



SOVEREIGN ADVISORY SERVICES

TIME TO SEVER THE SOVEREIGN-BANK NEXUS

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PREFACE



The sovereign-bank nexus describes the inter-dependencies between the government and the banking sector, where the financial health of one can affect the financial health of the other. These inter-dependencies can arise in several ways including when banks typically hold large amounts of sovereign debt; when banks are protected by government guarantees (explicitly or implicitly); when governments own banks, when banks lend heavily to loss-making state-owned enterprises, and when banks and the sovereign can be jointly affected by adverse national economic developments. This sovereign-financial nexus is a key risk in both advanced economies and emerging markets.

The challenges associated with sovereign-bank nexus are not new. This nexus had a devastating impact on several European countries during the global financial crisis (GFC) in the late 2000s and early 2010s including Greece, Ireland, Cyprus, Spain, and others. In Ireland for example public debt went up from 27% percent of GDP in 2007 to 129% percent of GDP in 2013 after the GFC primarily due to the need to bail out the financial system. There are several earlier well-known cases where a sovereign crisis led to a banking crisis including Russia (1998) and Argentina (2001-2002). These countries experienced profound recessions.

Over recent years the sovereign-bank nexus has become more relevant than ever. Since the Covid-19 pandemic and the Russian war on Ukraine, the global economy has been characterized by incessant waves of volatility. This has contributed to a lower risk appetite among international investors and prompted a flight to safer assets in AEs. Against this backdrop, governments in EMDEs, constrained by high interest rates on their foreign currency borrowing, have resorted more often to their local financial markets (e.g. local banks) to finance their deficits and funding gaps.

The global economy is also going through a period of economic (e.g. US tariffs / trade wars) and geopolitical turmoil (e.g. Ukraine, Gaza) with high debt levels, higher-for-longer interest rates, tight global financial conditions and weak economic performance. This challenging global backdrop disproportionately affects EMDEs especially where the financial linkages between the sovereign and the banking sector are deep. While these linkages may perform needed financial functions in favourable economic times—such as providing stable local currency funding for the government, a sizeable sovereign-debt nexus in times of sovereign stress can have dangerous consequences.

Although financial systems in EMDEs have evolved since past crises, they remain predominantly bank-centric and bank-dependent. Governments in these economies often depend on banks to fund public expenditures, which can inadvertently crowd out other types of investments and enhance mutual dependence between banks and governments. This heightened interdependence can slow economic growth, escalate borrowing costs and restrict the government's ability to intervene in the case of a banking crisis. Countries that have been adversely impacted by the sovereign-bank nexus include Lebanon, Ghana and Sri Lanka.

Moreover, recapitalization of state-owned banks that have accumulated material losses due to poor lending, bad governance or inadequate risk management can have a negative financial draw on the sovereign, where the sovereign has to act as the financial backstop or 'lender of last resort' (either through additional liquidity and/or capital).

This paper, produced in the Sovereign Advisory Services (SAS) practice of Alvarez & Marsal, describes the sovereign-bank nexus in more detail and outlines ways to untangle the relationship between the two. The goal of SAS is to support sovereigns and quasi-sovereigns around the world, helping them through a holistic offering on both the liability and the asset side of their balance sheets. On the liability side, SAS helps countries to meet their sovereign finance needs, improve debt sustainability, increase access to capital, and reduce the sovereign-bank nexus. On the asset side, SAS helps countries to enhance the efficiency of state-owned assets (companies and banks), improve the governance of their sovereign wealth funds, help them mobilize foreign direct investment, often from other sovereign wealth funds, and more generally support economic growth.

The key insights from this paper can help countries better manage the sovereign-bank nexus. These main measures that can be taken include:

- **During a sovereign-bank nexus crisis:** Assess the asset quality and capital adequacy of the banking sector; develop capital and funding plans to determine the viability of various banks; introduce resolution legislation, as required, to resolve weaker banks and introduce equity funding arrangements (e.g. financial stability fund).
- **Short-term preventive measures:** Introduce more accounting disclosures of government exposures and more accurate accounting treatment of these holdings (e.g. market to market) and review the favourable regulatory treatment (i.e. risk weights and concentration limits) of local currency government debt holdings held by banks.
- **Long-term preventive measures:** Introduction of robust bank resolution frameworks; privatization of State-owned banks and deepen and widen the participation in the domestic financial markets:

I am confident that the findings from this paper will be highly useful for any policymaker in an emerging market. SAS stands ready to support emerging markets address these sovereign bank nexus challenges and reduce their vulnerabilities.

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INTRODUCTION

As governments across many EMDEs and low-income countries (LICs) increasingly rely on sovereign borrowing to close their financing gaps, a self-reinforcing cycle has developed, tying the health of the sovereign to the health of the creditors holding this debt.

In many economies, domestic banks hold large amounts of the government — or sovereign — debt, creating a feedback loop in which the performance of the domestic financial sector and the financial strength of the government are intrinsically linked. This relationship is pro-cyclical, meaning it enhances the benefits of strong economic performance in favorable conditions but exacerbates challenges during periods of economic downturns.

In good times, large holdings of government securities by domestic banks can reduce government borrowing costs, improve macro-prudential health, enhance credit availability and create faster economic growth. However, as tides turn and the natural depths of the business cycle are felt, the pro-cyclical relationship can present serious challenges, particularly during times of sovereign stress.

If the market value of government securities declines during these episodes, it places strain on the sovereign by increasing its borrowing costs while simultaneously reducing the asset value of the banks' balance sheets. If this decrease in value is recognized, it can lead to material capital losses in those banks holding government paper. Depending on the extent of the capital loss, these stresses can potentially threaten the viability of the bank (or banking system) to the point of triggering defaults or bank runs. At the same time, they create additional contingent liabilities for the government at the exact moment it is already unable to meet its own financing requirements.

These important financial linkages and feedback loops between sovereign governments, the financial sector and the real economy (made up of both households and corporations) are known as the **sovereign-bank nexus**. This paper explores the nexus and elaborates on its potential risks and impacts in the following four sections:

- Background
- Risks posed by the sovereign-bank nexus
- Managing the impact on banks in a sovereign-bank nexus
- Conclusion and recommendations

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02 BACKGROUND

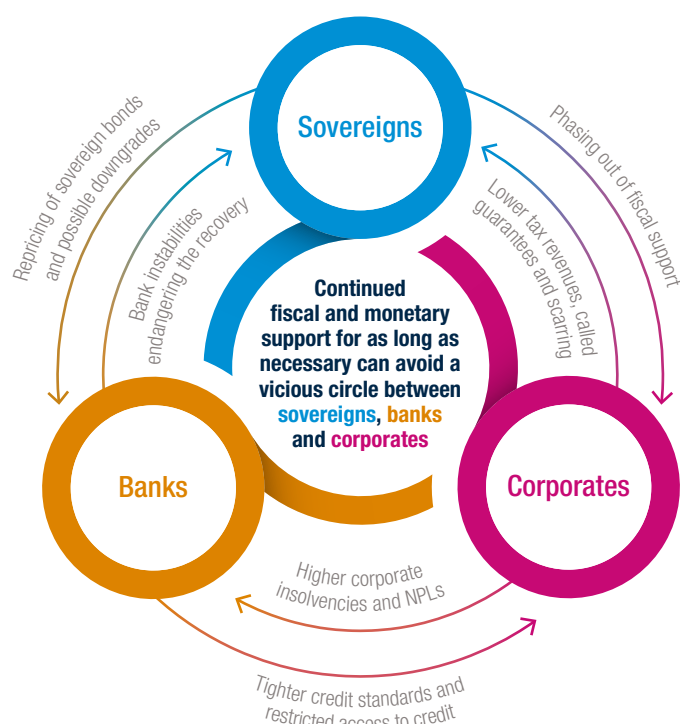


As mentioned, the financial health of governments (sovereigns) and the financial sector (banks) are intrinsically linked together through the sovereign-bank nexus through three different channels:

- The *'sovereign exposure'* (or the direct) channel occurs when domestic banks are traditionally significant investors and holders of sovereign debt issued by their governments, particularly in domestic currencies.
- The *'safety net' channel* occurs when governments usually provide a financial backstop — either explicit or implicit — to the financial system in times of stress.
- The *'macroeconomic'* (or the indirect) channel occurs when governments and banks interact with the wider economy — through corporates and households — which can impact both directly or indirectly during growth and recessionary cycles.

The three channels (and their linkages) can be depicted in Figure 1 below:

Figure 1: Sovereign-Bank Nexus Channels



Source: European Central Bank

The strong feedback and multiplier effects between sovereigns, banks and the real economy can accentuate either positive impacts, through growth in benign economic conditions and the deepening of domestic financial markets, or negative impacts referred to as “gloom or doom loops” in adverse economic conditions. The impacts on the global economy from the Covid-19 pandemic, the conflict in Ukraine and potential trade wars have intensified the focus on and interdependencies between sovereigns, banks and the wider economy.

1. THE SOVEREIGN EXPOSURE CHANNEL

Globally, public debt has jumped since the Covid-19 pandemic and the onset of the Ukrainian conflict. Estimates from the IMF (Fiscal Monitor, October 2024) suggest that global public debt is expected to pass the \$100-trillion mark by the end of 2024, representing about 93% of global GDP, approaching 100% by 2030. Sovereign debt has now become the most indebted of the four major asset classes as classified by Moody's — ahead of households, non-financial corporations and financial corporations.

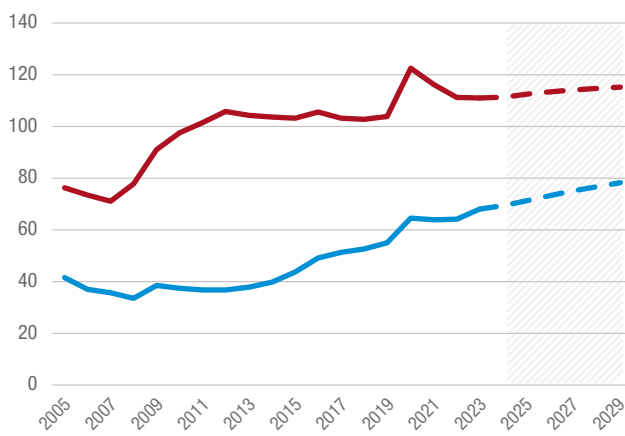
Governments provided unprecedented fiscal assistance during the pandemic to both households and businesses, either through direct support measures — such as job retention schemes, direct transfers, tax cuts and deferrals, spending increases and grants — or via indirect support measures like credit guarantee schemes. Most governments also provided cost of living supports caused by the conflict in the Ukraine.

According to the World Bank, in 2020 alone, additional non-health measures represented a fiscal cost of 8.1% of GDP on average in AEs, while EMs and LICs spent 4% and 2.1%, respectively. These aid measures were primarily financed through additional government debt and reflected their creditors' ability to absorb more of that debt. The conflict in Ukraine has further stretched fiscal balances in EMs and LICs, as most governments continue to subsidize the higher ‘cost of living’ costs (i.e. higher energy and food bills), caused by supply chain and energy disruption. This has also been coupled by higher targeted transfers to vulnerable sectors of the populations, in addition to other idiosyncratic factors – for instance, unprecedented humanitarian support for Ukrainian refugees in Europe and support of the conflict effort.

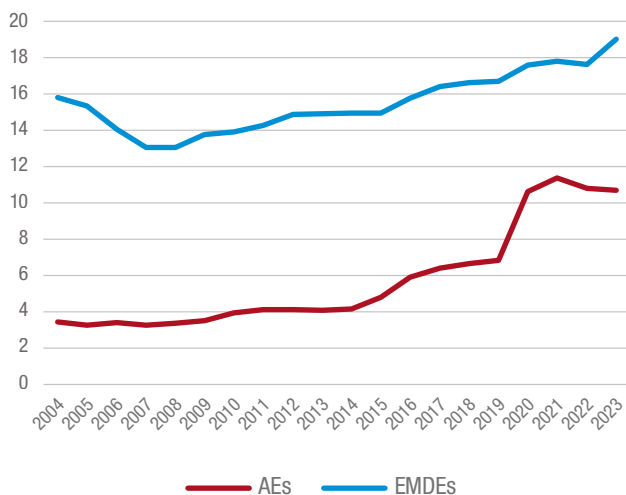
Figure 2 below shows that in EMDEs, public debt has grown steadily since 2005 and stood at c. 68% of GDP at the end of 2023. In the same period, EMDE banks' holdings of general government debt grew to c. 19% of their assets in 2023, on average, with some individual economies experiencing much higher holding rates.

Figure 2. The Rising Sovereign-Bank Nexus

1. General Government Debt, 2005-2029



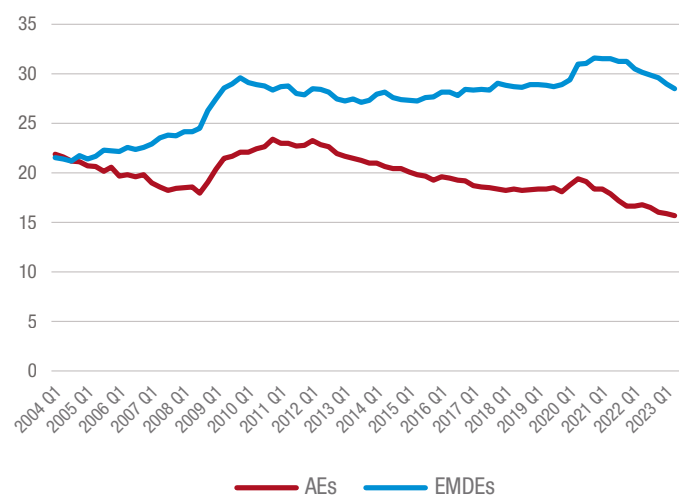
2. Domestic Banks Government Exposure, 2005-2023



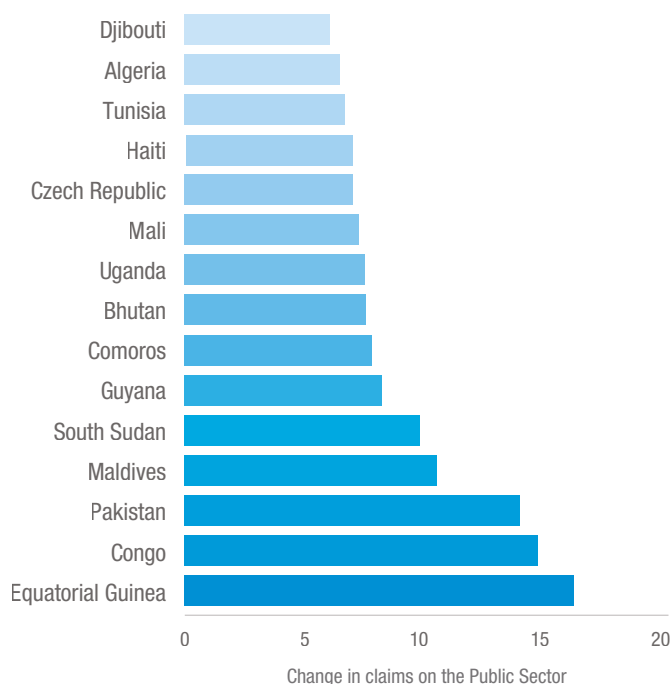
Source: IMF WEO; IFS and A&M staff calculations. Note: Lines in graph 1 represent average general government debt as a percentage of GDP for AEs and EMDEs, whereas lines in graph 2 represent the average ratio in percentage of domestic banks' claims on the public sector to their total assets.

During this period, EMDE banks held more general government debt than in previous periods and may have been over invested since foreign investors and other domestic (non-bank) investors reduced their participation in the sovereign debt market. Figure 3 below shows that by mid-2023, the share of general government debt with domestic domestic banks among larger EMs reached c. 31%, virtually double that of AEs.

Figure 3. General Government Debt Held by Domestic Banks



Source: IMF Arslanalp and Tsuda (2014a,b) Datasets; A&M staff calculations. Note: Lines represent the share in percentage of general government debt held by domestic banks for selected AEs (Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland) and EMs (Argentina, Brazil, Bulgaria, Chile, China, Colombia, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, Uruguay).

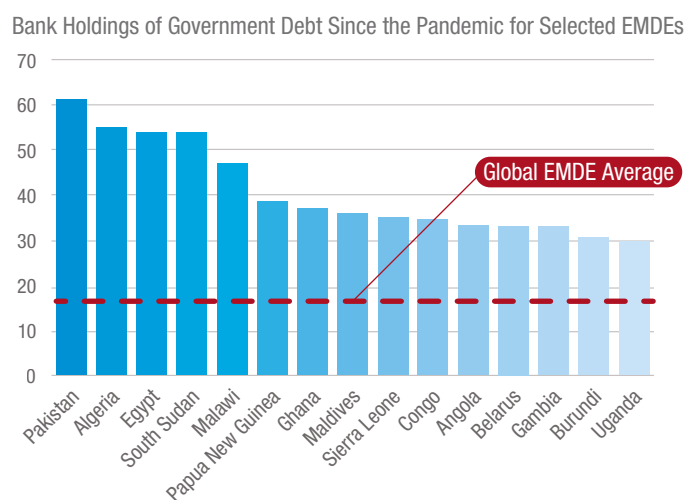
Figure 4. Change Since the Pandemic

Source: IMF IFS and A&M staff calculations. Note: Bars represent percentage-point changes in the ratios of domestic banks' claims on public sector to their total assets of selected EMDEs from 2019 until 2023 or most recent available data.

The rise in sovereign debt is not only restricted to larger EMDEs. Banks' holdings of sovereign debt increased dramatically since the pandemic, as they remain an active or primary investor in domestic government debt in EMDEs (Figure 4).

EMDEs that have banks with high sovereign debt holdings and that are facing a domestic debt restructuring program – or may soon do so – could see such banks experience liquidity and/or solvency pressures.

When looking at bank holdings of government debt across various EMDEs, we find some striking differences. As illustrated in Figure 5 above, certain countries like Pakistan (61%), Algeria (55%) and Egypt (54%) show very high concentrations, well above the global EMDE average of 19%, which may pose systemic consequences in times of stress. Also, certain countries that are currently restructuring their sovereign debt have concentrations above the global EMDE average, namely Ghana (37%), Sri Lanka (29%), Ukraine (26%) and Argentina (20%).

Figure 5. Strength of Sovereign-Bank Nexus

Source: IMF WEO; A&M staff calculations. Note: Bars represent the ratio in percentage of domestic banks' claims on public sector to their total assets of all countries with the highest ratios in 2023 or most recent available data.

The Finance and Prosperity Report (August 2024) on the sovereign-bank nexus prepared by the World Bank analyzed 50 EMDEs, representing 85% of total EMDE GDP and 93% of total EMDE bank assets, concluded that 15 of them have presented heightened financial sector risks, with nearly 70% of those being incapable of handling financial stress. Some of these countries have critical weaknesses in their regulatory and supervisory frameworks that undermine their capacity to mitigate and react to financial crises. For instance, they lack adequate mandate, independence and powers of banking supervisors. They also need improvements in reporting and resolution of Non-Performing Loans (NPLs), as well as crisis management, resolution and financial safety net frameworks – in particular, coverage, funding, and operational readiness of deposit insurance systems.

1 Although the study does not disclose which countries are facing financial sector risks, the World Bank indicates that such risks are particularly high in South Asia, Sub-Sahara and some countries in the Middle East and North Africa region.



While the default (or potential default) of the sovereign may have a significant impact on the domestic banking system, even in more benign times, a high sovereign-bank nexus can crowd out lending to the private sector as banks lend more to the sovereign and ultimately discourage foreign investors into the market, due to risk allocation and incentives (see later).

2. THE SAFETY NET CHANNEL

There is recent precedent for learnings on the impact of government intervention in the banking sector in times of stress. During the GFC, between 2008 and 2012, the accumulation of unsustainable risks in the banking system – primarily through poor and/or excessive secured (real estate) lending in Europe and the U.S. – caused significant build-up of NPLs and credit losses in the banking system. These losses could not be borne by the shareholders and creditors of the banks at the time, creating the ‘too big to fail’ moral hazard for government. Many sovereign governments including in AEs (e.g. U.K., Ireland, Spain, Greece, Cyprus and the U.S.) had to ‘bail-out’ the banks at significant cost to their taxpayers. The mutualization of bank bailouts was a very costly and painful period for many of these countries.

While AEs have successfully managed to bail out their banking sectors, albeit at a very high cost to public finances, many EMs have struggled with managing the adverse impact of a high sovereign-bank nexus. For example, Lebanon’s default in 2020 led to substantial losses to the banking sector, estimated at around USD 70 billion, or 280% of Lebanon’s GDP that year. Four years into the default, Lebanon’s banking sector remains insolvent, with capital controls still preventing people from accessing their savings in Lebanese banks and likely causing them to suffer nominal haircuts on their deposits – the recent hostilities add additional uncertainty. In Ghana, the local banking sector held a large proportion of the government’s domestic debt and had to suffer losses because of recent domestic debt restructuring – the World Bank has established the Ghana Financial Stability Fund to support bank recapitalizations. In Sri Lanka, domestic banks also held large stocks of domestic government debt and were

specifically excluded from any domestic debt restructuring as they were deemed to have participated in material burden sharing already.

An International Monetary Fund (IMF) analysis of various countries and crises between 2000 and 2014 shows that the probability of a double crisis occurring in a financial / economic downturn is high – with a 51% chance of a sovereign crisis occurring due to a banking crisis and a 22% chance of a banking crisis caused by a sovereign crisis.

Table 1: Banking Crises and Sovereign Distress

TYPE OF TWIN CRISIS	CONDITIONAL PROBABILITY
Sovereign debt crisis, conditional on banking crisis	51.00%
Banking crisis, conditional on sovereign debt crisis	22.30%

Source: IMF 2018. Note: The table depicts the share of crisis-years identified as a banking crisis or sovereign debt crisis, conditional on a banking crisis or sovereign debt crisis occurring, respectively, during 2000-14 for 66 countries. Banking crises are defined as in Laeven, L., & Valencia, F. (2013a), *Systemic Banking Crises Database* (IMF Economic Review 61 (2): 225-70). Sovereign debt crises are identified using Laeven, L., & Valencia, F. (2013b), *The Real Effects of Financial Sector Interventions during Crises* (Journal of Money, Credit and Banking 45 (1): 147-77), Moody’s Default & Recovery database, Standard & Poor’s sovereign ratings, and years when a given sovereign’s Credit Default Swap spreads exceed the long-term mean.

3. THE MACROECONOMIC CHANNEL

Macroeconomic events have an impact on the interaction between the banks and the sovereign. A poorly performing economy can stifle overall demand and consumption, leading to consumer unemployment, corporate losses, an increase in NPLs, lower tax revenues and increased government expenditures. Banks may then need to absorb more losses and curb lending, which will further exacerbate credit growth and may lead to an economic slowdown. Governments may have to borrow and spend more to avoid recession, which may result in this cycle repeating itself.

RISKS IMPOSED BY THE SOVEREIGN-BANK NEXUS



Within the sovereign-bank nexus, the risks stemming from one system can spill over into another, with the potential for positive and negative impacts and feedback loops. Each channel of the sovereign-bank nexus linkages presents different risks.

1. SOVEREIGN EXPOSURE CHANNEL

Banks primarily hold domestic government debt for various reasons including liquidity management (to manage surplus liquidity), investment management (to obtain a market rate yield), security (to invest in a safe-haven investment), and also for national interest (in a phenomenon known as 'home bias', banks may feel compelled to invest in domestic government bonds over foreign ones as a show of support to the sovereign).

Typically, a bank will place surplus liquidity with the local central bank to cover its minimum liquidity reserve requirements (being high-quality liquid asset holdings) and any balance can be invested in either the real economy (households and businesses) or into domestic government debt of varying maturities and terms. Typically, banks participate in the most liquid and short part of the yield curve. Government debt is viewed as a safe security as sovereigns are often the most creditworthy counterparties in the country.

However, another important benefit is the favorable regulatory capital treatment for banks' holdings of domestic sovereign debt in local currency compared with other asset classes (see Annex 1 for more details). Banks are incentivized to invest in domestic currency sovereign bonds as no risk capital allocation (risk weights) is required to be held against them. Risk-weighted returns on domestic government debt are effectively infinite if zero weighted, even though the inherent credit risk and concentration risk (and potential losses) may actually be higher.

Liquidity or capital problems may arise in a bank when its government bond holdings lose their value through a material rise in interest rates or the bond is part of a domestic debt restructuring. If the loss is material — and crystallized — and the bank has limited loss-absorbing capacity, the bank may run into financial difficulties such as deposit runs, liquidity difficulties, capital shortages and more. If the government at same time is also in debt distress then the recapitalization options for the banks may be limited. A simplified example of bond haircuts and their impact on bank's capital are shown below:

Table 2: Bond Haircut And Impact On Bank's Capital

ASSETS	PRE HAIRCUT	HAIRCUT @ 10%	POST HAIRCUT	LIABILITIES	PRE-LOSS ABSORBENCY (LA)	LOSS ABSORBENCY (LA)	POST-LOSS ABSORBENCY (LA)	CAPITAL REDUCTION
Government bonds	15.0	1.5	13.5	Other Liabilities	92.0		92.0	
Other Assets	85.0		85.0	Capital	8.0	1.5	6.5	18.75%
	100.0	1.5	98.5		100.0	1.5	98.5	

Source: A&M. Note: The above analysis only shows first-round effects, however second-round effects may also have additional impacts, resulting in larger losses and capital reductions.

In the above simplified illustration, the bank holds 15% of its assets in government bonds — at a 0% risk weight — with an 8% minimum capital threshold level. If it suffers a permanent 10% haircut on the government bonds, this will reduce the bank's capital by 18.75%, which may result in a regulatory capital breach below the 8% minimum capital level. As banks typically do not currently hold any capital — 0% risk weights — or have any concentration limits (another regulatory discretion) against their domestic sovereign bond portfolios, any impairment on them can have a disproportionate impact on the bank's overall capital.

In recent years, various policy proposals have been made to change the favorable regulatory treatment of sovereign debt to deal with both these credit and concentration risks. Though it was not agreed upon, one proposal in 2017 in the European Union was to place large-exposure type limits on a bank's holding of sovereign debt based on a percentage of Tier 1 Capital – 0% risk weight up to 33% risk weight of Tier 1 capital, and in increasing risk buckets above that level (see Annex 1 for more details) depending on the risks inherent in the debt instruments.

2. SAFETY NET CHANNEL

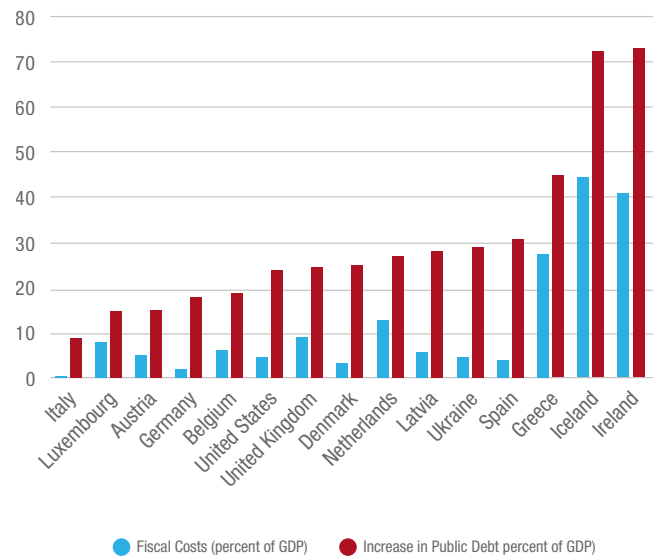
Sovereigns can have a relationship with the banking sector in various ways, including bank ownership, or as a debtor and/or creditor to the banks and through the provision of guarantees (or credit and other forms of support).

State ownership of banks can have its drawbacks as they may be run more for political purposes (e.g. directed lending), may be operated less efficiently (e.g. over-resourced), have governance weaknesses (e.g. political appointments), distort competition towards favoured sectors, create related-party relationships and increase moral hazard. State-owned banks may also be 'compelled' to invest in domestic sovereign debt above realistic concentration limits especially in times of stress/distress (e.g. home-bias).

Despite global efforts to address the problem of 'too big to fail' banks since the GFC, the government may still have to support such banks, or those of national/strategic importance, with taxpayer money when they get into financial difficulties.

Whether this support is explicit or implicit, costs can be extremely high for countries, measured by both direct fiscal costs and the increase in public debt. In the Iceland and Ireland debt crises during the GFC, both had fiscal costs greater than 40% of GDP, increases in public debt greater than 70% of GDP (see below) and the imposition of severe IMF programs, which required significant multi-year austerity and fiscal-adjustment programs to fix.

Figure 6: The Fiscal Cost of Systematic Banking Crises



Source: IMF (2018), Laeven and Valencia (2012). Note: Fiscal costs are defined as the component of gross fiscal outlays related to the restructuring of the financial sector. They include fiscal costs associated with bank recapitalizations but exclude asset purchases and direct liquidity assistance from the treasury. The increase in public debt is measured over (T-1, T + 3) where T is the crisis starting year, generally 2008, except for the United States and United Kingdom, when it is 2007.

For Greece, the figures include the recapitalization package included in the 2012 IMF program, although it had not been fully used as of May 2013.

However, significant work has been completed since 2010 by the Financial Stability Board (global banking regulator) and all the major economies to bring bank resolution and crisis management regimes into force, which were established to ensure financial stability, protect the taxpayer and depositors, ensure operational continuity and that losses are absorbed by the shareholders and unsecured creditors of the failing banks rather than the taxpayers. To-date, this second pillar of financial stability (i.e. resolution regime) has proved successful mainly in AEs, as seen by the limited financial contagion in 2023 with the regional bank failures in the U.S. and Credit Suisse's distressed merger with UBS. However, work is still required to improve the bank resolution and crisis management regimes for many EMDE countries – the IMF has identified this regularly in various Financial Sector Assessment Programs it conducts (e.g. Maldives, 2024).

3. MACROECONOMIC CHANNEL

The real economy through business and consumer activity can negatively impact banks' performance and balance sheets, especially during recessions or external shocks. This can lead to reduced earnings, lower risk appetite in sectors and asset classes, reduced lending, higher NPLs through increased defaults and insolvencies and credit impairment losses. The level of loss absorbency of the banks will determine whether they can trade through it themselves or will require internal or external support.

An economic downturn can also impact the sovereign due to reduced economic trading activity, reduced consumer spending, lower corporate profitability and stalled investment, which may impact government finances and cause reduced tax revenues, increased pressure on spending or rising deficits that ultimately require additional funding — typically from the domestic banks and the domestic central bank as foreign investors retreat from the market.

This sovereign-bank-corporate nexus can become a 'virtuous cycle' in good times or a 'vicious circle' in bad times. The vicious cycle may involve the sovereign introducing fiscal consolidation measures (i.e. tax increases, expenditure cuts), which negatively impact economic activity. These actions feed into the banks through lower credit growth, increased NPLs, lower bank revenues and higher impairment costs, further exacerbating the situation and causing a 'gloom loop' that can ultimately result in viability issues for certain banks.



MANAGING THE IMPACT ON BANKS IN A SOVEREIGN-BANK NEXUS



The number of sovereign defaults has been growing steadily since the Covid-19 pandemic and the onset of the conflict in Ukraine. Since 2020, several EMDEs have defaulted, including Argentina, Belize, Ecuador, Ethiopia, Ghana, Lebanon, Russia, Sri Lanka, Suriname, Ukraine, and Zambia, according to the IMF's Fiscal Monitor released in April 2024. As highlighted by S&P, in 2023, for the first time in more than two decades, local currency defaults on local currency sovereign debt were more frequent than on their foreign currency counterparts. In addition, default risks are elevated and continue rising among some developing countries that have not defaulted yet. For countries with a strong sovereign-bank nexus, such as Egypt and Pakistan, managing their sovereign-debt sustainability can be particularly challenging during these difficult global macroeconomic conditions.

When a country must enter into a domestic debt restructuring with its creditors — typically local banks, non-bank financial institutions, the central bank and investors — the terms and conditions may place undue stress on the domestic banking and wider domestic financial sectors. A domestic debt restructuring may have unintended consequences on the sovereign.

For example, as part of current IMF bailout programs, both Ghana and Sri Lanka have undergone domestic debt restructuring, including a rescheduling of principal debt repayments and lower coupons. In Sri Lanka, the domestic debt perimeter involved the three state-owned lenders — People's Bank, Bank of Ceylon and National Savings Bank — and the state Employee Retirement Fund, which account for the majority share of the country's banking assets, including government debt holdings.

The reduction in the face value of domestic bonds through a principal or implied net present value haircut, the accounting and regulatory treatment of the losses, whether taken upfront or spread over time, were assessed in Sri Lanka through an asset quality review of the top banks. On 28 June 2023, the government of Sri Lanka announced that the banking sector would participate in external debt restructuring only, through their holdings in International Sovereign Bonds (ISBs) and Sri Lankan Development Bonds (SLDBs). However, they would be excluded from any domestic debt restructuring as the banking sector had already borne a significant burden of the fiscal adjustment and the economic crisis in several ways.²

We have conducted an illustrative, high-level “outside in” assessment prior to any domestic debt restructuring to show the potential effect of various government bond principal haircuts on the current banking system capitalization of three countries below. Haircuts up to 10% leave the countries’ banking systems above the 8% Common Equity Tier 1 (CET1%) requirement, while a haircut up to 20% would leave each country above a 5.5% CET1% level and a 30% haircut would effectively reduce capital levels to unsustainable levels below 4%.

Table 3: CET %

HAIRCUT SCENARIO	GHANA	PAKISTAN	SRI LANKA
0%	16.56	16.98	12.4
-10%	12.11	11.43	8.82
-20%	7.51	5.68	6.42
-30%	2.75	-0.27	3.96

Source: A&M

As demonstrated, potential haircuts on government bonds can have a material impact on a banking system’s capital ratios where the bank holdings of government debt are high, the banking system’s capital ratios are tight and there is a potential asset value shock. This can create a circular dependency and an ineffective situation, if the sovereign has to then recapitalize the banks and it too is in debt distress.



² The Sri Lankan banking sector had already borne a significant burden of the fiscal adjustment and the economic crisis in several ways as follows: (i) taxes paid increased from 39% to 48%; NPLs have increased from Q1 '21 (8.1%) to 05/23 (13.3%); balance sheet provisions have increased to R916bn (8.96%), total losses on ISB / SLDB will be significant and significant forbearance provided to customers (15.65% of total loans or R1.6trn).

05 CONCLUSION



Unlike the GFC, the recent crises of the pandemic and the conflict in Ukraine did not originate in the financial sector, but in the real economy instead. This time around, most banks were better prepared, stronger with more liquidity and with better-capitalized balance sheets to withstand the economic shocks of these dual crises. As such, the majority of supports and the use of taxpayers' funds were targeted primarily at households and businesses to protect the real economy. The issue of moral hazard and the mutualization of risks being shared by the taxpayer instead of the ultimate risk-takers did not occur this time around.

The coordinated and decisive actions taken by the fiscal, monetary and prudential authorities during the pandemic effectively protected the interlinkages between banks, sovereigns and the economy in most countries from the vicious "doom loop cycle." However, many countries were fragile after the pandemic and now have had to counter the new challenges and impacts from potential trade wars and the Ukraine conflict — inflation, higher interest costs, cost of living rises and more — that have exposed previous vulnerabilities in the sovereign-bank nexus. Banks' exposure to sovereign debt and NPLs during a time of slow growth exacerbates the linkages between sovereigns, banks and corporates.

In November 2023, the Financial Stability Board (FSB), the international body that monitors and makes recommendations to national financial authorities and international standard-setting bodies about the global financial system, identified the sovereign-bank-nexus as a key systemic risk for EMDEs. In a press release, it said:

"For many EMDEs, the high debt levels built up during a decade of low interest rates has become a particular concern. Plenary members discussed the impact of tightening financing conditions on EMDE borrowers. In addition, some EMDEs face a challenge from the combination of high government debt and large bank holdings of domestic government bonds. Members discussed issues arising from the so-called 'sovereign-bank nexus', which may lead to speedier transmission of shocks between sovereigns and banks, and measures that could be taken to enhance the resilience of EMDEs against shocks."

Steps that are taken during a **negative sovereign bank cycle** (or crisis) by the authorities include:

- **Credit reporting:** Enhance monitoring of the identification, measurement and quantification of credit losses in banks' bond and loan books.
- **Credit assessments:** Conduct a bottom-up asset quality review of the balance sheets of systemically important banks to determine the underlying classification and valuation of credit books (bonds and loans) and identification of capital shortfalls.
- **Capital shortfalls evaluation:** Prepare detailed capital plans of banks with capital shortfalls to outline how the shortfalls will be resolved through internal or external measures.
- **Capital and funding plans:** Submit capital plans to the local regulator for review and challenge. Where state aid is required, an assessment should be made by the government's ministry of finance.
- **Bank legislation reform:** Merge, sell or wind down banks that cannot recapitalize themselves. It is important that a review of the banking legislation is conducted in advance to identify any gaps in the banks' (resolution and safety net) infrastructure or toolkit that may be required for such an eventuality. Any materials gaps should be legislated in advance of any banking failure.
- **Stability funds:** Support the recapitalization and funding of the banking sector under IMF programs, such as the establishment of a financial stability fund. For example, in 2023 Ghana set up such a fund for USD750m, with the financial backing of the World Bank of approximately USD 250 million, to support the financial sector post the domestic debt restructuring.
- **Investor diversification:** Sovereigns should try to diversify their domestic investor base by developing new pools of liquidity within the non-bank financial sector (i.e. insurance, pension funds and asset managers) and also the retail sector (though retail sovereign instruments).

Finally, going forward, **preventative measures** should be taken by authorities in times of non-distress to sever the sovereign-debt nexus, and reduce the vulnerabilities and risks that exist. These include short-term (1-3) and long-term (4-7) measures:

SHORT TERM MEASURES

1. **Risk weights on sovereign debt holdings:** The favorable capital treatment of domestic government debt for banks can lead to risky stock and concentration levels on banks' balance sheets during times of stress that can be hard to unravel. It can also lead to the crowding out of the economic (corporate and household) sector from new credit. Penalizing banks that hold excessive levels of sovereign debt, by attaching risk weights on credit risk and concentration risk over a certain level, should be further considered and adopted globally to balance these risks. There has been resistance to this policy initiative to date; however, if policymakers wish to tackle this matter seriously, its adoption can be an effective tool to weaken the nexus in the future.
2. **Debt disclosure:** Closer monitoring of sovereign debt holdings (sovereign, state-owned enterprises, direct and indirect) by banks, Non-Bank Financial Institutions (NBFIs) and central banks would help investors better understand the exposures of these parties to the sovereign. The development and adoption of standardized reporting templates could be supported by multilateral agencies in this regard.
3. **Accounting and regulatory treatment:** Strong(er) accounting and regulatory guidelines around holdings of sovereign debt, including market-to-market treatment, require more scrutiny to avoid accounting or regulatory arbitrage, especially with held-to-maturity portfolios.

LONG TERM MEASURES

1. **Development (or upgrading) of bank resolutions frameworks:** Building a robust bank resolution, deposit insurance and crisis management framework to break the sovereign safety net when banks fail and reduce the moral hazard of 'too-big-to-fail' banks. The IMF should continue with its regular timetable of Financial Sector Assessment Programs of vulnerable EDMs and focus on this topic.

2. **Reducing the potential moral hazard:** Policies should be implemented to minimize the moral hazard problem associated with the 'too-big-to-fail' institutions, particularly state-owned. Many banks have an implicit guarantee from the government and this can extend to lending to the government even when the government is showing signs of strain. Policies should be directed at imposing losses on agents with a greater ability to monitor risk, enhancing market discipline and limiting the build-up of vulnerabilities.
3. **State bank privatization:** Privatization over time of state-owned banks, which are typically not as efficient as privately-owned banks and prone to political interference, to reduce government influence in the banking sector. The development of a robust strategic plan by the government on the banking sector, which will include its expectation of ownership in the domestic banking sector, should be limited or a minority, given that it will unavoidably still have to be the back stop for financial institutions in times of stress.
4. **Deepening domestic financial markets:** Financial markets development can improve financial resilience. Governments should work towards expanding its creditor base by developing financial markets beyond traditional banks and attracting foreign investors. Developing local currency bond markets as well as the NBFI and retail deposit sectors would help bring borrowing costs down and decrease the governments' reliance on banks for its funding.

Finally, as highlighted, the sovereign-bank nexus can positively or negatively impact on the financial health of the other in good and bad times. Therefore, it is in the interest of all stakeholders — government, central bank and banks — to systemically eliminate the sovereign-bank nexus as much as possible so that they do not get caught in the 'gloom or doom loop' in every down cycle. This will require multi-year reform and may be an unpopular program that can be triggered either by a crisis or proactively tackled by forward-looking progressive sovereigns that take these hard and necessary actions before a crisis actually unfolds. In summary, being prepared by developing and executing a credible sovereign-bank nexus reduction plan is the best defence for any sovereign and banking sector. A&M has the relevant expertise to support sovereigns with their sovereign-bank nexus risks.

ANNEX 1

MITIGATING SOVEREIGN EXPOSURE RISKS ON BANKING BALANCE SHEETS

Sovereigns are intrinsically exposed to banking risks through shareholdings, loans and explicit or implicit guarantees. Likewise, banks are intrinsically exposed to sovereign risks through loans, bonds, derivatives and more, a situation referred to as the 'sovereign-bank nexus.' This nexus can cause a 'vicious cycle' that can start either in the banking system, such as through a financial crisis, or the public sector, such as through a fiscal or broader economic crisis, resulting in the weakening of both sovereigns and banks.

Banks' exposure to the domestic sovereign is typically through sovereign bond holdings and loans to the sovereign sector. The bond exposures are typically used for liquidity, regulatory and commercial reasons whereas loans are used to finance specific projects of central governments, local governments and state-owned enterprises (SOEs.)

In addition, the local central bank is typically a significant holder of government debt either directly with the sovereign through treasury bills and bonds or indirectly through the banking sector, where it purchases sovereign exposures with discounts applied through its normal monetary operations or by a formal bond buying program to support financial stability. This monetary financing tends to increase during times of sovereign stress.

Another key risk is the existence of 'home bias,' where banks have the tendency to invest their liquidity excessively in domestic sovereign debt rather than in foreign sovereign debt or other instruments.



There are several ways of measuring this, namely

1. Domestic sovereign debt holdings over total sovereign holdings or
2. Domestic debt holdings as a % of Total Tier 1 capital or Total Assets

A bank's sovereign exposure has favorable (i.e. exempt) regulatory treatment versus other asset classes — such as financial, non-financial and household assets — both for risk weights on credit risk (i.e. 0%) and risk weight rates on concentration risk (i.e. none).



RISK WEIGHTS ON CREDIT RISK

On credit risk, the Basel Committee under Basel III had established capital charges for sovereign exposures, under the standardized approach, based on sovereign credit ratings per the look-up table below:

Exposures to sovereigns and central banks are risk-weighted based on a ratings-based look-up table (Table 4). Alternatively, supervisors may recognise the country risk scores assigned by qualifying rating agencies. This table applies to sovereign exposures denominated in the domestic currency of the issuer and in any foreign currency.

Table 4: Current Standardised Approach Look-Up Table For Exposures To Sovereigns And Central Banks

CREDIT ASSESSMENT	AAA TO AA-	A+ TO A-	BBB+ TO BBB-	BB+ TO B-	BELOW B-	UNRATED
RISK WEIGHT	0%	20%	50%	100%	150%	100%

Source: BIS (2017): Bank for International Settlements (2017, December), *The Regulatory Treatment of Sovereign Exposures* – Dec 2017

However, the Basel III rules grant the option to apply lower-risk weights for bank holdings of domestic sovereign debt in domestic currency, based on a national discretion up to 0%. This means that banks do not need to hold any capital against their domestic currency sovereign exposures on balance sheet, regardless of the inherent credit risk. Most jurisdictions globally have taken advantage of this national discretion which effectively tightens, rather than weakens, the sovereign-bank nexus.

Implementing the standardized approach for capital charges on sovereign debt using the table above (0% – 150%), without the possibility of national discretion regarding holdings of domestic sovereign bonds, would essentially increase the capital requirements of the banking sector, especially as the credit quality of the sovereign deteriorates. A Deutsche Bank study in November 2021 on Euroland banks calculated a shortfall of €54 billion, or 2%, additional capital requirement in a scenario where this national discretion was removed, with divergence across the countries. In the study, it showed that even though they held large amounts of sovereign exposures from countries with high credit ratings like Germany, France and the Netherlands, this had negligible impact whereas countries with lower credit ratings like Italy and Spain had material capital impacts.

We have seen that the national discretion has been used in recent EMDE domestic debt restructurings as a tool to incentivize domestic banks to participate positively in the restructuring. In 2023, Ghana commenced a domestic debt restructuring that involved the exchange of old sovereign bonds into new sovereign bonds with less favorable terms including lower coupons and term extensions. Although the exchange was formally voluntary, banks were highly incentivized to participate as the risk-weighting of the old bonds were being increased to 100% from 0% and non-participating banks were not eligible for liquidity support from the newly created Ghana Financial Stability Fund. This incentive, however, does not reduce the sovereign-bank nexus; in fact, the new bonds remain at 0% risk weight, thereby maintaining the sovereign-bank nexus link.

RISK WEIGHT RATES ON CONCENTRATION LIMITS

In addition, banks' sovereign exposures are exempt from the regulatory large exposure cap of 25% that applies to private counterparties. This exemption is partly due to the fact that banks, under Basel III rules, must hold High Quality Liquid Assets (HQLA) of 100% of 30-day cash outflows to satisfy the regulatory liquidity coverage ratio. Cash, central bank reserves and sovereign bonds typically make up HQLA composition.

Without a large exposure cap for sovereign exposures, there is a potential risk of banks maintaining excessive holdings of domestic sovereign exposures through poor risk and liquidity management, chasing yield or government suasion.

In November 2017, the EU published a paper titled 'Sovereign Concentration Charge' where moderate risk weightings would trigger at certain levels. The paper proposed exempt treatment for sovereign exposures under 33% of Tier 1 capital, moderate risk weights under 100% of Tier 1 Capital and harsher risk weights over 100%. However, the proposal has not been implemented yet due to disagreements by the various countries.

In summary, a number of proposals have been put forward by different parties over the years to reduce the sovereign-bank nexus related to the regulatory treatment of sovereign debt holdings by banks. However, there has been a lack of political willingness to act on this, as there are big benefits for governments and banks in maintaining the status quo of this favorable regulatory treatment, including cheaper domestic sovereign financing and effective bank liquidity management. This regulatory and political stalemate on risk weighs on sovereign debt exposures needs to be re-prioritized by policymakers, especially as sovereign debt levels remain elevated as a result of the Covid-19 pandemic and the Ukraine conflict.

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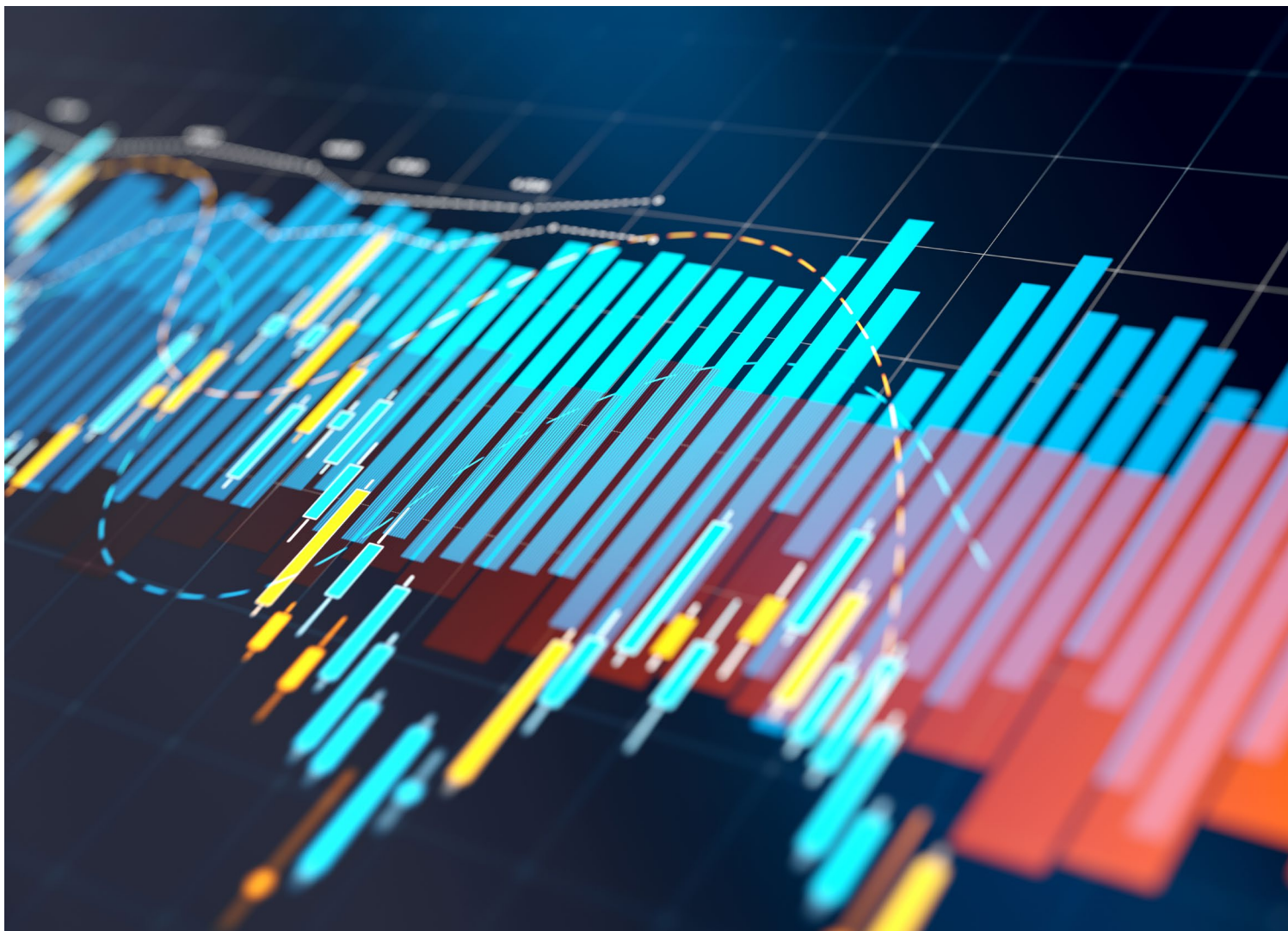
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