

Comparative Analysis of Government Debt Management Strategies in High- and Low-Income Countries

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Abstract

Governments are refinancing large post-pandemic debt stocks into a higher-rate environment. Across the OECD, the interest-payments-to-GDP ratio rose from ~3.0% (2023) to ~3.3% (2024), and refinancing needs are projected at about USD 13 trillion in 2025 (~80% of gross borrowing), reflecting heavier reliance on bills and the retreat of central-bank demand. Developing economies face tighter external finance: in 2023, they paid a record USD 1.4 trillion to service foreign debt, including USD 406 billion in interest, while about 3.4 billion people live in countries spending more on interest than on health or education. These conditions amplify rollover, FX, and market-functioning risks, with sharper constraints in low-income settings.

We synthesize international standards, the IMF–World Bank *Guidelines for Public Debt Management*, the Medium-Term Debt Management Strategy (MTDS), and DeMPA, and compare toolkits and outcomes across income groups. We triangulate recent cross-country statistics (OECD sovereign borrowing/interest outlays; World Bank *International Debt Report*; UNCTAD *World of Debt 2025*) and propose an empirical blueprint (2010–2024 panel) linking cost outcomes (interest/GDP) to portfolio metrics (ATM, FX share, bills share) and institutional capacity (DeMPA scores).

High-income countries (HICs) finance predominantly in local currency through predictable calendars, diversified instruments (including linkers and ultra-longs), and liability-management operations (buybacks/switches) to manage rollover and liquidity risk. In 2024, higher coupons and QT lifted average interest burdens to ~3.3% of GDP across the OECD. Low-income countries (LICs), by contrast, rely more on concessional external finance and face elevated FX and refinancing risks; in 2023, external-debt service reached USD 1.4 trillion for developing economies, straining social spending.

For HICs: maintain regular and predictable issuance, adjust the bills vs. coupons mix as term premia evolve, and deploy market-functioning buybacks/exchanges to preserve benchmark liquidity while smoothing maturity walls (especially given USD 13 trillion of 2025 refinancing). For LICs: adopt an MTDS-anchored sequencing (cash-management and T-bill markets first; extend local-currency tenors as microstructure and investor base deepen), strengthen transparency and debt recording (including contingent liabilities), avoid collateralized/opaque borrowing, and, in distress, integrate domestic operations with external restructuring within a macro program.

The paper distils a practical, income-sensitive playbook that helps debt management offices choose along, and, where capacity permits, shift, the cost–risk frontier under today’s higher-rate, lower-liquidity regime. It marries global standards (MTDS/DeMPA/Guidelines) with up-to-date cross-country statistics (OECD, World Bank, UNCTAD) to offer implementable steps for both market-based and concessional-anchored environments.

Keywords: *Public debt; MTDS; DeMPA; debt sustainability; domestic bond markets; concessional finance; liability management; auctions*

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1. Introduction

Sovereign debt management has re-emerged as a first-order macro-financial challenge. Governments worldwide are refinancing large post-pandemic stocks in an environment of higher real rates, retreating central-bank demand, and more discriminating investors. While the policy objective is broadly universal, meeting the government's financing needs at the lowest cost over the medium to long run, consistent with a prudent degree of risk, the feasible set of instruments and trade-offs differs systematically by income level. High-income countries (HICs) typically borrow in deep local-currency markets and can fine-tune issuance along the curve, deploy liability-management operations (buybacks, exchanges), and integrate cash and debt management. Low-income countries (LICs), by contrast, rely more on concessional external finance and episodic market access; they face sharper foreign-currency and rollover risks and must sequence market development while safeguarding social spending. Recent cross-country evidence from the OECD and UNCTAD underscores these pressures, documenting record sovereign borrowing needs in advanced economies and rising interest burdens across developing countries that constrain fiscal space.

This paper offers a comparative analysis of government debt management strategies across HICs and LICs, anchored in the international policy architecture that has guided practice for two decades. We synthesize three core frameworks: (i) the Revised Guidelines for Public Debt Management (IMF–World Bank), which articulate principles on objectives, governance, coordination with fiscal and monetary policy, transparency, and market development; (ii) the Medium-Term Debt Management Strategy (MTDS), which operationalizes cost–risk trade-offs via scenario analysis and instrument choices; and (iii) the Debt Management Performance Assessment (DeMPA), a diagnostic of institutional capacity spanning legal foundations, front/middle/back office functions, auction operations, cash management, settlement, and data quality. Together, these frameworks define the decision space and the institutional capabilities required to navigate it.

We complement these standards with the Debt Sustainability Framework for Low-Income Countries (LIC-DSF) and the World Bank's Sustainable Development Finance Policy (SDFP), which shape borrowing incentives, transparency, and creditor coordination for LICs. The LIC-DSF links borrowing envelopes to debt-carrying capacity and stress tests, while the SDFP conditions concessional flows on actions that enhance debt sustainability (e.g., debt data coverage, limits on non-concessional borrowing, and management of contingent liabilities). In practice, these instruments differentiate feasible strategies across income groups: in HICs, duration management and market-functioning tools sit at center stage; in LICs, concessional anchoring, FX-risk reduction, and market-building reforms dominate.

Our approach is integrative. First, we distil common principles and decision rules from the Guidelines, MTDS, and DeMPA. Second, we triangulate cross-country statistics from the OECD (sovereign borrowing outlooks and interest-cost trends) and UNCTAD's *World of Debt 2025* to describe the current macro-financial backdrop. Third, we translate the frameworks into an implementation playbook tailored to market depth and institutional capacity, using stylized case vignettes to illustrate operational choices (e.g., predictable calendars and buybacks in HICs; MTDS-sequenced market development and transparency reforms in LICs). Finally, we outline an empirical blueprint (2010–2024 panel) to relate cost outcomes (interest/GDP) to portfolio composition (average time to maturity, FX share, bills share) and institutional quality (DeMPA scores), enabling hypothesis tests on how strategies map to cost–risk profiles across income strata.

The paper's value-add is practical and income-sensitive. Rather than treating “best practice” as universal, we differentiate feasible strategies by market structure and policy constraints, show how global standards can be implemented under capacity limitations, and specify metrics and operating tools that help debt managers either choose along an existing cost–risk frontier (typical in HICs) or shift the frontier outward through concessional anchoring and market-building (typical in LICs). By combining internationally recognized frameworks with up-to-date cross-country evidence, the paper provides a concise guide for Debt Management Offices, finance ministries, and partners seeking resilient financing in a higher-rate, lower-liquidity world.

2. Conceptual framework

2.1 Objectives, constraints, and metrics

Objectives. The standing objective of public debt management is to meet the government's financing needs at the lowest cost over the medium to long run, consistent with a prudent degree of risk. In practice, this objective is operationalized in a debt management strategy (DMS) that specifies preferred portfolio characteristics and issuance choices over a rolling 3–5-year horizon, given macro, market, and institutional constraints. The IMF–World Bank Revised Guidelines for Public Debt Management codify this objective and its governance implications (coordination with fiscal/monetary policy, transparency, market development).

Constraints. The feasible set is shaped by: (i) market depth and currency credibility (which determine the scope to issue long-dated local-currency instruments and to diversify across fixed/floating/linkers); (ii) institutional capacity (legal mandate; separation of front/middle/back offices; auction and settlement infrastructure; debt recording/reporting); (iii) macroeconomic and policy constraints (inflation/FX regimes; monetary operations; fiscal rules); and (iv) investor-base structure (share of domestic vs. external, banks vs. nonbanks). The World Bank's DeMPA provides a benchmarked diagnostic across these institutional pillars, while the MTDS links borrowing choices to macro scenarios and stress tests, explicitly recognizing capacity constraints and market frictions.

Cost metrics. Cost should be measured on a medium-term basis and be consistent with budget accounting while capturing the risk embedded in the portfolio. Common measures include: (a) interest expenditures (cash basis) as a share of GDP or revenue; (b) weighted-average cost of the debt stock; and (c) projected interest costs under baseline and shock scenarios (e.g., policy rate/term-premium and FX shocks) generated by MTDS analytics. Some sovereigns also monitor Cost-at-Risk (CaR), the percentile increase in debt service over a horizon under simulated shocks, to gauge tail exposures.

Risk metrics. Three risks map to standard, portfolio-level indicators:

1. **Refinancing (rollover)** risk exposure to large redemptions in the near term. Tracked by the share maturing in the next 12/24 months and the Average Time to Maturity (ATM). A longer ATM and a smoother redemption profile reduce cliff effects but may raise expected cost when term premia are positive.
2. **Interest-rate (refixing)** risk sensitivity of debt service to rate changes. Tracked by the Average Time to Refixing (ATR), the fixed vs. floating (or inflation-linked) composition, and duration measures. A higher ATR (and fixed-rate share) lowers near-term sensitivity but can increase cost if the yield curve is upward sloping.
3. **Currency (FX)** risk exposure of debt stocks and service to exchange-rate movements. Tracked by the foreign-currency share of debt and net open FX position. MTDS scenarios typically combine policy-rate, term-structure, and FX shocks to evaluate cost–risk trade-offs under plausible macro paths.

Second-order but material modifiers.

- Market liquidity affects both cost and rollover resilience. DMOs monitor bid-to-cover ratios, auction tails, turnover, and on/off-the-run liquidity; where needed, they deploy taps, switches, or buybacks to support benchmark integrity. The OECD's Sovereign Borrowing Outlook documents these micro-structure indicators and related policy tools across advanced issuers.
- Cash-balance policy (target cash in the Treasury Single Account; use of bills and cash-management bills) reduces issuance volatility and settlement risk around lumpy cash-flow dates, thereby lowering the probability of forced short-term issuance at unfavourable rates. This integration is embedded in MTDS guidance and good-practice case work.
- Investor-based diversity (share of long-horizon institutions; domestic vs. external investors) stabilizes demand and compresses term premia. A simple Herfindahl–Hirschman Index (HHI) of investor concentration

or minimum diversity targets can be used as internal benchmarks; internationally, the Guidelines emphasize investor communication and predictable calendars to cultivate breadth and depth.

From principles to practice: MTDS and DeMPA. The MTDS (2017 update) provides a quantitative framework to select a preferred issuance mix by simulating cost paths and risk indicators (maturity profile, ATR, FX share) under baseline and stress scenarios (rate, FX, growth). The output is a strategy that minimizes expected medium-term cost for a given risk tolerance (or vice-versa), with sensitivity tests around alternative market conditions and policy constraints; the analytical tool supports these simulations. In parallel, DeMPA assesses whether institutions, data, and market infrastructure can deliver the strategy, covering the legal framework, managerial arrangements, borrowing and cash operations, debt recording/reporting, and audit/settlement. Countries typically use DeMPA to sequence capacity upgrades that expand the set of feasible MTDS options (e.g., moving from ad-hoc placements to predictable auctions; from short bills to benchmark bonds).

Link to the current environment. With interest burdens elevated and refinancing walls approaching in many economies, international practice increasingly emphasizes (i) predictability (regular calendars, benchmark maintenance), (ii) liability-management operations (switches/buybacks) to smooth redemption profiles and support secondary-market liquidity, and (iii) transparent risk reporting against the above indicators. These emphases are reflected in recent OECD surveillance and in country MTDS documents.

In sum, “cost–risk” is not a slogan but a measurable, scenario-tested frontier: cost as medium-term debt-service profiles; risk as ATM/ATR, maturity bunching, and FX exposure; and feasibility as the institutional/market capacity verified by DeMPA. The MTDS connects these pieces into a strategy that can be executed and adapted, as conditions evolve.

3. Literature and standards

Three foundational pillars. Sovereign debt management practice has crystallized around three widely used, mutually reinforcing frameworks:

1. **Revised Guidelines for Public Debt Management (IMF–World Bank, 2014).** The Guidelines codify the core objective, lowest cost over the medium/long run, consistent with a prudent degree of risk, and set expectations for governance, transparency, coordination with fiscal/monetary policy, market development, and risk reporting. They are principles-based and technology-neutral, intended to be adapted to country capacity and market depth.
2. **Medium-Term Debt Management Strategy (MTDS, 2017 update).** MTDS translates the objective into a quantitative decision process. Using baseline and stress scenarios for interest rates, exchange rates, and growth, authorities compare issuance mixes by projected cost and risk (e.g., ATM, ATR, FX share), supported by an analytical tool and guidance note jointly issued by the Bank and Fund. The 2017 refresh consolidated lessons from technical assistance and clarified links to cash management and domestic market development.
3. **Debt Management Performance Assessment (DeMPA, 2015).** DeMPA is a diagnostic that benchmarks institutional capacity across legal foundations; strategy formulation and approval; front/middle/back-office segregation; primary issuance and auction operations; cash management; settlement, recording, and reporting; and audit. Countries use DeMPA to prioritize reforms that expand the feasible MTDS set (e.g., moving from ad-hoc placements to predictable auctions; from bills-only to benchmark bonds).

Complementary policy frameworks. For low-income countries, borrowing choices are also shaped by:

- the Debt Sustainability Framework for Low-Income Countries (LIC-DSF), a standardized approach to linking borrowing envelopes and risk ratings to macro-debt dynamics and stress tests;
- the IMF Debt Limits Policy (DLP), which specifies risk-based quantitative conditionality on borrowing in IMF-supported programs (reformed in 2020 and effective June 30, 2021);
- and IDA’s Sustainable Development Finance Policy (SDFP), launched in 2020 to incentivize transparency, mitigate debt risks, and coordinate with other creditors through country-specific performance actions.

How the standards map to operating choices. The literature shows that optimal portfolios balance refinancing/refixing risk against term premia and market liquidity. In practice, Guidelines justify predictable auction

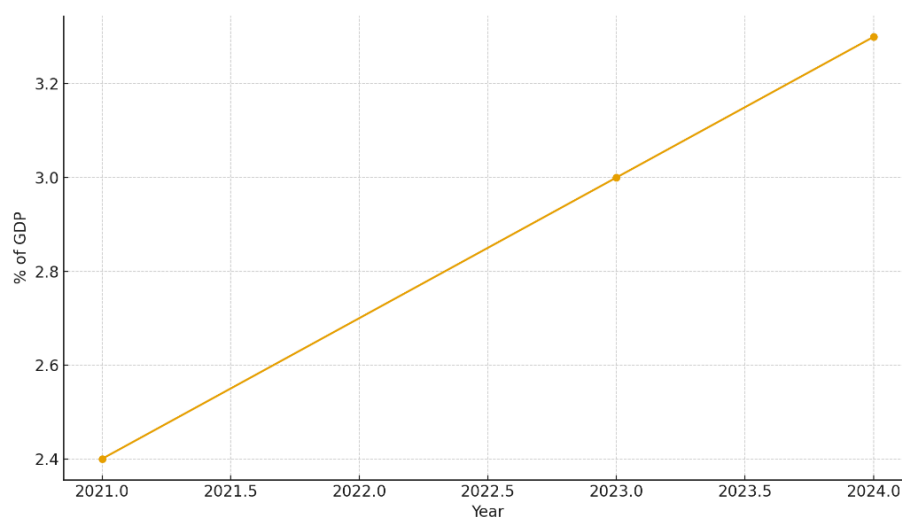
calendars, investor-relations programs, and integrated cash–debt management; MTDS provides the scenario engine to choose maturities/currencies/instruments; DeMPA ensures the institutional plumbing can deliver (e.g., legal mandate, auction tech, settlement, and recording). Together, they define a measurable cost–risk frontier and the institutional steps to reach it.

Connections to academic research. Formal models rationalize issuance at longer maturities to ensure against refinancing risk when future rates are uncertain (e.g., Missale & Blanchard), and highlight governments' comparative advantage in supplying money-like short-term paper when private intermediation is constrained (Greenwood–Hanson–Stein). These insights support the policy trade-offs embedded in MTDS (duration vs. cost; short-term liquidity vs. rollover risk) and the Guidelines' emphasis on market functioning.

4. Stylized facts in 2024–25

High-income countries (HICs): interest costs and refinancing walls are up. Across the OECD, gross interest payments rose to 3.3% of GDP in 2024

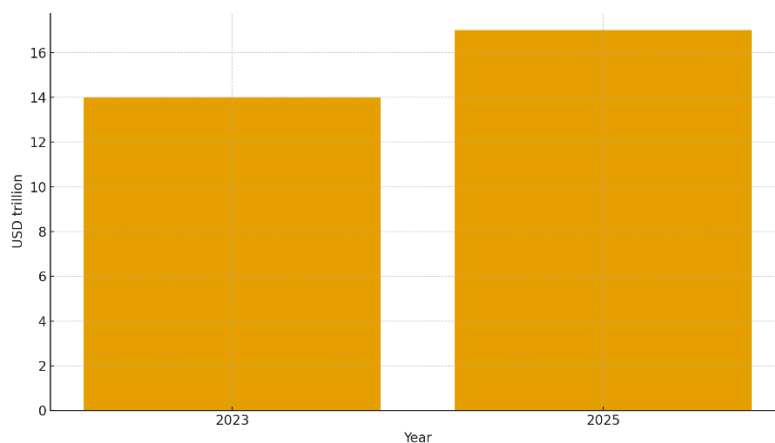
Figure 1. OECD government interest outlays, 2021–2024 (% of GDP).



Source: OECD (2025), *Global Debt/ Borrowing Outlook*.

(from 3.0% in 2023 and 2.4% in 2021), the highest since the early 2010s. Gross borrowing is projected at USD 17 trillion in 2025,

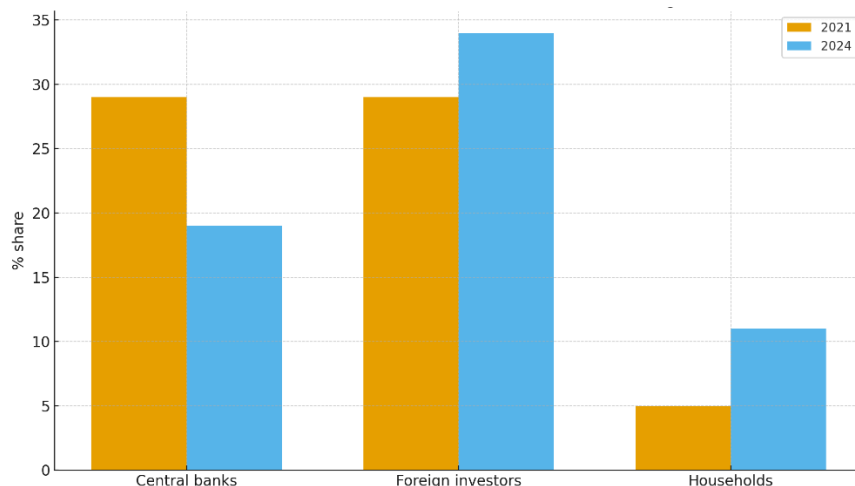
Figure 2. OECD sovereign bond issuance: 2023 vs 2025 projection (USD trillions).



Source: OECD (2025), *Global Debt/ Borrowing Outlook*.

with refinancing needs around USD 13 trillion ($\approx 80\%$ of gross) as larger bill stocks mature. Central-bank balance-sheet runoff is reshaping the investor base: domestic central-bank holdings fell from $\sim$ USD 15 trillion (2021) to $\sim$ USD 12 trillion (2024) and are projected to drop by another USD 1 trillion in 2025, while foreign investors' share rose from 29% to 34% and households from 5% to 11% (aggregate of 25 OECD countries). Implication: with bigger rollover walls and more price-sensitive buyers.

Figure 3. OECD investor-base shares, 2021 vs 2024 (% of outstanding): central banks, foreign investors, households.



Source: OECD (2025), *Global Debt/ Borrowing Outlook*.

Issuance mix (bills vs. coupons/tenors) and market-functioning tools (taps, switches, buybacks) have become more important to preserve benchmark liquidity and smooth redemption profiles. Developing economies: debt service is crowding out development. Global public debt hit a record USD 102 trillion in 2024, and about 3.4 billion people now live in countries spending more on interest than on health or education.

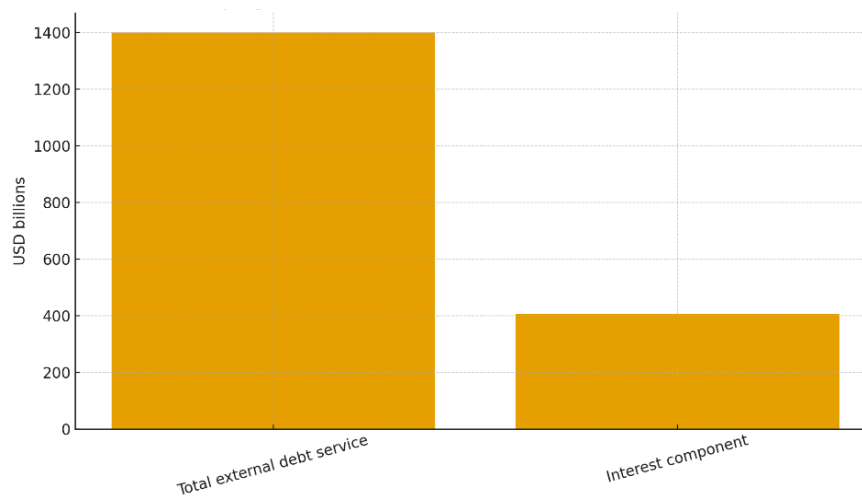
Figure 5. People living in countries spending more on interest than on health/education (billions).



Source: UNCTAD (2025), *A World of Debt*.

For low- and middle-income countries (LMICs), external debt reached a record USD 8.8 trillion in 2023, and total external-debt service hit USD 1.4 trillion, including USD 406 billion in interest.

Figure 4. Developing economies: external debt service in 2023 (USD billions).



Source: World Bank (2024), International Debt Report and press materials.

Strains that compress fiscal space and heighten rollover/FX risk where market access is thin. Implication: for LICs in particular, concessional terms, transparency (including contingent liabilities), and creditor coordination are first-order to contain risk and protect priority spending.

Income-group definitions for comparability. We classify countries using the World Bank Atlas method GNI per-capita thresholds applied in the most recent updates (FY2025/FY2026): for FY2026 (based on 2024 Atlas GNI), low-income $\leq$ USD 1,135; lower-middle USD 1,136–4,495; upper-middle USD 4,496–13,935; high-income $\geq$ USD 13,935. Thresholds are revised annually using the SDR deflator; country movements reflect both real changes and valuation effects. Implication: comparisons in this paper track these thresholds to keep HIC/LIC groupings consistent across datasets.

Why this matters for strategy. For HICs, the combination of higher coupons, record refinancing, and QT-era investor shifts pushes debt managers toward predictable calendars with tactical tilts (tenor, linker share, bills) and active liability-management operations to support liquidity without changing net issuance. For LICs/LMICs, the binding constraints are FX exposure and refinancing risk under tight external conditions; MTDS-anchored sequencing, full debt/CL coverage, and coordination under DSF/DLP/SDFP remain the core levers to stabilize portfolios and safeguard development spending.

Table 1. Stylized facts for 2024–25: key indicators referenced in Section 4.

Indicator	Unit	Year	Value
OECD interest outlays	Share of GDP	2024	3.3
	Share of GDP	2023	3
	Share of GDP	2021	2.4
OECD sovereign issuance	USD trillion	2025 (proj.)	17
	USD trillion	2023	14
Investor base (OECD)	Central bank share (%)	2021 → 2024	29 → 19
	Foreign investor share (%)	2021 → 2024	29 → 34
	Household share (%)	2021 → 2024	5 → 11
Developing economies	Total external debt service (USD bn)	2023	1400
	Interest component (USD bn)	2023	406
UNCTAD population	People spending more on interest than health/education (bn)	2024	3.4

Sources: OECD (2025) *Global Debt/Borrowing Outlook*; World Bank (2024) *International Debt Report*; UNCTAD (2025) *A World of Debt*. World Bank income thresholds per FY2026 Atlas method.

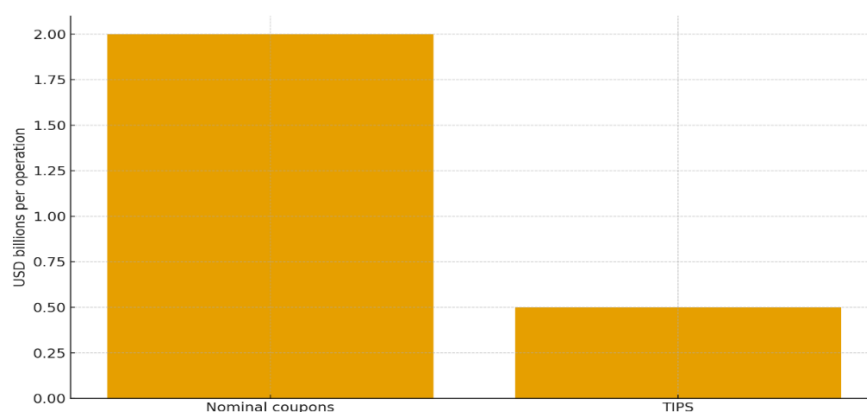
5. Comparative strategy toolkit

5.1 High-income countries: market-based, domestic-currency anchored

Core instruments and practices

(a) Predictable auction calendars and primary-dealer (PD) systems. HIC debt management offices (DMOs) anchor market liquidity with regular and predictable issuance, benchmark lines across the curve, and PD agreements that set quoting, participation, and reporting duties. OECD primary-market surveys document the near-universal use of auction calendars, standardised reopening practices to consolidate liquidity in on-the-run issues, and PD frameworks to support distribution and secondary-market making. These practices are now complemented by more frequent micro-liquidity diagnostics (bid-to-cover, tails, off-the-run turnover) to adjust tap sizes without disrupting the calendar.

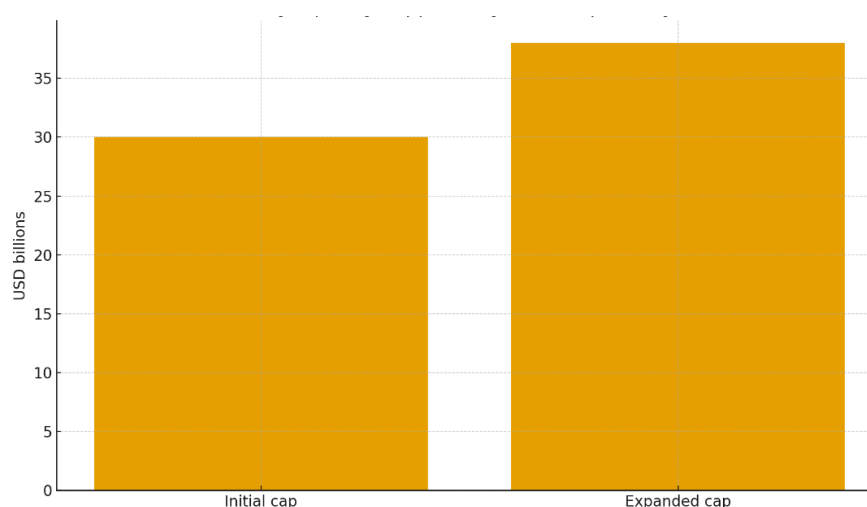
Figure 6. U.S. Treasury buybacks, per-operation limits for liquidity-support operations (launched May 2024).



Source: U.S. Treasury Office of Debt Management: Q4 2024 supplemental and TBAC charges detailing program specs (e.g., up to \$2.0bn per operation for nominal coupons; \$0.5bn for TIPS).

(b) Active liability management (buybacks/exchanges). Many HICs use buybacks and switches to smooth redemption profiles, retire off-the-run issues, and improve benchmark integrity without changing net issuance. The United States relaunched a regular liquidity-support buyback program in May 2024 and has since expanded it in size and frequency, alongside cash-management buybacks around lumpy tax dates, explicitly framed as market-functioning tools rather than a signal of stance.

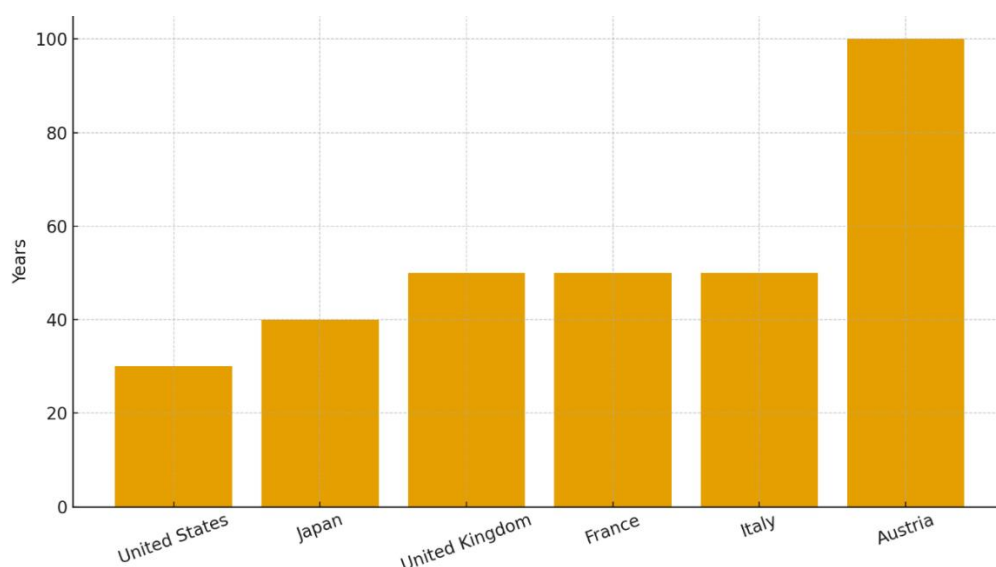
Figure 7. U.S. Treasury liquidity-support buybacks, quarterly maximum cap (initial \$30bn → expanded \$38bn).



Source: Official updates (TBAC materials) and news coverage of the July 2025 expansion.

(c) Integrated cash management. Treasuries manage target cash balances (often within a Treasury Single Account) and flex bills/CMBs to avoid cliff-edge issuance around settlement peaks or tax dates. The U.S. approach, maintaining a minimum cash buffer and deploying cash-management bills and buybacks to smooth flows, is a canonical example of integrating cash and debt policy to reduce forced short-term issuance at stressed times.

Figure 8. Ultra-long sovereign maturities by issuer (selected HICs): United States (30y), Japan (40y), United Kingdom (50y), France (50y), Italy (50y), Austria (100y).



Source: MOF Japan (40-year JGBs); UK DMO (50-year gilts); Agence France Trésor (OATs up to 50 years); Italian MEF (BTPs up to 50 years); OeBFA (Austria 100-year).

(d) Portfolio diversification. HICs generally fund in domestic currency with a diversified instrument set: fixed-rate notes/bonds across a full curve, inflation-linked lines, and in some cases ultra-long (30–50-year) maturities. Many OECD DMOs also issue sovereign sustainable (“green”) bonds, using standardized reporting frameworks; surveys point to rising linker shares for inflation hedging in investor mandates and a steady expansion of ESG programs since 2021.

(e) Market-functioning operations (Japan case). Japan’s Ministry of Finance runs Auctions for Enhanced-Liquidity (often called Liquidity Enhancement Auctions) targeted at off-the-run JGBs and operates a JGB Market Special Participants scheme (a PD-like club with specific obligations/privileges). In parallel, the Bank of Japan’s Securities Lending Facility (SLF) lends JGBs to alleviate settlement squeezes and repo frictions; the BoJ reviews link the changing use of the SLF to shifts in market functioning as purchase programs and yield-curve-control parameters evolved.

Strategic implications. In HICs with deep local-currency markets, DMOs optimize along the cost–risk frontier rather than trying to shift it.

Table 2. High-income country toolkit: practices, purposes, examples, and sources.

Practice	Purpose	Illustrative parameter/example	Source
Predictable calendars & PD systems	Anchor liquidity; stable benchmarks; distribution/market-making obligations	Monthly/quarterly auction calendars; reopenings to build lines	OECD 2024 Primary Markets Survey (Global Debt Report 2025)
Liability-management buybacks/switches	Smooth maturity walls; improve off-the-run liquidity without altering net issuance	US liquidity-support buybacks (since May 2024)	US Treasury TBAC charges (2024–2025); Treasury Q4 2024 supplemental

Integrated cash management (bills/CMBs & cash buffers)	Avoid issuance cliffs around tax dates/settlements; stabilize auctions	Cash-management bills; minimum target cash balances	US Treasury statements; MTDS guidance
Portfolio diversification (linkers, ultra-long, ESG)	Broaden investor base; hedge inflation; extend duration when premia allow	Ultra-long lines (30–50y); sovereign sustainable bonds	OECD Global Debt Report 2025; UK DMO; AFT; MEF; MOF Japan
Market-functioning operations (Japan)	Support secondary-market liquidity; ease settlement/repo squeezes	Liquidity Enhancement Auctions; JGB Market Special Participants; BoJ SLF	MOF Japan; Bank of Japan reports

Source references: OECD Global Debt Report 2025 (Primary Markets Survey; Liquidity Survey); U.S. Treasury TBAC charges/Q4 2024 supplemental; MTDS guidance; MOF Japan; Bank of Japan.

Three rules of thumb follow from recent practice:

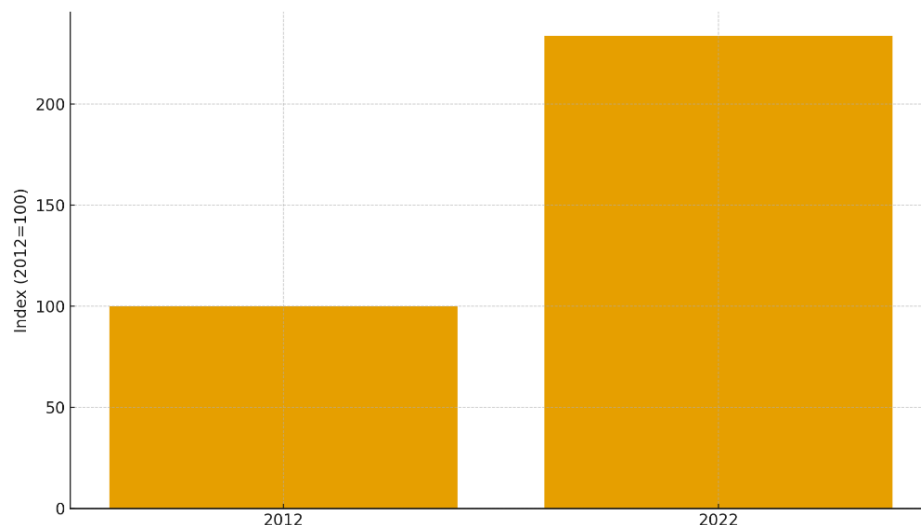
1. **Keep issuance regular and predictable**, adjusting tactically at the margin (e.g., bills vs. coupons, linker share, tap sizes) as term premia, inflation risks, and investor-base dynamics evolve.
2. **Use liability-management operations to support liquidity and smooth maturity walls**, particularly when refinancing needs are large or when quantitative-tightening reduces captive holdings. The U.S. experience since 2024 shows buybacks can enhance secondary-market functioning without altering the strategic duration target.
3. **Integrate cash and debt**, relying on bills/CMBs and target cash buffers (and, where available, cash-management buybacks) to avoid issuance cliffs around tax dates and settlement spikes. This reduces the probability of forced, high-cost front-end issuance and stabilizes auction performance.

Collectively, these tools, predictable calendars/PDs, liability-management operations, integrated cash policy, diversified domestic-currency instruments, and targeted market-functioning facilities, allow HIC DMOs to lengthen ATM when term premia permit, tilt toward fixed-rate when inflation risks rise, and preserve benchmark liquidity even as investor bases rotate in a post-QE/QT environment.

5.2 Low-income countries: risk containment, concessional anchor, market building

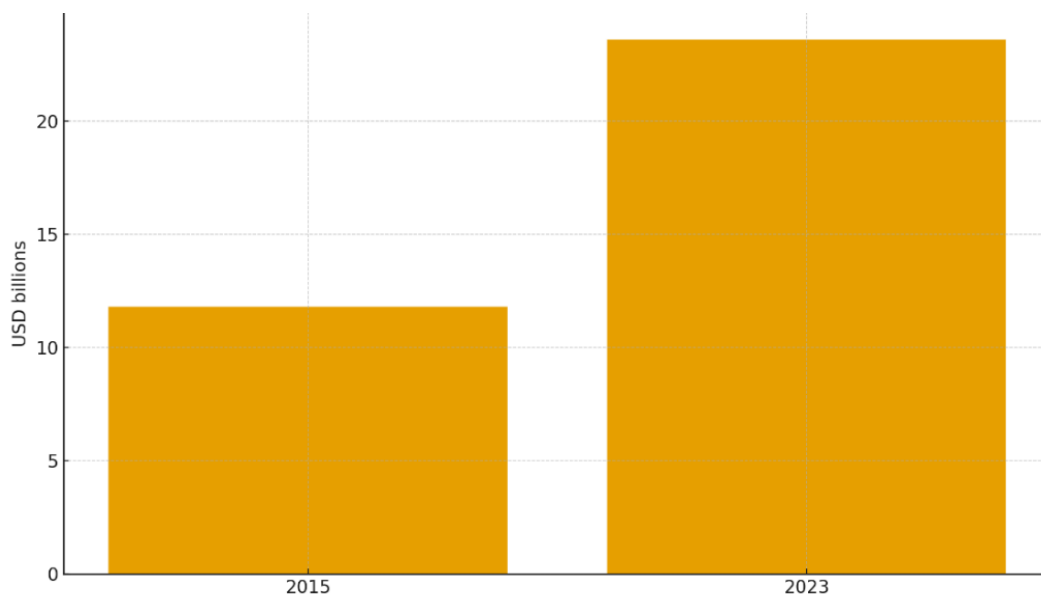
Core instruments and practices

(a) Concessional external finance + risk-based limits. LICs prioritize IDA and other IFI concessional flows to minimize cost and FX risk. Borrowing is framed by the LIC-DSF (risk ratings guide envelopes) and by the IMF Debt Limits Policy (DLP) in programs; IDA's SDFP adds country-specific performance actions on transparency and arrears prevention.

Figure 9. IDA-eligible countries: external debt stock index (2012=100 → 2022=234).

Source: World Bank, *International Debt Report* (press release on IDA-eligible debt +134% 2012→2022).

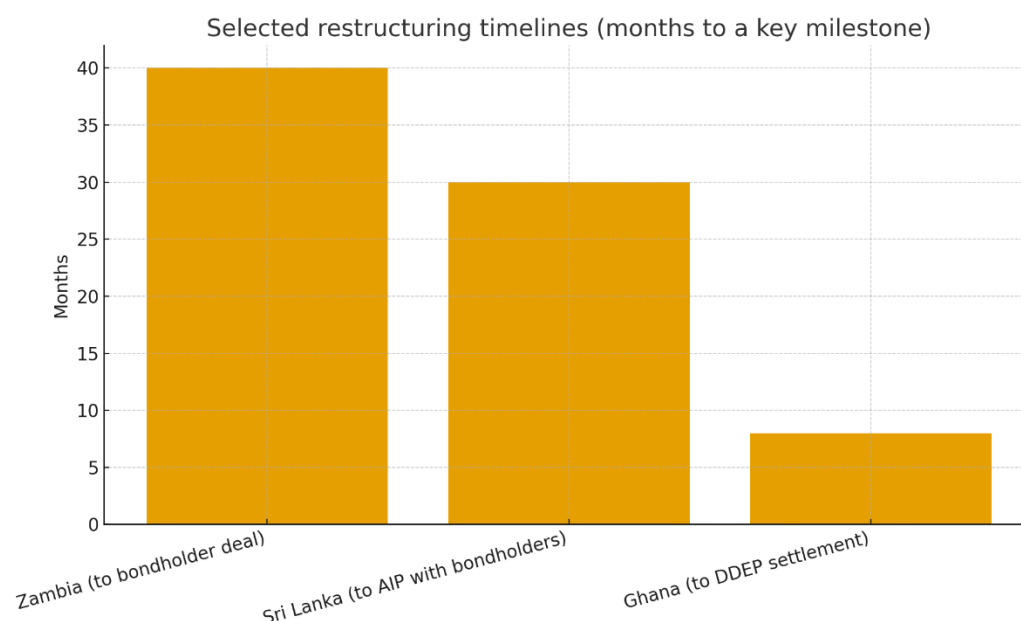
(b) MTDS-led sequencing. MTDS operationalises stepwise domestic market development: establish T-bill markets and cash management first (policy signalling, smoothing cash flows), then extend into short- and medium-tenor local-currency bonds as market microstructure, settlement, and the investor base deepen.

Figure 10. IDA-eligible countries: interest payments on external debt (USD billions, 2015 vs 2023).

Source: UN SDG Goal 17 report: interest payments by IDA-eligible countries doubled since 2015 to \$23.6bn (2023).

(c) Contingent liabilities (CLs) & guarantees. LICs should record and monitor SOE/PPP CLs within DSF templates, avoid collateralized/opaque deals, and strengthen debt recording and reporting to meet DeMPA benchmarks.

(d) Creditor coordination when in distress. Where solvency/liquidity gaps emerge, use the G20 Common Framework or ad-hoc committees. Recent cases illustrate varied paths: Zambia needed >3 years from default to a bondholder deal under the CF architecture; Ghana executed a Domestic Debt Exchange in 2023 while external talks proceeded; Sri Lanka combined domestic optimization (2023) with an agreement-in-principle with bondholders (Nov 2024) alongside its IMF program.

Figure 11. Selected restructuring timelines (months to a key milestone).

Notes: Zambia—default (Nov-2020) to bondholder deal (2024) $\approx$ 40 months; Sri Lanka—default (May-2022) to AIP with bondholders (Nov-2024) $\approx$ 30 months; Ghana—DDEP launch (Dec-2022) $\rightarrow$ settlement (Aug-2023) $\approx$ 8 months. Sources: Reuters/Zambia; IMF press notes on Sri Lanka; Ghana MoF DDEP settlement notice.

Table 3. LIC strategy toolkit, practices, purposes, steps, and sources.

Practice	Purpose	Illustrative steps	Key source(s)
Concessional external finance (IDA/IFIs)	Lower cost & FX risk; preserve fiscal space; align with DSF risk ratings	IDA grants/credits; MDB and IMF concessional windows	World Bank SDFP; LIC-DSF; IMF DLP guidance
MTDS-led sequencing of local markets	Reduce rollover/FX risk; build LCY curve and cash management capacity	T-bills $\rightarrow$ short LCY bonds $\rightarrow$ medium tenors as microstructure deepens	MTDS Guidance Note (2017)
Contingent liabilities (CLs) & guarantees management	Limit hidden risks; improve transparency and investor confidence	SOE/PPP registers; legal ceilings; reporting in debt statistics	DeMPA methodology; LIC-DSF templates
Creditor coordination in distress	Timely, coordinated restructurings; restore sustainability & access	G20 Common Framework; ad-hoc creditor committees	Reuters/official communiques on Zambia, Ghana, Sri Lanka

Sources: LIC-DSF; IMF DLP Guidance (2021); IDA SDFP; MTDS (2017); DeMPA; case materials for Zambia, Ghana, Sri Lanka.

6. Case vignettes

6.1 United States (HIC, reserve-currency issuer)

Approach: Large, regular, and predictable issuance across bills, notes, bonds; PD system and transparent quarterly refunding communication.

Recent innovations: launch of routine **buybacks** in 2024 for liquidity support; designation of a six-week bill benchmark; targeted TIPS sizing. **Cash-balance policy** and CMBs used to smooth flows.

Lesson: Active market-functioning tools can improve liquidity and help DMOs manage large refinancing waves without materially changing duration risk.

6.2 Japan (HIC, very high debt ratio)

Approach: Full local-currency funding with long maturities; **Liquidity Enhancement Auctions** to support off-the-run issues; **JGB Market Special Participants** framework to anchor distribution; central bank operations affect market micro-structure.

Lesson: With very high stocks, micro-liquidity tools and close DMO–market engagement are vital to maintain curve functioning.

6.3 Brazil (upper-middle income, deep local market)

Approach: Formal **Annual Borrowing Plan** sets cost-risk targets and instrument mix (fixed, floating LFTs, and inflation-linked NTN-B), with tactical revisions as market conditions evolve.

Lesson: Publishing targets and adjusting mix (e.g., more floating-rate when duration premia spike, then re-lengthening later) helps maintain access while containing risk—transparency itself reduces term premia.

6.4 Ghana (LIC/LMIC, market access with distress)

Approach: Following loss of market access, Ghana executed a **Domestic Debt Exchange** (no nominal principal haircut; step-up coupons), alongside IMF support and ongoing external restructuring.

Lesson: Domestic operations can alleviate near-term gross financing needs but require strong communication to preserve banking-system stability and secondary-market functioning.

6.5 Sri Lanka (LMIC, post-default restructuring)

Approach: IMF program with **Domestic Debt Optimization** and negotiation with bilateral and private creditors; DSF-anchored targets guide the restructuring envelope.

Lesson: Integrating domestic and external operations within a macro program and a credible MTDS is essential for restoring market access.

6.6 Zambia (LIC, Common Framework)

Approach: First “complete” CF case after multi-year negotiations with official and private creditors.

Lesson: Creditor coordination remains slow; enhancing frameworks and transparency (debt holder profiles, collateral mapping) is central to timelier resolutions.

7. Comparative summary table

Table 1. Debt management, typical contrasts by income group

Dimension	High-Income Countries (HICs)	Low-Income Countries (LICs)
Primary funding	Domestic currency, deep markets, predictable calendars	Concessional/semiconcessional external finance; nascent local markets
Instruments	Bills, fixed-rate bonds across curve, linkers; green/ESG; buybacks/switches	T-bills; few LCY tenors; occasional FX Eurobonds; capped by DLP/DSF
Risk profile	Low FX risk; manage refinancing via long ATM and buybacks	Higher FX/refinancing risk; focus on reducing short-term and FX exposures
Market plumbing	PD systems, PD agreements, auction tech, secondary-market makers	Building issuance platforms, primary dealers, and settlement systems
Governance	Published strategies, frequent reporting; integrated cash management	MTDS adoption increasing; DeMPA used to upgrade legal/institutional base

(Principles from IMF–World Bank Guidelines, MTDS, DeMPA.)

8. Methodology blueprint for empirical testing (for future application)

A cross-country panel (2010–2024) could estimate:

$$\text{IntCost/GDP}_{it} = \alpha + \beta_1 \text{ATM}_{it} + \beta_2 \text{FXShare}_{it} + \beta_3 \text{BillsShare}_{it} + \beta_4 \text{InflationLinkedShare}_{it} + \beta_5 \text{Debt/GDP}_{it} + \beta_6 \text{PolicyRate}_{it} + \gamma_i + \delta_t + \varepsilon_{it}$$

Where:

Int Cost/GDP_{it} = Interest cost as a percentage of GDP for the country *i* in year *t*

α = Constant (intercept)

ATM_{it} = Average Time to Maturity of government debt

FX Share_{it} = Share of foreign-currency-denominated debt

Bills Share_{it} = Share of short-term treasury bills in total debt

Inflation Linked Share_{it} = Share of inflation-indexed debt instruments

Debt/GDP_{it} = Public debt-to-GDP ratio

Policy Rate_{it} = Central bank policy interest rate

γ_i = Country-specific fixed effects

δ_t = Time-specific fixed effects

ε_{it} = Idiosyncratic error term.

9. Policy implications

For high-income countries

1. **Lean on predictability, adjust tactically:** maintain calendar discipline; fine-tune mix (bills vs. coupons; linker share) as term premia and QT evolve.
2. **Use market-functioning tools:** routine buybacks and taps can improve off-the-run liquidity and support benchmark integrity without altering net issuance.
3. **Integrate cash and debt:** smooth tax-date and settlement peaks with CMBs and cash-balance policies to reduce forced issuance.

For low-income countries

1. **Anchor in MTDS + DSF + DLP/SDFP:** adopt a rolling MTDS to reduce FX and refinancing risk; commit to transparency and creditor coordination to preserve concessional terms.
2. **Sequence market development:** build T-bill markets and cash management first; only then extend tenors and broaden the investor base (pensions/insurance) to lower rollover risk sustainably.
3. **Avoid risky structures:** limit collateralized and opaque borrowing; fully record SOE guarantees and PPP liabilities; publish comprehensive debt data.
4. **In distress, integrate operations:** align domestic debt operations with external restructuring within a macro program to avoid bank-sector damage and regain market access.

10. Implementation playbook (checklist)

1. **Adopt/refresh MTDS** with clear cost–risk targets (ATM, FX share, refixing profile) and scenario analysis.
2. **Publish an annual plan** (e.g., Brazil’s ABP model) with instrument ranges and risk targets; revise when conditions change.
3. **Strengthen institutions via DeMPA**—legal mandate, front/middle/back-office separation, auction procedures, debt recording, and reporting.
4. **Develop the investor base:** PD agreements, predictable calendars, and transparent data to cultivate domestic buy-and-hold and trading liquidity (linkers/retail/green lines where relevant).
5. **Integrate cash and debt** (TSA, cash forecasts, CMBs) to minimise issuance volatility.

11. Limitations

This comparative analysis synthesises standards and high-level evidence; country heterogeneity (exchange-rate regimes, capital controls, pension systems) means optimal strategies vary. Some recent developments (e.g., evolving creditor practices under the Common Framework) remain in flux and case-specific.

12. Conclusion

Debt management is about *choices under constraints*. HICs choose along a rich, efficient frontier—managing liquidity and term premia within deep local markets. LICs must first shift the frontier—by anchoring in concessional finance, reducing FX/refinancing risk, and investing in institutions and local markets. International standards (Guidelines, MTDS, DeMPA) remain the common grammar; the art of policy lies in sequencing and credibility. With interest costs elevated and refinancing walls approaching, countries that pair transparent strategies with fit-for-purpose tools—from buybacks to better bill markets—will weather the cycle with fewer scars.

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