundary nor a nearby landmark could be identified. A smallest ADM level boundary will be the next priority.
ADM 4	Province/Territory (Refer to the OSM ADM level)	Neither the precise boundary nor a nearby landmark could be identified. A smallest ADM level boundary will be the next priority.
ADM 3 (*rare)	Region (Refer to the OSM ADM level)	Neither the precise boundary nor a nearby landmark could be identified. A smallest ADM level boundary will be the next priority.

After coders record the OSM feature IDs and URLs, they then refer to the level of precision system to label each project accordingly.

## 4.2 - Stage 2: Geospatial Data Enhancement and Quality Assurance

Once the Stage 1 geospatial data collection is completed for a designated region, AidData coders conduct a review of all the retrieved geospatial data to ensure the geofeatures accurately reflect the final destination of the officially financed flows at the most precise level available. During this Stage 2 review process, AidData coders cross-check OSM features and the level of precision system with the established records.

## 4.3 - Stage 3: Geospatial Data Cleaning and Dataset Generation

Once all regions are reviewed and quality assured, AidData staff reformat the data collection worksheet with R scripts to automatically check for human error. Projects/activities with missing

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<sup>113</sup> OSM ADM level for all countries:  
<https://wiki.openstreetmap.org/wiki/Tag:boundary%3Dadministrative>

or mismatched levels of precision with OSM features are flagged for a second round of review and troubleshooting.

After cleaning the OSM feature data, AidData staff generate GeoJSONs using the OSM URLs through a Python workflow leveraging a combination of web scraping, the Overpass API, and the `osm2geojson` package. Individual GeoJSONs are then combined into multi-polygons, allowing AidData to represent various features within a project/activity as a single multi-polygon, as well as ensure a consistent feature type across all extracted geospatial features (lines, points, and polygons) in the final dataset. During the process, AidData staff flag a subset of invalid OSM links/features for a third round of review and troubleshooting. Since OSM is an open source community, a previous feature may have been revised/removed by other collaborators, which would result in the previous OSM link being invalid. The third round of review aims to find alternative valid OSM features and code corresponding levels of precision and rerun to get the updated GeoJSONs (Goodman et al. 2023). The code to replicate the GeoJSON generation for previous iterations can be found at: <https://github.com/aiddata/gcdf-geospatial-data>.

After the GeoJSONs are processed, AidData processes ADM files with centroid points for data users.

The GeoJSON file can be utilized with most software, tools, and approaches that support standard geospatial data formats. Desktop GIS software, such as the open source QGIS platform or ESRI's ArcGIS Pro, support a broad range of mapping, analysis, and other applications. Web-based platforms, such as MapBox and ArcGIS Online, also provide a range of functionality, often more tailored to sharing and visualizing outputs. Many popular programming languages have libraries or packages available which support working with geospatial data. In particular, Python has a large community supporting packages for many different applications of geospatial data, ranging from visualization to machine learning. See `geopandas` and `shapely` for working with geospatial features, `rasterio` and `python-rasterstats` for incorporating raster data, `Folium` and `Ipyleaflet` for mapping, and `torchgeo` for deep learning. Many other common Python packages such as `Numpy` and `SciKit-Learn` can be useful for working with spatial data.

See additional detailed documentation in the `read.me` file in the `geojson` download.

## Section 5 - Ownership Data Collection Process

In previous iterations of AidData's TUFF methodology, the ownership information for borrowers from official sector institutions in China exclusively focused on capturing the ownership structures of joint venture (JV) and special purpose vehicle (SPV) borrowers, flagging each JV's or SPV's relationship to the Chinese or host government based on the equity owners of the JV or SPV, with minimal accounting for holding companies or more complicated ownership structures. However, the latest version of the TUFF methodology provides ownership information for a broader set of borrowing institutions. Given that China's loan-financed projects and activities generate financial gains and losses, we now collect detailed data on the owners of all borrowing institutions to identify the entities that experience these gains and losses.

AidData's new 'Borrower Ownership' data tab within the 1.0 versions of CLG-LMIC, CLG-HIC, and CLG-Global datasets identifies the entities that ultimately control or own portions of each Direct Receiving Agency (DRA) identified in the 'Records' tab of the data files. We do so by first capturing the percentage ownership stakes that the direct owner(s) of the DRA hold at the time of the loan commitment, followed by the direct owner(s) of their (the first layer) direct owner(s) at the time of the loan commitment, and so on until AidData is unable to find further levels of ownership. Coders are instructed to stop identifying further owners when further ownership details would be unnecessary (i.e., the Government of Saudi Arabia would not have a parent owner), or due to lack of information. Doing so allows us to identify both the intermediate owners and the final identifiable owners (organizations called Parent\_Owner in the 'Borrower Ownership' tab). Our ultimate objective is to reveal which institutions and countries hold ownership stakes in overseas borrowers and loan-financed projects so that ownership trees can be analyzed in their entirety.

AidData codes the ownership information of new and existing borrowers using the ownership tree function in its internal data management platform. Coders systemically record the intermediate and ultimate beneficial (parent) owners for all eligible agencies across low-, middle-, and high-income countries.

## 5.1 Create Stakeholder Organizations

AidData coders create "stakeholder organizations" in AidData's internal data management platform based on available sources drawn during the process for record generation and amendment, as well as specific targeted searches conducted during the ownership data collection process intended to fill information gaps. "Stakeholder organizations" include the direct borrower of the loan from a Chinese state-owned creditor, each of its direct owning organizations, and their owning organizations, and so on. For each stakeholder organization, coders are instructed to populate the following fields:

- **Organization type:** Each stakeholder organization is assigned to one of eleven categories (types): Government Agency, State-Owned Bank, State-Owned Policy Bank, State-Owned Commercial Bank, State-Owned Company, State-Owned Fund, Intergovernmental Organization, Special Purpose Vehicle/Joint Venture, Private Sector, NGO/CSO/Foundation, or Miscellaneous Agency Type.
- **Country of Incorporation:** Each entity is assigned a country of incorporation that reflects where it is legally registered/domiciled. AidData gives its coders the following guidance to search for this information:
  - **Using existing information:** Coders are instructed to first consult associated record descriptions and sources to identify the country of incorporation of any relevant organization, as this information is often noted in AidData's narrative descriptions or can be found in the sources used to assemble its records.
  - **Conduct additional research:** When existing information is insufficient, coders are instructed to conduct further research to identify and fill information gaps. Coders should search, in quotes, a given institutions full name, including any suffixes or variations thereof, i.e. "Links Bidco Limited" and "Links Bidco Ltd". Coders then review the results of searches, prioritizing results that bring up

databases of companies or annual reports that show the full country of incorporation.

- **Joint Ventures/Special Purpose Vehicles:** Special purpose vehicles tend to either be incorporated where an asset is based (i.e. China Power Hub Generation Company (Pvt.) Ltd. owns power plants in Pakistan and is incorporated there) or in offshore financial centers, such as the Cayman Islands, Singapore, Cyprus, the Netherlands, and Jersey.
- **Government Agencies:** If an organization is coded as a Government Agency, its country of incorporation represents the country to which it belongs; for example, the Government of Guyana's country of incorporation is Guyana, the Ministry of Finance of Nigeria's country of incorporation is Nigeria; and the State Government of Texas's country of incorporation is the United States. The only recognized exceptions generally are embassies; the country of incorporation should be the country in which they operate, not their home country.
- **Intergovernmental Organizations:** Coders are instructed to code these as the region that best reflects where this institution operates in. For example, The Tazara Railway Authority is established in both Zambia and Tanzania and equally owned by both countries, so its country of incorporation is Africa, regional; the United Nations is a world-wide organization, so its country of incorporation is Multi-Region.
- **State-owned Companies, Banks, and Funds:** These entities can be incorporated overseas, away from the state that owns them. Many state-owned companies have overseas subsidiaries or special purpose vehicles, including Chinese companies, which often have Hong Kong-incorporated subsidiaries. However, a state-owned company *operating* in its home country is almost certainly incorporated in that country.
- **NGO/CSO/Foundations:** Local foundations should have a country of incorporation that reflects the jurisdiction where they operate. NGO/CSO/Foundations that function as multinational entities akin to Intergovernmental Organizations should be coded in an analogous manner.
- **Subnational incorporations:** Some countries, such as the United States and the United Kingdom, have incorporations at subnational levels. In the United States, every state has its own distinct incorporation, Delaware being the most popular for the borrowers in CLG-HIC 1.0 dataset. In the U.K., England and Wales tend to be the most popular jurisdictions for incorporations. In such cases, AidData assigns the Country of Incorporation based on the sovereign state governing the subnational jurisdiction—so a company incorporated in Delaware is coded to the United States, and one incorporated in England or Wales is coded to the United Kingdom.
- **Unknown:** In certain cases, AidData is unable to identify the country of incorporation for a given entity. Common reasons include a myriad of similarly named entities that make specific identification difficult or an entity's existence being known, but with its exact name unknown, making it all but impossible to

identify a place of legal incorporation without further information. In such cases, AidData coders are instructed to code the country of incorporation as Unknown.

## 5.2 Stakeholders' Nationality

Unlike the country of incorporation fields, which are based on the unambiguous legal place of incorporation that dictates an institution's legal existence and identifies the laws that govern it, the Parent\_Owner\_Nationality field captures the country that best reflects the individuals or entities who run or control a given institution. While in many cases the Parent\_Owner\_Nationality field will align with the Parent\_Owner\_Incorporation field, when they do diverge, it is significant. For example, many companies headquartered in China are legally incorporated in the Cayman Islands (as part of the round-tripping phenomenon described in Box 2), and high-net-worth individuals from around the world often set up holding companies in offshore financial centers.<sup>114</sup> Coders are instructed to follow the following guidance for Parent\_Owner\_Nationality:

In general, AidData identifies the country of headquarters for a given institution as its nationality. The location of an institution's headquarters is significant, as it often reflects its primary (and in many cases, *sole*) country of operation. Senior officers and employees are typically based in the country of headquarters, and the location also carries implications for oversight and regulation. In most cases, the country of incorporation and the country of headquarters are one and the same.

However, AidData will, in certain circumstances, rely on the actual ownership structure of the institution to determine its nationality, rather than its country of headquarters. In cases where holding companies are incorporated in OFCs but are otherwise directly owned by individuals traceable to another country, AidData codes the nationality of the organization as the country that reflects the citizenship or residence of the identified individual owners to the best extent possible, because these individuals hold the actual power over an entity and are its beneficiaries. For instance, a company incorporated in the British Virgin Islands, but owned by the family trust of a British billionaire would be assigned a nationality of the United Kingdom. If such ownership information is unavailable or reflects multiple countries (for example, an entity owned by five private individuals, each from and living in different countries), AidData codes the institution's country of headquarters as its nationality. In less common situations where the country of incorporation clearly does not reflect the nationality of the ultimate owner of the institution, but no single alternative country can be confidently assigned as the nationality of the ultimate owner of the institution, AidData relies on an 'Unknown' designation.

AidData also accounts for complex ownership arrangements such as dual listings, in which two distinct legal entities function as a single business. In these cases, each legal entity receives a nationality assignment based on its headquarters. When it is not possible to distinguish between entities, AidData records a combined organization that represents the single business, apportions ownership equally between the entities unless further information suggests otherwise, and codes the nationality of each entity accordingly.

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<sup>114</sup> For more details regarding round-tripping, see Box 2 in Section 2.5.2 (Tracking the Destinations of Official Sector Financing from China).

- AidData also has specific guidance for its coders to determine the Nationality designation, with guidance varying based on agency type:
  - **Government Agencies:** Nationality is the government to which they belong.
  - **State-owned Companies, Banks, Commercial banks, Policy banks, and Funds:** Nationality should be the country of headquarters, even when a state-owned company is based in another company overseas. In such cases, the coder is instructed to ensure said agency has a parent organization(s) that is actually headquartered / has a Nationality in the country of said government, so it is the Parent\_Owner.
  - **Intergovernmental Organizations:** Nationality should be the region they represent (e.g., European Union = Europe, regional) or to “Multi-Region” if their mandate is global.
  - **Private Sector, NGO/CSO/Foundations, and Miscellaneous Agency Types:** Unless said agencies are directly owned by an individual (or family or trust of individuals) with a recognizable country of citizenship (in cases of dual-citizenship and the like, AidData coders are instructed to code the country where the citizen actually resides as the Nationality), the Nationality should be the country of headquarters.
  - **Joint Venture/Special Purpose Vehicles:** AidData tries to avoid having these organizations as parent owners (as by design, they are generally used as vehicles for other entities, so those owners should be found and coded), but in rare cases they end up as Parent Owners. In these cases, the Nationality shall be the country of headquarters of the entity (often represented as the country of incorporation) unless AidData has information on the owners (i.e. it is known to be held by Chinese individuals), in which case the Nationality variable shall be coded based on that information.

The nationality field is applied to all institutions present in the Parent\_Owner field in the ‘Borrower Ownership’ tab, meaning that all top-level parent owners in the ownership trees of direct receiving agencies for loan records, to intermediate owners with partially known ownership, and to direct receiving agencies without recorded ownership information, have a nationality recorded.

## 5.3 Ownership Relationships

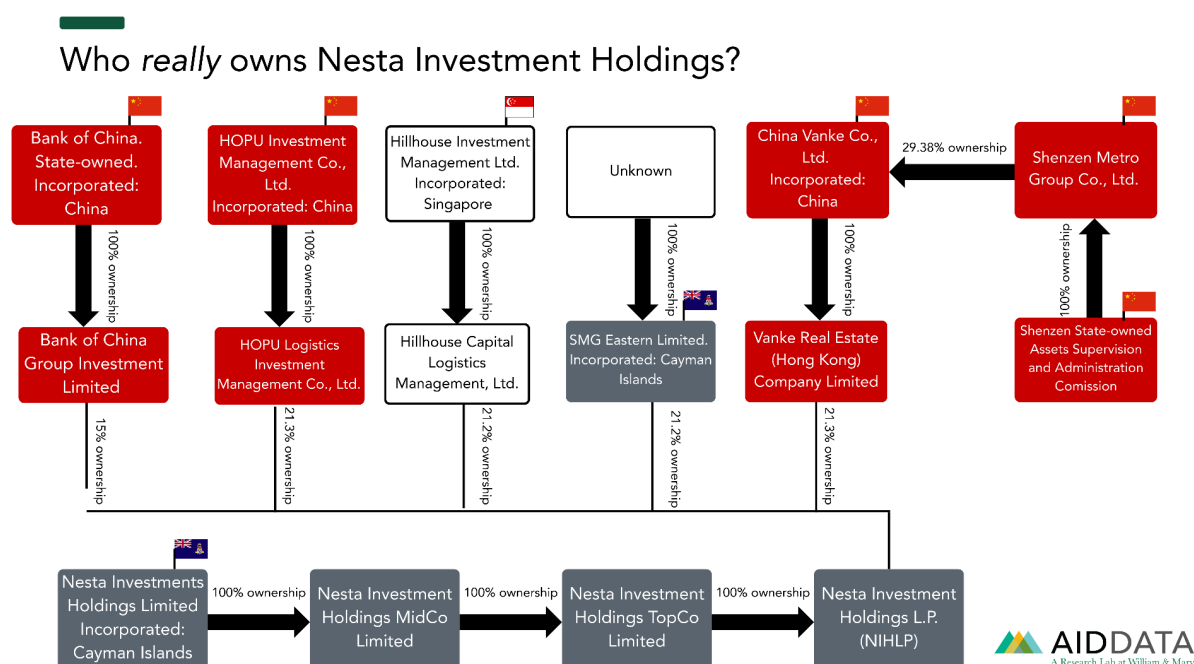
The direct receiving agencies that are identified in AidData records often have parent entities that own and control them. AidData coders endeavor to identify and create all agencies that are above the direct receiving agency in the hierarchical ownership tree structure in AidData’s internal data management platform.

Once the direct receiving agency’s immediate parent entities (Level I Parent Orgs) are created in the system, AidData coders connect them with the direct receiving agency by searching for the organization in the search bar. Then, AidData coders conduct research and assign the ownership percentages (100%) for the parent agencies. However, direct receiving agencies often have more than one level of parent organizations: complex corporate structures enable an entity to have multiple levels of parent organizations. Therefore, AidData coders seek to create and connect all levels of parent organizations and assign the appropriate ownership percentages for each level of owner organizations. See Figure 5.1 for an example of an



“ownership tree” for one of China’s borrowing institutions: Nesta Investment Holdings Limited Incorporated. For this borrower, AidData traces each layer of parent ownership—moving step-by-step through multiple intermediate entities—until reaching its ultimate parent owners. AidData has created corresponding intermediate entities within its internal data management platform to accurately capture and represent every organization that appears in this ownership chain.

Figure 5.1: Ownership Structure of Nesta Investment Holdings Limited Incorporated



For many organizations, AidData can identify enough information to accurately and fully capture the full parent owner of a given direct receiving agency. However, it is not always possible to identify the precise ownership shares of institutions with publicly available information. In such cases, AidData applies a set of standardized assumptions that allow for reasonable estimates of partial or missing ownership information. AidData then marks the Parent\_Ownership\_Estimated field as “True” so users are aware of the presence of one or more of these assumptions between the direct receiving agency and its parent owner. These assumptions are applied most frequently in the context of joint ventures and special purpose vehicles, when only one entity appears to be the owner of another, and in the case of funds managed by private equity firms. However, they are not generally applied to publicly traded companies where ownership information is typically available and assumptions can lead to very inaccurate depictions of their owners. AidData coders are instructed to follow these guidance when coding ownership information:

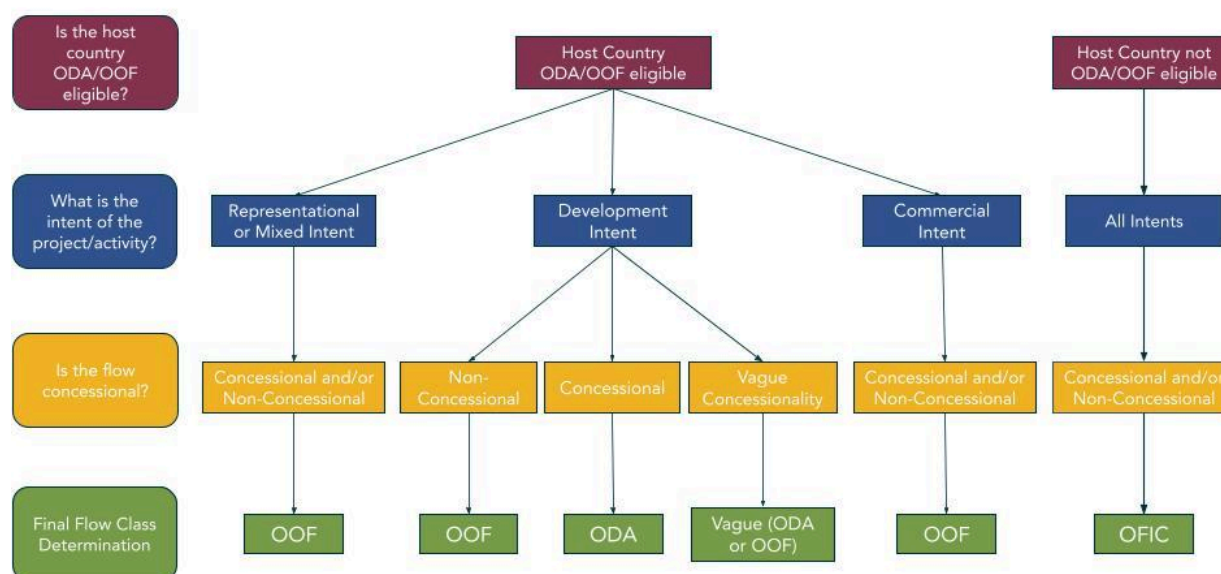
1. **Equal Ownership:** When project documentation or open sources specify that ownership is held “on an equal basis” or “on a joint basis,” all owners hold equal stakes, and AidData codes ownership equally among them. In cases where such coding would lead to the owners having stakes that collectively add to a repeating decimal (e.g.,

99.9999999%), AidData randomly chooses an organization to have a slightly larger stake. For example, a special purpose vehicle may have equal ownership for three owners, which AidData would code as 33.3333333%, 33.3333333%, and 33.3333334%. In these cases, AidData would not mark the Parent\_Ownership\_Estimated field as "Yes," as there is no true estimation.

2. **Take-the-Difference Assumption:** When the full set of owners is known and all but one ownership share is specified, AidData assigns the remaining stake to the final owner as the difference between the sum of the known shares and 100%. In these cases, AidData does not mark the Parent\_Ownership\_Estimated field as "Yes," as there is no true estimation. If multiple shares are unknown, AidData reverts to the Equal Ownership Assumption.
3. **Equal Ownership Assumption:** When all owners are identified but no information is available about their respective shares, AidData assigns equal percentages to each. If some ownership shares are known but others are not, AidData divides the residual ownership equally among the unknown entities. In cases where equal shares result in repeating decimals, one entity is randomly coded (normally rounded up by the relevant decimal point) to ensure that the total sums to 100%. In these cases, AidData marks the Parent\_Ownership\_Estimated field as "Yes."
4. **Majority/Minority Assumptions:** When there are two owners and one is known to hold a majority or minority stake, AidData codes majority ownership as 50.001% and minority ownership as 49.999%. If three or more owners exist and one is identified as holding a majority stake, the majority owner is assigned 50.001%, and the remaining percentage is divided equally among the other owners. If one of several owners is identified as a minority owner, AidData applies the Equal Ownership Assumption to all. In these cases, AidData marks the Parent\_Ownership\_Estimated field as "Yes."
5. **Wholly-Owned Assumption:** In cases where no ownership details are available but strong evidence exists that an institution is fully controlled by a parent (for example, when the institution's name directly signals affiliation), AidData codes the parent as the 100% owner. AidData also assumes that private equity funds are wholly owned by their managers, given the practical impossibility of identifying individual investors and the fact that control is exercised by the fund managers. In these cases, AidData marks the Parent\_Ownership\_Estimated field as "Yes."
6. **Publicly Traded Companies:** Ownership coding generally stops at publicly traded companies. The general exception is when an institution(s) consistently holds at least 25% of shares for three consecutive years in the period immediately preceding or following the commitment date. In these cases, AidData records the shareholder(s) as an owner in the structure, as this indicates a stable and significant controlling interest, not a temporary holding that can/will be sold off shortly thereafter. In these cases, AidData does not mark the Parent\_Ownership\_Estimated field as "Yes," unless they coexist with another assumption (i.e., a company is known to be a long-time majority owner).
7. **Bias for 100%:** In certain cases, AidData finds ownership information that adds up to close to 100%, but not quite 100%. In such cases, publicly reported stakes are often rounded and thus adding them up leads to a number below and sometimes even greater than 100%. If AidData coders encounter these, they are instructed to ensure it adds up to 100%, and may make minor adjustments to percentages to do so (e.g., add 0.005% to 0.12%). In these cases, AidData marks the Parent\_Ownership\_Estimated field as "Yes."

# Appendices

## Appendix A: Classification of Official Sector Loans and Grants by Flow Class



AidData seeks to assign projects/activities to an official finance classification (for the projects/activities we capture) based on the OECD-DAC guidelines. Doing so allows users to make comparisons between Chinese and non-Chinese sources of official financial flows. Projects/activities in host countries that are ODA/OOF-eligible countries in a given year are assigned to either the ODA or the OOF flow class category, depending on the intent and concessionality of the flow. Projects/activities in host countries that are high-income or otherwise ineligible to receive ODA/OOF according to OECD-DAC determinations are assigned to AidData's Official Flows to Ineligible Countries (OFIC) flow class.

Records are assigned 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 host country (i.e., have development intent). Second, the project/activity must take place in a country that qualifies for ODA based on its income level. 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 threshold). 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 concessionality threshold for loans to the official sector in

the host 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). Users can refer to the OECD\_ODA\_Concessional\_Threshold field to identify the threshold used for a particular loan record in the dataset. Projects/activities in ODA-eligible countries that are supported by an official financial or in-kind transfer but do not meet all three of these criteria are assigned to the OOF category. Projects/activities that are backed by an official commitment but cannot be reliably categorized as ODA or OOF because of insufficiently detailed information are assigned to the “Vague (ODA or OOF)” category. Projects/activities in this residual category primarily consist of (a) those with an unspecified Flow\_Type (i.e., values of “Vague TBD”); and (b) those financed with development-intent loans for which AidData lacks the borrowing terms (interest rates, grace periods, or maturity dates) needed for concessionality determinations.<sup>115</sup>

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<sup>115</sup> AidData does not capture Official Investment flows at this time.

## Appendix B: Geographic Coverage

List of Countries and Territories Covered in AidData's China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global 1.0)

Country	Record Count
Afghanistan	195
Albania	73
Algeria	67
American Samoa	1
Andorra	1
Angola	428
Antigua and Barbuda	86
Argentina	250
Armenia	55
Aruba	No projects/activities found
Australia	1347
Austria	23
Azerbaijan	65
Bahamas	69
Bahrain	16
Bangladesh	208
Barbados	123
Belarus	164
Belgium	27
Belize	No projects/activities found
Benin	200
Bermuda	32
Bhutan	No projects/activities found
Bolivia	165
Bosnia and Herzegovina	66
Botswana	149
Brazil	312
British Virgin Islands	No projects/activities found
Brunei Darussalam	69
Bulgaria	63
Burkina Faso	70
Burundi	190
Cabo Verde	119
Cambodia	518
Cameroon	222

Canada	290
Cayman Islands	4
Central African Republic	167
Chad	170
Chile	101
Colombia	117
Comoros	103
Congo	255
Cook Islands	44
Costa Rica	89
Cote d'Ivoire	204
Croatia	10
Cuba	187
Curacao	5
Cyprus	23
Czech Republic	30
Democratic People's Republic of Korea	149
Democratic Republic of the Congo	333
Denmark	47
Djibouti	142
Dominica	109
Dominican Republic	45
Ecuador	271
Egypt	163
El Salvador	71
Equatorial Guinea	205
Eritrea	109
Estonia	3
Eswatini	No projects/activities found
Ethiopia	358
Fiji	227
Faroe Islands	No projects/activities found
Finland	50
France	184
French Polynesia	5
Gabon	121
Gambia	85
Georgia	57
Germany	270
Ghana	284
Gibraltar	No projects/activities found
Greece	70
Greenland	2

Grenada	179
Guam	1
Guatemala	1
Guernsey	No projects/activities found
Guinea	158
Guinea-Bissau	147
Guyana	163
Haiti	35
Honduras	7
Hungary	85
Iceland	21
India	136
Indonesia	628
Iran	130
Iraq	76
Ireland	52
Isle of Man	1
Israel	32
Italy	238
Jamaica	131
Japan	267
Jersey	1
Jordan	106
Kazakhstan	242
Kenya	261
Kiribati	90
Kosovo	No projects/activities found
Korea	354
Kuwait	26
Kyrgyz Republic	173
Lao People's Democratic Republic	412
Latvia	20
Lebanon	108
Lesotho	165
Liberia	249
Libya	16
Liechtenstein	No projects/activities found
Lithuania	5
Luxembourg	47
Madagascar	186
Malawi	236
Malaysia	223
Maldives	120

Mali	202
Malta	43
Marshall Islands	87
Mauritania	184
Mauritius	179
Mexico	130
Micronesia	194
Moldova	71
Monaco	2
Mongolia	251
Montenegro	42
Morocco	86
Mozambique	180
Myanmar	559
Namibia	252
Nauru	14
Nepal	247
Netherlands	170
New Caledonia	1
New Zealand	269
Nicaragua	26
Niger	179
Nigeria	221
Niue	27
North Macedonia	78
Northern Mariana Islands	No projects/activities found
Norway	52
Oman	36
Pakistan	695
Palau	1
Panama	88
Papua New Guinea	243
Paraguay	4
Peru	211
Philippines	360
Poland	106
Portugal	46
Puerto Rico	3
Qatar	59
Romania	43
Russia	346
Rwanda	171
Saint Lucia	18



Samoa	184
Saint Kitts and Nevis	No projects/activities found
Saint Martin (French Part)	No projects/activities found
San Marino	1
Saint Vincent and the Grenadines	No projects/activities found
Sao Tome and Principe	135
Saudi Arabia	89
Senegal	142
Serbia	142
Seychelles	195
Sierra Leone	270
Singapore	416
Sint Maarten (Dutch part)	1
Slovak Republic	10
Slovenia	6
Solomon Islands	78
Somalia	80
South Africa	391
South Sudan	201
Spain	134
Sri Lanka	368
Sudan	358
Suriname	116
Sweden	55
Switzerland	146
Syrian Arab Republic	94
Tajikistan	191
Tanzania	331
Thailand	188
Timor-Leste	156
Togo	184
Tonga	189
Trinidad and Tobago	73
Tunisia	117
Turks and Caicos Islands	No projects/activities found
Turkey	213
Turkmenistan	60
Tuvalu	No projects/activities found
Uganda	244
Ukraine	135
United Arab Emirates	141
United Kingdom	945
United States	2490

United States Virgin Islands	No projects/activities found
Uruguay	98
Uzbekistan	236
Vanuatu	179
Venezuela	189
Viet Nam	243
West Bank and Gaza Strip	58
Yemen	94
Zambia	298
Zimbabwe	282

Notes: These row counts include both project/activity records that are marked "Yes" and "No" in the Recommended for Aggregates field. In addition to the row counts listed above, the dataset also includes 398 regional records.

## Appendix C: TUFF Source Prioritization Protocol

It is common for sources to have conflicting information on a certain project. In this case, it is necessary to have a hierarchical ranking of how much we weigh in each source.

### Ranking of Resource Types based on Reliability of Project Data

1. Official government source, from a donor or recipient government agency
2. Implementing or intermediary agency report/website
3. Other official sources (e.g. IMF, World Bank, CIA, etc.)
4. Peer-reviewed scholarly article
5. Other scholarly output, including working papers and dissertations
6. NGO, civil society, or advocacy group report/website
7. Media reports, including Wikileaks
8. Social media, including blogs from any unofficial source

If any conflicting information exists on a project detail, then the AidData coder or staff member will arbitrate by explicitly stating within the project description a) the source of this conflict and b) the reasoning for the proposed solution in the Staff\_Comments field.

## Appendix D: AidData's Deflation Methodology

### 1. Currency Conversion and Deflation Purpose

Financial values collected as part of AidData's data collection activities, including TUFF, must be converted and deflated so that they are comparable across currencies and years. AidData's methodology follows after the OECD's methodology.<sup>116</sup> The full methodology involves two steps: 1) Calculating nominal exchange rates and 2) calculating deflation rates detailed below. We calculate the deflators based on the OECD's methodology using World Bank sources for exchange rates and inflation.

### 2. Exchange Rates

#### *2.1 Exchange Rate Methodology*

Before deflation, all values must first be expressed in nominal (current) U.S. dollars (USD). This is done with an LCU per USD exchange rate, applied by:

$$(\text{original value}) / (\text{LCU per USD}) = (\text{new value})$$

For example:

$$100 \text{ EU} / .7 = 142.57 \text{ USD}$$

#### *2.2 Exchange Rate Sources*

Global Economic Monitor -- Official exchange rate, LCU per USD, period average (annual), [https://databank.worldbank.org/source/global-economic-monitor-\(gem\)](https://databank.worldbank.org/source/global-economic-monitor-(gem))

#### *2.3 Currency Revaluations/Changes in Currencies*

The standard data from the World Bank does not take into consideration currency revaluations and currency changes. So to reflect this nuance, we identified the complete list of countries that had undergone currency changes or revaluations that would affect the exchange rates used in TUFF datasets. In cases where the financial amount was quoted in old currencies, we used historical exchange rates (annual period average) from OANDA to calculate the exchange rate to USD.

### 3. Deflators

Deflation is necessary to take the USD nominal amount and deflate (or inflate) that amount into a constant year across the whole dataset so all the financial values are comparable despite year values. Deflators control for two changes over time: inflation in the donor country and change in buying power in the donor country relative to the United States. Both of these changes are calculated separately, and then multiplied together to get the final deflator used by AidData. The formula is the following:

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<sup>116</sup> Available at

<https://www.oecd.org/en/data/insights/data-explainers/2024/10/resources-for-reporting-development-finance-statistics.html>

$$\text{Inflation} * \text{Change in Buying Power} = \text{Deflator}$$

### 3.0 Inflation

The first part of the deflator formula is to calculate the inflation value from the base year to the constant year.

Inflation is measured as relative to a given base year. The below example calculations use a base year of 2014.<sup>117</sup> Percentages are then generated using the following formula:

$$\text{Percentage}_{\text{Year}} = \text{Percentage}_{\text{Previous Year}} + (\text{Percentage}_{\text{Previous Year}} * \text{Inflation}_{\text{Year}})$$

For example, in 2014, Colombia's GDP inflation was 4.2%. Taking 2014 as the base year, the percentage for 2014 is 100%. So, to calculate the percentage for 2010, using 2014 as the start year:

$$100 = P_{\text{previous}} + (P_{\text{previous}} * .04)$$

$$P_{\text{year}} / I_{\text{year}}$$

This yields 96% as Colombia's percentage for 2012. (Decimals have been rounded for this example, but were not rounded for AidData's deflator table.) In 2012, Colombia's GDP inflation was 8%. Then, to calculate 2012, 2013 is the start year:

$$96 = P_{\text{previous}} + (P_{\text{previous}} * .08)$$

$$P_{\text{year}} / I_{\text{year}}$$

This yields 89% as Colombia's percentage for 2012.

The following sources are used to compile the inflation values: World Bank GDP Inflation -- <http://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG>

### 3.2 Change in Buying Power

The second part of the deflators formula is to calculate the change in Buying Power for the donor country.

The change in buying power is taken from the LCU per USD rate and expressed as:

$$\text{Exchange Rate}_{\text{Base Year}} / \text{Exchange Rate}_{\text{Transaction Year}} = \text{Change in Buying Power}$$

For example, the Korean Won to USD rate was 1273.9 in 2014 and 804.4 in 1996. The subsequent change in buying power is:

$$1273.9 / 804.4 = 1.58$$

Note that this methodology yields a ratio of 1 for all currencies pegged to the USD.

The data used for the buying power formula are generated from the historical exchange rates described above.

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<sup>117</sup> AidData's China's Official Financial Flows to High-Income Countries Dataset uses a base year of 2023 for constant USD amounts.

### 3.3 Finalized Deflators

The GDP inflation and change in buying power numbers are combined to create annual deflators for donor countries:

$$\text{Inflation} * \text{Change in Buying Power} = \text{Deflator}$$

### 4. Examples on Using GDP Deflators

Amounts in LCU should be converted to nominal USD, using the LCU per USD exchange rates found in sheet A1. Then, the values should be *divided by* the percentages in sheet "E1." For example, in 1975, Kuwait funded an electrification project in Bangladesh worth 6,400,000 *KD*1975 (AidData ID 2427051). To convert this amount to USD 2014, first, convert it to USD 1975:

$$6,400,000 \text{ KD } 1975 / (.29003 \text{ KD/USD } 1975) = 22,066,505.30 \text{ USD } 1975$$

Next, divide it by the AidData deflator:

$$22,066,505.30 \text{ USD } 1975 / 20.83\% = 105,936,175.20 \text{ USD } 2014$$

Note that amounts that are *already reported in USD* do not need to be converted. They only need to be deflated (divided by the appropriate deflator).

## Appendix E: Health of Record Scores

AidData's Health of Record scores are meant to signal the quality of each record in four dimensions: 1) the quality of the sources used to underpin the record, 2) the completeness of the record in terms of foundational project/activity information, 3) the level of detail available on project/activity implementation, and 4) the financial details available for the project/activity. The details of each score are listed below.

**Source\_Quality\_Score:** This metric varies on a scale of 1 to 5, with 1 indicating that the record is exclusively underpinned by unofficial sources and 5 indicating reliance upon multiple, official sources. This score is meant to communicate which projects meet our preferred threshold for reliability/quality of the sources. We would consider records with a score of 3 or lower as records that have a lack of authoritative sources underpinning the record, flagging to users records that may have reliability issues. The average score across the entire 1.0 version of the CLG-Global dataset is 4.27, indicating that most records successfully meet our threshold for quality of sources (scoring a 4 or 5). The full scoring criteria is detailed below:

Criteria for Source\_Quality\_Score:

Source Categorizations:

- Official sources include Donor/Recipient Official Source, Implementing/Intermediary Organization Source, Other Official Source
- Tier 1 non-official sources include Academic Journal Article, Other Academic
- Tier 2 non-official sources include Media Report, NGO/Civil Society/Advocacy, Social Media, Other

Assign a value based on the following criteria:

- 1 = Only media sources
  - Source type = Media Report (any number).
- 2 = Only Tier 2 non-official sources or non-official sources + any media sources (not required)
  - Source types = NGO/Civil Society/Advocacy OR Social Media OR Other (at least one). Can have Media Report source type as well (any number).
- 3 = At least 1 Tier 1 non-official source (but no official sources) + any Tier 2 non-official sources (not required)
  - Source types = Academic Journal Article OR Other Academic (any number). Can have Media Report, NGO/Civil Society/Advocacy, Social Media, or Other (any number).
- 4 = Only 1 official source (no additional official sources) + any non-official sources, either Tier 1 or 2 (not required)

- Has only 1 source type that matches Donor/Recipient Official Source OR Implementing/Intermediary Organization Source OR Other Official Source. Can have Media Report, NGO/Civil Society/Advocacy, Other, Social Media, Academic Journal Article, or Other Academic (any number).
- 5 = At least 2 official sources
  - Has at least 2 sources with source type Donor/Recipient Official Source, Implementing/Intermediary Organization Source, or Other Official Source. Can have Media Report, NGO/Civil Society/Advocacy, Social Media, Other, Academic Journal Article, or Other Academic (any number).

**Data\_Completeness\_Score:** This metric varies on a scale of 0 to 5, with 5 indicating that the basic fields of the record are complete. The "threshold" for a score of 5 is similar to the key fields in the OECD-DAC's Creditor Reporting System: an actual rather than estimated commitment year, a non-missing transaction amount, a flow type/flow class that is not defined as "Vague," and identifiable funding, implementing, and receiving agencies. The average Data\_Completeness\_Score for the 1.0 version of the CLG-Global dataset is 3.38.

Criteria for Data\_Completeness\_Score:

Start at 5, then

- Projects with year uncertain = -1
- Projects with no transaction amount (include umbrella projects) = -1
- Projects with vague flow class or flow type = -1
- Projects with a missing or unspecified Funding Agency = -1
- Projects with EITHER a missing Implementing Agency OR Receiving Agency = -1

\*Min: 0, Max = 5

**Implementation\_Detail\_Score:** This metric varies on a scale of 0 to 5, with higher scores indicating that more implementation details have been captured in the record. The following implementation details are considered: whether the project's implementing agency (or agencies), implementation start and completion dates (actual or planned), and geographical locations are specified; and whether the project has a specified sector allocation. Project Implementation Scores are only calculated for records with a "Recommended for Aggregates" value of "Yes" and a "Status" value of "Implementation" or "Completion." The average Project\_Implementation\_Score in the 1.0 version of the CLG-Global dataset is 3.54.

Criteria for Implementation\_Detail\_Score:

Add an additional point for each of the criteria met below where Status = Implementation/Completion AND Recommended\_for\_Aggregates = Yes

1. The presence of implementing agency when Status = Implementation/Completion
2. The presence of start/end dates based on Status = Implementation



- a. Actual start date = 1 point
  - b. Planned end date = 1 point
- 3. The presence of start/end dates based on Status = Completion
  - a. Actual start date = 1 point
  - b. Actual end date = 1 point
- 4. The presence of location details when Status = Implementation/Completion
- 5. Sector != Unallocated/Unspecified

**Loan\_Detail\_Score:** This metric varies on a scale of 0-5, with higher values indicating that more financial transaction details are captured in the record. Loan Detail Scores are only calculated for records with a Recommended\_for\_Aggregates value of "Yes" and a Flow\_Type designation of "Loan." A score of 5 indicates that a loan's interest rate at T0, maturity, grace period, transaction value, funding agencies, and receiving agencies are all specified (i.e., not missing). The average Loan\_Detail\_Score in the 1.0 version of the CLG-Global dataset is 3.38.

#### Criteria for Loan\_Detail\_Score

Add an additional point when each of the fields below is not blank. Calculated only for projects where Flow\_Type = Loan AND Recommended\_for\_Aggregates = Yes

- Interest Rate at T0 != blank
- Maturity != blank
- Grace Period != blank
- Transaction value != blank
- Funding agency != blank OR Receiving agency != blank

## Appendix F: OECD Income Classification from 2000-2023

The following table illustrates the income status of each country included in the CLG-Global 1.0 dataset between 2000-2023 according to the OECD, along with the year range during which the country was considered eligible for ODA/OOF. Any year a country is ineligible for ODA/OOF (i.e., the OECD income status classification appears as high income), financial flows from China to that country are assigned to AidData's Official Flows to Ineligible Countries (OFIC) flow class.

Country	OECD Income Status Classification	ODA eligibility
Afghanistan	2000-2023 Low income	2000-2023 ODA eligible
Albania	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Algeria	2000-2010 Lower-middle income, 2011-2021 Upper-middle income, 2022-2023 Lower-middle income	2000-2023 ODA eligible
American Samoa	2000-2023 High income	2000-2023 ODA ineligible
Andorra	2000-2023 High income	2000-2023 ODA ineligible
Angola	2000-2023 Low income	2000-2023 ODA eligible
Antigua and Barbuda	2000-2021 Upper-middle income, 2022-2023 High income	2000-2021 ODA eligible, 2022-2023 ODA ineligible
Argentina	2000-2023 Upper-middle income	2000-2023 ODA eligible
Armenia	2000-2004 Low income, 2005-2021 Lower-middle income, 2022-2023 Upper-middle income	2000-2023 ODA eligible
Aruba	2000-2023 High income	2000-2023 ODA ineligible
Australia	2000-2023 High income	2000-2023 ODA ineligible
Austria	2000-2023 High income	2000-2023 ODA ineligible
Azerbaijan	2000-2004 Low income, 2005-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Bahamas	2000-2023 High income	2000-2023 ODA ineligible
Bahrain	2000-2004 Upper-middle income, 2005-2023 High income	2000-2004 ODA eligible, 2005-2023 ODA ineligible
Bangladesh	2000-2023 Low income	2000-2023 ODA eligible
Barbados	2000-2010 Upper-middle income, 2011-2023 High income	2000-2010 ODA eligible, 2011-2023 ODA ineligible
Belarus	2000-2004 High income, 2005-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2004 ODA ineligible, 2005-2023 ODA eligible
Belgium	2000-2023 High income	2000-2023 ODA ineligible
Belize	2000-2004 Lower-middle income,	2000-2023 ODA eligible

	2005-2010 Upper-middle income, 2011-2013 Lower-middle income, 2014-2021 Upper-middle income, 2022-2023 Lower-middle income	
Benin	2000-2023 Low income	2000-2023 ODA eligible
Bermuda	2000-2023 High income	2000-2023 ODA ineligible
Bhutan	2000-2023 Low income	2000-2023 ODA eligible
Bolivia	2000-2023 Lower-middle income	2000-2023 ODA eligible
Bosnia and Herzegovina	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Botswana	2000-2023 Upper-middle income	2000-2023 ODA eligible
Brazil	2000-2004 Upper-middle income, 2005-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
British Virgin Islands	2000-2023 High income	2000-2023 ODA ineligible
Brunei Darussalam	2000-2023 High income	2000-2023 ODA ineligible
Bulgaria	2000-2023 High income	2000-2023 ODA ineligible
Burkina Faso	2000-2023 Low income	2000-2023 ODA eligible
Burundi	2000-2023 Low income	2000-2023 ODA eligible
Cabo Verde	2000-2006 Low income, 2007-2023 Lower-middle income	2000-2023 ODA eligible
Cambodia	2000-2023 Low income	2000-2023 ODA eligible
Cameroon	2000-2007 Low income, 2008-2023 Lower-middle income	2000-2023 ODA eligible
Canada	2000-2023 High income	2000-2023 ODA ineligible
Cayman Islands	2000-2023 High income	2000-2023 ODA ineligible
Central African Republic	2000-2023 Low income	2000-2023 ODA eligible
Chad	2000-2023 Low income	2000-2023 ODA eligible
Chile	2000-2017 Upper-middle income, 2018-2023 High income	2000-2017 ODA eligible, 2018-2023 ODA ineligible
Colombia	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Comoros	2000-2023 Low income	2000-2023 ODA eligible
Congo	2000-2007 Low income, 2008-2023 Lower-middle income	2000-2023 ODA eligible
Cook Islands	2000-2019 Upper-middle income, 2020-2023 High income	2000-2019 ODA eligible, 2020-2023 ODA ineligible
Costa Rica	2000-2002 Lower-middle income, 2003-2023 Upper-middle income	2000-2023 ODA eligible
Cote D'Ivoire	2000-2010 Low income,	2000-2023 ODA eligible

	2011-2023 Lower-middle income	
Croatia	2000-2010 Upper-middle income, 2011-2023 High income	2000-2010 ODA eligible, 2011-2023 ODA ineligible
Cuba	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Curacao	2000-2023 High income	2000-2023 ODA ineligible
Cyprus	2000-2023 High income	2000-2023 ODA ineligible
Czech Republic	2000-2023 High income	2000-2023 ODA ineligible
Democratic People's Republic of Korea	2000-2023 Low income	2000-2023 ODA eligible
Democratic Republic of the Congo	2000-2023 Low income	2000-2023 ODA eligible
Denmark	2000-2023 High income	2000-2023 ODA ineligible
Djibouti	2000-2023 Low income	2000-2023 ODA eligible
Dominica	2000-2002 Lower-middle income, 2003-2023 Upper-middle income	2000-2023 ODA eligible
Dominican Republic	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Ecuador	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Egypt	2000-2023 Lower-middle income	2000-2023 ODA eligible
El Salvador	2000-2023 Lower-middle income	2000-2023 ODA eligible
Equatorial Guinea	2000-2017 Low income, 2018-2023 Upper-middle income	2000-2023 ODA eligible
Eritrea	2000-2023 Low income	2000-2023 ODA eligible
Estonia	2000-2023 High income	2000-2023 ODA ineligible
Eswatini	2000-2023 Lower-middle income	2000-2023 ODA eligible
Ethiopia	2000-2023 Low income	2000-2023 ODA eligible
Faroe Islands	2000-2023 High income	2000-2023 ODA ineligible
Fiji	2000-2007 Lower-middle income, 2008-2010 Upper-middle income, 2011-2013 Lower-middle income, 2014-2023 Upper-middle income	2000-2023 ODA eligible
Finland	2000-2023 High income	2000-2023 ODA ineligible
France	2000-2023 High income	2000-2023 ODA ineligible
French Polynesia	2000-2023 High income	2000-2023 ODA ineligible
Gabon	2000-2023 Upper-middle income	2000-2023 ODA eligible
Gambia	2000-2023 Low income	2000-2023 ODA eligible
Georgia	2000-2002 Lower-middle income, 2003-2004 Low income, 2005-2021 Lower-middle income,	2000-2023 ODA eligible

	2022-2023 Upper-middle income	
Germany	2000-2023 High income	2000-2023 ODA ineligible
Ghana	2000-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
Gibraltar	2000-2023 High income	2000-2023 ODA ineligible
Greece	2000-2023 High income	2000-2023 ODA ineligible
Greenland	2000-2023 High income	2000-2023 ODA ineligible
Grenada	2000-2023 Upper-middle income	2000-2023 ODA eligible
Guam	2000-2023 High income	2000-2023 ODA ineligible
Guatemala	2000-2021 Lower-middle income, 2022-2023 Upper-middle income	2000-2023 ODA eligible
Guernsey	2000-2023 High income	2000-2023 ODA ineligible
Guinea	2000-2023 Low income	2000-2023 ODA eligible
Guinea-Bissau	2000-2023 Low income	2000-2023 ODA eligible
Guyana	2000-2017 Lower-middle income, 2018-2023 Upper-middle income	2000-2023 ODA eligible
Haiti	2000-2023 Low income	2000-2023 ODA eligible
Honduras	2000-2002 Low income, 2003-2023 Lower-middle income	2000-2023 ODA eligible
Hungary	2000-2023 High income	2000-2023 ODA ineligible
Iceland	2000-2023 High income	2000-2023 ODA ineligible
India	2000-2007 Low income, 2008-2023 Lower-middle income	2000-2023 ODA eligible
Indonesia	2000-2004 Low income, 2005-2023 Lower-middle income	2000-2023 ODA eligible
Iran	2000-2010 Lower-middle income, 2011-2021 Upper-middle income, 2022-2023 Lower-middle income	2000-2023 ODA eligible
Iraq	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	2000-2023 ODA eligible
Ireland	2000-2023 High income	2000-2023 ODA ineligible
Isle of Man	2000-2023 High income	2000-2023 ODA ineligible
Israel	2000-2023 High income	2000-2023 ODA ineligible
Italy	2000-2023 High income	2000-2023 ODA ineligible
Jamaica	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Japan	2000-2023 High income	2000-2023 ODA ineligible
Jersey	2000-2023 High income	2000-2023 ODA ineligible
Jordan	2000-2010 Lower-middle income,	2000-2023 ODA eligible

	2011-2017 Upper-middle income, 2018-2021 Lower-middle income, 2022-2023 Upper-middle income	
Kazakhstan	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Kenya	2000-2017 Low income, 2018-2023 Lower-middle income	2000-2023 ODA eligible
Kiribati	2000-2023 Low income	2000-2023 ODA eligible
Korea	2000-2023 High income	2000-2023 ODA ineligible
Kosovo	2000-2021 Lower-middle income, 2022-2023 Upper-middle income	2000-2023 ODA eligible
Kuwait	2000-2023 High income	2000-2023 ODA ineligible
Kyrgyz Republic	2000-2013 Low income, 2014-2023 Lower-middle income	2000-2023 ODA eligible
Lao People's Democratic Republic	2000-2023 Low income	2000-2023 ODA eligible
Latvia	2000-2023 High income	2000-2023 ODA ineligible
Lebanon	2000-2023 Upper-middle income	2000-2023 ODA eligible
Lesotho	2000-2023 Low income	2000-2023 ODA eligible
Liberia	2000-2023 Low income	2000-2023 ODA eligible
Libya	2000-2004 High income, 2005-2023 Upper-middle income	2000-2004 ODA ineligible, 2005-2023 ODA eligible
Liechtenstein	2000-2023 High income	2000-2023 ODA ineligible
Lithuania	2000-2023 High income	2000-2023 ODA ineligible
Luxembourg	2000-2023 High income	2000-2023 ODA ineligible
Madagascar	2000-2023 Low income	2000-2023 ODA eligible
Malawi	2000-2023 Low income	2000-2023 ODA eligible
Malaysia	2000-2023 Upper-middle income	2000-2023 ODA eligible
Maldives	2000-2010 Low income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Mali	2000-2023 Low income	2000-2023 ODA eligible
Malta	2000-2002 Upper-middle income, 2003-2023 High income	2000-2002 ODA eligible, 2003-2023 ODA ineligible
Marshall Islands	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	2000-2023 ODA eligible
Mauritania	2000-2023 Low income	2000-2023 ODA eligible
Mauritius	2000-2023 Upper-middle income	2000-2023 ODA eligible
Mexico	2000-2023 Upper-middle income	2000-2023 ODA eligible
Micronesia	2000-2023 Lower-middle income	2000-2023 ODA eligible
Moldova	2000-2007 Low income,	2000-2023 ODA eligible

	2008-2021 Lower-middle income, 2022-2023 Upper-middle income	
Monaco	2000-2023 High income	2000-2023 ODA ineligible
Mongolia	2000-2007 Low income, 2008-2023 Lower-middle income	2000-2023 ODA eligible
Montenegro	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Morocco	2000-2023 Lower-middle income	2000-2023 ODA eligible
Mozambique	2000-2023 Low income	2000-2023 ODA eligible
Myanmar	2000-2023 Low income	2000-2023 ODA eligible
Namibia	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Nauru	2000-2023 Upper-middle income	2000-2023 ODA eligible
Nepal	2000-2023 Low income	2000-2023 ODA eligible
Netherlands	2000-2023 High income	2000-2023 ODA ineligible
New Caledonia	2000-2023 High income	2000-2023 ODA ineligible
New Zealand	2000-2023 High income	2000-2023 ODA ineligible
Nicaragua	2000-2007 Low income, 2008-2023 Lower-middle income	2000-2023 ODA eligible
Niger	2000-2023 Low income	2000-2023 ODA eligible
Nigeria	2000-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
Niue	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
North Macedonia	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Northern Mariana Islands	2000-2023 High income	2000-2023 ODA ineligible
Norway	2000-2023 High income	2000-2023 ODA ineligible
Oman	2000-2010 Upper-middle income, 2011-2023 High income	2000-2010 ODA eligible, 2011-2023 ODA ineligible
Pakistan	2000-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
Palau	2000-2023 Upper-middle income	2000-2023 ODA eligible
Panama	2000-2023 Upper-middle income	2000-2023 ODA eligible
Papua New Guinea	2000-2002 Lower-middle income, 2003-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
Paraguay	2000-2017 Lower-middle income, 2018-2023 Upper-middle income	2000-2023 ODA eligible
Peru	2000-2010 Lower-middle income,	2000-2023 ODA eligible

	2011-2023 Upper-middle income	
Philippines	2000-2023 Lower-middle income	2000-2023 ODA eligible
Poland	2000-2023 High income	2000-2023 ODA ineligible
Portugal	2000-2023 High income	2000-2023 ODA ineligible
Puerto Rico	2000-2023 High income	2000-2023 ODA ineligible
Qatar	2000-2023 High income	2000-2023 ODA ineligible
Romania	2000-2023 High income	2000-2023 ODA ineligible
Russia	2000-2023 High income	2000-2023 ODA ineligible
Rwanda	2000-2023 Low income	2000-2023 ODA eligible
Saint Kitts and Nevis	2000-2013 Upper-middle income, 2014-2023 High income	2000-2013 ODA eligible, 2014-2023 ODA ineligible
Saint Lucia	2000-2023 Upper-middle income	2000-2023 ODA eligible
Saint Martin (French part)	2000-2023 High income	2000-2023 ODA ineligible
Saint Vincent and the Grenadines	2000-2004 Lower-middle income, 2005-2023 Upper-middle income	2000-2023 ODA eligible
Samoa	2000-2013 Low income, 2014-2017 Lower-middle income, 2018-2021 Upper-middle income, 2022-2023 Lower-middle income	2000-2023 ODA eligible
San Marino	2000-2023 High income	2000-2023 ODA ineligible
Sao Tome and Principe	2000-2023 Low income	2000-2023 ODA eligible
Saudi Arabia	2000-2007 Upper-middle income, 2008-2023 High income	2000-2007 ODA eligible, 2008-2023 ODA ineligible
Senegal	2000-2023 Low income	2000-2023 ODA eligible
Serbia	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Seychelles	2000-2017 Upper-middle income, 2018-2023 High income	2000-2017 ODA eligible, 2018-2023 ODA ineligible
Sierra Leone	2000-2023 Low income	2000-2023 ODA eligible
Singapore	2000-2023 High income	2000-2023 ODA ineligible
Sint Maarten (Dutch part)	2000-2023 High income	2000-2023 ODA ineligible
Slovak Republic	2000-2023 High income	2000-2023 ODA ineligible
Slovenia	2000-2002 Upper-middle income, 2003-2023 High income	2000-2002 ODA eligible, 2003-2023 ODA ineligible
Solomon Islands	2000-2023 Low income	2000-2023 ODA eligible
Somalia	2000-2023 Low income	2000-2023 ODA eligible
South Africa	2000-2004 Lower-middle income, 2005-2023 Upper-middle income	2000-2023 ODA eligible
South Sudan	2000-2010 N/A,	2000-2010 N/A, 2011-2023



	2011-2023 Low income	ODA eligible
Spain	2000-2023 High income	2000-2023 ODA ineligible
Sri Lanka	2000-2023 Lower-middle income	2000-2023 ODA eligible
Sudan	2000-2023 Low income	2000-2023 ODA eligible
Suriname	2000-2007 Lower-middle income, 2008-2023 Upper-middle income	2000-2023 ODA eligible
Sweden	2000-2023 High income	2000-2023 ODA ineligible
Switzerland	2000-2023 High income	2000-2023 ODA ineligible
Syrian Arab Republic	2000-2021 Lower-middle income, 2022-2023 Low income	2000-2023 ODA eligible
Tajikistan	2000-2017 Low income, 2018-2023 Lower-middle income	2000-2023 ODA eligible
Tanzania	2000-2023 Low income	2000-2023 ODA eligible
Thailand	2000-2010 Lower-middle income, 2011-2023 Upper-middle income	2000-2023 ODA eligible
Timor-Leste	2000-2023 Low income	2000-2023 ODA eligible
Togo	2000-2023 Low income	2000-2023 ODA eligible
Tonga	2000-2013 Lower-middle income, 2014-2023 Upper-middle income	2000-2023 ODA eligible
Trinidad and Tobago	2000-2010 Upper-middle income, 2011-2023 High income	2000-2010 ODA eligible, 2011-2023 ODA ineligible
Tunisia	2000-2010 Lower-middle income, 2011-2017 Upper-middle income, 2018-2023 Lower-middle income	2000-2023 ODA eligible
Turkey	2000-2002 Upper-middle income, 2003-2004 Lower-middle income, 2005-2023 Upper-middle income	2000-2023 ODA eligible
Turkmenistan	2000-2002 Low income, 2003-2013 Lower-middle income, 2014-2023 Upper-middle income	2000-2023 ODA eligible
Turks and Caicos Islands	2000-2007 Upper-middle income, 2008-2023 High income	2000-2007 ODA eligible, 2008-2023 ODA ineligible
Tuvalu	2000-2023 Low income	2000-2023 ODA eligible
Uganda	2000-2023 Low income	2000-2023 ODA eligible
Ukraine	2000-2004 High income, 2005-2023 Lower-middle income	2000-2004 ODA ineligible, 2005-2023 ODA eligible
United Arab Emirates	2000-2023 High income	2000-2023 ODA ineligible
United Kingdom	2000-2023 High income	2000-2023 ODA ineligible
United States	2000-2023 High income	2000-2023 ODA ineligible
United States Virgin Islands	2000-2023 High income	2000-2023 ODA ineligible

Uruguay	2000-2017 Upper-middle income, 2018-2023 High income	2000-2017 ODA eligible, 2018-2023 ODA ineligible
Uzbekistan	2000-2002 Lower-middle income, 2003-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
Vanuatu	2000-2020 Low income, 2021-2023 Lower-middle income	2000-2023 ODA eligible
Venezuela	2000-2023 Upper-middle income	2000-2023 ODA eligible
Viet Nam	2000-2010 Low income, 2011-2023 Lower-middle income	2000-2023 ODA eligible
West Bank and Gaza Strip	2000-2023 Lower-middle income	2000-2023 ODA eligible
Yemen	2000-2023 Low income	2000-2023 ODA eligible
Zambia	2000-2023 Low income	2000-2023 ODA eligible
Zimbabwe	2000-2021 Low income, 2022-2023 Lower-middle income	2000-2023 ODA eligible

## Appendix G: AidData's China's Global Loans and Grants Dataset at a glance

AidData Dataset		Global Chinese Development Finance Dataset, Version 3.0 (November 2023)	China's Global Loans and Grants Dataset, Version 1.0 (CLG-Global1.0) (November 2025)
Scope & Coverage	Sectors	All	All
	Country Coverage	165 countries globally (including 146 countries with projects/activities identified)	217 countries globally (including 200 countries with projects/activities identified)
	Financiers	791 Chinese official sector institutions	1,193 Chinese official sector institutions
	Financial Instrument	Loans (with categorization of 23 distinct credit instruments), grants, scholarships, technical assistance, debt rescheduling, debt forgiveness	Loans (with categorization of 29 distinct credit instruments), grants, scholarships, technical assistance, debt rescheduling, debt forgiveness
Dataset Summary	Number of Records	20,985	33,580
	Number of Fields	133	175
	Sources Publicly Available	147,703 (including 99,393 unique sources)	246,261 (including 138,880 unique sources)
	Total Financial Value	\$1.34 trillion (2021 constant) (excluding short-term "rollover" facilities, or \$1.5 trillion when included)	\$2.2 trillion (2023 constant) (excluding short-term "rollover" facilities, or \$2.4 trillion when included)
	Timeframe	2000-2021 (with implementation details through 2023)	2000-2023 (with implementation details through 2025)

Project Details	Financial Details	Transaction amount, collateral, interest rate, default interest rate, grace period, maturity, commitment fee, management fee, insurance fee, first and last loan repayment dates, level of public liability	Transaction amount, collateral, Interest Rate Type, Fixed Interest Rate, Reference Rate, Loan Tenor, Margin on Reference Rate, and Interest at T0 syndicated loan amount, syndicated loan share, default interest rate, grace period, maturity, commitment fee, management fee, insurance fee, first and last loan repayment dates, level of public liability
	Participating Agencies	Funding agencies, co-financing agencies, direct receiving agencies, indirect receiving agencies, implementing agencies, guarantor, insurance provider, collateral provider, security agent/collateral agent	Funding agencies, parent funding agencies, marker for funding agency that is an overseas branch/subsidiary, co-financing agencies, direct receiving agencies (DRA), DRA country of incorporation, parent owner, parent ownership, ultimate beneficial owner, indirect receiving agencies, implementing agencies, guarantor, insurance provider, collateral provider, security agent/collateral agent
	Implementation Details	Commitment date, status, planned and actual start and end dates, deviation from planned start and completion dates, infrastructure project flag	Commitment date, status, planned and actual start and end dates, deviation from planned start and completion dates, infrastructure project flag
	Description	Average of 166 words per project	Average of 269 words per project narrative
	OECD Classifications <i>See section 1.1 for further information</i>	Sector, flow class, host country income classification, grant-equivalent measure	Sector, flow class, host country income classification, grant-equivalent measure
	Sub-national Details	9,497 physical locations	14,192 physical locations

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