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Global Debt Database: Methodology and Sources

by Samba Mbaye, Marialuz Moreno Badia, and Kyungla Chae

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I N T E R N A T I O N A L M O N E T A R Y F U N D

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Fiscal Affairs Department

Global Debt Database: Methodology and Sources

Prepared by Samba Mbaye, Marialuz Moreno Badia, and Kyungla Chae¹

Authorized for distribution by Catherine Pattillo

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Abstract

This paper describes the compilation of the Global Debt Database (GDD), a cutting-edge dataset covering private and public debt for virtually the entire world (190 countries) dating back to the 1950s. The GDD is the result of a multiyear investigative process that started with the October 2016 Fiscal Monitor, which pioneered the expansion of private debt series to a global sample. It differs from existing datasets in three major ways. First, it takes a fundamentally new approach to compiling historical data. Where most debt datasets either provide long series with a narrow and changing definition of debt or comprehensive debt concepts over a short period, the GDD adopts a multidimensional approach by offering multiple debt series with different coverages, thus ensuring consistency across time. Second, it more than doubles the cross-sectional dimension of existing private debt datasets. Finally, the integrity of the data has been checked through bilateral consultations with officials and IMF country desks of all countries in the sample, setting a higher data quality standard.

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"It is a capital mistake to theorize before one has data"

Arthur Conan Doyle, Sherlock Holmes

I. INTRODUCTION

In the age of big data, the economics profession increasingly places a premium on access to vast amounts of information to test the validity of alternative theories. For macroeconomists, this often means returning to the past as many research questions require long time series for an adequate empirical treatment. Nowhere has this trend been more prevalent than in recent studies on debt and financial crises. For one thing, financial crises in their different guises are rare events that take place decades apart. Hence, at least three to four decades of debt history would be needed for a chance to study more than one episode per country. If the goal is to study the interaction with other types of events such as recessions, the data requirements could be exponentially larger. In the wake of the Global Financial Crisis (GFC), scholars compiled new panel datasets on debt—whether public (Reinhart and Rogoff 2009; Abbas and others 2011) or private (Jordà, Schularick, and Taylor 2016)—covering many decades (if not centuries) of data to overcome this conundrum. Nonetheless, this strategy is not without cost as the new datasets necessarily include only a few countries or use a narrow and changing definition of debt. For example, long time series on private debt tend to focus on bank credit while public debt aggregates usually refer to the (budgetary) central government. While these data are very valuable for economic inference, they only provide a partial picture of global debt, how much is owed, and by whom. As a result, major macroeconomic shifts that have taken place in the last few decades such as the corporate sector's move away from bank financing, increasing subnational debt, or financial innovation and the emergence of new debt-like obligations (Borio, McCauley and McGuire 2017) are not necessarily captured by these data. Unfortunately, more comprehensive debt datasets do not reach far back in time, making them unsuitable for empirical analysis. Researchers are thus confronted with the unpalatable choice between the length of the data and the exhaustibility of coverage.

This paper describes the compilation of the Global Debt Database (GDD), a new dataset that takes a fundamentally different approach to compiling historical debt data to solve the dilemma between length and exhaustibility faced by existing datasets. The GDD is the result of a multiyear investigative process and an extensive standardization effort to produce consistent time series of debt, the genesis of which was the October 2016 Fiscal Monitor (FM2016). It covers the debt of the nonfinancial sector—both private and public—for virtually the entire world (190 countries) dating back to the 1950s. The main novelty is that, instead of catering to one side of the trade-off, the GDD takes a multidimensional approach, providing alternative debt series with different coverages. It reports various measures of private debt—from core instruments (such as loans and securities) to total private sector debt liabilities, for both households and nonfinancial corporations—and public debt—from the narrower central government to the wider public sector. One of the main benefits of this strategy is that it ensures the consistency of debt series throughout time. In addition, by including both the sovereign and private sides of borrowing, we can offer a global picture of total debt while accounting for the interlinkages between the public and private sector.

The GDD was constructed in two stages. In the first one, published in the FM2016, the focus was on expanding the country coverage of private debt—which was then limited to major

advanced and emerging market economies—while the historical public debt series was taken from Abbas and others (2011). This provided the most comprehensive dataset on global debt at the time. In the second stage, the data compiled for the FM2016 have been updated, using new primary and secondary sources to further expand the country and time coverage. In addition, important methodological improvements have been introduced to capture a broader set of debt instruments, better measure cross-border flows, and differentiate across institutional units within the government. This has resulted in a major overhaul of the public debt series, with more granular data for both the public and private sector giving a more accurate picture of global public and private debt. Another major enhancement has been the extensive data validation. The integrity of the different debt series has been checked through bilateral contacts with country officials and IMF country desks for all countries in the sample as well as consultations with statisticians and other data compilers, setting a higher data quality standard.² The GDD is available in electronic format at <http://www.imf.org/external/datamapper/datasets/GDD>.

The paper is organized as follows. The next section surveys existing data sources of private and public debt. Section III describes the sources used in compiling the GDD and the methodology for assembling information from them, explaining the rationale behind the choices made to overcome data constraints. Section IV discusses the main characteristics of the database while section V provides summary statistics and assesses broad debt trends by various country groupings, giving a first glimpse of the global picture. Section VI concludes by outlining the way forward. Annex I gives a brief synopsis of how the database was constructed and sources on a period-by-period and country-by-country basis, while Annex II provides the country classification by income and regional groups.

II. REVIEW OF EXISTING DATASETS

All researchers compiling historical cross-country datasets on debt face two fundamental tradeoffs between the panel and the debt coverage dimensions. At the cross-sectional level, one would like to include as many countries as possible as this would allow conducting cross-country comparisons. Nonetheless, some debt liabilities (for example, insurance, pension, and standardized guarantee schemes) may be available only for a limited number of countries. Similarly, one would like to maximize the time series dimension; but this would quickly lead to the same data constraints. On the other hand, narrowing the coverage of debt liabilities to core concepts—such as central government debt or bank credit—would allow to expand the panel dimension but would only give a partial picture of debt. Therefore, one needs to strike a balance between the country/time coverage and the conceptual coverage. If the objective is to have a comprehensive debt concept, the resulting sample is likely to include just a few countries and/or years. At the other end of the spectrum, covering many countries across time would require using a very narrow concept of debt to maintain comparability.

² Although the integrity of the data has been checked with country authorities, this does not represent an official endorsement by country authorities.

Table 1 summarizes the characteristics of some of the main debt datasets, highlighting the strategies adopted to address these tensions.³ Data compilers are either international institutions or scholars for which these efforts provide the backbone of their research agenda. Overall, most datasets cover either public or private debt⁴ (excluding the financial sector⁵) and tend to focus on just one side of the trade-off. Broadly speaking, all datasets can be classified into one of three categories:

- *Comprehensive coverage.* Those datasets that favor exhaustivity in the definition of debt usually cover a much shorter history. For example, the Organization for Economic Cooperation and Development (OECD) publishes both central and general government debt series but the dataset only spans 18–22 years on average. Similarly, the World Economic Outlook (WEO) uses a relatively broad institutional concept of government debt but it only includes about two decades of data for most countries.⁶ The Quarterly Public Debt (QPD) database—which has the most comprehensive institutional coverage, from the narrow central government to the wider public sector—at best goes back to 1995 and, in many cases, has much shorter time series. On private debt, the OECD provides the broadest range of debt instruments (going beyond loans and securities), but in most cases the earliest starting date is 1995.
- *Long time series.* At the other end of the spectrum, several datasets favor the length of the time series, covering many decades (or even centuries) of data. The tradeoff is that going back in time requires focusing on narrow debt concepts to maintain data consistency. For example, Reinhart and Rogoff (2009) use previous unexplored data sources and, at times, interpolation to build continuous data series going as far back as 1692, focusing on central government debt.⁷ Jordà, Schularick, and Taylor (2017) report bank credit to the nonfinancial private sector starting as early as 1870. For private debt, the Bank of International Settlements (BIS) publishes debt series (both loans and securities) of the nonfinancial private sector starting in 1950. These datasets provide an invaluable resource for researchers but their narrow focus makes them less suitable to study recent debt developments, as large parts of government borrowing take place outside the perimeter of the central government, and nonbank financing and new instruments account for an even larger share of private debt.

³ This is by no means a comprehensive list of datasets but it gives an overview of the most often cited sources in the literature.

⁴ In some cases, the datasets report not only public or private debt but also a detailed breakdown. For example, Cowan and others (2006) give information on the domestic/external composition, currency, and remaining maturity for the central government debt. De Broeck and others (forthcoming) record sovereign debt at the instrument level for the interwar period. The Global Debt Monitor (GDM), produced by the Institute of International Finance (IIF) offers information on currency breakdown.

⁵ An exception is the GDM (IIF 2018), which includes the outstanding debt securities and loans of the financial sector.

⁶ Debt series in the WEO database correspond to the general government or the widest institutional coverage available for each country. Information on the specific sectors covered in each country is available in the WEO statistical annexes.

⁷ Due to data constraints, the longest historical series in Reinhart and Rogoff (2009) sometimes refer to the debt-to-exports or external debt-to-exports rather than the debt-to-GDP, raising issues of comparability.

Table 1. Comparison of Existing Debt Datasets

Database	Reference	Debt Concept	Country Coverage	Period
Quarterly Public Sector Debt (QPSD) Database	QPSD, The World Bank/IMF	Public debt: for various levels of government, including CG, GG, and PS	77 AEs, EMEs, and LICs	Max: 1995-2016 AEs Average: 17 years
Historical Public Debt Database (HPDD)	Abbas and others (2011). "Historical Patterns and Dynamics of Public Debt. Evidence from a New Database". IMF Economic Review 59-4	Public debt: mixed of GG, CG, and NFPS depending on countries and periods	178 AEs, EMEs, and LICs	Max: 1692-2016 Average: 51 years
Public Finances in Modern History (PFMH) Database	Mauro and others (2015). "A Modern History of Fiscal Prudence and Profligacy" Journal of Monetary Economics, 76. pp 55-70.	Public debt: mixed of GG and CG, depending on countries and periods	55 AEs and EMEs	Max: 1800-2011 Average: 96 years
Reinhart and Rogoff (R&R)	Reihart and Rogoff (2009). "This Time is Different: Eight Centuries of Financial Folly" (Princeton University Press)	Public debt: CG debt, occasionally proxied by the GG debt ratio, external debt ratio, or debt-to-exports ratio	70 AEs, EMEs and LICs	Max: 1692-2010 Average: 116 years
World Economic Outlook (WEO) Database	WEO, The IMF	Public debt: mix of CG, GG, NFPS, and PS depending on countries	188 AEs, EMEs, and LICs	Max: 1960-2016 Average: 22 years
OECD, General Government Debt	OECD (2017), General Government Debt (indicator). doi: 10.1787/a0528cc2-en (Accessed on 01 September 2017)	Public debt: GG as defined in Mastricht criteria	34 AEs and EMEs	Max: 1995-2016 Average: 18 years
OECD, Central Government Debt	OECD Stat, Central Government Debt (Accessed on 01 September 2017)	Public debt: CG	34 AEs and EMEs	Max: 1980-2010 Average: 25 years
OECD, Financial Accounts and Financial Balance Sheets	OECD (2017)	Private debt: all instruments	41 AEs and EMEs	Max: 1990-2016 Average: 17 years
Eurostat, Financial Balance Sheets	Eurostat (2018)	Private debt: all instruments	32 AEs and EMEs	Max: 1995-2016 Average: 18 years
Standardized Public Debt Database (SPDD)	SPDD, The Inter-American Development Bank	Public debt: detailed information on CG debt	26 Latin American countries	Max: 2006-2015 Average: 14 years
Cowan, Levy-Yeyati, Panizza, and Sturzenegger (CLYPS)	Cowan and others (2006). Sovereign debt in the Americas: New Data and Stylized Facts, RES Working Paper No. 577, IADB	Public debt: CG	29 AEs, EMEs and LICs	Max: 1980-2005 Average: 19 years
Jaimovich and Panizza (J&P)	Jaimovich and Panizza (2010) "Public Debt Around the World: A New Data Set" Applied Economics Letters, 17(1), pp19-24	Public debt: CG	122 AEs, EMEs, and LICs	Max: 1970-2005 Average: 21 years
BIS, Credit to the Non-Financial Sector	Dembiermont, Drehmann, and Muksakunratana (2011) "How Much Does the Private Sector Really Borrow? A New Database for Total Credit to the Private Non-Financial Sector." BIS Quarterly Review (2013)	Private debt: loans and securities for HHs and NFCs	43 AEs and EMEs	Max: Q1:1951-Q4:2016 Average: 42 years
Jorda, Schularick, and Taylor (JST)	Jordà, Schularick, and Taylor (2017). "Macrofinancial History and the New Business Cycle Facts." NBER Macroeconomics Annual 2016, vol.31	Public debt: mix of CG and GG, depending on countries and periods Private debt: loans to HHs and NFCs	17 AEs	Max: 1870-2013 Average: 132 years
The Institute of International Finance	Global Debt Monitor, The International Institute of Finance Frontier Market Monitor, The International Institute of Finance	Public debt: GG or largest coverage in IMF's WEO. Private debt: loans and securities for HH, NFC, FC	71 AEs and EMEs	Max: Q1:1995-Q4:2016 Average: 19 years

- *Mixed strategy.* A third group of datasets takes a hybrid approach, switching debt concepts over time and across countries. The basic idea is to cover narrow concepts for earlier periods and broader ones for recent years. The benefit of this approach is that it provides very long time series, giving the broadest institutional coverage available for each point in time. This also results in a much wider cross-section dimension. The drawback, however, is that there are multiple breaks in the series and the definition of debt may not be the same across countries, which jeopardizes comparability. A prominent example of this strategy is the Historical Public Debt Database (HPDD) which starts in 1692 and reports central government, general government, or nonfinancial public sector debt for different countries and points in time, documenting the changes in coverage.⁸ Another example is the Public Finances in Modern History (PFMH) database, which starts in 1800 and mixes central and general government debt highlighting breaks in the series.

The GDD builds on this body of work but aims at striking a better balance between the length and exhaustibility of coverage. It does so by providing alternative debt series with different coverage, each catering to one side of the tradeoff. The next section discusses the strategy followed for the compilation of the GDD, data sources, and methodology.

III. METHODOLOGICAL CONSIDERATIONS

A. Strategy

As discussed in the previous section, building long time series for large panels quickly leads to an unescapable challenge faced by all cross-country historical databases: the tradeoff between the comprehensive versus narrow definition of debt. In the first case, data are only available for a few countries over short periods. In the later, the longer time span comes at the expense of covering only some borrowers and/or instruments, giving an incomplete picture of recent developments. None of these approaches is bullet-proof. Each provides some benefits that come with costs. In assembling the GDD, we take a fundamentally new strategy to compiling historical debt data, adopting three principles to address these tradeoffs:

- *Focusing on the second financial era.* The period after World War II—dubbed as the “second financial era” by Schularick and Taylor (2012)—provides a time frame where financial development takes off and credit decouples from broad money and starts increasing rapidly through leverage and new sources of funding.⁹ By focusing on this period, we can ensure the homogeneity of the data both across time and

⁸ One of the difficulties faced by Abbas and others (2011) in compiling the HPDD was the distinction between general and central government, particularly in relation to the treatment of extrabudgetary funds. Thus, they favor the use of central government debt in the earlier periods.

⁹ The “first financial era” ran from 1870 to 1939. During this period money and credit, although volatile, moved in tandem and have a stable relationship with GDP (for more details, see Schularick and Taylor (2012).

countries compared to other datasets that cover longer time series (Reinhart and Rogoff 2009; HPDD).

- *Taking a multi-dimensional approach.* Instead of favoring one side of the tradeoff over another as in most existing datasets, we provide alternative series with different coverages, each catering to a different end-user. This meant building different series of public debt—from the narrower central government to the wider public sector—with the former usually providing the longest time series. For the private sector, this implied including both longer-but-narrower time series focusing on core debt instruments, as well as a shorter-but-wider one capturing all forms of debt (see below). Both series are reported separately for households and nonfinancial corporations whenever possible. The GDD, thus, leaves full flexibility for the user to choose the data more relevant to her research interest. Box 1 illustrates this approach for the case of Mexico, highlighting the advantages of having multiple series.
- *Maintaining comparability.* By providing different measures of debt, we can ensure consistency of the series across time (i.e., there is no need to mix different concepts). At the country level, we strive to preserve comparability at a minimum within income groups, which allows us to circumvent some of the data availability issues (see Annex I).

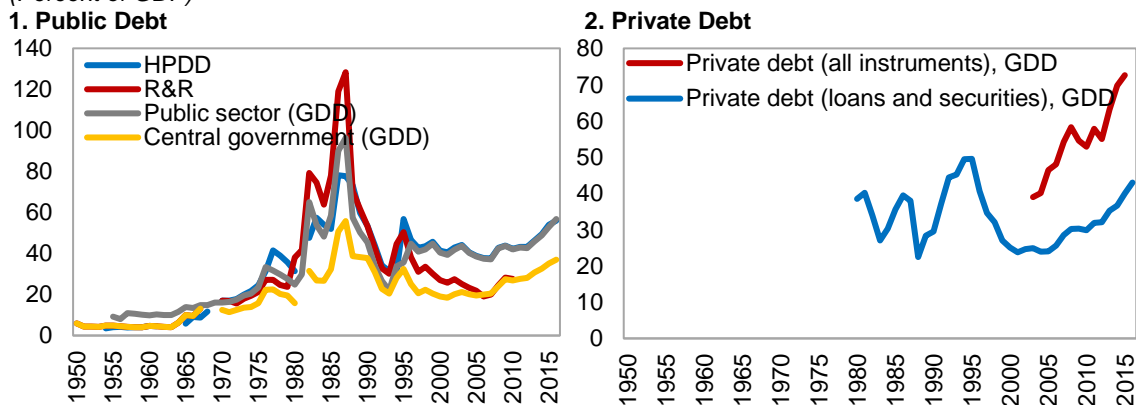
Overall, this strategy helped achieve an unprecedented coverage of the world's debt for 190 countries dating back to the 1950s. By including both the sovereign and private sides of borrowing for (close to) the entire universe of countries, we can offer a global picture of debt in the post-World War II era. Building a consistent and comparable dataset was not easy, requiring us to rely not only on primary sources but also on the work of many scholars as well as secondary sources to construct long-run time series. The integrity of the data was checked through bilateral contacts with IMF country desks and officials of *all* 190 countries, as well as statisticians and other data compilers (such as the BIS), which guarantees a high-quality standard and further sets the GDD apart from existing debt datasets.

Box 1. A Multidimensional Approach to Debt Statistics: The Example of Mexico

The example of Mexico provides an insight into the advantages of taking a multidimensional approach to compiling historical debt data. It confirms that focusing on a narrow definition not only gives a misleading picture of the true size of debt but also its trends. On the other hand, relying solely on comprehensive debt measures leaves important data gaps for long periods. By providing multiple series, the GDD allows the researcher to get a more comprehensive understanding of debt dynamics.

- Public debt.** Figure 1.1 (panel 1) shows the data on public debt reported in the HPDD, Reinhart and Rogoff (R&R), and the GDD. The HPDD combines two measures of debt: up to 1995, it reports central government debt and from that point onwards public sector debt. The authors introduced breaks in the series whenever the transition between different sources of data resulted in either step differences between series or differences in the implied direction of the underlying debt ratio. The main drawback of this approach is that there are multiple breaks that may prevent the use of time series analysis. A second issue is that in the transition from central government to public sector, the underlying trend of the public sector debt may change: according to the GDD, public sector debt increased by close to 9 percent of GDP between 1995 and 1996 while the HPDD shows a decrease in public debt of 10 percent of GDP instead. R&R reports data for the central government debt and has fewer breaks than the HPDD for Mexico. However, although the trends in debt are broadly similar to the HPDD's, there are significant differences in debt levels (notably in 1987 when the two series differed by more than 50 percent of GDP). The GDD resolves some of these issues by first reporting two separate series: one for central government and another for public sector debt. To validate these data, we contacted the Mexican authorities (Secretaría de Hacienda y Crédito Público) who kindly provided updated central government debt data back to 1982 (secondary sources were used for the preceding years) and for the public sector starting in 1955. By relying directly on primary sources, we were also able to ascertain differences in coverage across time: from 1955 to 1989 public sector debt figures include debt from the central government, Pemex, CFE, and development banking; while from 1990 onwards they correspond to a broader debt aggregate (the "historical balance of public sector borrowing requirements") which, in addition, include the IPAB and other debt concepts.
- Private debt.** Figure 1.1 (panel 2) shows the two private debt series reported in the GDD. As expected, the metric including all debt instruments is much shorter (only 13 years of data are available). For those years in which the narrow and broad debt concepts overlap, the trends are roughly the same but the broader debt measure displays a much steeper slope. More importantly, there is a significant level gap between the two measures, exceeding 32 percent of GDP by the end of the sample. This comparison underscores the importance of using broader debt measures to understand recent trends in private leverage.

Figure 1.1. Mexico: Comparison of Debt Aggregates
(Percent of GDP)



Sources: Global Debt Database; and authors' calculations.

Note: HPDD refers to the data from Abbas and others (2011); R&R refers to the public debt series reported in Reinhart and Rogoff (2009).

B. Definitions

In line with the *System of National Accounts 2008*, the GDD defines debt as the gross outstanding stock of all liabilities that are debt instruments. Based on this definition, debt statistics should ideally include loans, debt securities, special drawing rights; currency and deposits; other account payables; and insurance, pension, and standardized guarantee schemes. In practice, however, only a handful of countries provide exhaustive coverage of sovereign and private debt instruments dating back to the 1950s. This is especially true for private debt, where the data consistent with the above definition are either nonexistent (particularly in most emerging market economies and low-income developing countries) or start in the early 1990s (as is the case in most advanced economies). Thus, we also compile an alternative measure of private debt that focuses on the core debt instruments, i.e., loans and debt securities. This narrower definition of private debt mirrors that of the BIS' database and helps expand the GDD's coverage considerably. For public debt, the above broader definition was maintained and, to the extent possible, we flag those cases where the instrument coverage falls short (Annex I).

C. Data Sources

In constructing the GDD, we relied on various sources for series on public and private debt, GDP, and debt-to-GDP ratios. These included official government publications, and databases compiled by researchers and international organizations (for the complete list, see Annex I).¹⁰

National accounts—more specifically, sectoral financial accounts—are the best source of data on debt liabilities, whether sovereign or private, thanks to their bird's-eye view of the economy. They usually offer a wider coverage than alternative sources, such as fiscal accounts or monetary statistics, and are often based on a consistent set of assumptions that guarantee homogeneity across (private and public) debt statistics and countries. However, only 44 countries currently produce sectoral financial accounts, most of them dating back to the 1990s. Thus, one needs to rely on second-best estimates, when national account data are not available. The GDD builds and improves upon two pillar databases on debt: the BIS' long-term credit to the nonfinancial sector (Dembiermont, Drehmann, and Muksakunratana 2013), on the private debt side, and the IMF's HPDD (Abbas and others 2011) on public debt. One of the features that make the GDD unique is the heavy reliance on 97 primary sources—mainly central banks, ministries of finance, and national statistical offices—which tend to provide more reliable data. To fill gaps, we also use supplementary information from secondary sources including the work of other scholars (Cowen and others 2006; Reinhart and Rogoff 2009; Jaimovich and Panizza 2010) and databases from several international institutions (Eurostat, Interamerican Development Bank, IMF, OECD, United Nations, and

¹⁰ Annex I explains how the GDD was constructed and more details on country and period coverage, variables, as well as the criteria to choose among alternative sources.

World Bank). Historical GDP series were retrieved from the Penn World Table (9.0) as discussed in Feenstra, Inklaar and Timmer (2015), national statistical sources, and WEO.

D. Methodology

Nonfinancial private debt

Our approach to building the private debt series was largely dictated by data availability. By order of preference, we relied on:

- Approach 1: sectoral financial accounts. This approach is used in most advanced economies and some emerging market economies.
- Approach 2: sum of domestic bank loans, cross-border bank loans data from the BIS, and debt securities data from the *Dealogic* database. This approach was used in most emerging market economies and a few advanced economies that do not report sectoral financial accounts.
- Approach 3: domestic bank claims on the private sector. This approach was used in low-income developing countries.¹¹

In a handful of countries, including China, the methodology was dictated by country specific factors (see Annex I for a detailed description of each of these approaches).

An alternative to approach 2 would be to add domestic bank loans and external private debt liabilities from the international investment position (IIP) statistics (see Figure 1). But taking the IIP route would have led us to conceptual and practical hurdles that would ultimately be too high to jump over. The first and most daunting one would be the limited availability of long series of IIP statistics. Existing data either do not discriminate between sovereign and private external debt (Lane and Milesi-Ferretti 2017) or provide data for a limited panel (IMF IIP statistics). The second hurdle would be a conceptual tradeoff. On the one hand, IIP statistics offer better coverage of external debt liabilities than approach 2, which only includes the BIS' cross-border bank loans and external debt securities from *Dealogic*. On the other hand, using IIP statistics would imply ignoring debt securities held by domestic lenders, which are

Figure 1. Private Debt Coverage in Approach 2 vs. IIP Approach

		GDD Approach	
		Loans	Securities
IIP Approach	Domestic	<div style="background-color: #003366; color: white; padding: 5px;">Domestic bank loans</div> <div style="background-color: #e0e0e0; padding: 5px;">Domestic non-bank loans</div>	<div style="background-color: #add8e6; padding: 5px;">Domestic securities</div>
	External	<div style="background-color: #003366; color: white; padding: 5px;">External bank loans</div> <div style="background-color: #ffcc99; padding: 5px;">External non-bank loans</div>	<div style="background-color: #003366; color: white; padding: 5px;">External securities</div>

Both approaches
 Only in GDD approach
 Only in IIP approach
 Not covered

Source: Authors.

¹¹ Extensive data checks confirmed that, even for the few low-income developing countries for which debt securities data were available, bank claims on the private sector account for the lion's share of the private debt.

(partly) captured in approach 2 (see Figure 1). This conceptual conundrum was ultimately solved by the much larger data availability in approach 2.¹²

Private debt series are not consolidated because for most purposes, such as assessing debt sustainability, it does not matter whether, for example, a firm's debt security is held by a bank or another firm. This admittedly does not hold when the lending transaction involves two entities of the same conglomerate, in which case consolidation might be appropriate. However, isolating these intra-conglomerate lending was impossible for most countries in the sample.¹³

Following on the BIS' footsteps, the private debt data collected is adjusted for breaks due to changes in the coverage of instruments, borrowers, and lenders, in line with the BIS' methodology.

Public debt

The GDD's public debt series result from a major overhaul of the IMF's HPDD (Abbas and others 2010 and 2011).¹⁴ It follows the same principles as the HPDD with one fundamental difference: the GDD does not combine central, general government, and public sector statistics, but compile them in separate series. This strategy, not only improves the comparability and integrity of the data but, above all, it allows for smoother transitions across sources and reduces by two-thirds the number of "breaks" that were left in the HPDD series. Moreover, the GDD significantly expands the number of sources relative to the HPDD and relies, to a larger extent, on national sources. As a result, we gain on average 14 years of continuous homogeneous series relative to the HPDD. The GDD follows its predecessor in that it does not resort to extrapolation, interpolation, or auxiliary regressions. Instead, public debt series were built through an exhaustive review and comparison of existing sources, contacting national authorities in all 190 countries in the dataset, and correcting the data for differences in definition and coverage across sources, whenever underlying details were available. This allowed for reducing jumps when switching data sources, with step differences of no more than 3 percent of GDP in the first overlapping year in most cases. Where that was not possible, clearly highlighted breaks were implemented as in the HPDD, although for a fewer number of cases. A thorough review of the debt-ratios was also conducted to retrieve nominal debt series and correct for revisions to GDP series. The GDP series are also reported for reference.

¹² For those countries for which data under both approaches were available, a comparison shows that the total debt aggregate is very similar.

¹³ For similar reasons, we refrained from including the financial sector in our private debt statistics. Indeed, including the latter would exacerbate the need for consolidation across sectors, and absent detailed information on the identity of lenders, it would be near impossible to compute credible statistics of total debt.

¹⁴ Unless otherwise indicated, public debt series in the GDD are consolidated within each institutional sector. In other words, liabilities and claims between units within the same institutional sector, for example central government (CG) or general government (GG), are netted out. However, CG liabilities vis-à-vis public entities outside CG, for example social security funds, are not netted out of CG debt. These liabilities are only netted out in the general government series, sometimes resulting in a lower GG debt stock

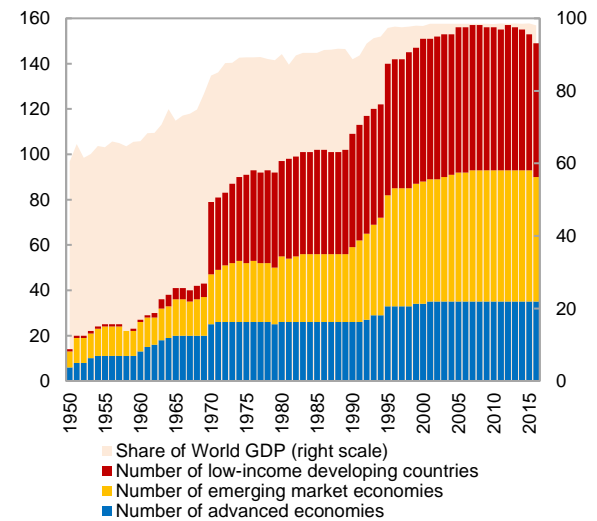
IV. OVERVIEW OF THE GLOBAL DEBT DATABASE

The outcome of the data collection described above is an unbalanced panel of 190 countries dating as far back as 1950. Its coverage grows from a sample of 45 countries accounting for 60 percent of global output in 1950, to 99 percent of the world's GDP in 2016, falling only 8 countries shy of accounting for the entire universe of sovereign states or territories (Figure 2).¹⁵

While most advanced economies are included from the 1950s, the coverage of emerging market economies and low-income developing countries improves gradually over time, with two distinct waves in 1960 and 1970. Both public and private debt are available for most countries in the sample, back to the 1970s (Figure 3). Coverage in earlier decades is curtailed by the lack of data on sovereign borrowing in low-income developing countries.

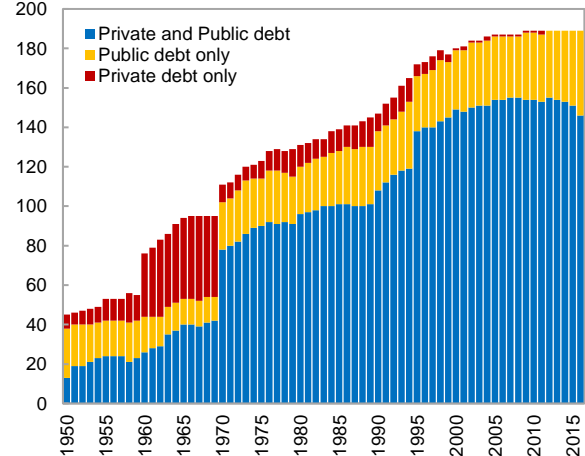
Despite these limitations, the GDD offers an unrivaled coverage of debt statistics since 1950, as illustrated in Figures 4 and 5. Its largest contribution is on private debt, where it (more-than) doubles the coverage of the largest existing datasets. On public debt, the GDD's contributions go beyond the marginal improvement in country coverage relative to its predecessor (HPDD), by introducing new debt series for different institutional units within the public sector and conducting extensive data validation checks.

Figure 2. Country Coverage in the Global Debt Database



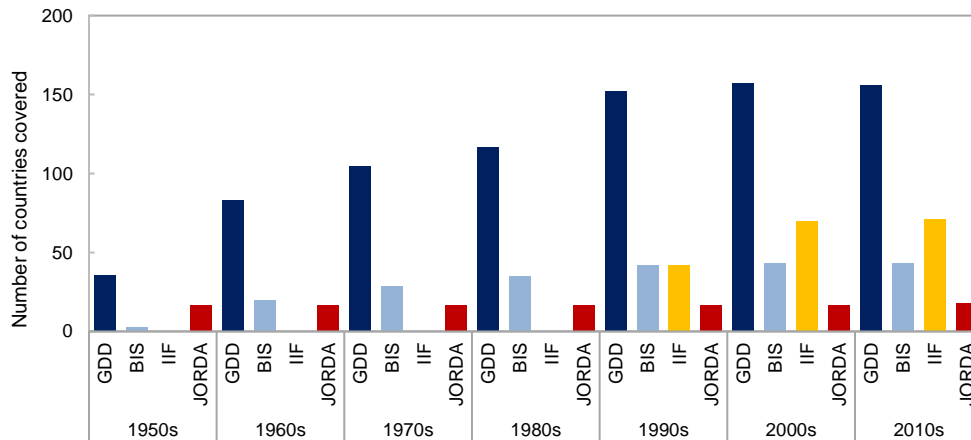
Sources: Global Debt Database; World Economic Outlook; and authors' calculations.

Figure 3. Country Coverage in the Global Debt Database

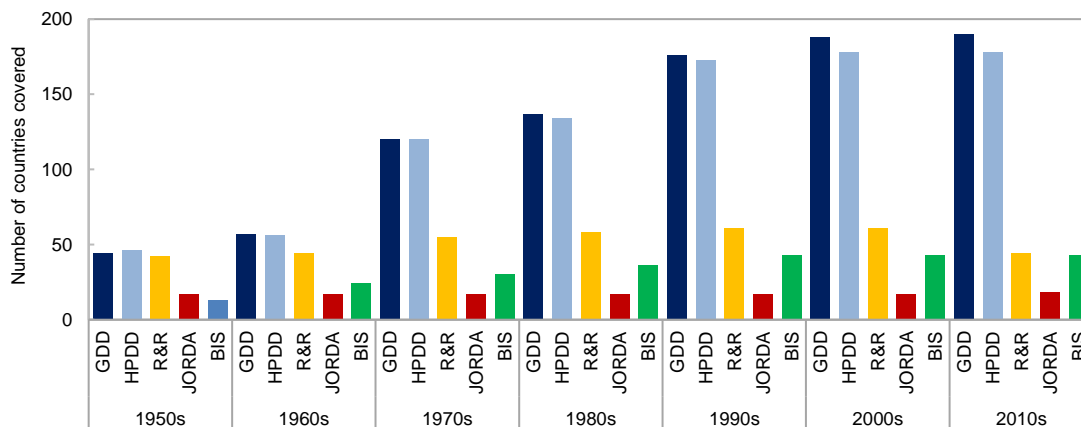


Sources: Global Debt Database; and authors' calculations.

¹⁵ Sovereign states and territories not included in the database are Andorra, Cuba, Liechtenstein, Monaco, North Korea, Palau, Somalia, and the Vatican.

Figure 4. Private Debt: Country Coverage in the Global Debt Database vs. Existing Datasets

Sources: Global Debt Database and authors' calculations.

Figure 5. Public Debt: Country Coverage in the Global Debt Database vs. Existing Datasets

Sources: Global Debt Database; and authors' calculations.

V. GLOBAL DEBT TRENDS

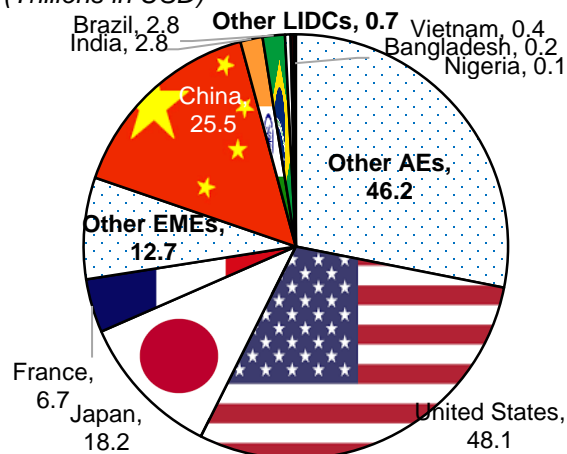
By including both the sovereign and private sides of borrowing for (close to) the entire universe of countries, we can offer a global picture of debt in the post-World War II era, which was not possible in previous studies. So, what are the basic insights one gains from this comprehensive database? The first observation is that, almost a decade after the collapse of Lehman Brothers, global debt, at \$164 trillion—or about 225 percent of global GDP—has reached new record highs (April 2018 *Fiscal Monitor*).¹⁶ Not surprisingly, the most indebted

¹⁶ This figure comprises the debt of the government, households, and nonfinancial firms. The private sector debt figure is based on a measure comprising just loans and securities. Compared with the \$152 trillion figure published in the October 2016 *Fiscal Monitor*, this updated estimate expands the coverage by 77 countries to a total of 190 countries and introduces significant methodological changes. For the full list of countries and their classification by income group and regions, see Annex II.

economies in the world are also the richer ones. It is nonetheless striking that the top three borrowers in the world (United States, China, and Japan) account for more than half of the global debt, significantly greater than their share of global output (Figure 6). The emergence of China among the top ranking is, however, a relatively new development (Table 2). Since the beginning of the millennium, China's share in global debt has gone up from less than 3 percent to over 15 percent, underscoring the rapid credit surge in the aftermath of the GFC.

Figure 6. Largest Debtors by Income Group, 2016

(Trillions in USD)



Sources: Global Debt Database; and authors' calculations.
Note: AEs=Advanced Economies; EMES=Emerging Market Economies; LIDCs=Low-Income Developing Countries.

Table 2. Selected Countries and Income Group: Total Debt
(Trillions in US dollar)

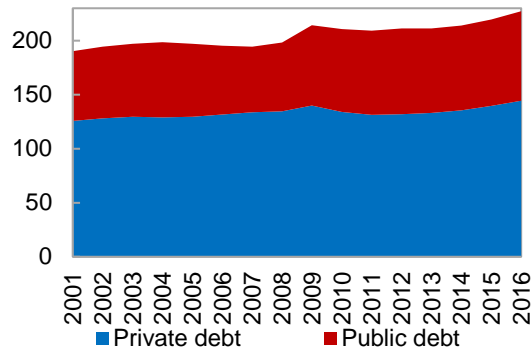
	2001	2007	2015	2016
United States	20	34	46	48
China, Mainland	2	5	24	26
Japan	13	16	17	18
France	3	6	7	7
Advanced Economies	55	100	117	119
Emerging Market Economies	6	16	41	44
Low-Income Developing Countries	0	1	1	1
Total	62	116	158	164

Sources: Global Debt Database; and authors' calculations.

Note: Data refer to the global gross debt (both public and private) for an unbalanced sample comprising 190 countries. For each country and year, public debt corresponds to the largest institutional unit for which data are available.

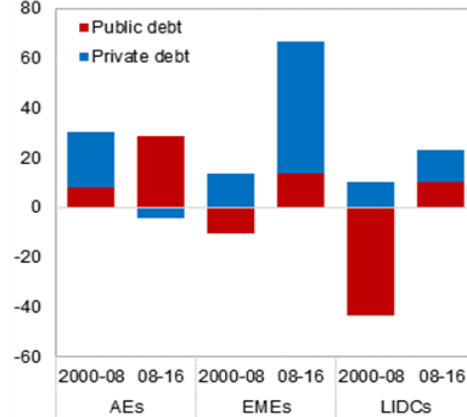
Compared to the previous peak in 2009, global debt is now 12 percent of GDP higher. That is, except for a short hiatus, no deleveraging has taken place at the global level since the onset of the GFC (for an analysis on private deleveraging and the factors behind it, see Mbaye, Moreno Badia, and Chae 2018a). This reflects an increase in both public and private nonfinancial debt (Figure 7) but different country groups are behind these trends. Public debt increases have been mainly driven by advanced economies while the private debt surge is mainly explained by emerging market economies (Figure 8).

Figure 7. Total Debt
(Weighted average; percent of GDP)



Sources: Global Debt Database; and authors' calculations.
Note: Data refers to the gross debt of the nonfinancial sector—comprising the government, households, and nonfinancial firms. The weighted average is calculated using an unbalanced sample comprising 190 countries. To ensure comparability, public debt for each country refers to the debt of either the central or the general government throughout the sample period.

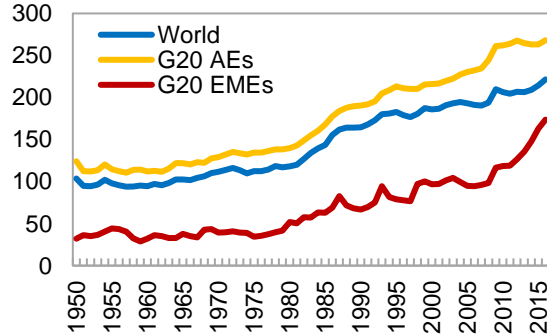
Figure 8. Change in Public and Private Debt
(Percent of GDP; balanced sample)



Source: Global Debt Database; and authors' calculations.
Note: AEs=Advanced Economies; EMEs=Emerging Market Economies; LIDCs=Low-Income Developing Countries.

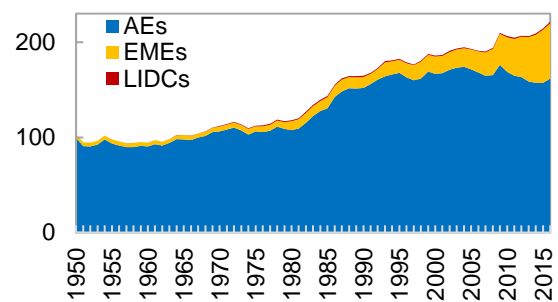
Taking a longer view, global debt ratios have been on an almost uninterrupted ascending trend since World War II (see Mbaye, Moreno Badia, and Chae 2018b for a detailed account of the stories behind global debt). Although advanced economies overshadowed global developments for most of the second financial era, emerging market economies have taken the lead in the aftermath of the GFC. Notwithstanding this meteoric rise, the gap between the debt of the G20 advanced and emerging market economies is still significant, exceeding 90 percent of GDP on average (Figure 9). Low-income countries are even more of an outlier, accounting for less than 1 percent of the global debt, well below their share of output (Figure 10).

Figure 9. Total Debt: World and G20
(Weighted average; percent of GDP)



Sources: Global Debt Database; and authors' calculations.
Note: Data refers to the gross debt of the nonfinancial sector—comprising the government, households, and nonfinancial firms. The weighted average is calculated using an unbalanced sample comprising 190 countries. To ensure comparability, public debt for each country refers to the debt series for which the time coverage is the longest. AEs=Advanced Economies; EMEs=Emerging Market Economies.

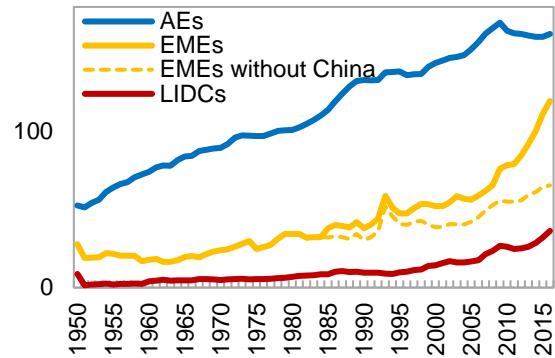
Figure 10. Contribution to Total Debt by Income Group
(Weighted average; percent of GDP)



Sources: Global Debt Database; and authors' calculations.
Note: Data refers to the gross debt of the nonfinancial sector—comprising the government, households, and nonfinancial firms. The weighted average is calculated using an unbalanced sample comprising 190 countries. To ensure comparability, public debt for each country refers to the debt series for which the time coverage is the longest. AEs=Advanced Economies; EMEs=Emerging Market Economies; LIDCs=Low-Income Developing Countries.

From a sectoral perspective, the driving force behind global indebtedness has been the private sector—which has almost tripled its debt since 1950. The global leverage cycle was dominated by advanced economies for almost six decades, with the debt of the nonfinancial private sector reaching a peak of 170 percent of GDP in 2009 and little deleveraging since (Figure 11). On the other hand, the ascent of emerging market economies is a relatively new development, which started to accelerate only in 2005. But by 2009, emerging market economies have become the major force behind global trends. Private debt ratios doubled in a decade, reaching 120 percent of GDP by 2016. Developments since the onset of the GFC are, however, almost match one-to-one trends in just one country. China alone accounts for almost three-quarters of the increase in global private debt. At the other end of the spectrum, financial deepening in low-income developing countries has been limited.

Figure 11. Private Debt by Income Group
(Weighted average; percent of GDP)



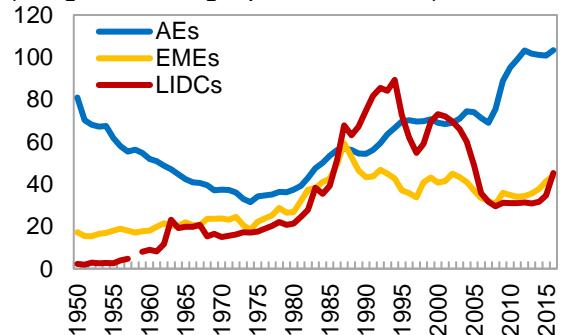
Sources: Global Debt Database; and authors' calculations.

Note: The weighted average is calculated using an unbalanced sample comprising 158 countries. AEs=Advanced Economies; EMEs=Emerging Market Economies; LIDCs=Low-Income Developing Countries.

Although the global debt story has been dominated by the private sector, public debt has also played an important role in this era with two distinct phases: up to the mid-1970s global public debt went steadily down only to reverse its course afterwards. In the first phase, the fall in public debt is mainly explained by advanced economies where growth, inflation, and financial repression pushed debt ratios down (Reinhart and Sbrancia 2015). The second phase is characterized by an upward trend but developments diverged across country groups:

- Advanced economies have experienced a continuous increase in public debt (with a short interruption immediately before the GFC thanks to favorable cyclical conditions). Although public debt ratios have reached a plateau in recent years, at over 100 percent of GDP, they still exceed the levels seen in the early 1950s (Figure 12).
- Among emerging market economies, public debt reached its peak of 63 percent of GDP at the end of the 1980s, after which it declined partly reflecting consolidation efforts, restructuring, and favorable cyclical

Figure 12. Public Debt by Income Group
(Weighted average; percent of GDP)



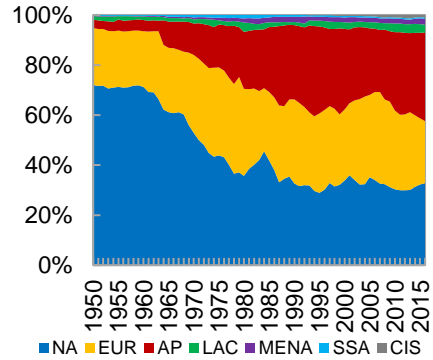
Sources: Global Debt Database; and authors' calculations. Note: To ensure comparability, public debt for each country refers to the debt series for which the time coverage is the longest. AEs=Advanced Economies; EMEs=Emerging Market Economies; LIDCs=Low-Income Developing Countries.

conditions. Nonetheless, in the last few years, the decline in commodity prices and rapid spending growth has taken a toll pushing debt levels up again.

- Public debt in low-income developing countries reached its peak at close to 90 percent of GDP in the mid-1990s, sharply coming down after that, thanks to debt relief under the Heavily Indebted Poor Countries and Multilateral Debt Relief Initiatives. Nonetheless, high primary deficits and the fall in commodity prices since 2014 has resulted in a rapid uptick in debt ratios.

The most indebted regions in the world are Asia Pacific, North America, and Europe, accounting for 35, 33, and 25 percent of global debt in 2016, respectively (Figure 13). Since the early 1950s, North America was at the lead of the global debt ranking but was taken over by Asia Pacific in the early 1990s, partly due to rapid leveraging in Japan. Nonetheless, North America regained the top ranking at the turn of century and maintained it until the onset of the GFC. Since then, the Asian and Pacific Region has returned to the top position, this time thanks to the rapid credit increase in China. The ranking among the top three regions on private debt are pretty much the same (Figure 14) although the share of private debt from other regions is even smaller than total debt, reflecting lower levels of financial deepening in less developed countries. Interestingly, the ranking on public debt has been similar to those of total and

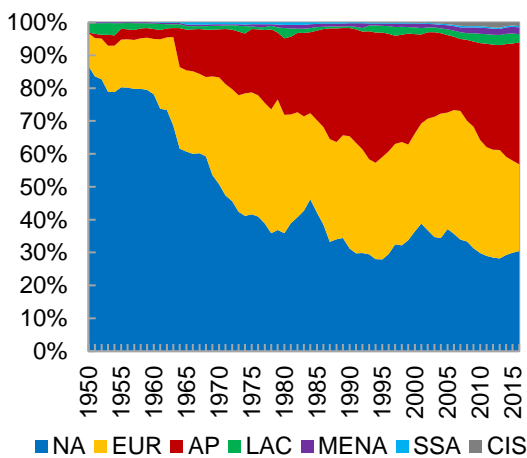
Figure 13. Total Debt by Region
(Share of total; percent)



Sources: Global Debt Database; and authors' calculations.

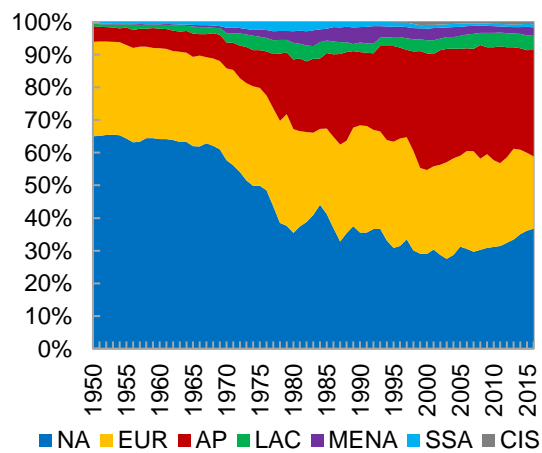
Note: AP=Asia and Pacific; CIS=Commonwealth of Independent States; EUR=Europe; LAC=Latin America and the Caribbean; MENA=Middle East and North Africa; NA=North America; SSA=sub-Saharan Africa.

Figure 14. Private Debt by Regions
(Share of total; percent)



Sources: Global Debt Database; and authors' calculations. Note: AP=Asia and Pacific; CIS=Commonwealth of Independent States; EUR=Europe; LAC=Latin America and the Caribbean; MENA=Middle East and North Africa; NA=North America; SSA=sub-Saharan Africa.

Figure 15. Public Debt by Regions
(Share of total; percent)



Sources: Global Debt Database; and authors' calculations. Note: AP=Asia and Pacific; CIS=Commonwealth of Independent States; EUR=Europe; LAC=Latin America and the Caribbean; MENA=Middle East and North Africa; NA=North America; SSA=sub-Saharan Africa.

private debt until 2013. Since then, and unlike total and private debt, North America has been the highest debtor in the world among public borrowers (Figure 15).

VI. CONCLUSION AND WAY FORWARD

This paper has described the compilation of a cutting-edge dataset covering private and public debt for virtually the entire world (190 countries) dating back to the 1950s. The GDD is the result of a multiyear investigative process that started with the FM2016. It makes three major contributions relative to existing datasets. First, it takes a fundamentally new approach to compiling historical data by offering multiple debt series with different coverages, thus ensuring consistency across time. Second, it more than doubles the cross-sectional dimension of existing private debt datasets. Finally, the integrity of the data has been checked through extensive bilateral consultations with officials and IMF country desks of all countries in the sample.

Notwithstanding efforts to improve previous datasets, some data gaps remain. As additional data sources are identified, attempts will be made to expand the instrument and sectoral coverage of the private and public debt data.¹⁷ Looking ahead, authorities should continue efforts to improve statistics on debt covering both the public and private sector.

Finally, we rely on the feedback from users to address any problems they may encounter with the data. Notification of any omissions or supplementary sources is welcome and would be fully acknowledged.¹⁸

¹⁷ Data coverage on private cross-border flows is generally patchy for low-income developing countries. Expanding the information set in this area will be an important priority in this respect.

¹⁸ Suggestions can be sent to the authors (see the email addresses on the cover page of this paper) and IMF-GDD@imf.org.

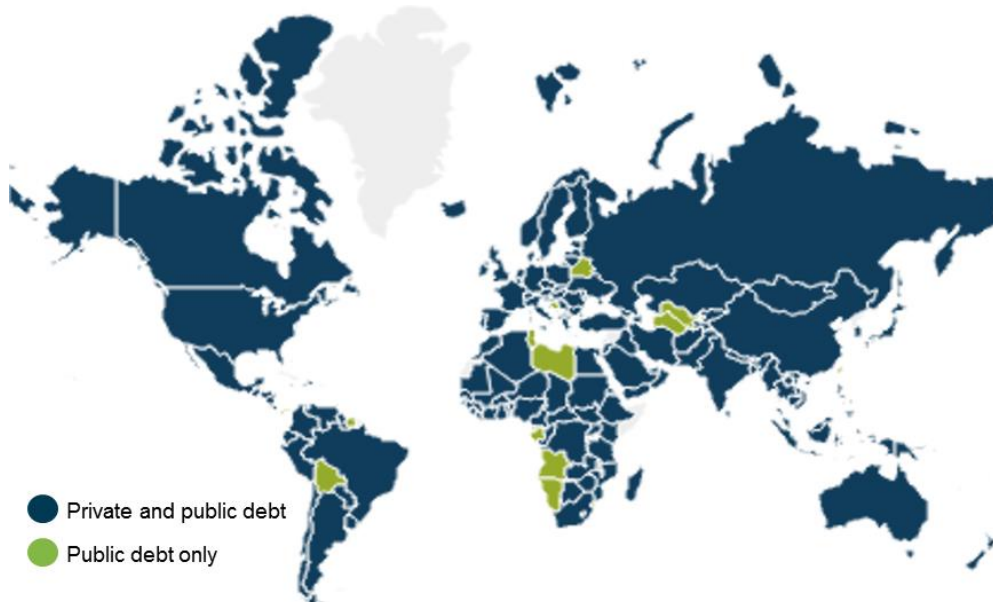
ANNEX I. THE GLOBAL DEBT DATABASE: DEFINITIONS, METHODOLOGY AND SOURCES

This annex describes the methodology employed to construct continuous series, including the approach used to link country series from different databases and the treatment of breaks when transitioning from one series to another. It also provides the list of all variables in the database and their sources on a period-by-period and country-by-country basis.

The GDD was constructed in two stages. In the first one, published in the FM2016, the focus was on expanding the country coverage of private debt; in the second stage, the main effort was on methodological improvements and conducting the data validation (see Box A.1.1 for a discussion). The GDD relies on the work of many scholars as well as primary and secondary sources.¹⁹ Overall, this helped achieve an unprecedented coverage of the world's debt for 190 countries (Figure A.1.1) dating back to the 1950s. It reports total gross debt of the (private and public) nonfinancial sector, spanning on average 45 years for private debt and 42 years for public debt.

Notwithstanding efforts to improve previous datasets, some data constraints were inescapable. This is particularly the case for low-income developing countries for which information on certain debt instruments tend to be sparse. To circumvent some of the data availability issues, we strived to preserve comparability at a minimum within income groups relying on the metadata information available from each of the sources we use. In this section, we discuss the methodology used to address these constraints in detail.

Figure A.1.1. Global Debt Database: Country Coverage



Source: Authors.

¹⁹ Details about specific data sources are included at the end of this annex.

Box A.1.1. Compilation of the Global Debt Database

The GDD is the result of a multiyear investigative process and an extensive standardization effort to produce consistent time series of debt. The data compilation process was conducted in two stages. In the first one, which resulted in the publication of the FM2016, the focus was on expanding the country coverage of private debt—which was then limited to major advanced and emerging market economies—taking the historical public debt series from Abbas and others (2011). This provided the most comprehensive dataset on global debt at the time, covering 113 advanced economies, emerging market economies, and low-income developing countries, spanning 40 years on average.

In the second stage, the data compiled for the FM2016 have been updated, using new primary and secondary sources. In addition, important methodological improvements have been introduced as follows:

Country coverage

The GDD adds 77 new countries: 9 advanced economies, 41 emerging market economies, and 27 low-income developing countries.

Data sources and validation

The number of data sources has been expanded significantly (110 new data sources have been added) giving a much higher weight to primary sources, which tend to be more reliable (97 in total). In addition, the dataset was validated by IMF country desks and officials of all 190 countries. When discrepancies arose between alternative data sources, efforts were made to resolve these by consulting country officials, statisticians, and other data compilers (notably the BIS).

Public debt

The public debt series in the GDD are the result of a major overhaul of the HPDD:

- *Institutional coverage.* Each public debt series in the GDD refers to a single institutional unit, ensuring comparability across time and countries. Thus, rather than one public debt series, the GDD reports four (subject to availability): central government, general government, non-financial public sector, and public sector.
- *Closing data gaps.* By relying on new data sources and reporting separate debt series, we reduced the breaks in the HPDD by two-thirds and gained 14 years of continuous homogenous series on average.
- *Data consistency.* Nominal values are retrieved to calculate debt ratios (when using secondary sources, nominal debt values were recovered by tracing back the original GDP series). This ensures that the debt-to-GDP ratios reported in the GDD are consistent with the latest national accounts data (some of which have been significantly revised since the HPDD was first released). The use of national sources also allowed to minimize data jumps when switching across data sources.

Private debt

One of the main novelties is the introduction of a new debt series as well as the use of additional data sources resulting in improvements of:

- *Instrument coverage.* The GDD includes an additional private debt series covering all instruments. Data are available for most advanced economies and some major emerging market economies (45 countries in total).
- *Panel coverage.* 45 additional countries have been added and the time series has been expanded by over four years on average.
- *Sectoral coverage.* New sources have been used to expand the coverage of household and nonfinancial corporate debt (the breakdown is now available for 34 new countries)
- *Cross-border flows.* Data have been adjusted to exclude the official sector (which was previously included) using as proxy the international claims drawn from the consolidated banking dataset reported by the BIS.
- *China.* Private debt aggregates now include external debt.

Private debt

The GDD's approach to compiling private debt statistics builds and improves upon the methodology developed by the Bank for International Settlements (BIS) (Dembiermont, Drehmann, and Muksakunratana 2013). The original BIS sample of 43 countries was expanded to include 158 countries.

Definition

Private debt is defined in the GDD as the gross outstanding stock of all liabilities that are debt instruments, in line with the *System of National Accounts 2008*. In practice only a handful of countries provide an exhaustive coverage of the above instruments, dating back to the 1950s.²⁰ Thus, we also compile an alternative measure of private debt that focuses on the core debt instruments, i.e., loans and debt securities. This narrower definition of private debt mirrors that of the BIS's database and helps expand the GDD's coverage considerably.

Methodology

Overall, we follow four main approaches in compiling the private debt aggregates depending on the income group and data availability: (1) as a first-best strategy, sectoral financial accounts data were used in most advanced countries and a few emerging markets; (2) when this was not possible, the private debt aggregate was computed as the sum of domestic and cross-border bank loans and debt securities; (3) domestic bank claims on the private sector was the third-best proxy (mainly in low income countries) when the first two options were not feasible; and (4) in a few cases, the methodology was dictated by country-specific factors (see below).

Approach 1: national accounts data

For the majority of advanced economies and a few emerging market economies, the dataset relies on sectoral balance sheets published as part of the system of national accounts (also known as *flow of funds*), which provides the most comprehensive coverage of private non-financial debt. Harmonized series come from the BIS for a sample of twenty-eight countries, with adjustments for breaks due to differences in borrower, lender, or instrument coverage (Dembiermont, Drehmann, and Muksakunratana 2013). For twelve European countries the BIS does not provide harmonized series. Therefore, data from Eurostat are used instead in these cases.

Approach 2: bank loans, and debt securities

Total private debt for all other advanced economies and most emerging market economies is calculated as the sum of three components: (1) bank loans to domestic households and nonfinancial corporations, drawn from the IMF's *Standardized Reporting Forms* (SRFs) and

²⁰ Adding to this problem, financial innovation and the emergence of new debt-like obligations and types of creditors (e.g. shadow banking) may not be captured in official statistics.

International Financial Statistics (IFS);²¹ (2) cross-border bank loans from the BIS²²; and (3) the outstanding stock of debt securities issued (on the domestic and international markets) by non-financial corporations, calculated based on securities issuance data from *Dealogic*.²³ This follows closely the approach of the BIS for estimating private debt, but improves upon it by using debt securities data from *Dealogic*, which should capture not only securities held by banks but all entities.

Approach 3: domestic bank claims

In low-income developing countries, private debt estimates cover only claims by domestic banks, due to data limitations. The impact of this restriction is, however, likely to be limited as domestic bank loans typically account for the lion's share of total private debt in low-income developing countries.²⁴

Approach 4: other

In a few cases, the compilation approach was adapted to fit country-specific factors.

- In the case of China, the private debt series is based on the broader credit concept of *total social financing* (TSF), including external private debt, adjusted for local government bond swaps, and excluding equity financing. To account for the blurred line between private and public debt in China, the borrowing of local government financing vehicles that has been recognized or is likely to be recognized as explicit local government debt is included in the public rather than the private debt aggregate (see IMF 2016 for details).
- For Liberia, Mauritania and Zimbabwe, reported debt series are based on domestic bank credit to the private sector from the World Bank's World Development Indicators.
- For Argentina, Chile, Russia, and South Africa, the reported debt series are drawn from the BIS's estimates of total credit to the private non-financial sector, which appear to have a better coverage.

²¹ "SRF bank loans" comprise loans by other depository corporations to households (FODALR) and non-financial corporations (FODALO). The "IFS bank claims on the private sector" refer to the series in line 22d. Due to the limited coverage of SRF, bank loans are spliced backwards using the bank claims. This assumption is likely to have only a limited impact, as loans usually account for the bulk of bank claims (96 percent on average in countries' reporting to the SRF in 2015). SRF data are reported only for countries that have agreed to release SRF-based data beyond IFS published lines.

²² The cross-border loans in the BIS locational banking dataset includes the official sector (defined as general government, central banks and international organizations) as well as non-bank financial corporations. Ideally, one would like to exclude the loans and securities of both from the cross-border aggregate. However, due to data constraints, it is only possible net out the component corresponding to the official sector using as proxy the international claims drawn from the consolidated banking dataset reported by the BIS.

²³ Outstanding debt securities are calculated on the basis of maturity at issuance.

²⁴ Indeed, for the limited sample of low-income developing countries for which all components of private debt were available, bank claims on the private sector accounted for 85 percent of total private debt on average.

Adjusted series

Given the heterogeneity of data sources and the fact that the coverage of instruments, lenders, and borrowers are not always homogeneous over time, there are breaks in the series. To ensure consistency (particularly when some components of debt are missing), we follow the BIS's methodology to adjust for breaks, which consists of proportionally scaling up/down all earlier observations when a break occurs.

More specifically, break-adjusted series are calculated as follows:

$$\text{Adjusted private debt}_t = \begin{cases} d_t + c_t & \text{if } t \geq t_0 \\ d_t * \left(\frac{d_{t_0} + c_{t_0}}{d_{t_0}}\right) & \text{if } t < t_0 \end{cases}, \text{ (A.1)}$$

in which c_t is, for example, the stock of cross-border debt flows available starting only at t_0 and d_t is the stock of domestic debt available throughout the period.

Debt of Households and Nonfinancial Corporations

Debt series for households and nonfinancial corporations are calculated depending on the methodology followed to calculate the private debt aggregate as follows:

- *Approach 1.* The BIS estimates for the stocks of outstanding debt issued by households and non-financial corporations are used.²⁵
- *Approach 2.* When the sectoral breakdown of private debt is available from the BIS, the household debt component (in nominal terms) reported by the BIS is used and the non-financial corporation debt is calculated as a residual. When the BIS does not provide the split between households and non-financial corporations, the sectoral breakdown of bank loans is derived from the SRF (whenever available), while debt securities and cross border flows are assumed to be all related to non-financial corporations.
- *Approach 3.* Household and non-financial corporation debt series are estimated by using the ratios of household/non-financial corporation loans in total bank loans to the private sector calculated from SRF data (whenever available).
- *Approach 4.* Country specific sources are used for China. For the other countries, the sectoral breakdown is estimated as in approach 2.

Metadata

Table A1.1 gives an overview of the characteristics of the private debt data. Several issues worth noting:

²⁵ As discussed in Dembiermont, Drehmann, and Muksakunratana (2013), in some cases, the sectoral data does not add up to the total private debt due to break adjustments. This is because pre- and post-break values for overlapping periods determine adjustment factors in such a way that the adding-up restriction only holds in the overlapping period.

- *Borrowers.* Public nonfinancial corporations are excluded from the private debt series except in those cases where the data come from financial accounts. Another exception is China where the TSF data includes borrowing by state-owned enterprises (SOEs).
- *Instrument coverage.* All instruments data are available only for those countries for which sectoral financial accounts are used as source.
- *Valuation.* Due to the absence of observable market prices, loans are measured at nominal values. Debt securities data coming from *Dealogic* are also measured at nominal values. Data coming from financial accounts are generally reported at market values.

Public debt

The public debt data included in the Global Debt Database (GDD) builds on the IMF's HPDD (Abbas and others, 2011) improving it along three dimensions. First, it reports separate series for general and central government debt. In addition, it includes data on the nonfinancial public sector and public sector (subject to data availability). Second, it fills in more than three-quarters of existing breaks in the HPDD series by relying on a wider range of sources and distinguishing between central and general government debt. The dataset has on average about fourteen more years of continuous series relative to the HPDD. Finally, the GDD expands the HPDD's country coverage by ten—mostly low-income developing countries.

Definition and coverage

The public debt series corresponds to gross debt and aims at covering all debt instruments owed by the general and/or central government, as defined in the IMF's *Public Debt Statistics: Guide for Compilers 2011*. These include: (i) loans; (ii) debt securities; (iii) currency and deposits; (iv) insurance, pension, and standardized guarantee schemes; (v) other accounts payable; and (vi) and special drawing rights.²⁶

The dataset provides separate debt series for the central and/or general government for most countries in the sample, based on the institutional coverage indicated in the source statistics (see data file for details). SOEs' debts are in most cases excluded from the GDD, except in countries where public debt series cover the nonfinancial public sector/public sector (in which cases, the debt of SOEs is included in the public sector) or private debt series come from financial accounts (in which case, SOEs are included in private debt series).

²⁶ In some cases, the coverage of debt instruments (especially *insurance, pension, and standardized guarantee schemes*) may be incomplete. While information on the sectoral coverage of debt statistics is available for most countries (see above), metadata on instrument coverage, consolidation, and valuation is virtually inexistent for a majority of the sample. Therefore, it is not possible to establish the comparability of the series across countries under each of these dimensions.

Methodology and sources

The dataset is built from various primary and secondary sources: (1) national statistical sources (for a complete list by country, see below); (2) the UN's Statistical Yearbooks from the 1950s through early-1980s; (3) the *International Financial Statistics*' (IFS) data on domestic bank lending to the government, coupled with the World Bank's *International Debt Statistics* (IDS) data on external debt, starting from the early-1970s; (4) the *Quarterly Public Sector Debt* (QPSD) database jointly developed by the World Bank and International Monetary Fund; and (5) various vintages of the WEO database for the most recent years. These were completed with data drawn from Reinhart and Rogoff (2009 and 2011), Jaimovich and Panizza (2010), Cowan and others (2006), the Inter-American Development Bank's *Standardized Public Debt Database*, the OECD's public debt statistics, and the CEIC (see data file for more details).

The reported debt series were compiled without recourse to extrapolation, interpolation, or auxiliary regressions. Original data series were adjusted for differences in definition and coverage whenever feasible. In most cases, this allowed for a smooth transition across sources, with gaps of no more than three percent of GDP in the first overlapping year across sources. Where that was not the case, breaks were implemented in the GDD, following the same approach as in the HPDD. These are clearly highlighted in the dataset.

Table A.1.1. Global Debt Database: Characteristics of Private Debt Data

	Total private debt (all instruments)	Total private debt (loans and securities)	Domestic bank credit	Debt securities	Cross-border bank credit
Source	Financial accounts	Financial accounts	Monetary surveys	Dealogic	BIS international banking statistics
Borrowers					
Non-financial corporations					
Private nonfinancial corporations	X	X	X	X	X
Public nonfinancial corporations	–	–	–	–	–
Households	X	X	X	–	–
Non-profit institutions serving households	X	X	X	–	–
Other financial corporations	–	–	–	–	X
Lenders					
Non-financial corporations					
Financial corporations					
Central banks	X	X	–	X	–
Other domestic depository corporations	X	X	X	X	–
Other financial institutions	X	X	–	X	–
General government	X	X	–	X	–
Households	X	X	–	X	–
Non-profit institutions serving households	X	X	–	X	–
Rest of the world					
Internationally active banks	X	X	–	X	X
Other sectors	X	–	–	X	–
Instruments					
Debt securities	X	X	X	X	X
Loans	X	X	X	X	X
Special drawing rights	X	–	–	–	–
Currency and deposits	X	–	–	–	–
Other accounts payables	X	–	–	–	–
Insurance, pension, and standardized guarantee schemes	X	–	–	–	–
Currency ^{1/}	National currency	National currency	National currency	National currency	National currency
Valuation method					
Debt securities	Market value ^{2/}	Market value ^{2/}	–	Nominal value	Market value
Loans	Nominal value	Nominal value	Nominal value	–	Nominal value
Intra-sector consolidation	Not consolidated	Not consolidated	No intra-sector transactions ^{3/}	Not consolidated	No intra-sector transactions ^{3/}

Source: Authors' calculations based on Dembiermont, Drehmann, and Muksakunratana (2013).

1/ Exchange rate movements can affect reported private debt levels as some instruments (notably cross-border ones) can be denominated in multiple currencies.

2/ For the United States, face value.

3/ Consolidation is not an issue as there are no intra-sector transactions.

Data Sources

Abbreviation	Full Name	Reference
BIS	Bank of International Settlements	http://stats.bis.org/
CLYPS	Cowan, Levy-Yeyati, Panizza and Sturzenegger	Cowan K., Levy-Yeyati E., Panizza U. and Sturzenegger F. (2006). Sovereign debt in the Americas: new data and stylized facts, RES Working Paper No. 577, Inter-American Development Bank, Research Department, Washington, DC, United States.
Dealogic	Dealogic	http://www.dealogic.com/
Eurostat	Eurostat	http://ec.europa.eu/eurostat/data/database
HPDD	Historical Public Debt Database	Abbas, S. Ali, Nazim Belhocine, Asmaa El Ganainy and Mark Horton (2011). "A Historical Public Debt Database." IMF Working Paper, International Monetary Fund, Washington DC.
IADB	Inter-American Development Bank	Standardized Public Debt Statistics Database, https://mydata.iadb.org/Finance/Standardized-Public-Debt-Database/8c5g-k9ut/data
IFS	International Financial Statistics	International Monetary Fund, International Financial Statistics Washington DC.
IFS+IDS	Sum of domestic bank lending to the government from the IFS (12a, 22a, 42a) and external debt statistics from the World Bank's International Debt Statistics (IDS)	-
IMF Staff	International Monetary Fund Staff Estimates	-
JP	Jaimovich and Panizza	Jaimovich D. and U. Panizza. 2010. "Public debt around the world: a new data set of central government debt," Applied Economics Letters, Taylor and Francis Journals, vol. 17(1), pp. 19-24.
OECD	Organization for Economic Cooperation and Development	OECD (2009) Central Government Debt - Country Tables 2009. Organization for Economic Cooperation and Development, Paris, France.
QPD	Quarterly Public Data	
PWT	Penn World Table	Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" American Economic Review, 105(10), 3150-3182, available for download at www.ggd.net/pwt
R&R	Reinhart & Rogoff	Reinhart, C. M., and K. S. Rogoff. 2009. This Time is Different: Eight Centuries of Financial Folly, Princeton Press; Reinhart, C. M., and K. S. Rogoff. 2011. "From Financial Crash to Debt Crisis." American Economic Review 101(5), pp. 1676-706.
SRF	Standardized Reporting Forms	International Monetary Fund, Standardized Reporting Forms, Washington DC.
UN	United Nations Statistics Yearbook	United Nations Statistical Yearbooks (1948-1949, 1952, 1958, 1965, 1973, 1986).
WDI	World Development Indicators	World Bank Group, World Development Indicators, Washington DC.
WEO 2002	World Economic Outlook (WEO 2002)	International Monetary Fund, September 2002 Vintage, World Economic Outlook, Washington DC.
WEO 2009	World Economic Outlook (WEO 2009)	International Monetary Fund, October 2009 Vintage, World Economic Outlook, Washington DC.
WEO 2010	World Economic Outlook (WEO 2010)	International Monetary Fund, October 2010 Vintage, World Economic Outlook, Washington DC.
WEO 2014	World Economic Outlook (WEO 2014)	International Monetary Fund, October 2014 Vintage, World Economic Outlook, Washington DC.
WEO 2016	World Economic Outlook (WEO 2016)	International Monetary Fund, October 2016 Vintage, World Economic Outlook, Washington DC.
National Source (Albania)	Bank of Albania	https://www.bankofalbania.org/web/Time_series_22_2.php?evn=agregate_detaje&evb=agregate&cregtab_id=434&peridha_id=1; https://www.bankofalbania.org/web/Time_series_22_2.php?evn=agregate_detaje&evb=agregate&cregtab_id=702&peridha_id=3
National Source (Algeria)	Monetary Survey Data	
National Source (Austria)	Austrian National Bank	https://www.oenb.at/isaweb/report.do;jsessionid=E41DFAB747B318A6699E887D7289C517?report=7.21
National Source (Barbados)	Central Bank of Barbados	http://data.centralbank.org.bb/TermsOfUse.aspx

Data Sources

Abbreviation	Full Name	Reference
National Source (Belarus)	Ministry of Finance of the Republic of Belarus (via CEIC)	https://www.ceicdata.com/en
National Source (Belgium)	National Bank of Belgium	http://stat.nbb.be/Index.aspx?ThemeTreeld=10&lang=fr#
National Source (Bolivia)	Bolivia Ministry of Finance	
National Source (Brazil)	Central Bank of Brazil	http://www.bcb.gov.br/ingles/economic/seriehistNPDGross2007.asp
National Source (Canada)	Department of Finance (via CEIC), and Statistics of Canada	http://www65.statcan.gc.ca/acyb_r000-eng.htm
National Source (Chile)	Ministry of Finance Chile	http://www.hacienda.gob.cl/english/public-debt-office/statistics/public-debt.html
National Source (China, Mainland)	People's Bank of China	
National Source (Croatia)	Croatian National Bank (via CEIC)	https://www.ceicdata.com/en
National Source (Cyprus)	Central Bank of Cyprus	
National Source (Czech Republic)	Ministry of Finance of the Czech Republic (via CEIC), and Czech Statistical Office	https://www.ceicdata.com/en
National Source (Denmark)	Denmark National Bank	
National Source (Dominican Republic)	Ministry of Finance Dominican Republic	
National Source (Ecuador)	Ministry of Finance Ecuador	
National Source (El Salvador)	Central Bank of El Salvador	http://www.bcr.gob.sv/bcrsite/?cat=1000&lang=en
National Source (Estonia)	Statistics Estonia	http://pub.stat.ee/px-web.2001/l_Databas/Economy/08Finance/06Government_finances/04Revenue_expenditure_and_debt/04Revenue_expenditure_and_debt.asp
National Source (Fiji)	Ministry of Economy and Reserve Bank of Fiji	
National Source (Finland)	Treasury Finland	http://www.treasuryfinland.fi/verti/?bmark=/DATABASE/0VALTION%20VELANHALLINTA/0VALTIONVELKA/Valtionvelka_BKT&gfile=/QUICKTABLES/0VALTION%20VELANHALLINTA/0VALTIONVELKA/Valtionvelka_BKT&ACTION=OPENROOT&lang=en
National Source (France)	National Institute of Statistics and Economic Studies	https://www.insee.fr/fr/statistiques
National Source (Georgia)	Georgia Ministry of Finance	http://mof.ge/en/4411
National Source (Germany)	Bundesbank	
National Source (Greece)	Ministry of Finance Greece (via CEIC)	https://www.ceicdata.com/en
National Source (Guatemala)	Guatemala Ministry of Finance	http://dcp-web.minfin.gob.gt/Documentos/Estadisticas/Reporte_Operaciones_Credito_Publico.pdf
National Source (Honduras)	Central Bank of Honduras, and Honduras Ministry of Finance	http://www.bch.hn/sector_fiscal.php

Data Sources

Abbreviation	Full Name	Reference
National Source (Hong Kong SAR)	Government Finance Statistics Yearbook	
National Source (Hungary)	National Bank of Hungary (via CEIC)	https://www.ceicdata.com/en
National Source (Iceland)	Statistics Iceland, and Central Bank of Iceland	https://www.statice.is/ ; http://px.hagstofa.is/pxen/pxweb/en/Efnahagur/Efnahagur__fjaropinber__fjarmal_rikissjods/THJ05281.px/table/tableViewLayout1/?rxid=a676e0a2-51c5-43ed-9327-ec42fd5a2e6f
National Source (India)	Ministry of Finance India, and Reserve Bank of India	
National Source (Indonesia)	Ministry of Finance Republic of Indonesia (via CEIC)	https://www.ceicdata.com/en
National Source (Ireland)	Ireland National Treasury Management Agency (via CEIC), Central Bank of Ireland, and Central Statistics Office Ireland	https://www.ceicdata.com/en
National Source (Israel)	Bank of Israel	http://www.boi.org.il/en/DataAndStatistics/Pages/MainPage.aspx?Level=2&Sid=19&SubjectType=2
National Source (Italy)	Bank of Italy	https://infostat.bancaditalia.it/inquiry/
National Source (Jamaica)	Jamaica Ministry of Finance and the Public Service	http://online.mof.gov.jm/dmu/default.asp?c=1100&page=1102
National Source (Japan)	Bank of Japan, and the Cabinet Office	
National Source (Kazakhstan)	Kazakhstan National Bank, Kazakhstan Ministry of Finance, and Kazakhstan Ministry of National Economy	
National Source (Kenya)	Central Bank of Kenya	https://www.centralbank.go.ke/public-debt/
National Source (Korea, Republic of)	Republic of Korea Ministry of Strategy and Finance	
National Source (Latvia)	Republic of Latvia Treasury	http://www.kase.gov.lv/l/saimnieciska-gada-parskats-par-valsts-budzeta-izpildi-un-pasvaldibu-budzetiem/86 http://www.kase.gov.lv/?object_id=9151
National Source (Luxembourg)	Central Bank of Luxembourg, and Luxembourg State Treasury	http://www.bcl.lu/en/statistics/series_statistiques_luxembourg/05_real_economy/index.html ; http://www.te.public.lu/fr/dette_publique/moyen_long_terme/Evolution_historique_de_la_dette_publique_de_1970-2012.html
National Source (Macedonia, FYR)	National Bank of the Republic of Macedonia	http://www.nbrm.mk/?ItemID=E93CE394DF9E684F9356289B19564FD5
National Source (Malaysia)	Ministry of Finance Malaysia	http://www.treasury.gov.my/index.php/en/economy/economic-data.html
National Source (Malta)	Central Bank of Malta	https://www.centralbankmalta.org/government-finance
National Source (Mauritius)	Republic of Mauritius Ministry of Finance and Economic Development, and Statistics Mauritius	
National Source (Mexico)	Mexico Ministry of Finance	http://finanzaspublicas.hacienda.gob.mx/es/Finanzas_Publicas/Estadisticas_Oportunas_de_Finanzas_Publicas
National Source (Moldova)	Ministry of Finance of the Republic of Moldova (via CEIC)	https://www.ceicdata.com/en

Data Sources

Abbreviation	Full Name	Reference
National Source (Mongolia)	Mongolia Ministry of Finance	http://shilendans.gov.mn/org/408?form=1620896&year=2017&group=3&task=739
National Source (Montenegro)	Montenegro Ministry of Finance	http://www.mf.gov.me/en/sections/state-debt/GDDS_table/
National Source (Netherlands)	Central Bank of the Netherlands	https://www.dnb.nl/en/statistics/statistics-dnb/key-statistics-dutch-economy/national-summary-data-page-sdds/index.jsp
National Source (New Zealand)	Statistics New Zealand	http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts/long-term-data-series/government.aspx
National Source (Nicaragua)	Central Bank of Nicaragua	http://www.bcn.gob.ni/estadisticas/finanzas_publicas/finanzas/index.php
National Source (Norway)	Statistics Norway	https://www.ssb.no/statistikkbanken/SelectVarVal/Define.asp?MainTable=OffBruttoGjeld&KortNavnWeb=offogjeld&PLanguage=1&checked=true
National Source (Paraguay)	Treasury Paraguay	http://www.economia.gov.py/index.php/dependencias/direccion-de-politica-de-endeudamiento/presentacion-pais/deuda-publica-clasificacion-saldo-desembolso-servicio
National Source (Peru)	Central Reserve Bank of Peru	https://estadisticas.bcrp.gob.pe/estadisticas/series/anuales/resultados/PM10188FA/html ; https://estadisticas.bcrp.gob.pe/estadisticas/series/mensuales/resultados/PN00502MM/html ; https://estadisticas.bcrp.gob.pe/estadisticas/series/mensuales/resultados/PN00532MM/html ; https://estadisticas.bcrp.gob.pe/estadisticas/series/mensuales/resultados/PN00533MM/html ; https://estadisticas.bcrp.gob.pe/estadisticas/series/mensuales/resultados/PN00534MM/html
National Source (Poland)	Ministry of Finance Poland	http://www.mf.gov.pl/en/web/wp/public-debt/outstanding-debt/historical-data
National Source (Portugal)	Banco de Portugal, Portuguese Treasury, and Debt Management Agency	https://www.igcp.pt/en/1-4-399/statistics/government-debt/
National Source (Romania)	Romania Ministry of Finance	http://discutii.mfinante.ro/static/10/Mfp/buletin/executii/Structuradatorieipublice2000-2017septEng.pdf
National Source (Samoa)	Central Bank of Samoa	
National Source (Singapore)	Singapore Ministry of Finance	
National Source (Slovak Republic)	National Bank of Slovakia	
National Source (Slovenia)	Republic of Slovenia Statistics Office, and Ministry of Finance	http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=0314905E&ti=&path=../Database/Economy/03_national_accounts/25_03149_government_accounts/&lang=1 http://www.mf.gov.si/en/investor_relations_disclaimer/the_issuer/central_government_budget_debt/
National Source (Solomon Islands)	Central Bank of Solomon Islands	http://www.cbsi.com.sb/publications/quarterly-review/
National Source (South Africa)	South African Reserve Bank (via CEIC)	https://www.ceicdata.com/en
National Source (Spain)	Bank of Spain	http://app.bde.es/bie_www/faces/bie_wwwias/jsp/op/BusquedaTematica/PBusquedaTematicaV2.jsp
National Source (St. Kitts and Nevis)	St. Kitts and Nevis Ministry of Finance	https://www.eccb-centralbank.org/statistics/monetary-survey-datas/country-report
National Source (St. Vincent and the Grenadines)	St. Vincent and the Grenadines Ministry of Finance	

Data Sources

Abbreviation	Full Name	Reference
National Source (Sweden)	Statistics Sweden, and Swedish National Debt Office	(private) http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_FM_FM0103_FM0103A/FirENS2010ofAr/?rxid=5432f24c-4e75-44ea-b83b-8ea147b1ce44 ; (public) https://www.riksgalden.se/en/aboutsndo/Central-government-debt-and-finances/Central-government-debt-an-overview/Historical-datal-diagrams/
National Source (Switzerland)	Federal Statistical Office Switzerland, and Swiss National Bank	https://www.bfs.admin.ch/bfs/fr/home/statistiques/administration-finances-publiques.assetdetail.106548.html
National Source (Taiwan Province of China)	Ministry of Finance Republic of China, Taiwan Province of China (via CEIC)	https://www.ceicdata.com/en
National Source (Thailand)	Bank of Thailand	http://www2.bot.or.th/statistics/ReportPage.aspx?reportID=775&language=eng
National Source (Timor Leste)	Central Bank of Timor-Leste	
National Source (Tunisia)	Central Bank of Tunisia	
National Source (Turkey)	Republic of Turkey Prime Ministry Undersecretariat of Treasury, and Central Bank of the Republic of Turkey	https://www.treasury.gov.tr/public-finance-statistics ; http://www.tcmb.gov.tr/ http://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Statistics/Monetary+and+Financial+Statistics/Financial+Accounts/
National Source (Ukraine)	National Bank of Ukraine	https://bank.gov.ua/control/en/publish/article?showHidden=1&art_id=27893044&cat_id=8782106&ctime=1456402130048#1 https://bank.gov.ua/control/en/publish/article?showHidden=1&art_id=19486397&cat_id=47388#4
National Source (United Kingdom)	United Kingdom Debt Management Office (via CEIC), and Office for National Statistics	https://www.ceicdata.com/en ; https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/unitedkingdomeconomicaccountssectorhouseholdsandnonprofitinstitutionsservinghouseholds
National Source (United States)	United States Federal Reserve Bank	
National Source (Uruguay)	Central Bank of Uruguay (via CEIC)	https://www.ceicdata.com/en
National Source (Vietnam)	Ministry of Finance Vietnam (via CEIC)	https://www.ceicdata.com/en

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Afghanistan		Spliced IFS (1960-2005); SRF (2006-2016)				SRF (2006-2016)		SRF (2006-2016)				WEO 2018 (2002-2016)	WB (1960-1969); PWT (1970-1993); WEO 2018 (2002-2016)
Albania		National Source (2003-2016)	National Source (2003-2016)	National Source (2003-2016)		National Source (2003-2016)		National Source (2003-2016)			National Source (1994-1999); WEO 2018 (2000-2016)	National Source (1994-2016)	WEO 2018 (1950-2016)
Algeria		National Source (1995-2016)	National Source (1995-2016)	National Source (1995-2016)		National Source (2001-2016)		Derived using national source and IFS/SRF (2001-2016)				IFS+IDS (1970-1994); WEO 2018 (1995-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Angola												IFS+IDS (1995-1999); WEO 2018 (2000-2016)	WEO 2018 (1969-2016)
Antigua and Barbuda												WEO 2018 (1990-2016)	WEO 2018 (1963-2016)
Argentina		BIS (1950-2016)	BIS (1950-2016)	BIS (1950-2016)		BIS (1994-2016)		BIS (1994-2016)				R&R (1950-1992); WEO 2018 (1993-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Armenia												WEO 2018 (1996-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Australia		BIS (1953-2016)	BIS (1953-2016)	BIS (1953-2016)		BIS (1977-2016)		BIS (1977-2016)			WEO 2018 (1989-2016)	R&R (1950-1978); JP (1979-1998); IMF Staff (1999-2016)	PWT (1950-1959); WEO 2018 (1960-2016)
Austria	National Source (1995-2016)	BIS (1950-2016)	BIS (1950-2016)	BIS (1950-2016)	National Source (1995-2016)	BIS (1995-2016)	National Source (1995-2016)	BIS (1995-2016)			WEO 2009 (1970-1987); WEO 2018 (1988-2016)	National Source (1950-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Azerbaijan		Spliced IFS (1992-2000); SRF (2001-2016)	Spliced BIS (1992-1994); BIS (1995-2016)	Spliced Dealogic (1992-2009); Dealogic (2010-2016)								WEO 2009 (1994); WEO 2018 (1995-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Bahamas, The		IFS (1995-2016)	BIS (1995-2016)	Spliced Dealogic (1995-2001); Dealogic (2002-2016)								IFS (1968-1989); WEO 2018 (1990-2016)	WB (1960-1961); WEO 2018 (1962-2016)
Bahrain		IFS (1965-2015)	Spliced BIS (1965-1994); BIS (1995-2016)	Spliced Dealogic (1965-2002); Dealogic (2003-2016)								IFS+IDS (1974-1979); JP (1980-1989); WEO 2018 (1990-2016)	WEO 2018 (1962-2016)
Bangladesh		Spliced IFS (1974-2000); SRF (2001-2016)				SRF (2004-2016)		SRF (2004-2016)				IFS+IDS (1973-2002); WEO 2018 (2003-2016)	PWT (1959-1961); WEO 2018 (1962-2016)
Barbados												IFS (1970-1980); National Source (1981-1993); WEO 2018 (1994-2016)	PWT (1960-1962); WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Belarus											WEO 2018 (2004-2016)	IFS+IDS (1994-2002); National Source (2003-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Belgium	OECD (1995-2016)	BIS (1970-2016)	BIS (1970-2016)	BIS (1970-2016)	OECD (1995-2016)	BIS (1980-2016)	OECD (1995-2016)	BIS (1980-2016)			National Source (1970-1994); WEO 2018 (1995-2016)	National Source (1950-2016)	PWT (1950-1952); WEO 2018 (1953-2016)
Belize												IFS+IDS (1976-1999); WEO 2016 (2000); WEO 2018 (2001-2016)	WB (1960-1962); WEO 2018 (1963-2016)
Benin		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1998); WEO 2018 (1999-2016)	PWT (1959-1961); WEO 2018 (1962-2016)
Bhutan		Spliced IFS (1983-2000); SRF (2001-2016)										IFS (1982); IFS+IDS (1983-1996); WEO 2018 (1997-2016)	WEO 2018 (1963-2016)
Bolivia										WEO 2016 (1998-1999); WEO 2018 (2000-2016)		IFS+IDS (1970-1995); CLYPS (1996-1999); National Source (2000-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Bosnia and Herzegovina											WEO 2018 (1998-2016)	WEO 2018 (1998-2016)	PWT (1990-1993); WEO 2018 (1994-2016)
Botswana		Spliced IFS (1972-2000); SRF (2001-2016)	Spliced BIS (1972-1994); BIS (1995-2016)	Spliced Dealogic (1972-2011); Dealogic (2012-2016)								IFS+IDS (1972-1997); WEO 2018 (1998-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Brazil	OECD (2009-2014)	BIS (1993-2016)	BIS (1993-2016)	BIS (1993-2016)	OECD (2009-2014)	BIS (1994-2016)	OECD (2009-2014)	BIS (1994-2016)		WEO 2018 (2000-2016)	National Source (2001-2016)	R&R (1950-1993); CLYPS (1994-2000); National Source (2001-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Brunei Darussalam												IFS+IDS (2001-2005); WEO 2018 (2006-2016)	WB (1965-1969); PWT (1970-1984); WEO 2018 (1985-2016)
Bulgaria	Eurostat (2000-2015)	Spliced IFS (1991-1994); Eurostat (1995-2016)	Spliced BIS (1991-1994); Eurostat (1995-2016)	Spliced Dealogic (1991-1994); Eurostat (1995-2016)	Eurostat (2000-2015)	Eurostat (1995-2016)	Eurostat (2000-2015)	Eurostat (1995-2016)			Eurostat (1997-1999); QPD (2000-2016)	R&R (1981-1992); IFS+IDS (1993-1999); QPD (2000-2016)	WEO 2018 (1969-2016)
Burkina Faso		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-2001); WEO 2018 (2002-2016)	PWT (1959-1961); WEO 2018 (1962-2016)
Burundi		Spliced IFS (1964-1999); SRF (2000-2016)										IFS (1964-1969); IFS+IDS (1970-1993); WEO 2009 (1994-1999); WEO 2018 (2000-2016)	PWT (1960-1962); WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
C.A.R.		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1997); WEO 2018 (1998-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Cambodia		Spliced IFS (1993-2000); SRF (2001-2016)									WEO 2009 (1995); WEO 2018 (1996-2016)		WB (1960-1969); PWT (1970-1985); WEO 2018 (1986-2016)
Cameroon		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1996); WEO 2018 (1998-2005); IMF Staff (2006-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Canada	OECD (1990-2016)	BIS (1954-2016)	BIS (1954-2016)	BIS (1954-2016)	OECD (1990-2016)	BIS (1969-2016)	OECD (1990-2016)	BIS (1969-2016)			National Source (1950-1978); WEO 2018 (1979-2016)	National Source (1990-2016)	WEO 2018 (1950-2016)
Cape Verde		Spliced IFS (1976-2000); SRF (2001-2016)										IFS+IDS (1981-1985); WEO 2009 (1986-1996); WEO 2016 (1997-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Chad		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1992); JP (1993-1998); WEO 2018 (1999-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Chile	OECD (2003-2016)	BIS (1983-2016)	BIS (1983-2016)	BIS (1983-2016)	OECD (2003-2016)	BIS (2002-2016)	OECD (2003-2016)	BIS (2002-2016)			WEO 2017 (1990-1990); WEO 2018 (1991-2016)	R&R (1950-2000); National Source (2001-2016)	PWT (1951-1959); WEO 2018 (1960-2016)
China, Mainland		IMF Staff (1985-2016)	IMF Staff (1985-2016)	IMF Staff (1985-2016)		National Source (2006-2016)		National Source (2006-2016)			WEO 2018 (1995-2016)		PWT (1952-1961); WEO 2018 (1962-2016)
Colombia	OECD (2015-2015)	BIS (1996-2016)	BIS (1996-2016)	BIS (1996-2016)	OECD (2015-2015)	BIS (1996-2016)	OECD (2015-2015)	BIS (1996-2016)			WEO 2018 (1996-2016)	R&R (1950-1994); IMF Staff (1995-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Comoros		Spliced IFS (1982-2000); SRF (2001-2016)										WEO 2018 (1984-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Congo, Dem. Rep. of		Spliced IFS (1963-1999); SRF (2000-2016)									HPDD (1970-1998); WEO 2018 (2000-2016)		PWT (1950-1964); WEO 2018 (1965-2016)
Congo, Republic of		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1993); WEO 2014 (1994-1999); WEO 2018 (2000-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Costa Rica		Spliced IFS (1996-2000); SRF (2001-2016)	BIS (1996-2016)	Spliced Dealogic (1996-1998); Dealogic (1999-2016)		SRF (2001-2016)		SRF (2001-2016)			QPD (2009-2016)	R&R (1950-1969); JP (1970-1995); WEO 2018 (1996-2008); QPD (2009-2016)	PWT (1950-1962); WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Cote D'Ivoire		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1983); R&R (1984-1998); WEO 2018 (1999-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Croatia	Eurostat (2001-2015)	Spliced IFS (1994-2000); Eurostat (2001-2016)	Spliced BIS (1994-2000); Eurostat (2001-2016)	Spliced Dealogic (1994-2000); Eurostat (2001-2016)	Eurostat (2001-2015)	Eurostat (2001-2016)	Eurostat (2001-2015)	Eurostat (2001-2016)			WEO 2009 (1997); WEO 2018 (1998-2016)	IFS+IDS (1993-1998); National Source (1999-2009); Eurostat (2010-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Cyprus	Eurostat (1995-2015)	Spliced IFS (1960-1994); Eurostat (1995-2016)	Spliced BIS (1960-1994); Eurostat (1995-2016)	Spliced Dealogic (1960-1994); Eurostat (1995-2016)	Eurostat (1995-2015)	Eurostat (1995-2016)	Eurostat (1995-2015)	Eurostat (1995-2016)			JP (1970-1994); National Source (1995-2016)	National Source (2000-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Czech Republic	National Source (1995-2015)	National Source (1995-2015)	National Source (1995-2015)	National Source (1995-2015)	National Source (1995-2016)	National Source (1995-2016)	National Source (1995-2015)	National Source (1995-2015)	National Source (2011-2015)	National Source (2011-2015)	WEO 2018 (1995-2016)	National Source (1993-2016)	PWT (1990-1994); WEO 2018 (1995-2016)
Denmark	OECD (1994-2016)	BIS (1951-2016)	BIS (1951-2016)	BIS (1951-2016)	OECD (1994-2016)	BIS (1994-2016)	OECD (1994-2016)	BIS (1994-2016)			WEO 2009 (1970-1991); WEO 2018 (1992-2016)	R&R (1950-1979); JP (1980-1989); National Source (1990-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Djibouti		IFS (1984-2016)										WEO 2016 (1995-1998); WEO 2018 (1999-2016)	PWT (1970-1989); WEO 2018 (1990-2016)
Dominica		Spliced IFS (1975-2000); SRF (2001-2016)										IFS+IDS (1975-1988); WEO 2018 (1990-2016)	WEO 2018 (1962-2016)
Dominican Republic		Spliced IFS (1991-2000); SRF (2001-2016)	Spliced BIS (1991-1994); BIS (1995-2016)	Spliced Dealogic (1991-2001); Dealogic (2002-2016)						National Source (1970-2008); WEO 2018 (2009-2016)		National Source (2000-2016)	National Source (1950-2016)
Ecuador		Spliced IFS (1950-2001); SRF (2002-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2013); Dealogic (2014-2016)						R&R (1950-2000); WEO 2018 (2001-2016)		JP (1990-1998); National Source (1999-2016)	PWT (1950-1969); WEO 2018 (1970-2016)
Egypt		Spliced IFS (1950-2003); SRF (2004-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2003); Dealogic (2004-2016)							IFS+IDS (1970-1994); JP (1995-2001); WEO 2018 (2002-2016)	UN (1954-1962)	PWT (1950-1961); WEO 2018 (1962-2016)
El Salvador		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2012); Dealogic (2013-2016)		SRF (2001-2016)		SRF (2001-2016)			WEO 2018 (1991-2016)	IFS (1951-1982); IFS+IDS (1983-1996); National Source (1997-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Equatorial Guinea												WEO 2018 (1980-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Eritrea		Spliced IFS (1995-2000); SRF (2001-2014)										IFS+IDS (1995-1998); WEO 2018 (2000-2016)	PWT (1990-1991); WEO 2018 (1992-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Estonia	OECD (1995-2015)	Spliced IFS (1992-1994); Eurostat (1995-2016)	Spliced BIS (1992-1994); Eurostat (1995-2016)	Spliced Dealogic (1992-1994); Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)			WEO 2018 (1995-2016)	National Source (2000-2016)	PWT (1990-1992); WEO 2018 (1993-2016)
Ethiopia		IFS (1960-2008)									IFS+IDS (1970-1995); WEO 2018 (1996-2010); IMF Staff (2011-2016)		PWT (1950-1960); WEO 2018 (1961-2016)
Fiji												IFS+IDS (1970-1988); WEO 2009 (1990-1991); WEO 2018 (1992-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Finland	OECD (1995-2016)	BIS (1970-2016)	BIS (1970-2016)	BIS (1970-2016)	OECD (1995-2016)	BIS (1970-2016)	OECD (1995-2016)	BIS (1970-2016)			WEO 2009 (1960-1978); WEO 2018 (1979-2016)	National Source (1950-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
France	ECB (1995-2016)	BIS (1969-2016)	BIS (1969-2016)	BIS (1969-2016)	ECB (1995-2016)	BIS (1977-2016)	ECB (1995-2016)	BIS (1977-2016)			National Source (1978-2016)	France_MIT_v2 (1950-1977); National Source (1978-2016)	WEO 2018 (1950-2016)
Gabon												IFS+IDS (1970-1999); WEO 2018 (2000-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Gambia, The		Spliced IFS (1964-2000); SRF (2001-2014)										HPDD (1973-1999); WEO 2018 (2000-2013); IMF Staff (2014-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Georgia		Spliced IFS (1995-2000); SRF (2001-2016)	BIS (1995-2016)	Spliced Dealogic (1995-2009); Dealogic (2010-2016)							National Source (1995-2016)		WB (1965-1989); WEO 2018 (1990-2016)
Germany	National Source (1995-2016)	BIS (1950-2016)	BIS (1950-2016)	BIS (1950-2016)	National Source (1995-2016)	BIS (1970-2016)	National Source (1995-2016)	BIS (1970-2016)			National Source (1950-1990); WEO 2018 (1991-2016)	National Source (1961-2016)	WEO 2018 (1950-2016)
Ghana		Spliced IFS (1955-2000); SRF (2001-2016)										UN (1962-1969); IFS+IDS (1970-1992); WEO 2018 (1993-2016)	PWT (1955-1961); WEO 2018 (1962-2016)
Greece	OECD (1995-2016)	BIS (1960-2016)	BIS (1960-2016)	BIS (1960-2016)	OECD (1995-2016)	BIS (1994-2016)	OECD (1995-2016)	BIS (1994-2016)			WEO 2018 (1960-2016)	R&R (1950-1984); JP (1985-1996); National Source (1997-2016)	PWT (1951-1959); WEO 2018 (1960-2016)
Grenada		Spliced IFS (1970-2000); SRF (2001-2016)										IFS+IDS (1970-1991); WEO 2018 (1992-2016)	WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Guatemala		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-1997); Dealogic (1998-2016)								R&R (1950); UN (1951); R&R (1952-1958); UN (1959-1969); IFS+IDS (1970-1981); National Source (1982-2016)	WEO 2018 (1950-2016)
Guinea		IFS (1989-2016)										WEO 2018 (1990-2016)	PWT (1959-1962); WEO 2018 (1963-2016)
Guinea-Bissau		Spliced IFS (1990-2000); SRF (2001-2016)										IFS+IDS (1986-1999); WEO 2018 (2000-2016)	PWT (1960-1979); WEO 2018 (1980-2016)
Guyana		Spliced IFS (1960-2000); SRF (2001-2016)										IFS (1963-1969); IFS+IDS (1970-2001); WEO 2018 (2002-2016)	WB (1960-1961); WEO 2018 (1962-2016)
Haiti		Spliced IFS (1955-2000); SRF (2001-2016)										IFS+IDS (1970-1996); WEO 2018 (1997-2016)	IHS (1955-1959); PWT (1960-1962); WEO 2018 (1963-2016)
Honduras		Spliced IFS (1950-2000); SRF (2001-2016)				National Source (2001-2016)		Derived using national source and IFS/SRF (2001-2016)	National Source (1980-2016)	National Source (1980-2016)	WEO 2018 (1990-1997); National Source (1998-2016)	R&R (1950-1969); IFS+IDS (1970-1979); National Source (1980-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Hong Kong SAR		BIS (1978-2016)	BIS (1978-2016)	BIS (1978-2016)		BIS (1990-2016)		BIS (1990-2016)				National Source (2002-2016)	PWT (1960); WEO 2018 (1961-2016)
Hungary	OECD (1990-2016)	BIS (1989-2016)	BIS (1989-2016)	BIS (1989-2016)	OECD (1990-2016)	BIS (1989-2016)	OECD (1990-2016)	BIS (1989-2016)			National Source (1989-2016)	National Source (1989-2016)	WEO 2018 (1962-2016)
Iceland	National Source (2003-2016)	National Source (1951-2016)	National Source (1951-2016)	National Source (1951-2016)	National Source (2003-2016)	National Source (1970-2015)	National Source (2003-2016)	National Source (1970-2015)			R&R (1950-1979); WEO 2009 (1980-1981); WEO 2018 (1982-2016)	JP (1972-1997); National Source (1998-2016)	WEO 2018 (1950-2016)
India		BIS (1951-2016)	BIS (1951-2016)	BIS (1951-2016)		National Source (1998-2016)		Derived using national source and IFS/SRF (1998-2016)			WEO 2018 (1991-2016)	R&R (1950-1973); JP (1974-1996); National Source (1998-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Indonesia		Spliced IFS (1980-2000); SRF (2001-2016)	Spliced BIS (1980-1994); BIS (1995-2016)	Spliced Dealogic (1980-1997); Dealogic (1998-2016)		BIS (2001-2016)		BIS (2001-2016)	National Source (2010-2016)		WEO 2018 (2000-2016)	JP (1972-1985); IFS+IDS (1986-1999); National Source (2000-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Iran, I. Rep. Of		IFS (1955-2016)	Spliced BIS (1955-1994); BIS (1995-2016)	Spliced Dealogic (1955-2010); Dealogic (2011-2016)								IFS+IDS (1970-1995); WEO 2018 (1996-2016)	PWT (1955-1958); WEO 2018 (1959-2016)
Iraq		SRF (2004-2015)	BIS (2004-2015)	Spliced Dealogic(2004-2013); Dealogic (2014-2015)								WEO 2018 (2004-2016)	WB (1968-1969); PWT (1970-1997); WEO 2018 (1998-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Ireland	National Source (2001-2016)	BIS (1971-2016)	BIS (1971-2016)	BIS (1971-2016)	National Source (2001-2016)	BIS (2002-2016)	National Source (2001-2016)	BIS (2002-2016)			WEO 2014 (1979-1989); WEO 2018 (1990-2016)	R&R (1950-1973); National Source (1974-1993); QPD (1995-2016)	PWT (1950-1959); WEO 2018 (1960-2016)
Israel	OECD (2010-2015)	BIS (1992-2016)	BIS (1992-2016)	BIS (1992-2016)	OECD (2010-2015)	BIS (1992-2016)	OECD (2010-2015)	BIS (1992-2016)			National Source (1983-2016)	National Source (1983-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Italy	National Source (1995-2016)	National Source (1950-2016)	National Source (1950-2016)	National Source (1950-2016)	National Source (1995-2016)	National Source (1950-2016)	National Source (1995-2016)	National Source (1950-2016)			National Source (1950-1994); QPD (1995-2016)	National Source (1950-1994); QPD (1995-2016)	PWT (1950); WEO 2018 (1951-2016)
Jamaica		Spliced IFS (1953-2000); SRF (2001-2016)	Spliced BIS (1953-1994); BIS (1995-2016)	Spliced Dealogic (1953-2009); Dealogic (2010-2016)								IFS (1963-1973); IFS+IDS (1974-1978); National Source (1980-1999); WEO 2018 (2000-2016)	PWT (1953-1961); WEO 2018 (1962-2016)
Japan	National Source (1994-2016)	BIS (1964-2016)	BIS (1964-2016)	BIS (1964-2016)	National Source (1994-2016)	BIS (1964-2016)	National Source (1994-2016)	BIS (1964-2016)			National Source (1955-2016)	National Source (1969-2016)	PWT (1950-1954); WEO 2018 (1955-2016)
Jordan		IFS (1954-2016)	Spliced BIS (1954-1994); BIS (1995-2016)	Spliced Dealogic (1954-2001); Dealogic (2002-2016)								IFS (1969-1979); IFS+IDS (1980-1989); WEO 2018 (1990-2016)	PWT (1954-1961); WEO 2018 (1962-2016)
Kazakhstan		Spliced IFS (1995-2002); SRF (2003-2016)	BIS (1995-2016)	Spliced Dealogic (1995-2005); Dealogic (2006-2016)		SRF (2003-2016)		SRF (2003-2016)			IFS+IDS (1993-1997); WEO 2009 (1998-2001); WEO 2018 (2002-2016)	National Source (2000-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Kenya		Spliced IFS (1961-2000); SRF (2001-2016)										R&R (1963-1972); IFS+IDS (1973-1997); National Source (1998-1999); WEO 2018 (2000-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Kiribati											WEO 2018 (1988-2016)	WEO 2018 (1988-2016)	PWT (1970-1979); WEO 2018 (1980-2016)
Korea, Republic of	OECD (2008-2016)	BIS (1962-2016)	BIS (1962-2016)	BIS (1962-2016)	OECD (2008-2016)	BIS (1962-2016)	OECD (2008-2016)	BIS (1962-2016)		National Source (2011-2015)	National Source (2011-2015)	IFS (1958-1968); National Source (1970-1989); WEO 2018 (1990-2016)	WEO 2018 (1953-2016)
Kosovo											WEO 2018 (2009-2016)	WEO 2018 (2009-2016)	WEO 2018 (2000-2016)
Kuwait		Spliced IFS (1962-2000); SRF (2001-2016)	Spliced BIS (1962-1994); BIS (1995-2016)	Spliced Dealogic (1962-2010); Dealogic (2011-2016)								IFS+IDS (1971-1989); WEO 2018 (1991-2016)	WEO 2018 (1962-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product	
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government		
Kyrgyz Republic		Spliced IFS (1995-2000); SRF (2001-2016)									WEO 2009 (1994-1999); WEO 2018 (2000-2016)	WEO 2009 (1994-1999); WEO 2018 (2000-2016)	WB (1987-1989); PWT (1990-1991); WEO 2018 (1992-2016)	
Laos		IFS (1989-2010)										IFS+IDS (1976-1995); WEO 2009 (1996-2000); WEO 2018 (2001-2016)	WEO 2018 (1963-2016)	
Latvia	OECD (2004-2015)	Eurostat (1995-2016)	Eurostat (1995-2016)	Eurostat (1995-2016)	OECD (2004-2015)	Eurostat (1995-2016)	OECD (2004-2015)	Eurostat (1995-2016)			WEO 2009 (1995-1997); WEO 2018 (1998-2003); National Source (2004-2016)	National Source (1995-2016)	PWT (1990-1991); WEO 2018 (1992-2016)	
Lebanon		IFS (1964-2016)	Spliced BIS (1964-1994); BIS (1995-2016)	Spliced Dealogic (1964-1999); Dealogic (2000-2016)								IFS+IDS (1970-1988); WEO 2009 (1990-1999); WEO 2018 (2000-2016)	WEO 2018 (1962-2016)	
Lesotho		Spliced IFS (1973-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1992); WEO 2018 (1993-2016)	PWT (1960-1962); WEO 2018 (1963-2016)	
Liberia		IFS (1961-2016)										IFS+IDS (1973-1983); WEO 2018 (2000-2016)	WB (1960-1963); PWT (1964-1999); WEO 2018 (2000-2016)	
Libya											WEO 2016 (1990-2016)	IFS+IDS (1973-2016)	WEO 2018 (1963-2016)	
Lithuania	OECD (1995-2015)	Spliced IFS (1993-1994); Eurostat (1995-2016)	Spliced BIS (1993-1994); Eurostat (1995-2016)	Spliced Dealogic (1993-1994); Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)			Eurostat (1995-2000); WEO 2018 (2001-2016)	Eurostat (1995-2016)	PWT (1990-1994); WEO 2018 (1995-2016)	
Luxembourg	National Source (1999-2016)	BIS (1999-2016)	BIS (1999-2016)	BIS (1999-2016)	National Source (1999-2016)	BIS (2002-2016)	National Source (1999-2016)	BIS (2002-2016)			WEO 2009 (1980-1994); WEO 2018 (1995-2016)	National Source (1970-2016)	PWT (1950-1964); WEO 2018 (1965-2016)	
Macedonia, FYR		National Source (2005-2016)	National Source (2005-2016)	National Source (2005-2016)		National Source (2005-2016)		National Source (2005-2016)	National Source (2002-2016)		IFS+IDS (1994-1998); WEO 2018 (1999-2016)	National Source (1994-2016)	PWT (1990-1991); WEO 2018 (1992-2016)	
Madagascar		IFS (1962-2016)										IFS+IDS (1970-1992); WEO 2018 (1993-2016)	PWT (1960-1961); WEO 2018 (1962-2016)	
Malawi		IFS (1965-2016)										IFS+IDS (1970-2000); WEO 2018 (2002-2016)	PWT (1954-1962); WEO 2018 (1963-2016)	
Malaysia		Spliced IFS (1955-2000); SRF (2001-2016)	Spliced BIS (1955-1994); BIS (1995-2016)	Spliced Dealogic (1955-1992); Dealogic (1993-2016)							National Source (1995-2016)	WEO 2018 (1990-2016)	R&R (1950-1957); UN (1960-1963); IFS (1964-1969); National Source (1970-2016)	PWT (1955-1961); WEO 2018 (1962-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Maldives		Spliced IFS (1976-2000); SRF (2001-2016)										IFS+IDS (1976-1996); WEO 2018 (1997-2016)	WEO 2018 (1963-2016)
Mali		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1999); WEO 2018 (2000-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Malta	Eurostat (2004-2016)	Spliced IFS (1960-1994); Eurostat (1995-2016)	Spliced BIS (1960-1994); Eurostat (1995-2016)	Spliced Dealogic (1960-1994); Eurostat (1995-2016)	Eurostat (2004-2016)	Eurostat (1995-2016)	Eurostat (2004-2016)	Eurostat (1995-2016)			National Source (1995-2016)	IFS (1965-1984); National Source (1985-2016)	PWT (1954-1978); WEO 2018 (1979-2016)
Marshall Islands											WEO 2018 (1997-2016)		PWT (1970-1996); WEO 2018 (1997-2016)
Mauritania		IFS (1960-2012)										IFS+IDS (1970-1998); WEO 2018 (2000-2016)	WB (1960-1989); WEO 2018 (1990-2016)
Mauritius	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2007-2016)	National Source (2003-2016)		IFS+IDS (1970-1996); WEO 2009 (1997-1999); WEO 2018 (2000-2016)		PWT (1950-1962); WEO 2018 (1963-2016)
Mexico	OECD+BIS (2003-2015)	BIS (1980-2016)	BIS (1980-2016)	BIS (1980-2016)	BIS (2003-2015)	BIS (1994-2016)	OECD (2003-2015)	BIS (1994-2016)	National Source (1955-1989); WEO 2009 (1990-1995); WEO 2018 (1996-2016)			R&R (1950-1967); JP (1970-1975); UN (1976-1979); JP (1980); National Source (1982-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Micronesia		IFS (1995-2016)									WEO 2018 (1995-2016)		PWT (1970-1994); WEO 2018 (1995-2016)
Moldova		Spliced IFS (1991-2000); SRF (2001-2016)									WEO 2018 (1995-2016)	JP (1995-2002); IFS+IDS (2003-2006); National Source (2007-2016)	PWT (1990); WEO 2018 (1991-2016)
Mongolia		Spliced IFS (1991-2000); SRF (2001-2016)	Spliced BIS (1991-1996); BIS (1997-2016)	Spliced Dealogic (1991-2011); Dealogic (2012-2016)							WEO 2016 (2013-2016)	National Source (1992-2016)	WEO 2018 (1950-2016)
Montenegro, Rep. of											WEO 2018 (2002-2016)	National Source (2002-2016)	PWT (1990-1999); WEO 2018 (2000-2016)
Morocco		Spliced IFS (1958-2000); SRF (2001-2016)	Spliced BIS (1958-1994); BIS (1995-2016)	Spliced Dealogic (1958-2013); Dealogic (2014-2016)		SRF (2001-2016)		SRF (2001-2016)				R&R (1965-1969); IFS+IDS (1970-1994); WEO 2018 (1995-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Mozambique		Spliced IFS (1988-2000); SRF (2001-2016)										WEO 2018 (1999-2016)	PWT (1960-1962); WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Myanmar		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-1994); WEO 2018 (1998-2016)	WB (1960-1961); PWT (1962-1996); WEO 2018 (1997-2016)
Namibia												WEO 2016 (1989-1992); WEO 2018 (1993-2016)	PWT (1960-1988); WEO 2018 (1989-2016)
Nauru											WEO 2018 (2009-2016)		PWT (1970-2003); WEO 2018 (2004-2016)
Nepal		Spliced IFS (1960-2001); SRF (2002-2016)				SRF (2002-2016)		SRF (2002-2016)				IFS+IDS (1970-1999); WEO 2018 (2000-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Netherlands	OECD (1995-2016)	BIS (1961-2016)	BIS (1961-2016)	BIS (1961-2016)	OECD (1995-2016)	BIS (1990-2016)	OECD (1995-2016)	BIS (1990-2016)			Netherlands_v2 (1950-1979); WEO 2018 (1980-2016)		PWT (1950-1979); WEO 2018 (1980-2016)
New Zealand		BIS (1960-2016)	BIS (1960-2016)	BIS (1960-2016)		BIS (1990-2016)		BIS (1990-2016)				New_Zealand_v2 (1950-1985); WEO 2018 (1986-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Nicaragua		Spliced IFS (1950-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)	IFS+IDS (1970-2004); National Source (2005-2015)		WEO 2018 (1997-2016)	WEO 2018 (1997-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Niger		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1995); WEO 2018 (1996-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Nigeria		Spliced IFS (1951-2000); SRF (2001-2016)									IMF Staff (2011-2016)	IFS (1968-1969); IFS+IDS (1970-1993); WEO 2018 (1994-2012); QPD (2013-2015)	PWT (1950-1989); WEO 2018 (1990-2016)
Norway	OECD (1995-2016)	BIS (1953-2016)	BIS (1953-2016)	BIS (1953-2016)	OECD (1995-2016)	BIS (1975-2016)	OECD (1995-2016)	BIS (1975-2016)			WEO 2009 (1970-1977); WEO 2018 (1978-2016)	R&R (1950-1964); National Source (1965-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Oman		Spliced IFS (1972-2006); SRF (2007-2016)	Spliced BIS (1972-1994); BIS (1995-2016)	Spliced Dealogic (1972-2010); Dealogic (2011-2016)								IFS+IDS (1972-1990); WEO 2018 (1991-2016)	WB (1960-1961); WEO 2018 (1962-2016)
Pakistan		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2000); Dealogic (2001-2016)		SRF (2006-2016)		SRF (2006-2016)				IFS (1951-1969); JP (1970-1993); WEO 2018 (1994-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Panama										R&R (1950-1990); WEO 2015 (1991-1993); WEO 2018 (1994-2016)	R&R (1950-1990); WEO 2015 (1991-1993); WEO 2018 (1994-2016)		WEO 2018 (1950-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Papua New Guinea		Spliced IFS (1973-2000); SRF (2001-2016)										IFS+IDS (1970-1974); JP (1975-1993); WEO 2018 (1994-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Paraguay		Spliced IFS (1952-2000); SRF (2001-2016)	Spliced BIS (1952-1994); BIS (1995-2016)	Spliced Dealogic (1952-2011); Dealogic (2012-2016)					WEO 2018 (1990-2016)			IFS+IDS (1970-1989); CLYPS (1990-2001); IMF Staff (2002-2003); National Source (2004-2016)	PWT (1951-1962); WEO 2018 (1963-2016)
Peru		IFS (1950-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-1998); Dealogic (1999-2016)		National Source (2001-2016)		Derived using national source and IFS/SRF (2001-2016)	National Source (1999-2016)	National Source (1999-2016)	National Source (1999-2016)	National Source (1999-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Philippines		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-1997); Dealogic (1998-2016)							R&R (1950-1959); UN (1960-1969); IFS+IDS (1970-1993); WEO 2018 (1994-2016)		PWT (1950-1963); WEO 2018 (1964-2016)
Poland	OECD (2003-2016)	BIS (1992-2016)	BIS (1992-2016)	BIS (1992-2016)	OECD (2003-2016)	BIS (1995-2016)	OECD (2003-2016)	BIS (1995-2016)			WEO 2009 (1990-1994); WEO 2018 (1995-2016)	IFS+IDS (1986-1993); WDI (1994-2006); National Source (2007-2016)	WEO 2018 (1963-2016)
Portugal	OECD (1995-2016)	BIS (1950-2016)	BIS (1950-2016)	BIS (1950-2016)	OECD (1995-2016)	BIS (1979-2016)	OECD (1995-2016)	BIS (1979-2016)		National Source (2007-2016)	WEO 2002 (1970-1985); WEO 2009 (1986-1989); WEO 2018 (1990-2016)	Portugal_v2 (1950-1994); National Source (1995-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Qatar		Spliced IFS (1966-2000); SRF (2001-2016)	Spliced BIS (1966-1994); BIS (1995-2016)	Spliced Dealogic (1966-2005); Dealogic (2006-2016)								WEO 2018 (1990-2016)	WEO 2018 (1963-2016)
Romania	Eurostat (1998-2016)	Spliced IFS (1996-2000); SRF (2001-2016)	BIS (1996-2016)	Spliced Dealogic (1996-2005); Dealogic (2006-2016)	Eurostat (1998-2016)	SRF (2001-2016)	Eurostat (1998-2016)	SRF (2001-2016)			Eurostat (1995-2016)	Eurostat (1995-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Russian Federation	OECD (2011-2015)	IFS (1993-2016)	Spliced BIS (1993-1994); BIS (1995-2016)	Spliced Dealogic (1993-1997); Dealogic (1998-2016)	OECD (2011-2015)		OECD (2011-2015)				WEO 2009 (1998); WEO 2018 (1999-2016)	JP (1992-2004); QPD (2005-2016)	WB (1989); WEO 2018 (1990-2016)
Rwanda		Spliced IFS (1964-2000); SRF (2001-2016)										IFS+IDS (1970-1978); JP (1979-1995); WEO 2018 (1996-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Samoa		National Source (1963-2016)	National Source (1963-2016)	National Source (1963-2016)		National Source (1995-2016)		National Source (1995-2016)				IFS+IDS (1970-1994); WEO 2016 (1995-2016)	WEO 2018 (1963-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
San Marino												WEO 2018 (2004-2016)	PWT (1970-1996); WEO 2018 (1997-2016)
São Tomé and Príncipe		Spliced IFS (1995-2000); SRF (2001-2016)				SRF (2006-2016)		SRF (2006-2016)				IFS+IDS (1977-2000); WEO 2018 (2001-2016)	WEO 2018 (1963-2016)
Saudi Arabia		IFS (1962-2016)	Spliced BIS (1962-1994); BIS (1995-2016)	Spliced Dealogic (1962-2009); Dealogic (2010-2016)								WEO 2009 (1989-1990); WEO 2018 (1991-2016)	WEO 2018 (1962-2016)
Senegal		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1996); WEO 2018 (1997-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Serbia		Spliced IFS (1997-2002); SRF (2003-2016)	Spliced BIS (1997-2005); BIS (2006-2016)	Spliced Dealogic (1997-2012); Dealogic (2013-2016)						WEO 2018 (2000-2016)		IMF Staff (2003-2015)	PWT (1990-1996); WEO 2018 (1997-2016)
Seychelles												JP (1972-1977); IFS+IDS (1980-1991); WEO 2018 (1992-2016)	PWT (1960-1962); WEO 2018 (1963-2016)
Sierra Leone		Spliced IFS (1960-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1970-2005); WEO 2018 (2006-2016)	WB (1960); PWT (1961-1962); WEO 2018 (1963-2016)
Singapore		IFS (1963-2016)	Spliced BIS (1963-1994); BIS (1995-2016)	Spliced Dealogic (1963-1991); Dealogic (1992-2016)								IFS (1963-1964); National Source (1965-1987); WEO 2009 (1988-1989); WEO 2018 (1990-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Slovak Republic	OECD (1995-2015)	Eurostat (1995-2016)	Eurostat (1995-2016)	Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)	OECD (1995-2015)	Eurostat (1995-2016)			National Source (1993-1994); WEO 2018 (1995-2016)	QPD (2006-2015)	PWT (1990-1992); WEO 2018 (1993-2016)
Slovenia	OECD (2001-2016)	Spliced IFS (1991-2000); Eurostat (2001-2016)	Spliced BIS (1991-2000); Eurostat (2001-2016)	Spliced Dealogic (1991-2000); Eurostat (2001-2016)	OECD (2001-2016)	Eurostat (2001-2016)	OECD (2001-2016)	Eurostat (2001-2016)			National Source (1995-2016)	National Source (1993-2016)	PWT (1990-1991); WEO 2018 (1992-2016)
Solomon Islands		Spliced IFS (1978-2000); SRF (2001-2016)				National Source (2001-2016)		Derived using national source and IFS/SRF (2001-2016)				IFS+IDS (1978-2002); WEO 2018 (2003-2016)	WEO 2018 (1963-2016)
South Africa		BIS (1965-2016)	BIS (1965-2016)	BIS (1965-2016)		BIS (2008-2016)		BIS (2008-2016)				UN (1950-1959); National Source (1960-1999); WEO 2018 (2000-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
South Sudan		SRF (2011-2016)										WEO 2018 (2012-2016)	WB (2008-2010); WEO 2018 (2011-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Spain	OECD (1995-2016)	BIS (1970-2016)	BIS (1970-2016)	BIS (1970-2016)	OECD (1995-2016)	BIS (1980-2016)	OECD (1995-2016)	BIS (1980-2016)			WEO 2018 (1980-2016)	R&R (1950-1993); National Source (1994-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Sri Lanka		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2008); Dealogic (2009-2016)		SRF (2001-2016)		SRF (2001-2016)				IFS (1951-1966); UN (1967-1980); WEO 2009 (1981-1989); WEO 2018 (1990-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
St. Kitts and Nevis											WEO 2018 (1996-2016)	IFS+IDS (1984-2003); National Source (2005-2016)	WB (1960-1961); WEO 2018 (1962-2016)
St. Lucia		Spliced IFS (1975-2000); SRF (2001-2016)										IFS+IDS (1981-1989); WEO 2018 (1990-2016)	WEO 2018 (1963-2016)
St. Vincent and the Grenadines		Spliced IFS (1975-2000); SRF (2001-2016)									WEO 2018 (1990-2016)	IFS+IDS (1970-1998); National Source (2000-2016)	WB (1960-1962); WEO 2018 (1963-2016)
Sudan		Spliced IFS (1960-2000); SRF (2001-2016)										WEO 2018 (1992-2016)	WB (1960-1961); WEO 2018 (1962-2016)
Suriname												IFS (1971-1986); WEO 2018 (1990-2016)	WB (1960-1962); WEO 2018 (1963-2016)
Swaziland												IFS+IDS (1970-1983); JP (1984-1992); WEO 2018 (1993-2016)	WB (1960-1962); WEO 2018 (1963-2016)
Sweden	National Source (1995-2016)	National Source (1961-2016)	National Source (1961-2016)	National Source (1961-2016)	National Source (1995-2016)	National Source (1950-2016)	National Source (1995-2016)	National Source (1961-2016)	National Source (2006-2016)	National Source (2006-2016)	WEO 2002 (1970-1992); WEO 2018 (1993-2016)	R&R (1950-1974); National Source (1975-2016)	PWT (1950-1959); WEO 2018 (1960-2016)
Switzerland	OECD (1999-2015)	BIS (1950-2016)	BIS (1950-2016)	BIS (1950-2016)	OECD (1999-2015)	BIS (1999-2016)	OECD (1999-2015)	BIS (1999-2016)			WEO 2016 (1983-1989); WEO 2018 (1990-2016)	R&R (1950-1983); JP (1986-1992); National Source (1993-2016)	PWT (1950-1964); WEO 2018 (1965-2016)
Syria												IFS+IDS (1970-1989); WEO 2018 (1990-2010)	PWT (1960-1961); WEO 2018 (1962-2010)
Taiwan Province of China											WEO 2018 (1997-2016)	National Source (1987-2016)	PWT (1951-1967); WEO 2018 (1968-2016)
Tajikistan		Spliced IFS (1998-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)			WEO 2018 (1998-2016)		WB (1985-1989); PWT (1990-1991); WEO 2018 (1992-2016)
Tanzania		Spliced IFS (1961-2000); SRF (2001-2016)									IFS+IDS (1970-2000); WEO 2018 (2001-2014); IMF Staff (2015-2016)		WEO 2018 (1960-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
Thailand		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-1987); Dealogic (1988-2016)		National Source (2003-2016)		Derived using national source and IFS/SRF (2003-2016)	WEO 2018 (1996-2004); National Source (2005-2016)	National Source (2005-2016)	National Source (2005-2016)	R&R (1950-1989); WDI (1990-2004); National Source (2005-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Timor Leste		SRF (2002-2016)										IMF Staff (2012-2016)	PWT (1990-1999); WEO 2018 (2000-2016)
Togo		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-2000); WEO 2017 (2001-2004); WEO 2018 (2005-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Tonga		Spliced IFS (1974-2000); SRF (2001-2016)										HPDD (1985-1998); IMF Staff (1999-2016)	PWT (1970-1978); WEO 2018 (1979-2016)
Trinidad & Tobago		Spliced IFS (1951-2000); SRF (2001-2016)	Spliced BIS (1951-1994); BIS (1995-2016)	Spliced Dealogic (1951-1999); Dealogic (2000-2016)								IFS (1963-1979); CLYPS (1980-1987); WEO 2018 (1988-2016)	PWT (1950-1962); WEO 2018 (1963-2016)
Tunisia												IFS+IDS (1970-1973); JP (1974-2003); WEO 2018 (2004-2016)	PWT (1960-1961); WEO 2018 (1962-2016)
Turkey	OECD (2010-2015)	National Source (1986-2016)	National Source (1986-2016)	National Source (1986-2016)	OECD (2010-2015)	National Source (1986-2016)	OECD (2010-2015)	National Source (1986-2016)	National Source (2000-2016)		WEO 2018 (2000-2016)	UN (1950-1972); IFS (1973-1975); IFS+IDS (1976-1985); National Source (1986-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Turkmenistan											WEO 2018 (1997-2016)	WEO 2018 (1997-2016)	WB (1987-1989); PWT (1990-1991); WEO 2018 (1992-2016)
Tuvalu												WEO 2018 (2005-2016)	PWT (1970-1999); WEO 2018 (2000-2016)
U.A.E.		Spliced IFS (1973-2000); SRF (2001-2016)	Spliced BIS (1973-1994); BIS (1995-2016)	Spliced Dealogic (1973-1991); Dealogic (1992-2016)		SRF (2008-2016)		SRF (2008-2016)			IFS+IDS (1973-1981); WEO 2009 (1982-1998); WEO 2018 (1999-2016)		WEO 2018 (1962-2016)
Uganda		Spliced IFS (1960-2000); SRF (2001-2016)										IFS+IDS (1970-1986); JP (1991-1996); WEO 2018 (1997-2016)	PWT (1950-1959); WEO 2018 (1960-2016)
Ukraine		National Source (1995-2016)	National Source (1995-2016)	National Source (1995-2016)		National Source (1995-2016)		National Source (1995-2016)			WEO 2009 (1995-1996); WEO 2018 (1997-2016)	IMF Staff (1995-2015)	WB (1965-1989); PWT (1990-1991); WEO 2018 (1992-2016)

Country	Private Debt								Public Debt				Nominal Gross Domestic Product
	All instruments	Domestic loans	Cross-border loans	Debt securities	Household, all instruments	Household, loans and securities	Nonfinancial corporation, all instruments	Nonfinancial corporation, loans and securities	Public sector	Nonfinancial public sector	General government	Central government	
United Kingdom	OECD (1995-2016)	BIS (1963-2016)	BIS (1963-2016)	BIS (1963-2016)	OECD (1995-2016)	BIS (1966-2016)	OECD (1995-2016)	BIS (1966-2016)	National Source (1974-2016)		National Source (1950-1966); WEO 2002 (1967-1973); National Source (1974-2016)	National Source (1974-2016)	WEO 2018 (1950-2016)
United States	OECD (1950-2016)	National Source (1950-2016)	National Source (1950-2016)	National Source (1950-2016)	OECD (1950-2016)	National Source (1950-2016)	OECD (1950-2016)	National Source (1950-2016)			National Source (1950-2016)	National Source (1950-2016)	WEO 2018 (1950-2016)
Uruguay		Spliced IFS (1950-2000); SRF (2001-2016)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-2010); Dealogic (2011-2016)					WEO 2018 (2001-2016)			IFS+IDS (1970-1988); JP (1990-1998); National Source (1999-2016)	PWT (1950-1961); WEO 2018 (1962-2016)
Uzbekistan											WEO 2018 (1998-2016)		WB (1987-1989); PWT (1990); WEO 2018 (1991-2016)
Vanuatu		Spliced IFS (1976-2000); SRF (2001-2016)				SRF (2001-2016)		SRF (2001-2016)				IFS+IDS (1981-1991); WEO 2018 (1992-2016)	WEO 2018 (1963-2016)
Venezuela, Republica Bolivariana de		Spliced IFS (1950-2000); SRF (2001-2015)	Spliced BIS (1950-1994); BIS (1995-2016)	Spliced Dealogic (1950-1984); Dealogic (1985-2016)							WEO 2018 (1998-2016)	R&R (1950-1959); UN (1960-1970); IFS+IDS (1971-1989); CLYPS (1990-2005); IADB (2006-2015)	PWT (1950-1961); WEO 2018 (1962-2016)
Vietnam		IFS (1992-2016)									WEO 2018 (2000-2016)	IFS+IDS (1991-2008); National Source (2010-2014)	WEO 2018 (1963-2016)
West Bank and Gaza												WEO 2018 (2000-2016)	PWT (1970-1993); WEO 2018 (1994-2016)
Yemen		IFS (1990-2013)									IFS+IDS (1990-1998); WEO 2018 (1999-2016)	IFS+IDS (1990-1998); WEO 2018 (1999-2016)	PWT (1989); WEO 2018 (1990-2016)
Zambia		Spliced IFS (1965-2000); SRF (2001-2016)										IFS+IDS (1970-1998); WEO 2018 (2000-2013); IMF Staff (2014-2016)	PWT (1955-1961); WEO 2018 (1962-2016)

ANNEX II. COUNTRY CLASSIFICATION

Table A.2.1. Classification by Income Group

Advanced Economies	Emerging Market Economies		Low-Income Developing Countries	
*Australia	Albania	Kuwait	Afghanistan	Mali
Austria	Algeria	Lebanon	Bangladesh	Marshall Islands
Belgium	Angola	Libya	Benin	Mauritania
*Canada	Antigua and Barbuda	Macedonia	Bhutan	Micronesia
Cyprus	*Argentina	Malaysia	Burkina Faso	Moldova
Czech Republic	Armenia	Mauritius	Burundi	Mozambique
Denmark	Azerbaijan	*Mexico	Cambodia	Myanmar
Estonia	Bahamas, The	Mongolia	Cameroon	Nepal
Finland	Bahrain	Montenegro	Cape Verde	Nicaragua
*France	Barbados	Morocco	Central African Republic	Niger
*Germany	Belarus	Namibia	Chad	Nigeria
Greece	Belize	Nauru	Comoros	Papua New Guinea
Hong Kong SAR	Bolivia	Oman	Congo, Republic of	Rwanda
Iceland	Bosnia and Herzegovina	Pakistan	Cote d'Ivoire	Samoa
Ireland	Botswana	Panama	Dem. Rep. of the Congo	Sao Tome & Principe
Israel	*Brazil	Paraguay	Djibouti	Senegal
*Italy	Brunei Darussalam	Peru	Dominica	Sierra Leone
*Japan	Bulgaria	Philippines	Eritrea	Solomon Islands
*Korea	Chile	Poland	Ethiopia	South Sudan
Latvia	*China	Qatar	Gambia, The	St. Lucia
Lithuania	Colombia	Romania	Ghana	St. Vincent and the Grenadines
Luxembourg	Costa Rica	*Russia	Grenada	Sudan
Malta	Croatia	*Saudi Arabia	Guinea	Tajikistan
Netherlands	Dominican Republic	Serbia	Guinea-Bissau	Tanzania
New Zealand	Ecuador	Seychelles	Guyana	Timor-Leste
Norway	Egypt	*South Africa	Haiti	Togo
Portugal	El Salvador	Sri Lanka	Honduras	Tonga
San Marino	Equatorial Guinea	St. Kitts and Nevis	Kenya	Tuvalu
Singapore	Fiji	Suriname	Kiribati	Uganda
Slovak Republic	Gabon	Swaziland	Kyrgyz Republic	Uzbekistan
Slovenia	Georgia	Syria	Laos	Vanuatu
Spain	Guatemala	Thailand	Lesotho	Vietnam
Sweden	Hungary	Trinidad and Tobago	Liberia	Yemen
Switzerland	*India	Tunisia	Madagascar	Zambia
Taiwan Province of China	*Indonesia	*Turkey	Malawi	Zimbabwe
*United Kingdom	Iran	Turkmenistan	Maldives	
*United States	Iraq	Ukraine		
	Jamaica	United Arab Emirates		
	Jordan	Uruguay		
	Kazakhstan	Venezuela		
	Kosovo	West Bank and Gaza		

Note: * indicates G20 countries.

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