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BoC–BoE Sovereign Default Database: What's new in 2024?

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Introduction

Since 2014, the Bank of Canada (BoC) has maintained a comprehensive database of sovereign defaults to systematically measure and aggregate the nominal value of the different types of sovereign government debt in default. The database draws on published datasets compiled by various public and private sector sources. It combines elements of these sources with new information to develop comprehensive estimates of stocks of government obligations in default. These include bonds and other marketable securities, as well as bank loans and official loans, valued in US dollars, for the years 1960 to 2023, on both a country-by-country and a global basis.

We consider debt to be in distress—and effectively in default—when an interruption in scheduled debt service occurs, a sovereign seeks to renegotiate the existing contract terms of any of its obligations or a combination of both. Such restructurings can include writing down the principal, reducing the interest rate or extending maturities. Typically, they also involve creditors suffering a loss in net present value. Once restructured, the debt is reclassified as performing and no longer considered to be in default.

Official creditors include the International Monetary Fund (IMF), the World Bank, other multilateral development banks, Paris Club creditors, non-Paris Club G20 creditors (notably China, India and South Africa) and other government development agencies. Private creditors are external bondholders, banks and suppliers.

The database is posted on the BoC's website and is updated annually in partnership with the Bank of England (BoE). Regular updates of the BoC–BoE database are useful to researchers analyzing the economic and financial effects of individual sovereign defaults and, importantly, the impacts on global financial stability from episodes involving multiple sovereign defaults.

In this paper, we:

- highlight developments in sovereign debt defaults in 2023, including details on the 1% decrease in the US-dollar value of sovereign debt in default from 2022
- update key insights regarding the number, size and types of defaults
- give a historical overview of debt defaults and their persistence in heavily indebted, low-income sovereigns
- examine the shift in bilateral official sovereign lending from Paris Club lenders toward
 China¹
- update our estimates of stocks of domestic arrears, valued in US dollars

¹ The Paris club members are an informal group of mostly advanced-economy countries. The permanent members are Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, the Netherlands, Norway, Russia, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States. For more information, see the Paris Club website.

The 2024 edition of the database and related research contain a number of enhancements, including:

- more data about defaults on China's official loans
- revisions to country and aggregate default data for 1960 to 2022, most notably:
 - official loans and bond debt of imperial Russia repudiated in 1917 and later settled with British creditors in 1986 and with French bondholders in 1996
 - o bonds repudiated by China in 1949 and later settled with British bondholders in 1987
 - new data on domestic arrears by country and globally, most comprehensively for the years 1990 to 2023
 - a new visual showing debt in default across different regions
 - updates to documents with the methodology and the appendix and references

All data are downloadable in CSV, JSON and XML formats.

Key insights from the 2024 edition

The total value of sovereign debt in default fell by 1% last year

Our preliminary estimate of the total value of sovereign debt in default is US\$523 billion in 2023, or 0.5% of global public debt. This is a decrease of US\$7 billion, or 1%, from the revised total of US\$530 billion in 2022. At the same time, we estimate that the number of sovereigns in default declined from 98 to 92. That said, tighter financing conditions impacted many Heavily Indebted Poor Countries (HIPC) and emerging-market and frontier sovereigns. By contrast, debt in default among advanced-economy sovereigns fell to zero last year after Puerto Rico finished its debt restructuring in 2022 and the United Kingdom repaid a long-standing obligation to Iran.

Defaults to official external creditors rose by 6% in 2023

Loans in default to official creditors increased by US\$12 billion, or 6%, between 2022 and 2023 to US\$215 billion but the major sub-groups of creditors each fared differently. For only the second time since 1974, there were no defaults to the IMF. By contrast, defaults to the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA)—which form part of the World Bank Group—and the International Development Bank (IADB) rose collectively by US\$0.3 billion, or 8%, to US\$4.5 billion. Among bilateral creditors, identified defaults to China rose by US\$10 billion, or 28%, to nearly US\$50 billion, while defaults to the Paris Club remained around US\$78 billion. Defaults to other

official creditors (bilateral and multilateral creditors we have not identified separately) rose by US\$0.8 billion, or 1%, to US\$82 billion.

Defaults to private external creditors fell by 9%

Debt in default to private creditors dropped by US\$29 billion, or 9%, to US\$281 billion in 2023. As with official creditors, big variations were observed across categories. Defaults on foreign currency bonds, which made up the largest share of defaults (**Chart 1**), fell by US\$24 billion, or 10%, as the completion of Puerto Rico's US\$61 billion debt workout offset ongoing defaults by 17 sovereigns. The most notable defaults by magnitude were Venezuela (US\$50 billion), Russia (US\$47 billion), Lebanon (US\$40 billion), Ukraine (US\$30 billion) Argentina (US\$22 billion) and Ghana (US\$13 billion). Defaults on bank loans rose US\$5 billion due to defaults by 10 sovereigns, while defaults to other private external creditors (mainly suppliers) dropped by US\$10 billion, or 24%, to US\$32 billion.²

Local currency debt defaults also rose, albeit from a small base

Defaults on local currency sovereign debt jumped to nearly US\$27 billion in 2023, up from US\$16 billion in 2022, an increase of 65%. This is the highest level since 1999 and largely reflects the ongoing restructurings in Ghana and Sri Lanka. Argentina, Liberia and Suriname recorded smaller defaults.

The distribution of defaults remains concentrated

As in previous years, the distribution of defaults in 2023 is highly concentrated in terms of value: 10 sovereigns accounted for 75% of the US-dollar value of debt in default globally. Just three sovereigns—Venezuela, Russia and Iraq—accounted for 35% of the overall amount in default in 2023.

² For a discussion about revisions to the data on defaults to private sector creditors, see D. Beers, O. Ndukwe and A. Charron, "BoC–BoE Sovereign Default Database: Methodology and Assumptions," Bank of Canada Technical Report No. 124 (updated July 2024).

FC bonds FC bank loans 43.5% 4.4% Other official creditors Other private creditors 15.7% 6.0% China Paris Club LC debt 9.5% IMF 5.1% 15.0% 0.0% **IBRD IADB** IDA 0.3% 0.1% 0.5%

Chart 1: Total share of debt in default by creditor, 2023

Note: LC is local currency, and FC is foreign currency. See footnote 1 for more information on the Paris Club group of lenders. Other official creditors are bilateral and multilateral creditors not identified separately. Other private creditors are mainly suppliers.

Source: BoC-BoE Sovereign Default Database 2024

Last observation: 2023

General government debt continues to rise globally with interest rates elevated in many countries

The IMF estimates that the global stock of general government debt, measured in US dollars, reached a record US\$97.6 trillion in 2023, or 93% of global gross domestic product (GDP). The IMF also projects that the global public debt burden will continue to grow over the medium term partly due to elevated nominal interest rates and debt service payments. The World Bank (2023) notes that debt service payments have increased by 5% for all developing countries. The World Bank also estimates that over the last decade, interest payments have quadrupled for the 75 low-income countries eligible to borrow from the IDA, and that of those countries, 24 expect to see their interest payments balloon by as much as 39% in 2024. These 75 countries already spend over one-tenth of their export revenues to service their long-term, external public debt.

Sovereign defaults in historical perspective

The BoC–BoE database and future updates help researchers in analyzing the economic and financial effects of sovereign defaults on debt owed to official and private creditors since 1960. The database compares the scale of individual and multiple default events with earlier episodes. Thus, it contributes to the understanding of ongoing risks to global financial stability. In the commentary that follows, we highlight the most noteworthy trends.

The scale of defaults has fallen substantially

Since 1960, 160 governments—nearly 75% of the existing 215 sovereigns—have defaulted on their obligations.³ Defaults had the biggest global impact in the 1980s, with the total amount in default reaching US\$470 billion, or 6.4% of global public debt, by 1990. The scale of defaults has fallen substantially since then. Over the past decade, between 0.3% and 0.6% of global public debt has been in default. For 2023, we estimate the amount in default at 0.5%.

Sovereigns tend to default selectively on debt

Over the 1960–2023 period, only 6% of sovereigns defaulted on between 50% and 100% of their total outstanding government debt. In contrast, about 72% of sovereigns defaulted on 10% or less of their total outstanding government debt. These data confirm that sovereigns tend to default selectively and that shares of sovereign debt in default are skewed toward lower values.

Sovereign defaults on local currency debt are more common than sometimes assumed. Since 1960, 42 sovereigns have defaulted on local currency debt. In 2023, five sovereigns—Argentina, Ghana, Liberia, Sri Lanka and Suriname—defaulted on local currency debt amounting to US\$26.6 billion.

A history of sovereign defaults

We know from the historical record that for over 200 years the story of sovereign defaults has centred mainly, though not exclusively, on foreign currency bonds and other marketable securities. Cross-border bond financing for governments emerged in the 1820s when newly independent states in Latin America and other regions, as well as some longer-established sovereigns, began issuing bonds denominated in foreign currency in European financial centres. Defaults on many of these bonds soon followed on a substantial scale and persisted well into the 20th century. Defaults on debt denominated in local currency also occurred, but they appear to have been less frequent, based on the evidence from before 1960 (Reinhart and Trebesch 2014).

After the Second World War, pervasive national controls on the movement of capital caused cross-border bond issuance by governments to fall to low levels, as did the incidence of defaults. Both remained low over nearly four decades. For a relatively brief period, in the 1970s and 1980s, bank loans denominated in foreign currency were more important than bonds. Many developing and Eastern European countries defaulted on bank loans in the 1980s and 1990s, resulting in creditor losses. The subsequent exit of the largest global commercial banks

³ Seven additional sovereigns in the database—Bahamas, Sint Maarten, Palau, Slovak Republic, Tuvalu, Micronesia and West Bank and Gaza—have only domestic arrears, which we consider to be effective defaults, although not on conventional sovereign obligations. For more information on domestic arrears, see the section "Domestic arrears in the sovereign default database: An update," on page 13 of this note.

⁴ This section of our updated report draws in part on previous work published by Beers and Chambers (2006), Cruces and Trebesch (2011), Rieffel (2003), Reinhart and Rogoff (2009) and Suter (1992).

from this business resulted in many low- and middle-income sovereigns turning to the cross-border bond markets in the 1990s, an approach to financing that continues today.

The period since the 1990s is also noteworthy because of growing cross-border investments in emerging-market debt, both local currency denominated debt and foreign currency bonds. Both types of obligations featured in the big workouts involving Russia in 1998–2000 and Argentina in 2001–05. Nonetheless, while defaults on foreign currency bonds are increasing, they remain well below their historical peaks from before the Second World War.

Chart 2 provides a snapshot of trends in defaults on foreign currency bonds and bank loans from 1820 to 2023.⁵ Because historical data on bonds are limited for much of this period, we calculate unweighted default rates: that is, governments in default as a percentage of all governments.⁶ For bonds, three peak default periods stand out:

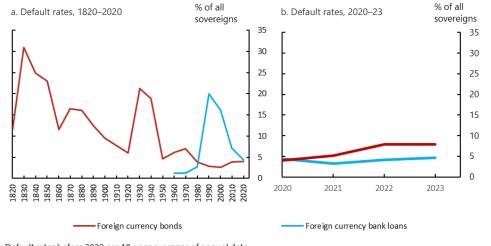
- from the 1830s through the 1850s, when default rates exceeded 25%
- in the 1870s, when default rates averaged 18%
- in the 1930s, when they reached 21%

Also of note is the sharp decline in bond defaults after the Second World War that persisted through the 1980s. The resolution of many pre-war bond defaults was the main reason the default rate fell in the postwar period. At the same time, the fragmentation of the cross-border financial markets limited access to bond-markets to only the most creditworthy borrowers. As a result, defaults on new issues were low.

⁵ The data in Chart 2 are based partly on data previously published by Beers and Chambers (2006).

⁶ By our count, the total number of sovereigns globally was 36 in 1820, 65 in 1900, 105 in 1950 and 215 in 2023. Reinhart and Rogoff (2009) calculate historical sovereign default rates weighted by estimated aggregated GDP. However, we do not replicate this approach here because of reliability issues with the national income data of many countries before the Second World War.

Chart 2: Sovereign default rates on foreign currency bonds and bank loans



Note: Default rates before 2020 are 10-year averages of annual data. Sources: Suter (1992) and BoC-BoE Sovereign Default Database 2024

Last observation: 2023

Before the Second World War, sovereign defaults played only an intermittent role in policy discussions. After 1945, however, lending to governments by the IMF and other newly established multilateral institutions quickly gained prominence. These institutions, as well as national export credit and development agencies, were launched in part to fill perceived gaps in public finance left by the shrinkage in cross-border bond markets. They increasingly targeted loans to the governments of developing countries, mainly on concessional terms.

Initially, defaults on official loans were low. By the 1980s, however, sovereign defaults on loans from official creditors grew alongside a sharp rise in defaults on foreign currency bank loans (Chart 2 and Chart 5). Even arrears on IMF loans surfaced, although they were small compared with defaults to other creditors. The factors driving both bank loans and official loans into default were often closely linked, most notably the adverse fiscal impact in many countries from the spike in both world oil prices and US short-term interest rates. The increase in US interest rates directly influenced the cost of syndicated bank loans contracted by many sovereign borrowers and helped ratchet up the real burden of their public debt. Sovereign debt in default reached US\$471 billion by 1990, with debt owed to official creditors accounting for about 24% of the total (Chart 3). By 1995, the share of debt owed to official creditors reached nearly 60%.

600 500 JS\$ billions 400 300 200 100 1975 1978 1981 1984 1990 1993 1999 2002 2005 2008 2011 2014 2017 2020 2023 1987 IBRD IMF IDA China ■ Paris Club Other official creditors ■ FC bonds FC bank loans Other private creditors ■ LC debt

Chart 3: Total sovereign debt in default by creditor, 1975-2023

Note: IMF is International Monetary Fund. IBRD is International Bank for Reconstruction and Development. IDA is International Development Association. LC is local currency, and FC is foreign currency.

Source: BoC-BoE Sovereign Default Database 2024

Last observation: 2023

Many of the defaults on official loans continued for long periods because of the borrowers' internal economic and political difficulties and the reluctance of creditors to reschedule loans. By the 1980s, however, official debt restructurings led by the Paris Club became a frequent occurrence. Yet defaults on official debt persisted. This logjam started to ease in the mid-1990s, thanks in part to the multilateral HIPC Initiative, launched with strong support from the IMF and the World Bank (IMF 2016).

Under the program, now nearing completion, 39 low-income governments became eligible for substantial reductions in their official debt, subject to them implementing agreed-upon economic policy reforms. Bilateral official creditors wrote off much of the debt. The IMF and other multilateral institutions also agreed to participate through the Multilateral Debt Relief Initiative. As a result, apart from China's and the World Bank's loans in default, the dollar amounts of debt in default owed to the IMF, Paris Club and other official creditors have fallen in most years since 2005 (Chart 3).

Nevertheless, three recent developments are worth highlighting. The first is the spikes in problematic official debt that occurred in 2013 and in 2018 (**Chart 3**). The spikes resulted from the restructuring (without any interruption of scheduled debt service) of loans to Greece, Ireland and Portugal agreed to by their EU partners. Fiscal pressures in the euro area generally

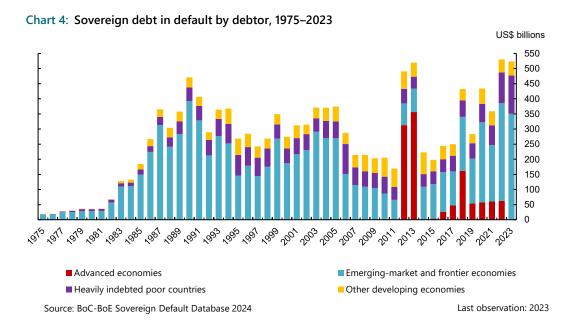
⁷ Sudan became eligible in 2021. Another candidate—Eritrea—is at the pre-decision point.

⁸ Government donors funded write-offs of IMF and multilateral institution loans to avoid damaging the institutions' balance sheets and weakening their preferred creditor status. These write-offs can reach 100% under the Multilateral Debt Relief Initiative.

⁹ For Greece, creditors reduced interest rates and charges and deferred debt service. They also extended average maturities of EU or euro area official loans to Greece, Ireland and Portugal by up to seven years. These official debt

have eased since then. However, Greece delayed its payment of US\$2.2 billion to the IMF in 2015 and restructured another US\$110.9 billion of official debt after completing its stabilization program in 2018.¹⁰

The second noteworthy development is that defaults persist in the majority of highly indebted poor countries and reached a record high of nearly US\$127 billion in 2023 (**Chart 4**). This is partly due to an increase in default rates on Paris Club loans and to the slow pace at which some non–Paris Club official creditors are implementing debt relief. Official creditor holdouts may be less well known than litigious bondholder holdouts, but, like bondholders, they can also delay the resolution of defaulted debt. However, many sovereigns under the HIPC Initiative are defaulting on new loans contracted with official and private creditors even after they received debt relief through the program.¹¹



The third development is the significant shift underway in the composition and scale of bilateral official lending. Since the 1980s, sovereign debt owed to bilateral official and private creditors has generally been restructured according to the principle of comparability of treatment set out by the Paris Club. 12 Despite occasional frictions with other official creditors, bank creditors

restructurings are consistent with our definition of sovereign defaults because they result in creditor losses in present-value terms.

¹⁰ See Khan and Brunsden (2018) for details about Greece's 2018 restructuring of official debt agreed to with official creditors in the euro area.

¹¹ For example, two of these sovereigns—the Republic of Congo and Mozambique—defaulted on US\$2.8 billion of bonds and bank loans between 2016 and 2019. In 2020 and 2021, three other sovereigns in the HIPC Initiative—Chad, Ethiopia and Zambia—signalled an intent to pursue broad debt restructuring. Chad became the first country to reach a debt treatment agreement with official and private creditors under the G20 Common Framework in 2022.

¹² Comparability of treatment means that bilateral official and private creditors should broadly replicate any debt relief the Paris Club provides to sovereigns.

and bondholders, these arrangements have been broadly effective in sovereign debt restructuring.

The Paris Club, however, no longer represents all the large bilateral official creditors (Chart 5). With some members placing more emphasis on grants, the Paris Club's stock of loans to emerging-market and developing economies—estimated at US\$330 billion in 2023—has been relatively flat in recent years. By contrast, bilateral loans from China, India and Gulf states have grown sharply: the World Bank conservatively estimates that loans from China alone rose from US\$139 billion in 2012 to about US\$470 billion in 2023, substantially exceeding the stock of Paris Club loans (Hurley, Morris and Portelance 2018). These new official creditors have not yet formally joined the Paris Club, although China, India and Saudi Arabia—all G20 members—have agreed to cooperate with the Paris Club in the Common Framework for Debt Treatments. 13

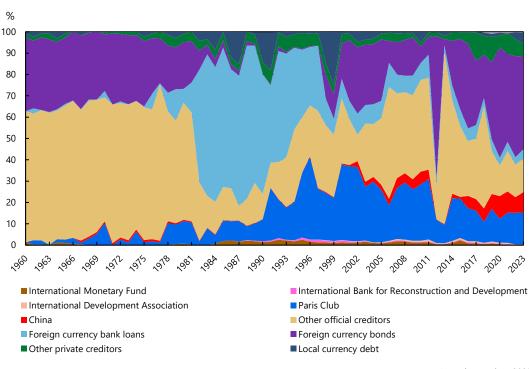


Chart 5: Proportion of debt in default by creditor, 1960-2023

Source: BoC–BoE Sovereign Default Database 2024

Last observation: 2023

In this context, China's bilateral official lending has generated particular interest. Its Belt and Road Initiative, launched in 2013, could result in US\$1 trillion or more of new financing by 2027 (PricewaterhouseCoopers 2016; Morgan Stanley 2018). The main beneficiaries of this initiative are emerging-market and low-income sovereigns. The available data on defaulted Chinese official loans indicate that defaults have been increasing steadily since 2015 (Chart 6), with at

¹³ China, India, Abu Dhabi, Kuwait and a few other governments have periodically participated in Paris Club meetings on an ad hoc basis (Paris Club 2022). For a description of the G20 Common Framework, see Republic of Italy (2021).

least US\$207 billion of loans related to the Belt and Road Initiative being renegotiated or written off in the past three years. ¹⁴

US\$ billions ■ Paris Club ■ China

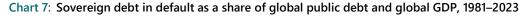
Chart 6: Official loans in default for Paris Club and China, 2000-23

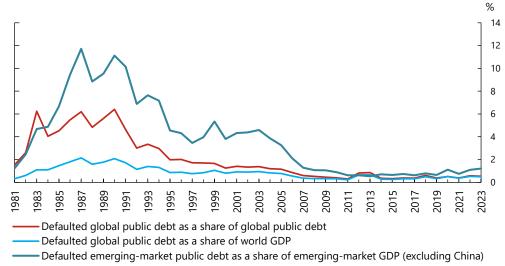
Source: BoC-BoE Sovereign Default Database 2024

Last observation: 2023

To assess the relative importance of sovereign defaults, we compare the nominal value of debt in default with global public debt, global GDP and the combined GDP of emerging-market, frontier and other developing economies (excluding China) (Chart 7). At the start of the 1980s, sovereign defaults had minimal impact globally. However, significant fiscal stresses affected low- and middle-income countries by the middle of the decade. The defaulted sovereign debt that was restructured and, in many cases, ultimately written down peaked in 1990 at 6% of global public debt. Relative to this group's GDP, the peak was sharper still, at 11.7%, but it was milder in terms of global GDP, rising from near zero to 2.1%.

¹⁴ See AidData, "AidData's Global Chinese Development Finance Dataset, Version 2.0" (2021) and World Bank IDS (2024).





Note: GDP is gross domestic product. Nominal GDP is used. Source: BoC–BoE Sovereign Default Database 2024

Last observation: 2023

Chart 7 also shows that the global footprint left by these debt workouts has faded, despite the restructuring of sovereign bonds and official loans in the euro area in 2012–13 and again for official loans in 2018; large defaults in 2020 by Argentina, Lebanon and Ecuador; and the broader pick up in emerging-market and developing country sovereign defaults in 2022–23.

Nonetheless, as already noted, the IMF has stepped up its warnings that debt distress among emerging-market and low-income sovereigns is likely to escalate. The risk factors the IMF highlights include:

- high leverage globally in the public and private financial sectors
- elevated market interest rates to counter inflationary pressures
- the negative impacts on global economic growth and public finances from the COVID-19 pandemic and Russia's invasion of Ukraine
- rising debt-servicing costs, with nearly 60% of low-income sovereigns already in, or close to, debt distress
- the sluggish pace at which existing defaults (notably by Ethiopia and Zambia) are being resolved under the Common Framework for Debt Treatments

As governments grapple with increasing fiscal challenges, these trends are worth watching alongside other risks to global financial stability.

¹⁵ For more details, see IMF (2022a, 2002b, 2023a, 2023b, 2024).

Domestic arrears in the sovereign default database: An update

From the inception of the BoC–BoE database in 2014, its coverage has been based on a broad definition of sovereign default—one that tracks both interruptions of scheduled debt service and changes in debt payment terms that result in creditor losses. For defaults involving private creditors, this includes marketable debt denominated in foreign and local currencies.

That said, other government fiscal actions suggest that the perimeter of sovereign defaults should be expanded to include late payments by governments for local goods and services—known as fiscal or expenditure arrears. These arrears create obligations to domestic creditors that are effectively in default and must ultimately be resolved.

Defining and determining domestic arrears are relatively straightforward, at least in theory (Flynn and Pessoa 2014). Arrears are defined as any overdue payments for legally mandated or contractually required expenditures, including pensions, salaries, domestic sovereign marketable securities, capital outlays and other services. Local law generally governs when late payments become arrears—typically when payments are late by more than 30, 60 or 90 days, depending on the country.

When domestic arrears accumulate over several years, or their legality is disputed, governments and their creditors usually rely on independent accountants working with ad hoc tribunals to reconcile and confirm claims before resolving them. Once finalized, these obligations are settled by some combination of cash payment and issuing new debt to creditors. At times, there are haircuts on the amounts repaid, and interest payments on amounts owed appear to be rare. Given these factors, and the often-extended time frame between when arrears emerge and when they are settled, the domestic creditors involved clearly incur significant financial losses.

Clearing arrears and adopting polices to discourage them from recurring are frequent objectives of IMF country programs. This is not surprising given the adverse impact that government arrears have on both the public and private sectors in affected countries. But at the same time, IMF documents highlight that, like conventional sovereign defaults, domestic arrears recur and involve a broad spectrum of emerging-market, frontier and other developing-country sovereigns, as well as, albeit less frequently, high-income sovereigns.

The published IMF data on domestic arrears have limitations. The data usually identify flows of arrears—not stocks—based on government estimates that are subject to change. Moreover, comparisons with the value of conventional sovereign debt in default can be challenging because until recently, the IMF rarely reported estimated stocks of arrears. But now the IMF increasingly reports data on the stock of domestic arrears and explicitly incorporates them into

¹⁶ For a recent discussion, see IMF (2019).

the data on public debt. As a result, we can now more easily compare the data on arrears with the conventional defaults we report in the BoC–BoE Sovereign Default Database.

In this year's update, we have revised our estimates of stocks of arrears, most comprehensively for the years 1990 to 2023. These data are included in a domestic arrears category for each sovereign, including ones that have not had conventional defaults. The database also includes for each year global US-dollar values and totals of the number of sovereigns with domestic arrears.

For affected sovereigns, we estimate each year's stock by aggregating the net annual flows of arrears reported in local currency, converted to US dollars at year-end exchange rates. We adjust these totals (generally downward) by incorporating historical stock estimates for each country, which the IMF publishes periodically.

Going forward, we will continue to backfill missing data for years before 1990, with two aims:

- to provide a more comprehensive picture of the historical scale of sovereign debt in distress
- to evaluate whether domestic arrears are best viewed as a coincident indicator or a driver of conventional sovereign defaults on external debt

Our main findings based on the data are:

- The overall stock of identified domestic arrears peaked at US\$228 billion in 2016 and has trended downward to an estimated US\$127 billion in 2023.
- The number of sovereigns with identified arrears has declined to an estimated 77 in 2023 from a peak of 90 in 2015.
- By comparison, global defaults on conventional sovereign debt have risen from US\$244 billion in 2016 to an estimated US\$523 billion in 2023. The number of sovereigns with conventional defaults fell from 100 in 2016 to an estimated 92 in 2023.¹⁷
- Overdue debt service on local law bonds typically makes up a small part of the overall value of domestic arrears.

The available data highlight two issues about domestic arrears:

 They are often sizable in relation to conventional defaults. In some instances, most notably in Iran since 2014, domestic arrears have exceeded the US-dollar value of the stock of conventional debt in default by large margins.

¹⁷ The actual scale of domestic arrears over the 1990–2023 period could well be larger globally than our findings indicate. For example, Eritrea, Ethiopia and Venezuela do not compile and report their domestic arrears to the IMF.

• They are economically damaging, undermine trust in the governments that incur them, often persist for extended periods and often recur.

The decline in the estimated yearly US-dollar stocks of arrears since 2016 — which has occurred at the same time as the volume of conventional sovereign defaults has been growing — points to behavioural changes by some governments. Notably, cases of domestic arrears have become rarer over the past decade in Central and Eastern Europe.

In contrast, sovereigns in Sub-Saharan Africa now account for the majority of the stock of arrears measured in US dollars. By our count, 45 sovereigns have reported arrears for one or more years since 1990, and 20 have had stocks of arrears continuously over this period. For many policymakers in Sub-Saharan Africa and elsewhere, the political benefits of accumulating domestic arrears clearly outweigh the political costs to themselves and outweigh the economic and social costs to both the broader public sector and the private sector. This means that improving governance may be just as important in reducing the incidence of domestic arrears as for conventional sovereign defaults.

Sovereign default on local currency debt revisited

A key aim of our work is to document cases of defaults on local currency debt. ¹⁸ Identifying these defaults can be challenging because governments often do not acknowledge them. A related factor limiting visibility of these defaults is that the most affected investors are typically domestic residents who may have few avenues of redress. Cross-border investment in sovereign local currency debt instruments, which dates back to the 1990s, has undoubtedly contributed to greater awareness of more recent default cases.

¹⁸ Local currency debt refers here to obligations issued by a government in its own currency. For sovereigns that are members of monetary unions, debt denominated in the common currency is regarded as foreign currency debt in our analysis.

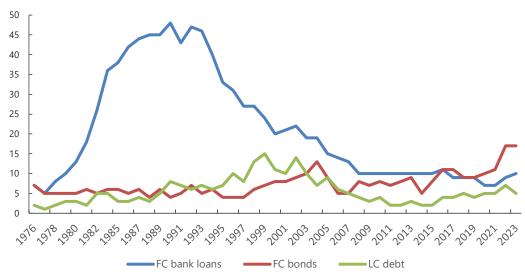


Chart 8: Number of sovereign defaults, 1976–2023

Note: FC is foreign currency and LC is local currency. Source: BoC–BoE Sovereign Default Database 2024

Last observation: 2023

We have identified 42 sovereigns that defaulted on local currency debt between 1960 and 2023. These defaults take different forms. Perhaps most striking is the number of cases involving the exchange of old currency for new currency on confiscatory terms. We find that 17 sovereigns have undertaken such exchanges, with some doing so more than once (e.g., Ghana, North Korea, Myanmar, and the Soviet Union and Russia). Creditors incur losses because of the conditions authorities typically impose, notably:

- setting short time frames to exchange old bank notes for new ones
- placing limits on amounts that can be exchanged
- requiring that notes above such limits be deposited in blocked accounts
- barring foreign holders of old currency from participation in such exchanges

The factors triggering confiscatory currency reforms appear to be idiosyncratic. They can follow a change in political regimes or be part of an official strategy to curtail black markets. Therefore, these defaults do not always reflect broader financial distress. Among the countries involved, only four have also defaulted on other types of local currency debt—Democratic Republic of Congo, Nicaragua, Venezuela, and the Soviet Union and Russia—although many more ultimately defaulted on their foreign currency debt. Another case, Peru, involved bonds adversely affected by high inflation where local courts ultimately ordered compensation to creditors.

Other cases include:

 two instances where there were unilateral reductions in real interest rate coupons on inflation-linked debt

- one involving a restructuring and conversion into foreign currency debt
- one situation where new taxes targeted local currency debt service

However, most local currency defaults involve overdue interest and principal payments, restructurings of debt stocks or both.

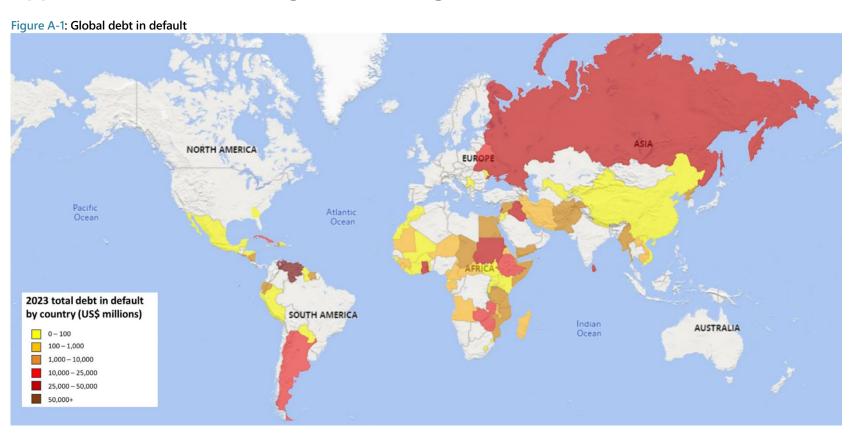
Chart 8 tracks the annual number of defaults on local currency debt we have identified in the 1960–2023 period compared with defaults on foreign currency bank loans and bonds—the two other principal types of sovereign debt owed to private creditors. Through nearly half the survey period, defaults were predominantly on foreign currency bank loans. However, defaults on foreign currency bonds have increased since the mid-1990s as international banks curtailed their sovereign lending. The frequency of defaults on local currency debt has been more variable: the number gradually picked up after the 1970s but has trended down again since the early 2000s. Over the past decade, between 5 and 17 sovereigns have defaulted on foreign currency bonds each year, and between 2 and 7 on local currency debt.

Interestingly, since 1960, defaults on foreign and local currency market debt by the same sovereign have happened concurrently less than half the time. This pattern is changing, however. Current debt restructurings in Ghana and Sri Lanka highlight that workouts involving both local and foreign currency bonds are becoming increasingly commonplace.

Conclusion

In publishing this annual update of the BoC–BoE Sovereign Default Database and our related research, we aim to provide readers with meaningful insights into how and why sovereign defaults occur and their implications for global financial stability. We will continue to enhance the accuracy and relevance of the data, including on domestic arrears, in future versions of the database. We welcome questions and feedback on this project.

Appendix: Visualization of global sovereign debt in default in 2023



References

- Beers, D. and J. Chambers. 2006. "Sovereign Defaults at 26-Year Low, to Show Little Change in 2007." S&P Global.
- Cruces, J. and C. Trebesch. 2011. "Sovereign Defaults: The Price of Haircuts." CESifo Working Paper Series No. 3604. Bond and bank loan restructuring data are also available.
- Flynn, S. and M. Pessoa. 2014. "Prevention and Management of Government Expenditure Arrears." International Monetary Fund.
- Hurley, J., S. Morris and G. Portelance. 2018. "Examining the Debt Implications of the Belt and Road Initiative." Centre for Global Development Policy Paper No. 121.
- International Monetary Fund. 2016. "Heavily Indebted Poor Countries (HIPC) Initiative and Multilateral Debt Relief Initiative (MDRI)—Statistical Update."
- International Monetary Fund. 2019. "Background Paper: Annex Chapter 3—Domestic Arrears in SSA." In *Regional Economic Outlook—Sub-Saharan Africa: Navigating Uncertainty*, 27–58.
- International Monetary Fund. 2022a. "Restructuring Debt of Poorer Nations Requires More Efficient Coordination." *IMFBlog* (April 7).
- International Monetary Fund. 2022b. *World Economic Outlook: War Sets Back the Global Recovery.*Washington, DC, April.
- International Monetary Fund. 2023a. *World Economic Outlook: A Rocky Recovery.* Washington, DC, April.
- International Monetary Fund. 2023b. Debt Relief Under the Heavily Indebted Poor Countries (HIPC) Initiative. Washington, DC, February.
- International Monetary Fund. 2024. World Economic Outlook: Steady But Slow: Resilience Amid Divergence. Washington, DC, April.
- Khan, M. and J. Brunsden. 2018. "Eurozone Creditors Reach 'Historic' Deal on Greek Debt Relief." *Financial Times*, June 21.
- Morgan Stanley. 2018. "Inside China's Plan to Create a Modern Silk Road."
- Paris Club. 2022. "Ad Hoc Participants."
- PricewaterhouseCoopers. 2016. "China's New Silk Route: The Long and Winding Road."
- Reinhart, C. and K. Rogoff. 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton, N.J.: Princeton University Press.

- Reinhart, C. and C. Trebesch. 2014. "A Distant Mirror of Debt, Default, and Relief." National Bureau of Economic Research Working Paper No. 20577.
- Republic of Italy. 2021. "The Common Framework for Debt Treatment Beyond the DSSI."
- Rieffel, L. 2003. *Restructuring Sovereign Debt: The Case for Ad Hoc Machinery*. Washington, DC: Brookings Institution Press.
- Suter, C. 1992. Debt Cycles in the World-Economy: Foreign Loans, Financial Crises, and Debt Settlements, 1820–1990. Boulder, Colorado: Westview Press.
- World Bank Group. 2022. "Debt Service Suspension Initiative."
- World Bank Group. 2023. "Developing Countries Paid Record \$443.5 Billion on Public Debt in 2022." Press release, December 13.