

IMF Publication

Review of the Adequacy of the Fund's Precautionary Balances

INTERNATIONAL MONETARY FUND



IMF POLICY PAPER

REVIEW OF THE ADEQUACY OF THE FUND'S PRECAUTIONARY BALANCES

April 2024

IMF staff regularly produces papers proposing new IMF policies, exploring options for reform, or reviewing existing IMF policies and operations. The following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its March 20, 2024 consideration of the staff report.
- The **Staff Report**, prepared by IMF staff and completed on February 22, 2024 for the Executive Board's consideration on March 20, 2024.

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International Monetary Fund
Washington, D.C.



IMF Executive Board Discusses the Adequacy of the Fund's Precautionary Balances

FOR IMMEDIATE RELEASE

Washington, DC – April 4, 2024. The Executive Board of the International Monetary Fund (IMF) concluded the 2024 *Review of the Adequacy of the Fund's Precautionary Balances*.¹ The review took place somewhat ahead of the standard two-year cycle, in view of the imminent attainment of the current indicative medium-term target of SDR 25 billion.

The Fund's precautionary balances consist of the general and special reserves. They are a key element of the IMF's multi-layered framework for managing financial risks. Precautionary balances provide a buffer to protect the Fund against potential losses resulting from credit, income, and other financial risks. For this reason, they help protect the value of reserve assets represented by member countries' positions in the Fund and underpin the exchange of assets through which the Fund provides financial assistance to countries with balance of payments needs.

The review was based on the assessment framework established in 2010, which uses an indicative range for precautionary balances, linked to a forward-looking measure of total IMF non-concessional credit, to guide decisions on adjusting the medium-term target over time. It takes into account the macroeconomic environment, the characteristics of Fund lending, and the financial and operational risks faced by the Fund. The framework also allows for judgement in setting the target based on a broad range of factors that affect the adequacy of precautionary balances.

Executive Board Assessment²

Executive Directors welcomed the opportunity to review the adequacy of the Fund's precautionary balances, following the last review in December 2022. They stressed that maintaining an adequate level of precautionary balances remains a key element of the Fund's multilayered risk management framework to mitigate financial risks, safeguard the strength of its balance sheet, and protect the value of members' reserve positions in the Fund.

Directors agreed that the current transparent and rules-based framework adopted in 2010 for assessing the adequacy of precautionary balances remains broadly appropriate. They recognized the important role of judgment and Board discretion in the framework.

¹ This press release summarizes the views of the Executive Board as expressed during the March 20, 2024, Executive Board discussion based on the paper entitled "Review of the Adequacy of the Fund's Precautionary Balances."

² At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.IMF.org/external/np/sec/misc/qualifiers.htm>.

Directors highlighted that the framework's methodology has continuously evolved to strengthen its robustness, and that the framework has led to a strong increase in the Fund's reserves. Noting staff's review of the developments in the capital adequacy approaches of International Financial Institutions and of the Basel regulatory approach, Directors did not see a need for major adjustments. They welcomed the methodological enhancements to the framework to allow for judgmental consideration of commitments under precautionary arrangements and the development of a model based quantitative measurement of credit risks to inform the Board's judgement.

Directors welcomed that precautionary balances have continued to increase and are expected to reach the current medium-term target of SDR 25 billion by the end of FY2024, for the first time since the introduction of the framework. Noting the attainment of the target will be ahead of schedule, a number of Directors saw this as an opportunity to review policies related to the pace of accumulation of precautionary balances, including the surcharges policy. A number of Directors also saw merit in considering ways to utilize excess precautionary balances accumulated above the target, including to address the challenges faced by low-income countries. Directors welcomed that coverage metrics have continued to strengthen, despite Fund lending in response to multiple shocks remaining near historical peaks.

Directors concurred that while financial risks remain high, they are broadly unchanged from the last review, taking into account the strengthening of some risk mitigants. Measures of credit risk in the lending portfolio have generally increased reflecting the more challenging economic and financial landscape, and the likelihood of arrears has somewhat risen, albeit remaining at considerably low levels. Notwithstanding, credit concentration risks and near-term bunching of repurchases have eased slightly from high levels, commitments under precautionary arrangements have declined, and the capacity of the burden sharing mechanism has increased. Medium term operational income remains strong, although subject to concentration risk, and while investment risks are elevated, the medium-term outlook for investment returns has improved.

Directors broadly agreed that the current target of precautionary balances, together with other elements of the financial risk management framework and the IFRS 9 provisioning approach, provides a robust level of financial protection for the Fund's balance sheet. Most Directors concurred with retaining the current medium-term target for precautionary balances of SDR 25 billion, with a few Directors in favor of raising the target. While noting the expected upward shift in the trajectory of Fund credit, Directors recognized that the target is expected to remain within the indicative range of the forward-looking credit measure, above its mid-point in the desk survey demand scenario, and closer to the lower bound in the adverse scenario. Notwithstanding, a few Directors were skeptical of the assumption of only a partial drawdown on precautionary arrangements under the adverse scenario.

Directors supported increasing the minimum floor for precautionary balances from SDR 15 billion to SDR 20 billion. They emphasized the need to maintain an adequate minimum level of reserves to protect against an unexpected rise in credit or deterioration in credit risks and ensure sufficient investment income. Directors agreed that higher and longer

lasting credit peaks and higher and more volatile commitments, justifies a higher base level of precautionary balances. A higher floor would also help to reduce income risks, given the Fund's reliance on lending income. Investment income from precautionary balances is an important source of income diversification, helping to stabilize Fund reserves and income during periods of lower Fund credit.

Directors called for a continued close monitoring of the adequacy of precautionary balances to ensure that the Fund remains financially strong in the context of large global uncertainty. They supported maintaining the biennial review cycle, with earlier reviews if warranted by developments that could materially affect the adequacy of precautionary balances.



February 22, 2024

REVIEW OF THE ADEQUACY OF THE FUND'S PRECAUTIONARY BALANCES

EXECUTIVE SUMMARY

Precautionary balances (PBs) are a key element of the Fund's multilayered framework to mitigate financial risks. They are designed to address residual financial risks of the Fund, particularly from non-concessional lending, after applying other elements of the multilayered credit risk management framework. PBs consist of the adjusted balances in the general and special reserves.

PBs have continued to grow and are now expected to reach the SDR 25 billion medium-term target by the end of FY2024. PBs reached SDR 24.4 billion as of end-December 2023, from SDR 21.6 billion as of end-September 2022, consistent with the persistently elevated levels of credit outstanding under the General Resources Account (GRA). Coverage metrics have continued to strengthen notwithstanding rising Fund lending in response to continued shocks.

In view of the imminent attainment of the medium-term target, this paper reviews the adequacy of the Fund's PBs, ahead of the standard two-year cycle due in December 2024. The assessment remains guided by the transparent and rules-based framework adopted for previous adequacy reviews, following a re-examination of the framework to confirm that it remains fit for purpose after several years of implementation. Under the framework, the Board sets a medium-term target for PBs based on a comprehensive assessment of risks facing the Fund and an indicative range of 20-30 percent for the ratio of PBs to a forward-looking credit measure, as well as a minimum floor. The framework also envisages a role for judgment in setting the target.

Staff's review of the robustness of the PBs adequacy assessment framework suggests that it remains broadly adequate considering the special characteristics of the Fund. Since inception in 2010, the framework has accompanied a significant increase in the Fund's reserves buffers and several methodological aspects related to its application have been strengthened. A review of innovations in capital adequacy approaches of International Financial Institutions (IFIs) and the Basel regulatory approach does not suggest a need for major adjustments. Staff proposes to introduce some methodological enhancements in the framework's application, reflecting feedback received by Directors at the time of the last review, by providing further analysis to support the judgmental consideration of commitments under precautionary arrangements in setting the PB target. The analytical underpinnings for measuring credit risk are also further strengthened.

Amid a challenging global economic environment, the overall balance of credit and financial risks to the Fund is broadly unchanged from the previous review. Credit outstanding remains near historical peaks and its expected trajectory going forward has shifted further upward since the last review. Measures of credit risk in the Fund's lending portfolio generally point to some further increase, with new empirical analysis by staff suggesting that the likelihood of new arrears has risen somewhat, albeit remaining relatively modest overall. Market-based solvency indicators also signal rising stress, especially in some of the largest exposures. At the same time, credit concentration and the near-term bunching of repurchases have eased slightly from high levels, commitments under precautionary arrangements have declined, and the capacity of the burden sharing mechanism has increased. Medium-term operational income remains strong but is subject to concentration risk. Investment risks are elevated even though the medium-term outlook for investment returns has improved given the recent increase in real interest rates.

Against this general backdrop, staff proposes to retain the current target for PBs at SDR 25 billion. The medium-term PB target remains comfortably within the indicative range and above its mid-point in the most plausible lending demand scenarios and approaches the lower bound in the adverse scenario. While credit outstanding has increased compared to end-September 2022, there are no expectations of a major further surge in the demand for Fund resources at this stage. The overall balance of credit and financial risks is broadly stable, with a stronger burden sharing capacity providing for some additional risk mitigation. The current level of PBs, together with other elements of the financial risk management framework and the IFRS 9 provisioning framework, provides a robust level of financial protection for the Fund's balance sheet and creditor claims.

Staff proposes to increase the minimum PB floor to SDR 20 billion in response to expected trends in credit, income, and economic volatility. The floor is designed to maintain a minimum coverage of credit outstanding and help maintain a sustainable income position by ensuring an asset base for investment income generation. A higher floor is justified by the expectation of higher and longer credit peaks, with elevated commitments under precautionary arrangements, and would help reduce income risks.

Staff will continue to closely monitor the adequacy of PBs to ensure that the Fund remains financially strong in the context of large global uncertainties. Staff proposes to maintain biennial review cycles, with earlier reviews if there are developments that could materially affect the adequacy assessment, such as significant deviations of Fund lending from previous projections or increases in credit or financial risks, including due to changes in lending policies.

Approved By
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Glossary

ADB	Asian Development Bank
AfDB	African Development Bank
BBA	Bilateral Borrowing Agreements
BIS	Bank for International Settlements
BOP	Balance of Payments
EA	Endowment Subaccount
EBRD	European Bank for Reconstruction and Development
EFF	Extended Fund Facility
FI	Fixed-Income Subaccount
FCC	Forward Commitment Capacity
FCL	Flexible Credit Line
FX	Foreign Exchange
FY	Fiscal Year
GFC	Global Financial Crisis
GIR	Gross International Reserves
GRA	General Resources Account
IA	Investment Account
IAS	International Accounting Standards
IDB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
IFIs	International Financial Institutions
IFRS	International Financial Reporting Standards
NAB	New Arrangements to Borrow
PBs	Precautionary Balances
PFA	Post Financing Assessment
PPM	Post Program Monitoring
PLL	Precautionary and Liquidity Line
RF	Random Forest
RFAs	Regional Financial Agreements
RFI	Rapid Financing Instrument
RTP	Reserve Tranche Positions
SBA	Stand-By Arrangement
SCA-1	First Special Contingent Account
SDR	Special Drawing Rights
TA	Trust Assets
UCT	Upper-Credit Tranche
WEO	World Economic Outlook

INTRODUCTION

1. Precautionary balances (PBs) are a key element of the Fund's multilayered framework to mitigate financial risks and safeguard members' resources. They provide a buffer against potential losses resulting from credit, income, and other financial risks. PBs, which consist of adjusted balances in the general and special reserves, stood at SDR 24.4 billion at end-December 2023 compared to SDR 21.6 billion at end-September 2022.

2. The current medium-term PB target is expected to be reached in the current fiscal year. At the 2022 standard review, the Executive Board agreed that despite the higher trajectory of credit outstanding than projected previously, the medium-term target for PBs was expected to remain within the indicative range of the forward-looking measure in the most plausible scenario. Directors broadly agreed to retain the target of SDR 25 billion and minimum floor of SDR 15 billion. They noted that the pace of accumulation was slightly faster than projected earlier, with the target expected to be reached in early FY2025, or late FY2024. Amid the weakening global economic and financial outlook, most Directors supported maintaining the standard two-year review cycle, but would welcome an interim review should lending developments diverge significantly from the papers' projections, or credit and other financial risks rise materially, including due to changes in lending policies.

3. In view of the imminent attainment of the target, this paper undertakes a review of the adequacy of the Fund's PBs ahead of the standard two-year cycle due in December 2024. This review, the fourth since the start of the pandemic, is being conducted against the backdrop of continued high levels of credit outstanding and the challenges still facing the world economy after the shocks of COVID-19 and Russia's war in Ukraine. The assessment remains guided by the transparent and rules-based framework adopted for previous adequacy reviews, following a re-examination of the framework to confirm that it remains fit for purpose after several years of implementation.

4. This review complements other recent Executive Board reviews of topics related to the Fund's PBs:

- *The Review of the Fund's Income Position for FY2023 and FY2024*, discussed by the Board on April 27, 2023, maintained the margin for the rate of charge for IMF lending at 100 basis points over the SDR interest rate for FY2024.¹
- *The Annual Review of the Investment Account (IA) and Trust Assets (TA) Investment Strategy for FY2023*, completed on July 21, 2023, discussed investment performance, portfolio developments, implementation of the strategy refinements approved by the Board in January 2022, and

¹ See [Review of the Fund's Income Position for FY2023 and FY2024](#).

progress on operationalizing the Board's commitment for the IA and TA to be invested responsibly.

- *The review of the Flexible Credit Line, the Short-Term Liquidity Line, and the Precautionary and Liquidity Line, and Proposals for Reform* discussed by the Board on October 2, 2023, focused on further strengthening the Global Financial Safety Net (GFSN) and ensuring that the IMF's precautionary arrangements toolkit remain fit for purpose as external risks become more prevalent, protracted, and diverse.²

5. This paper is organized as follows. The first section describes the framework that guides the assessment of reserves adequacy and discusses its continued relevance. The paper then takes stock of developments in PBs and credit, income, and other financial risks since the 2022 review. The final section assesses the adequacy of the current medium-term target and the minimum floor, and discusses the projected pace of accumulation of PBs under existing policies and different demand scenarios.

THE FRAMEWORK FOR ASSESSING RESERVE ADEQUACY

The current framework for assessing the adequacy of the Fund's precautionary balances was adopted in 2010, drawing on approaches used in other International Financial Institutions (IFIs), adapted to the Fund's specific characteristics, and complemented by an element of judgment. The framework has been applied in eight reviews since then. Since its inception, the framework has led to a significant increase in the Fund's reserves buffers and its methodology has been strengthened. A review of developments of capital adequacy approaches of IFIs and the Basel regulatory approach does not suggest a need for major adjustments. Staff proposes to introduce additional methodological enhancements in the framework's application reflecting feedback received by Directors at the time of the last review, notably by providing some analysis of the impact of possible drawdowns under precautionary arrangements on the credit measure to support their judgmental consideration in setting the PB target. The analytical underpinnings for measuring credit risk are also further strengthened.

A. Precautionary Balances

6. To fulfill its mandate, the Fund needs a strong balance sheet which ensures that claims to members meet the reserve asset status. Fund lending is based on an exchange of assets. Members whose currencies are used in the Fund's lending receive, in exchange, a liquid claim on the Fund (reserve tranche position) that earns interest based on the SDR interest rate. Members' reserve tranche positions, which are part of members' reserve assets, must be fully liquid and readily

² See [Review of the Flexible Credit Line, the Short Term Liquidity Line, and the Precautionary and Liquidity Line, and Proposals for Reform](#).

available for use, if needed.³ In addition to a prudent liquidity management to safeguard the availability of the reserve asset, the Fund needs a strong risk management framework to ensure that members' reserve positions remain of high quality.

7. PBs are an important tool for managing financial risks of the Fund and ultimately protect its balance sheet (Annex I). The Fund faces a range of financial risks. Credit risk is inherent in the Fund's unique financing role in the international financial architecture and is typically the predominant financial risk. Lending policies such as conditionality, access limits and the exceptional access framework, policies on charges and maturities, and safeguards assessments provide a multilayered framework, together with the Fund's de facto preferred creditor status, to mitigate the risk of arrears and protect against ultimate losses. The Fund also faces risks to its liquidity and adequacy of lending resources, risks to operational income and cash flows, market risks, and risks of financial losses in operations. PBs provide buffers to absorb potential losses from residual credit, income, and other financial risks that remain after the existing mitigations (Box 1).

8. The Fund's gold holdings lend strength to its balance sheet by adding credibility to the PBs framework but are not considered part of PBs. The Fund's gold holdings underpin the Fund's liquidity and therefore its credibility and strengthen the creditworthiness of the Fund in its role as the central institution of the international monetary system by enhancing the institution's ability to borrow should the need arise. However, gold holdings are not part of or an alternative to PBs due to their restricted use from legal, policy and accounting perspectives.

Box 1. Typology of Fund Financial Risks and Mitigation

- **Credit risk** refers to any borrowing member's failure to fulfill its financial obligations to the Fund, including repurchases (repayment of the principal of the loans) and charges and surcharges (interests/fees), which would result in income losses to the Fund.^{1/} Credit risk can fluctuate widely because the Fund under its mandate does not target a particular level of lending or lending growth. This risk is mitigated using a multilayered risk management framework, which ensures that residual credit risks to the Fund are low.
- **Operational income and cashflow risk** arise when the Fund's operational income and cashflows are insufficient to cover operational expenses and accumulate PBs to the target level. While the broadening of non-lending income sources under the Fund's 2008 income model is helping mitigate this risk, currently the Fund remains dependent on lending income to cover the bulk of its activities. Risk is managed by containing operational expenses, following a prudent strategy for the Investment Account (IA), setting the margin for the basic rate of charge on Fund lending at an appropriate level, and accumulating PBs.

³ The *Fund's Balance of Payments and International Investment Position Manual Sixth Edition (BPM6)* defines reserve assets as "those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes ..." To be readily available, reserve assets generally should be of high quality. See *BPM6*, Chapter 6, paragraphs 6.64 and 6.70.

Box 1. Typology of Fund Financial Risks and Mitigation (concluded)

- **Adequacy and liquidity of lending resources risk** is the risk that available financial resources are insufficient to cover members' financing needs and to repay the Fund's obligations as they fall due, including under Fund borrowing agreements. Mitigation is provided through regular liquidity reviews in the near-term, and quota reviews and Fund borrowing over the medium-term. In addition, the Fund retains a prudential balance of quota and borrowed resources to help manage liquidity risks and provide a buffer to support the encashability of members' reserve tranche positions and claims under borrowing.^{2/} Liquidity is monitored daily through the Forward Commitment Capacity (FCC), which measures resources available to finance new commitments over the next 12 months.
- **Financial risk related to the Fund's investment activities** refers specifically to assets held in the Investment Account (IA), comprising the Endowment Subaccount (EA) and Fixed-Income Subaccount (FI).^{3/} Market risk is the predominant source of risk in the investment portfolio. Market risks are mitigated through high-level strategic risk parameters defined in the Board approved Investment Rules and Regulations (Rules), additional key risk controls (e.g., credit rating threshold by asset, issuer concentration limits), and diversification requirements.
- **Operational risk** refers to the risk of losses attributable to errors or omissions in the Fund's day-to-day administration. This risk is mitigated through strong internal controls.

1/ This can be related to but is distinct from risks to program performance under Fund arrangements that give rise to review delays and unmet program conditionality.

2/ The prudential balance is currently set at 20 percent of the quotas of members participating in the financing of IMF transactions (Financial Transaction Plan members), because borrowed resources are not currently activated.

3/ Amounts in the FI subaccount generally correspond to the Fund's reserves that are treated as PBs.

9. PBs currently comprise adjusted balances in the general and special reserves:^{4,5}

- *Special reserve* – established as a first line of defense to absorb administrative losses. It was funded initially by the proceeds from a gold investment program, and later with net income allocations. Under the Fund's Articles, no distributions (dividends) can be made from the special reserve.
- *General reserve* – established to absorb capital losses and meet administrative losses. It has been funded through net income allocations. Reserves accumulated in the general reserve may be distributed to members, in proportion to their quota, if the Board approves such decision by a 70 percent majority of the total voting power.

⁴ Prior to its full distribution in the context of Sudan's arrears clearance in 2021, precautionary balances also included balances in the First Special Contingent Account (SCA-1) (Annex II).

⁵ PBs do not include the portion of the special reserves attributed to the gold profits and invested in the endowment because, in setting up the endowment, the Board recognized that its sole purpose would be to generate income. On the asset side, the Fund's reserves treated as PBs are either invested in the Fixed Income subaccount or held in SDRs and currencies. Starting from May 2021, PBs are adjusted for the impact of the cumulative IAS 19 gain and losses.

B. The Rules-Based Framework

10. The Fund's current framework for assessing PBs was adopted in 2010 in response to the Global Financial Crisis (GFC) and related increase in Fund lending.⁶ The framework was conceived as a transparent and rules-based approach that would allow for flexibly adjusting the PB target over time.

11. The 2010 framework comprises several elements (Figure 1):

- **An indicative range for the reserve coverage ratio**, set at 20 to 30 percent of a forward-looking measure of credit outstanding. This element draws on the financial risk management and capital-adequacy approaches in other IFIs, adapted to the specific circumstances of the Fund and in particular the demand-driven nature of its lending portfolio.⁷ This range was also expected to provide a reasonable probability of ensuring that reserves exceed the Fund's largest individual credit exposures. The Executive Board recognized that a reasonable coverage does not necessarily imply that the level of PBs always exceeds the largest individual exposure, but it should do so most of the time, as indicated by historical experience.⁸
- **A forward-looking credit measure** to anchor the range—the three-year average of credit outstanding covering the past twelve months and projections for the next two years—which helps smooth year-to-year volatility of credit.⁹ Commitments under precautionary arrangements including Stand-by Arrangements, FCL, PLL, and SLL, are excluded from the credit measure used to derive the indicative range but are considered by the Board judgmentally when setting the target.
- **A minimum floor to protect against an unexpected increase in credit risks, particularly after periods of low credit.** As it takes considerable time to rebuild PBs, especially after periods of low credit, the floor provides a buffer in the face of an unexpected increase in credit risks. Also, the floor helps maintain a sustainable income position under the New Income Model (NIM) by ensuring an asset base for investment income generation, thus improving the resilience of

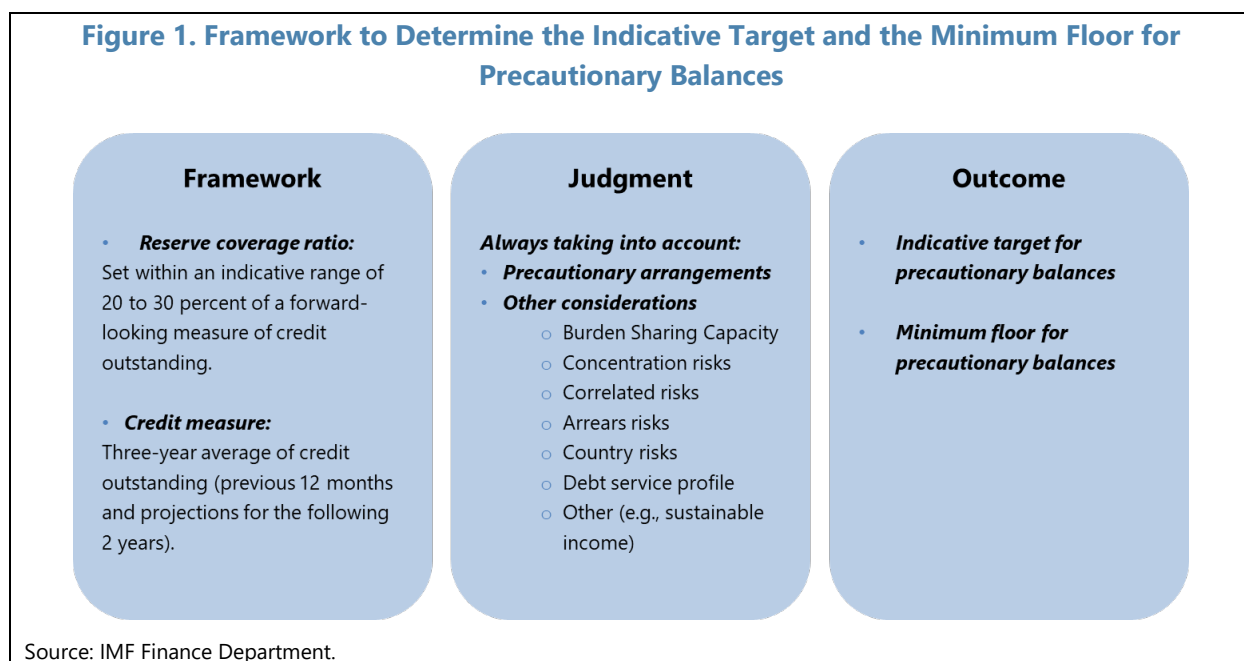
⁶ See [Public Information Notice: IMF Board discusses the Adequacy of the Fund's Precautionary Balances, 2010 Review of the Adequacy of the Fund's Precautionary Balances](#).

⁷ The framework also has elements in common with the methodologies used by rating agencies in assessing capital adequacy in supranational lending institutions (see Annex II in [2016 Review of the Adequacy of the Fund's Precautionary Balances](#)).

⁸ From August 1985 to July 2010, the Fund's average credit exposure to the largest borrower was 27 percent.

⁹ The two-year projection is based on scheduled net disbursements under existing non-precautionary arrangements. The original methodology does not require an explicit analysis of possible future arrangements, but they could be included in the projections if their probability were assessed to be high. Scenarios on future arrangements have been included since 2020, which shows how the indicative range would be affected by different projections and in turn can inform Board judgment. All methodologies assume no delays in scheduled disbursements, or early repurchases.

the Fund's income in a potential low lending environment.¹⁰ The floor is expected to be changed only occasionally.



12. The Executive Board retains discretion in setting the target based on a comprehensive assessment of the financial risks facing the Fund. While it is generally expected that the target will be maintained within the indicative range, the Board could decide to set or maintain a target outside the range if warranted by a broader assessment of financial risks, as was the case in the 2016 and 2018 reviews. Over the years, Executive Directors have repeatedly stressed the importance of judgment in setting the target.

13. The framework applies to PBs as a whole. The Board has not adopted separate targets for the sub-components, i.e., the special and general reserves and the balances in the First Special Contingent Account (SCA-1) prior to its full distribution in June 2021 (Annex II). The appropriate allocation of net income between the special and general reserves is considered by the Board each year as part of the annual review of the Fund's income position.

14. The 2010 framework was modeled using approaches followed by other IFIs as a reference point, tailored to the particular circumstances of the Fund. The quantitative elements of the framework draw on risk-management and capital-adequacy approaches used by selected IFIs, in particular the equity-to-loan ratio limits. The adopted approach adjusted for the distinctive features of the Fund's financial framework, including its sources of financing, range of borrowers, and core mandate (Annex III). In the development of the 2010 proposal and earlier discussions, staff explored the application of the Basel II framework – typically used by commercial financial

¹⁰ The New Income Model, endorsed by the Board in 2008 and implemented over time, was aimed at diversifying the Fund's sources of income and reducing the institution's overreliance on income from lending activities to finance its diverse activities, particularly in the context of low Fund lending.

institutions – to Fund's credit, operational, and market risks for benchmarking and for illustration. However, staff found that the Basel framework was not applicable to the Fund's credit risks and the implied reserve for operational risks was too modest to be considered as a separate quantitative element of the framework.¹¹

15. Since the introduction of the framework in 2010, the Board has increased the target for PBs three times and the minimum floor once (Table 1). Prior to 2010, the target was SDR 10 billion, set in 2002. In 2010, along with adopting the current framework, the Board also agreed to raise the indicative medium-term target by SDR 5 billion to SDR 15 billion. The target was further increased to SDR 20 billion in 2012, and reaffirmed in 2014, 2016, and 2018, even though it exceeded the indicative range during the latter two reviews. The target was increased to SDR 25 billion in 2020 due to the sharp increase in the demand for Fund lending in the wake of the pandemic, and was confirmed at this level in 2021 and 2022. A minimum floor of SDR 10 billion for PBs was agreed for the first time in 2010 and reaffirmed in the 2012 and 2014 reviews. The floor was increased to SDR 15 billion in 2016 and maintained at this level in the subsequent reviews.

Table 1. The Floor and Target Agreed at Each Review, 2010-22

(In billions of SDRs)

Review year	Floor	Increase?	
		Yes/No	Target Yes/No
Before 2010	-	-	10
2010	10	No	15
2012	10	No	20
2014	10	No	20
2016	15	Yes	20
2018	15	No	20
2020	15	No	25
2021	15	No	25
2022	15	No	25

Source: IMF Finance Department.

C. Developments in Fund Credit, IFI Capital Adequacy Frameworks, and Application of the PB Adequacy Framework

16. With the medium-term target within reach for the first time, it is appropriate to review how the framework has held up over time. It has been over a decade since the current framework was adopted, and since then, several global shocks—which greatly affected Fund lending—and regulatory innovations have taken place. Against this backdrop, it is appropriate to cast a hard look at the robustness of the framework and consider whether it remains fit for purpose.

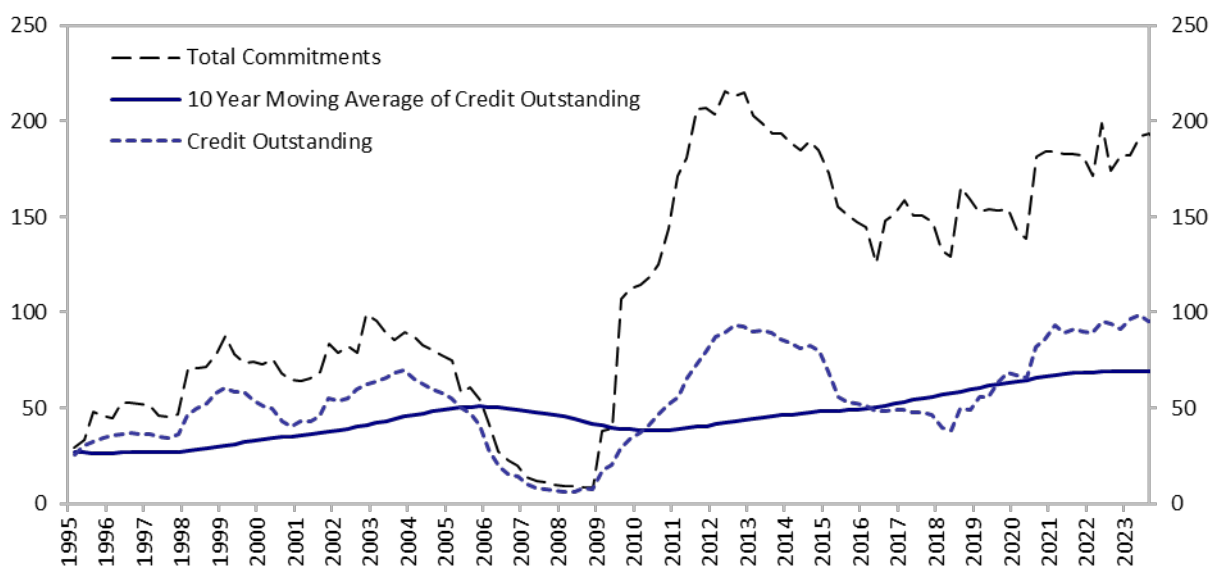
17. Fund lending has changed since the adoption of the 2010 framework:

- **Higher-for-longer levels of credit outstanding** (Figure 2). Prior to the Global Financial Crisis (GFC), the level of Fund credit was relatively low and the duration of credit cycles was short. The pace of Fund lending accelerated from SDR 7.6 billion in 2008Q3 to SDR 55.6 billion in 2010Q4. Fund credit then reached historical highs in 2011Q2-2014Q3, an average of SDR 85.5 billion, and moderated thereafter. The Fund's response to multiple shocks in recent times, including the global pandemic, Russia's war in Ukraine, elevated food and energy prices, and rising interest rates has further moved GRA credit outstanding to new highs, which have now persisted longer

¹¹ See [Public Information Notice: IMF Board discusses the Adequacy of the Fund's Precautionary Balances](#).

than the duration in the aftermath of the GFC, partly due to the shift in the credit portfolio towards extended arrangements (Figure 2 and section on *Developments Since the 2022 Review*).

Figure 2. Total Commitments and Credit Outstanding: January 1995–December 2023^{1/}
(In billions of SDR)



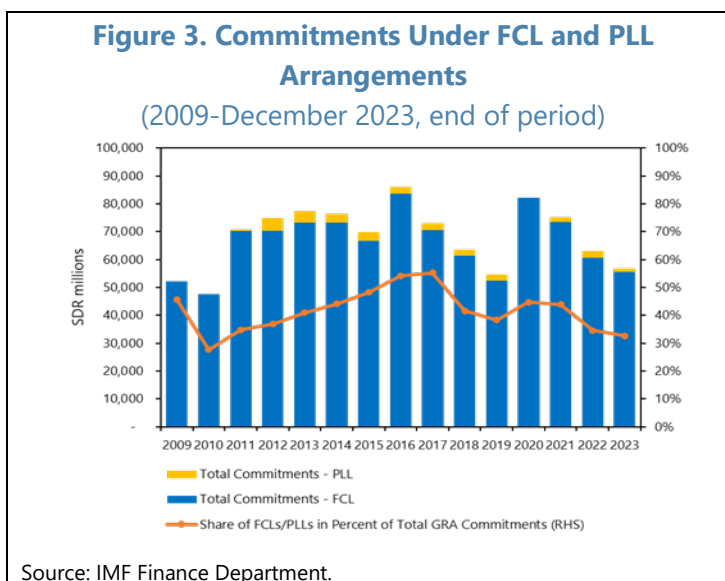
Source: IMF Finance Department.

^{1/} Total commitments equal GRA credit outstanding plus undrawn balances.

- An increase in the level of commitments and drawings under precautionary arrangements.** Commitments under Flexible Credit Line (FCL) and Precautionary and Liquidity Lines (PLL) arrangements rose from SDR 47.5 billion (28 percent of total commitments) in 2010 to a peak of SDR 86 billion (54 percent of total) in 2016 (Figure 3). After declining gradually to SDR 55 billion (38 percent of total) in 2019 (38 percent of total), these commitments rose again to SDR 82 billion (45 percent of total) in 2020 before declining for three consecutive years to SDR 56.6 billion as of December 2023. While drawings under these arrangements have been very low at ½ percent of total amounts committed, the incidence of drawings reached a peak of SDR 5.9 billion or around 7 percent of the commitments in 2020. The persistently elevated levels of commitments under precautionary arrangements and increasing drawing rates argue for a reconsideration of how precautionary arrangements should be treated in the PBs adequacy assessment framework going forward.
- Higher Fund credit risk.** A combination of high credit concentration, high credit exposure, and weaker indicators of payment capacity for the Fund's credit portfolio since 2020 all point to an increase in the Fund's credit risk (see section on *Developments since the 2022 Review*). In terms of credit concentration, the average share of the largest borrower in total credit outstanding has increased over time. In addition, a considerable share of credit outstanding is due to emergency financing in response to the pandemic, for which safeguards are weaker as it is not subject to ex-post conditionality.

18. The regulatory and capital adequacy approaches that the PBs framework has been modeled on have also changed:

- **The capital adequacy regulations of other IFIs have evolved over time.** Since the Global Financial Crisis, IFIs have moved towards frameworks encompassing capital adequacy for a variety of risks, moving away from targets of equity-to-loan measures towards quantitative measures reflecting their evolving risk exposure. However, the equity-to-loan ratio is still used by some IFIs, either as key indicator (e.g., the IBRD), or



integrated into the overall framework. Most of the IFIs' capital frameworks are built on risk-based capital measures, which assess the capacity of the institution to absorb losses and determine economic capital needed to support risk taking. Recently, the international community called for widespread improvements to strengthen the lending and investment capacity of the MDBs. In 2021, the G20 commissioned an independent review of capital adequacy frameworks for MDBs which recommended changes, including refining shareholders' risk tolerance, incorporating callable capital, creating usable capital and shifting risks to willing parties, and improving the credit agencies' assessment of their financial strength. MDBs are currently at various stages of implementing the recommendations (Annex III).

- **The Basel III capital adequacy approach has replaced the Basel II framework to address issues highlighted by the Global Financial Crisis.** The issues that emerged in the aftermath of the Global Financial Crisis included the large heterogeneity in banks' application of the framework, and the resulting difficulties in comparability and applicability of capital ratio rules. The new Basel framework, introduced in 2010, addresses these issues by strengthening requirements for the level and quality of bank capital, leverage, and liquidity, broadening the coverage of risks, and limiting procyclicality (Box 2). The approach to measure capital adequacy for credit and operational risks changed more substantially, while the treatment of market risks remained broadly similar to Basel II.

19. The Fund adopted provisioning for impairment losses under International Financial Reporting Standards (IFRS) in FY2019. Staff developed a framework for assessing the possible need for provisioning in line with the requirements of the accounting standard dealing with impairment losses — International Financial Reporting Standard (IFRS) 9, Financial Instruments (Box 3). Provisioning under IFRS 9 considers all relevant information, including forward-looking information in determining whether there has been a significant increase in credit risk that results in an expected loss. To date, the Fund has not recognized an impairment loss.

Box 2. The Basel III Framework for Capital Adequacy

- Credit risk.** As in Basel II, institutions may use a standardized approach or one of the internal ratings-based (IRB) approaches (either advanced IRB or foundation IRB) to evaluate credit risk. However, in order to enhance the comparability between treatment across institutions and to enhance the robustness of risk modelling, the Basel III framework applies constraints to the use of the IRB approaches.^{1/} In particular, the advanced IRB approach cannot be used for specific asset classes (e.g., equities) and a floor is instituted for inputs such as probabilities of default for capital requirements calculations when an IRB approach is used. The changes to the standardized approach instead have broadly been in the direction of providing more granular and risk-sensitive parameters to better capture risk changes in sub-categories of risk classes.
- Operational risk.** The treatment of operational risk has changed substantially in Basel III. While in Basel II there were three possible measurement techniques, with the basic indicators approach being the most relevant to the Fund, the new framework eliminates the various approaches in favor of a standardized approach methodology.^{2/} The standardized calculation of capital requirements is based on a measure of operational risk drawn from the financial statements, weighted with a set of coefficients determined by the regulatory framework and, when available, a measure of the average historic operational loss.
- Market risk.** The treatment of market risk has remained broadly similar to Basel II.^{3/} The simplified standardized approach for market risk in Basel III is based on four classes: interest rate risk, equity risk, FX risk and commodity risk. The overall capital charge for market risk is a function of the capital requirements for the four risk classes. Capital requirements for each class are determined by calculating the risk associated with individual financial instruments and the overall risk of the portfolio.

1/ Basel committee of Banking Supervision (2017), High-level summary of Basel III reforms. *Bank for International Settlements*. See High-level summary of Basel III reforms (bis.org).

2/ Basel Committee on Banking Supervision (2023), Calculation of RWA for operational risk. *Bank for International Settlements*.

3/ Basel committee of Banking Supervision (2019), Minimum capital requirements for market risk. *Bank for International Settlements*.

20. Staff has introduced some methodological changes in the application of the PBs adequacy framework to enhance its effectiveness. These include: (i) explicitly incorporating into the credit path the projected demand for Fund lending under various alternative scenarios; (ii) strengthening credit risk analysis using publicly available market-based indicators of sovereign repayment capacity, to gauge the level of risk embedded in Fund loan portfolio; and (iii) introducing a new approach for the treatment of pension-related revaluations in PBs, endorsed by the board in December 2021, aimed at better isolating the volatility in the level of PBs stemming from pension-related (IAS 19) accounting gains or losses.

Box 3. Provisioning under International Financial Reporting Standard 9 – Financial Instruments (IFRS 9) and Implications for Reserves and Precautionary Balances

- **IFRS 9 is the accounting standard that deals with impairment losses on financial assets, such as credit outstanding.** IFRS 9 sets out detailed requirements for assessing impairment losses and requires the Fund to recognize a provision for impairment losses on credit outstanding when there has been a significant increase in credit risk, considering all relevant information, including forward looking information, resulting in an expected credit loss.
- **Provisioning for impairment losses under IFRS 9, in the context of the Fund, is a two-step process.** The first step requires the assessment of the credit quality of credit outstanding on a member-by-member basis. The second step is to calculate a probability-weighted expected loss on credit outstanding. Provisions are an accounting estimate and subject to a significant level of uncertainty. Cases where provisioning may need to be considered by the Fund are expected to remain very rare due to the unique nature of the Fund's lending and its multilayered framework for managing credit risks.
- **While Fund reserves (which mostly comprise PBs) and provisioning for impairment losses are both tools to safeguard the integrity of the balance sheet, they serve different but related purposes.** An impairment provision results in a charge against income, with a corresponding allowance being recorded against the related asset on the balance sheet. Similarly, the reversal of a provision results in a gain in the income statement and a reduction of the previously recorded allowance. An impairment provision will reduce the accumulation of reserves (or decrease reserves if income is not sufficient to cover the impairment) and the reversal of a provision (gain) will increase reserves in the period in which it is recorded. Provisions ensure that an entity's assets and income position are not overstated. While both provisioning and reserves serve to maintain/safeguard the integrity of the balance sheet by setting aside resources to protect against credit losses, reserves also serve a wider purpose, by providing a capital buffer against other financial risks of the Fund. The existence of reserves does not preclude the need for provisioning where there is a determination that assets are impaired.

D. Suitability of the Current Framework and Possible Enhancements

21. On balance, staff believes that the PBs adequacy framework remains broadly appropriate despite the changed context. The approach has demonstrated its operational effectiveness by facilitating a sustained increase in PBs in tandem with the evolution of Fund lending and associated risks. The quantitative elements of the framework capture and respond well to the higher-for-longer Fund lending. The record high level of credit outstanding increases the three-year average credit outstanding (both the historical and forward-looking components), and in turn the range for the PBs target. In addition, the adoption in 2020 of the scenario analysis with various assumptions of future arrangements strengthened the framework. Additional credit paths under these scenarios widen the range of credit measures for setting the target, better capturing developments of the global economy and relevant risks.

22. The 20-30 percent target range remains broadly appropriate, in combination with the refinements to the credit path methodology. The range remains comparable to those used in selected IFIs, such as IBRD and IDB (Annex III) and the forward-looking credit paths derived under various scenarios since 2020 have been considerably higher than the single credit path (corresponding to an "existing arrangements" scenario) used in 2010-20, translating in more

conservative target setting.¹² Over time, the target range has provided a reasonable probability of ensuring that reserves exceed the Fund's largest individual credit exposure. While the share of the credit outstanding to the largest borrower has been increasing in recent years and currently exceeds the target range, the credit exposure to the largest borrower has remained just below the upper bound of 30 percent on average since introduction in 2010.¹³ Considering the continued use of forward-looking scenario analysis for the credit measure, a high likelihood that the level of credit concentration will continue to vary over time, and that the impact of any arrears on Fund income and PBs can be expected to materialize gradually and incrementally, staff views the application of the 20-30 percent range as remaining broadly appropriate to ensure proper PBs coverage of the credit exposure, including to the largest borrowers (See Section *Assessing the Adequacy of Precautionary Balances*).

23. Provisioning under IFRS 9, which was adopted by the Fund in FY2019, helps safeguard the integrity of the Fund's balance sheet (Box 3). Provisions ensure that an entity's assets and income position are not overstated by setting aside resources to protect against expected credit losses. The creation of a provision for impairment losses on Fund credit outstanding would be a charge against income, hence lowering accumulated reserves and reducing precautionary balances; and lowering the amount available for potential distribution to members. The provisioning framework in addition to other elements of the financial risk management framework provide a robust level of financial protection for the Fund's balance sheet and creditor claims.

24. The innovations in the MDBs' capital adequacy frameworks offer some useful aspects for comparison for the Fund but do not warrant major adjustments to the PBs framework. The concept of the equity-to-loan ratio is still considered an important element in the capital adequacy frameworks of selected IFIs. However, the IFIs' move towards capturing risk exposure more analytically and comprehensively highlights the importance of strengthening the quantitative measurement of risk exposure in the Fund's framework. Ongoing or planned reforms seeking to boost the lending and investment capacity of the MDBs are of limited relevance to the Fund, where lending is demand-driven and cannot be constrained by leverage ratios. Similarly, capital adequacy framework improvements regarding the leverage ratio, callable capital, loan risk shifting, and credit agencies assessments are also of limited relevance to the Fund, as the Fund does not borrow from the market or rely on callable capital and is not subject to credit agencies' ratings. Finally, other features of the financial structure of the MDBs, such as their shareholder governance and preferred creditor status, were already considered in designing the Fund's current PBs framework (Annex III).

25. The Basel III capital adequacy approach represents a useful benchmark for the Fund (similarly to Basel II) rather than an operational model to determine the adequacy of PBs. For credit risk, the issues originally identified that argue against the application of Basel II to the Fund remain, including the incompatibility of the standard approach and Internal Ratings-based approach

¹² In particular, the credit exposure to the largest borrower has always been below the 30 percent of the upper bound of the credit paths in at least one or two scenarios out of four.

¹³ From August 2010 to 2022, the average credit exposure to the largest borrower was 29.7 percent. The share of the largest single credit exposure to credit outstanding was below the 30 percent upper bound of the indicative target range during 56 percent of the period.

with the Fund's concentrated credit portfolio and the reliance on credit ratings, which is not in line with the Board's guidance. The capital requirements for operational risks and market risks under Basel III are still relatively small compared to the levels of the Fund's PBs, and do not support the introduction of an ad-hoc quantitative element in the PB framework, as was the case at the time of its introduction.¹⁴

26. While continuing to follow the rules-based framework approved in 2010, staff proposes to implement some further methodological enhancements in its application.

- Staff has developed a *model-based quantitative measurement of credit risks* that complements the suite of analytical tools supporting the Board's judgement on the appropriateness of the PB target. The metric is tailored to reflect the Fund's specific risk, in contrast to market-based indicators that rely on sovereign ratings, using empirical models (logit and Random Forest) to investigate the degree to which arrears episodes can be explained by country-specific economic and institutional factors, global conditions, and IMF-specific credit indicators, and ultimately to predict the likelihood of arrears in the Fund's credit portfolio (see Annex IV).
- *Precautionary arrangements* are already taken into account in the framework through the Board's judgment — including the level of the commitments and an assumption of drawings in the adverse scenario. Reflecting feedback from some Directors in previous reviews, staff is further supporting the application of judgment in setting the PB target by providing analysis of the impact of possible drawings under precautionary arrangements on the forward-looking credit measure in the desk survey scenario, based on historical experience.

DEVELOPMENTS SINCE THE 2022 REVIEW

Further increases in the precautionary balances since the previous review have brought the medium-term target within immediate reach. Coverage metrics continue to strengthen even though Fund lending, in response to multiple shocks, has risen to historically high levels. Measures of credit risk in the Fund's lending portfolio generally point to some further increase, especially with regard to some of the largest exposures. However, credit concentration risks and the near-term bunching of repurchases have eased somewhat from high levels, commitments including under precautionary arrangements have declined, and the capacity of the burden sharing mechanism has increased. Projected medium-term operational income remains strong but is subject to concentration risk. Investment risks are elevated but the medium-term outlook for investment returns has improved given the recent increase in real interest rates.

¹⁴ Under this framework, the updated estimate for the capital charge is SDR 0.6 billion. This amount is quite modest compared to the current PB level, similar to the findings under the Basel II approach in 2010. Even though the estimated capital charge amount could vary in practice, as the application of the Basel framework is usually subject to supervisors' judgments, it is still considered small compared to the current PB level.

A. Size and Coverage of Precautionary Balances

27. Further increases of PBs since the 2022 review have brought their level within immediate reach of the medium-term target. Balances have risen by SDR 2.8 billion to SDR 24.4 billion at end-December 2023, about SDR 0.6 billion short of the SDR 25 billion target, reflecting mainly high lending income (Figure 4). Assuming an equal allocation of income earned in FY2024 through December, the general reserve is estimated at SDR 14.5 billion and the special reserve is valued at SDR 11 billion before adjusting for the cumulative pensions-related (IAS 19) gains of SDR 1.1 billion (Figure 4).¹⁵

28. PB coverage ratios have also risen further. PBs are now equivalent to 26.5 percent of GRA credit outstanding and 14 percent of total commitments compared to about 23.7 percent and 11.8 percent respectively at the time of the last review (based on end-September 2022 data). Coverage relative to lending capacity reached 3.5 percent, up from 3.1 percent (Figure 4).

29. Current projections suggest that PBs would reach SDR 25.2 billion at end-April 2024. This reflects a net operational income estimate of SDR 2.6 billion for the fiscal year as a whole, without an adjustment for the cumulative pensions-related (IAS 19) gains/losses.

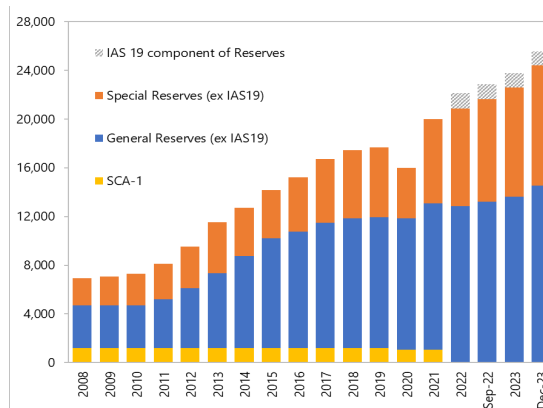
¹⁵ Commencing in FY2022, PBs are adjusted to exclude the cumulative IAS 19 gains and losses from the Fund's reserves to mitigate the volatility created by the accounting treatment of pension revaluation under IAS 19. See Box 2 - The New Approach for the Treatment of Pension-Related Revaluations in PBs, in [Review of the Adequacy of the Fund's Precautionary Balances \(imf.org\)](#) (SM/22/260, 11/16/22). In April 2022, Directors adopted a new framework for allocating the Fund's annual net income to reserves that would isolate pension-related remeasurement gains and losses in the special reserve. See *Review of the Fund's Income Position for FY2022 and FY2023–2024* (EBS/22/26, 04/12/22).

Figure 4. Precautionary Balances Composition, Accumulation, and Coverage

Accumulation
(In billions of SDR)

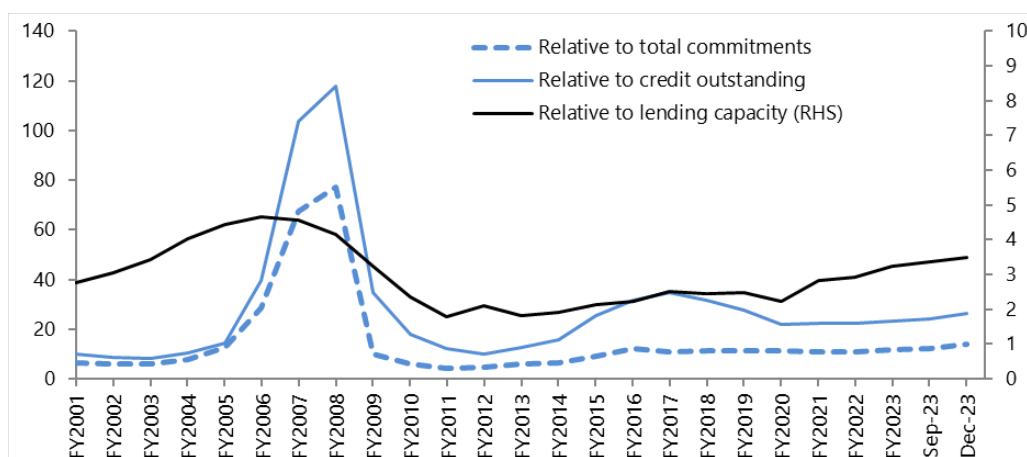
	FY2023 (End-Sep)	FY2023	FY2024 (End-Dec)
I. PB - beginning of period	20.9	20.9	22.6
II. Operational income	1.2	2.9	2.5
lending income incl. surcharges	1.2	2.8	1.8
non-lending income	0.0	0.1	0.7
III. Admin expenses	-0.4	-1.2	-0.7
IV. Net operational income	0.7	1.7	1.8
V. PB - end of period	21.6	22.6	24.4

Composition: 2008–December 2023
(In millions of SDRs, end of financial year)



Coverage Ratios: 2001–2023

(In percent, end of financial year, unless otherwise specified)



Source: IMF Finance Department.

1/ Starting FY2022, PBs exclude cumulative IAS 19 gains and losses from special and general reserves

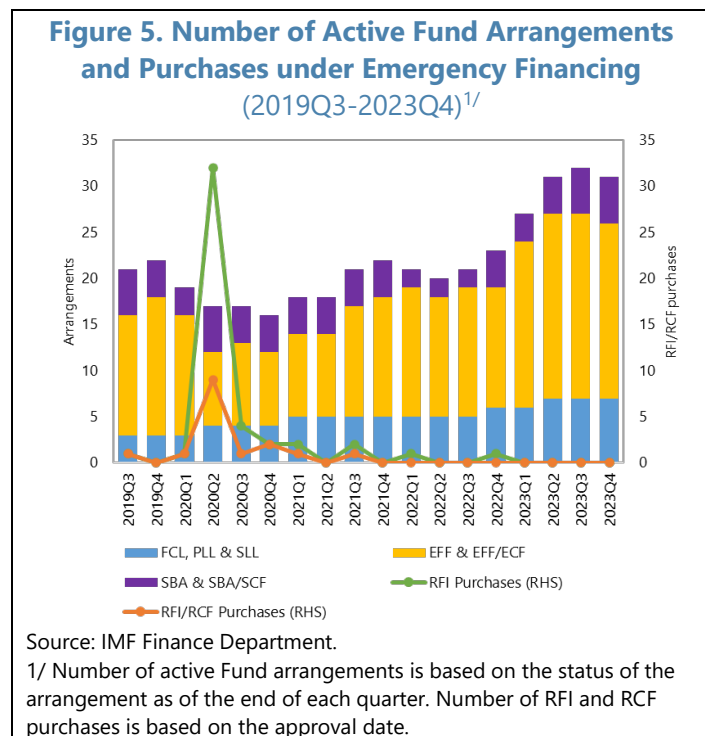
B. Credit Risk

30. Measures of credit risk in the Fund's lending portfolio generally point to some further weakening since the 2022 PB review, but at the same time some risks mitigants have strengthened (Table 2). The weakening reflects a more challenging economic and financial landscape. Sovereign credit ratings signal rising stress for some borrowers, especially large exposures, amid increases in global interest rates. Along with a further rise in Fund credit, exposure to the top region has slightly increased. New staff analysis suggests that the likelihood of arrears has also increased somewhat but remains at relatively modest levels. Moreover, the near-term bunching of repayments has eased, commitments under precautionary arrangements have declined, including the largest regional exposures, while PBs and the burden sharing capacity have increased.

31. Fund lending in response to multiple shocks pushed credit outstanding to record levels (Figure 2). Credit outstanding

under the GRA picked up pace at the onset of the pandemic, reaching its highest level in March 2023 at about SDR 98.7 billion as the Fund responded to Russia's war in Ukraine and the food price crisis, and remained higher than levels observed during the euro area debt crisis (2012-13) until recently. At end-December 2023, credit outstanding stood at SDR 92.1 billion, about SDR 1 billion higher than at end-September 2022, reflecting disbursements from existing Fund arrangements as well as disbursements under new Fund arrangements approved since the 2022 review.¹⁶ Overall, as of end-December 2023, the number of active Fund arrangements (EFF and SBA) returned to pre-pandemic levels, while the number of

FCL and PLL arrangements reached seven, as Fund lending continued its shift from emergency financing to Upper Credit Tranche (UCT) arrangements (Figure 5), particularly EFFs. At the same time, the number of members that have outstanding Fund credit increased to 54 from 31 pre-pandemic.



¹⁶ The new arrangements approved since October 2022 are 11 Extended Arrangements (EFFs), four Stand-by Arrangements of which two are treated as precautionary, two Precautionary and Liquidity Line arrangements (PLLs) and one Flexible Credit Line (FCL) arrangement, for total new commitments of SDR 31 billion. In addition, an existing FCL was renewed for an amount of SDR 26.7 billion. Five of the new UCT arrangements were approved together with an RSF. No new Rapid Financing Instrument (RFI) disbursement was approved.

**Table 2. Credit Risk Indicators and Precautionary Balances Metrics:
Current vs Previous Review**

(In billions of SDRs, end-September 2022 and end-December 2023, unless otherwise indicated)

Indicators	2022	2023	Change
Risks			
Total commitments	182.4	174.0	↓
Commitments under precautionary arrangements ¹	62.9	58.0	↓
of which FCL and PLL arrangements	62.6	56.6	↓
Credit outstanding			
Actual	91.1	92.1	↑
Projected peak	98.7	97.6	↓
Largest individual exposure			
Actual	30.7	30.4	↓
Projected peak	34.2	34.2	→
Credit concentration			
Top 5 (in percent of total)	68.8	68.0	↓
Top 1 (in percent of total)	33.7	33.0	↓
Share of largest regional exposure in total commitments (percent)	71.1	58.7	↓
Share of largest regional exposure in total credit outstanding (percent)	47.8	48.0	↑
Share of RFI in the credit portfolio (percent)	18.1	15.4	↓
Weighted sovereign credit rating of Fund credit exposures (S&P) ²	14.7	15.7	↑
Weighted sovereign spreads of largest five borrowers (basis points)	2434	1962	↓
Share of Fund credit to members rated CCC or lower (percent)	44.7	52.9	↑
Arrears	0	0	→
Buffers			
Precautionary balances	21.6	24.4	↑
Precautionary balances (in percent of)			
Credit outstanding	23.7	26.5	↑
Total commitments	11.8	14.0	↑
Lending capacity	3.1	3.5	↑
Burden sharing capacity (SDR millions)	657.0	1329.5	↑
Other			
Lending capacity	692.3	695.6	↑

Source: Bloomberg, Standard & Poor's and IMF Finance Department.

¹ Undrawn balances under arrangements treated as precautionary by the authorities.

² Sovereign credit ratings are assigned numerical scores. The weaker the rating the higher the score. A higher weighted average rating of Fund exposures reflects a deterioration in ratings.

32. The trajectory of credit outstanding has shifted further upward compared to the previous review. In an "existing arrangements" scenario (assuming no early repurchases, new arrangements, or new emergency assistance), and based on current drawing arrangements as of December 2023, credit outstanding is projected to rise further and reach a peak of SDR 94.2 billion in March 2024, and decrease afterwards. Credit outstanding is on average expected to be SDR 14.7 billion higher for the period between January 2024-end-FY2024 and FY2025-26 than projected at the previous review.

33. Total commitments have fallen from recent peaks (Figure 2). Total commitments (including credit outstanding, undrawn balances under existing arrangements, and commitments under precautionary arrangements) averaged SDR 188 billion in 2022Q3–2023Q3, before falling to SDR 174 billion at end-December 2023, about SDR 8.4 billion lower than at the previous review. Commitments under precautionary arrangements also declined to SDR 56.6 billion (Figure 3) following renewal of Mexico's FCL arrangement with reduced access (300 percent of quota). Undrawn balances on precautionary SBAs stood at SDR 1.4 billion as of end-December 2023.

34. Some drawings under FCL and PLL arrangements took place after the onset of the pandemic and there has been only one new drawing since the last review of PBs. FCL and PLL arrangements have been tapped three times (two partial and one full draw down) since 2020 to address the impact of global shocks compared to only once before the pandemic, while one draw down took place in January 2024.¹⁷ The average drawing rate, calculated as the ratio of the actual total amount drawn under FCL and PLL arrangements to the total amount committed per year, remains low at ½ percent for the period end-December 2009 to end-December 2023, peaking at around 7 percent in 2020, and stabilizing at around 3 percent over 2020–2023.

35. The Fund's exposure to Argentina, its largest borrower, declined moderately and is expected to remain high in the medium-term.

Credit to Argentina declined from SDR 30.7 billion, or 33.7 percent of total credit outstanding at end-September 2022 to SDR 30.4 billion or 33 percent at end-December 2023, following repurchases under the current extended arrangement (Table 3). Credit outstanding to Argentina peaked at SDR 34.2 billion in March 2023 and is projected to remain above SDR 30 billion through FY2027 before gradually declining.

Table 3. Credit Outstanding: Top Five Borrowers
(In billions of SDRs)

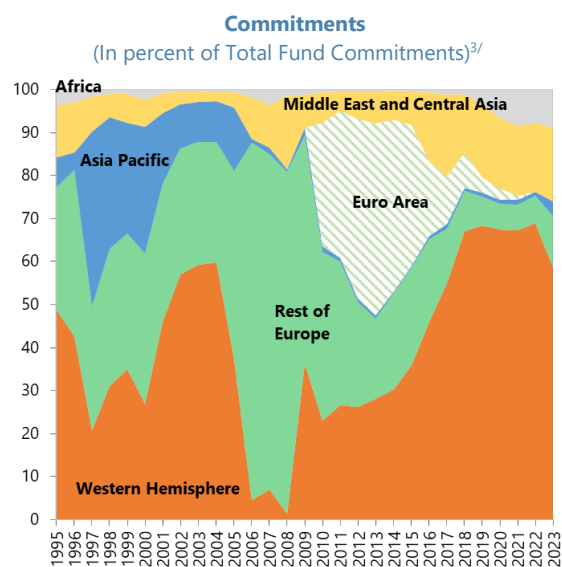
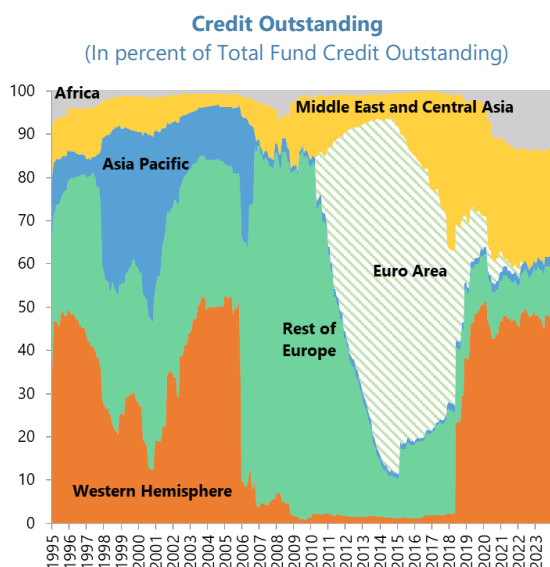
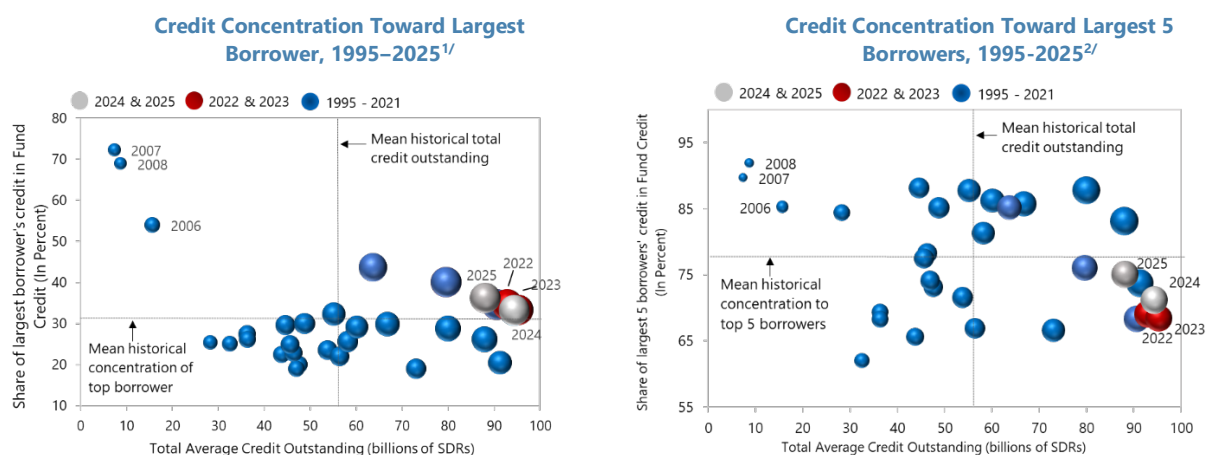
	As of end September 2022	As of end December 2023	Change
Argentina	30.7	30.4	-0.3
Egypt	13.6	11.5	-2.1
Ukraine	6.8	9.0	2.3
Ecuador	5.6	5.9	0.3
Pakistan	5.9	5.7	-0.3

Source: IMF Finance Department.

36. Credit outstanding continues to be concentrated in the Western Hemisphere and to a lesser degree Middle East and Central Asia. Credit concentration to the top five borrowers decreased slightly to 68 percent of total credit at end-December, remaining below the historical average but is projected to increase in 2024–25 in the existing arrangements scenario. Commitments remain heavily concentrated in the Western Hemisphere, reflecting exposure to Argentina and FCL arrangements for Mexico, Chile, Peru, and Colombia (Figure 6).

¹⁷ At approval of North Macedonia's PLL in November 2022, the authorities announced that they intended to draw on the arrangement during the first year. The amount of SDR 84.18 million under the arrangement was disbursed immediately at approval, while a disbursement of SDR 119.26 million was made upon completion of the first review in January 2024 (see [Staff Report](#)).

Figure 6. Credit Concentration Toward Largest Borrowers and Regional Concentration



Source: IMF Finance Department.

1/ The relative size of the bubbles reflects the amount of Fund credit outstanding to the largest borrower.

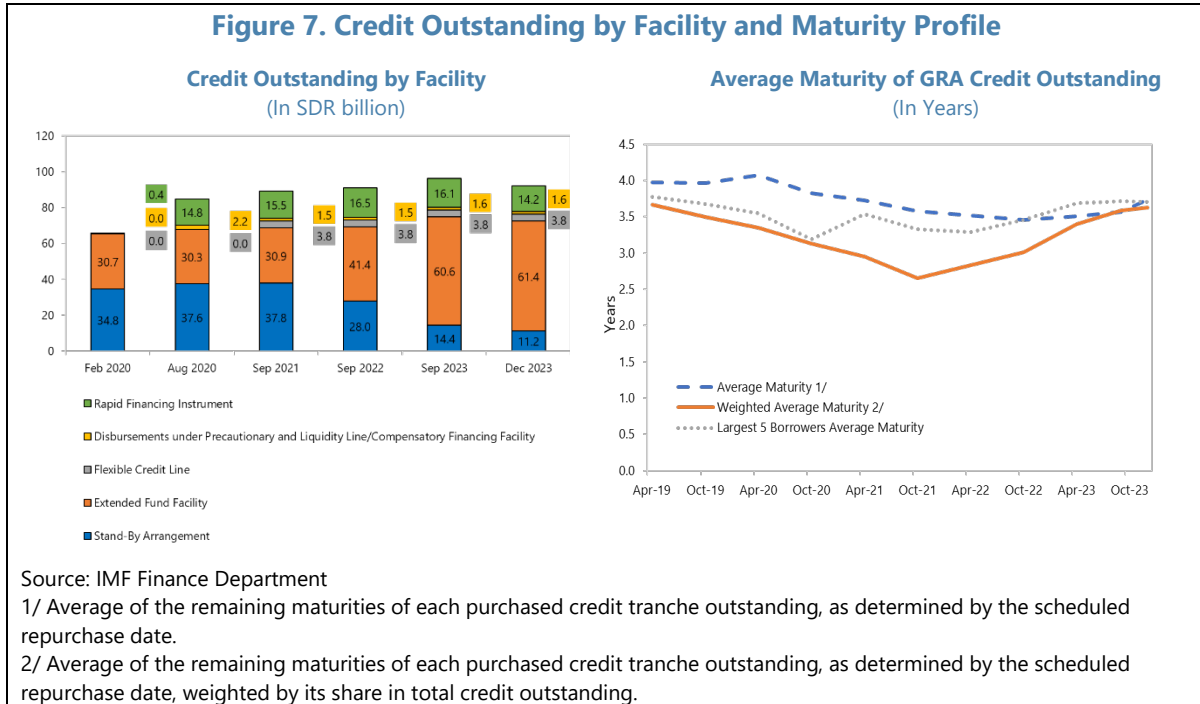
2/ The relative size of the bubbles reflects the amount of Fund credit outstanding to the five largest borrowers.

3/ GRA credit outstanding plus undrawn balances by region as a share of total GRA balances and total GRA undrawn balances. The latter include undrawn balances under existing arrangements as well as commitments under precautionary arrangements.

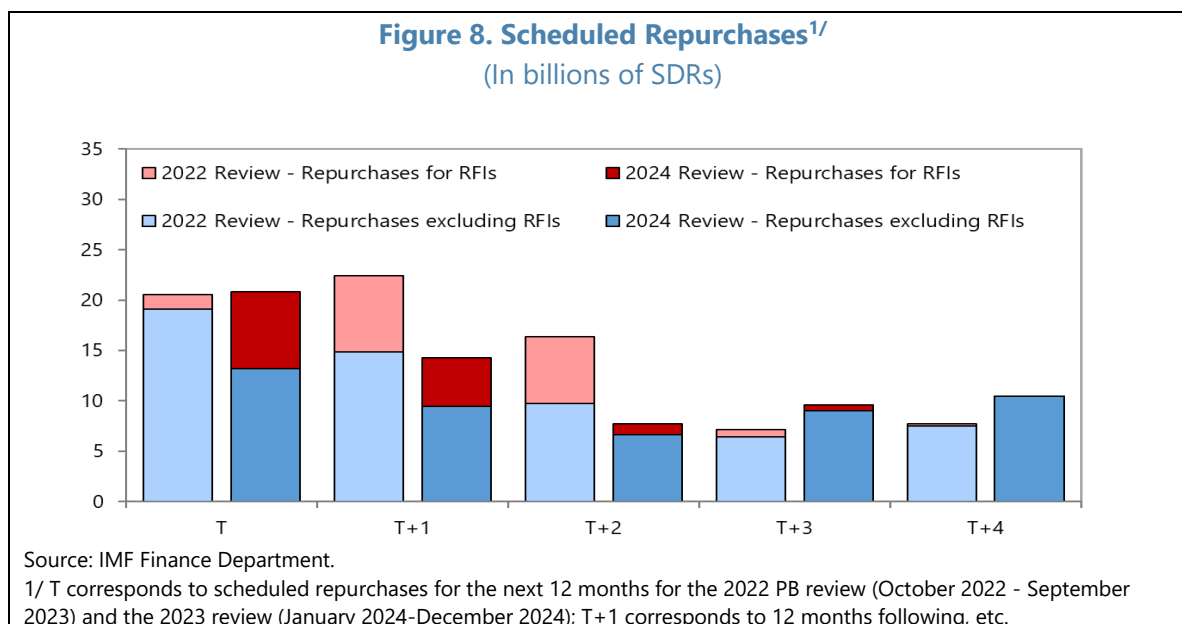
37. Extended Arrangements now account for the largest share of the credit portfolio.

Credit outstanding under Extended Arrangements rose by SDR 20 billion to SDR 61.4 billion, equivalent to 66.7 percent of total credit (Figure 7). The amount outstanding under Stand-By Arrangements declined by SDR 16.8 billion to SDR 11.2 billion (14.9 percent of total credit). The increase in the share of the Extended Arrangements credit portfolio reflects: (i) a higher number of members with credit exposures under Extended Arrangements (33) compared with Stand-By Arrangements (eight member countries of which seven also have credit outstanding under Extended Arrangements); and (ii) large disbursements to Argentina under its Extended Arrangement. Credit outstanding under the emergency Rapid Financing Instrument has decreased to SDR 14.2 billion

after the 2022 peak of SDR 16.5 billion, while the amounts outstanding under FCL and PLL arrangements are broadly stable. Overall, the weighted average maturity of the outstanding credit portfolio has risen somewhat to 3.6 years as of end-December 2023 from 2.9 years at the last review, reflecting the shift of credit to Extended arrangements (Figure 7).

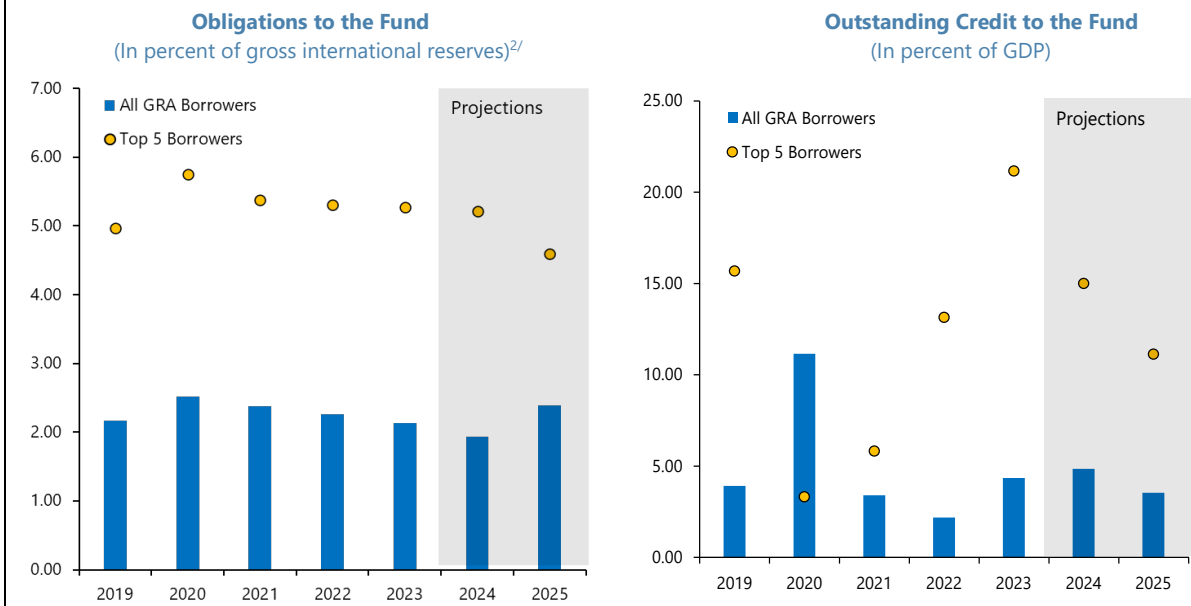


38. Projected near-term repurchases have eased relative to the last review but remain concentrated. Total scheduled repurchases as of end-December 2023 for the next 12 months (January – December 2024) amount to SDR 20.9 billion, slightly higher than the 12-month projection (October 2022 – September 2023) at the 2022 PB review (Figure 8). Scheduled repurchases in the following 24 months (2025-26) would then drop by an average of SDR 8.4 billion. Repurchases from Argentina since the previous review have brought down the credit outstanding under the 2018 SBA to SDR about 6.0 billion. The bulk of RFI repurchases of 12.5 billion are due in 2024-25. Over the medium term (2027-28), repurchases are projected to average about SDR 10 billion per year of which RFIs amount to SDR 0.6 billion, compared to SDR 7 billion and SDR 0.4 billion, respectively in the previous review.



39. GRA borrowers' capacity to service Fund obligations appears broadly adequate, but some large borrowers have experienced stress since 2023, amid rising interest rates. Measured by the ratio of Fund obligations to gross international reserves (GIR), the average capacity of the 54 GRA borrowers is projected to moderately weaken in 2024 but would strengthen next year (Figure 9) and still appears broadly adequate overall. This metric would increase to 4.9 percent in 2024 from 4.4 percent in 2023, as rising global interest rates raise GRA charges (Figure 10), but would come down to 3.6 percent in 2025. The ratio for the top 5 borrowers reached 21.1 percent in 2023 and is projected to remain elevated albeit declining. Near-term projections indicate that the Fund exposure-to-GDP ratio remains in line with recent trends, with an uptick in 2025 for the average GRA borrower (Figure 9). The ratio for the top 5 borrowers is projected to continue declining.

Figure 9. Fund Borrowers: Obligations to Gross International Reserves and Credit to GDP ratios^{1/}

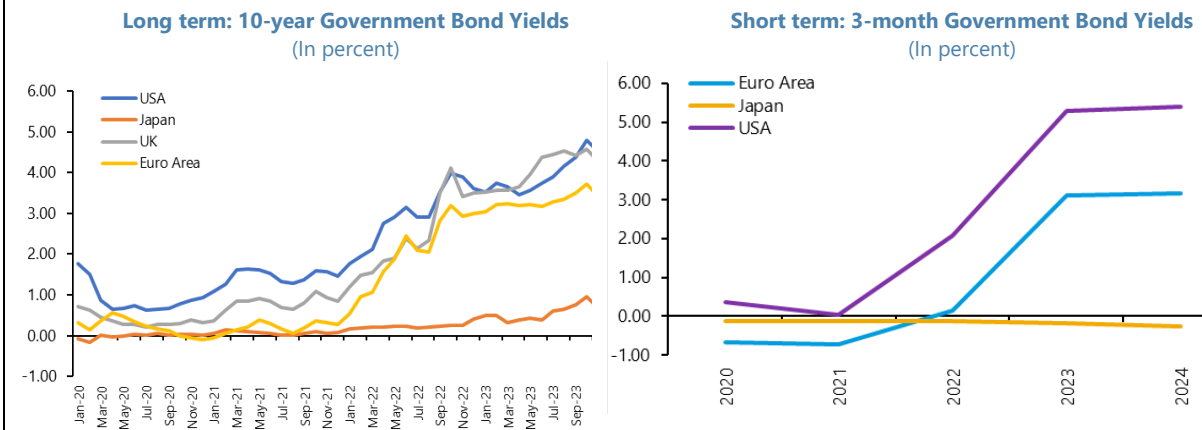


Source: IMF Finance Department, WEO database and staff calculations.

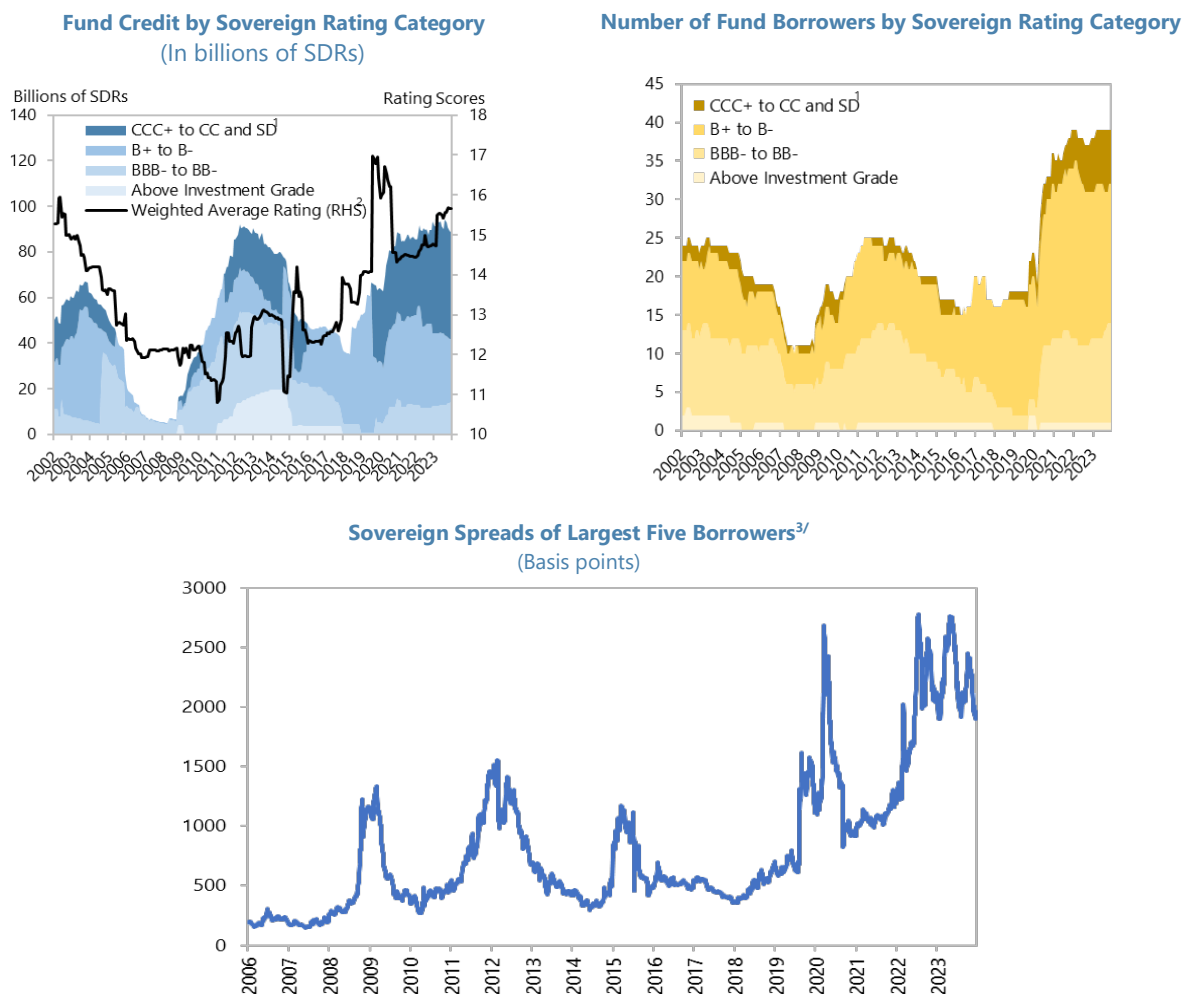
1/ Lending data is based on existing arrangements.

2/ The large increase in 2020 reflects Somalia's clearance of arrears. The ratio of Fund obligations to reserves that year was very large. Excluding Somalia, the average would have been 2.5 percent.

Figure 10. Global Interest Rates



Source: Federal Reserve Economic Data, WEO Database, and staff calculations.

Figure 11. Fund Borrowers: Sovereign Ratings and Spreads

Source: Bloomberg, Standard & Poor's, and staff calculations.

1/ SD stands for "selective default".

2/ Worse sovereign credit ratings are assigned higher numerical scores, so a higher weighted average rating indicates a deterioration in ratings.

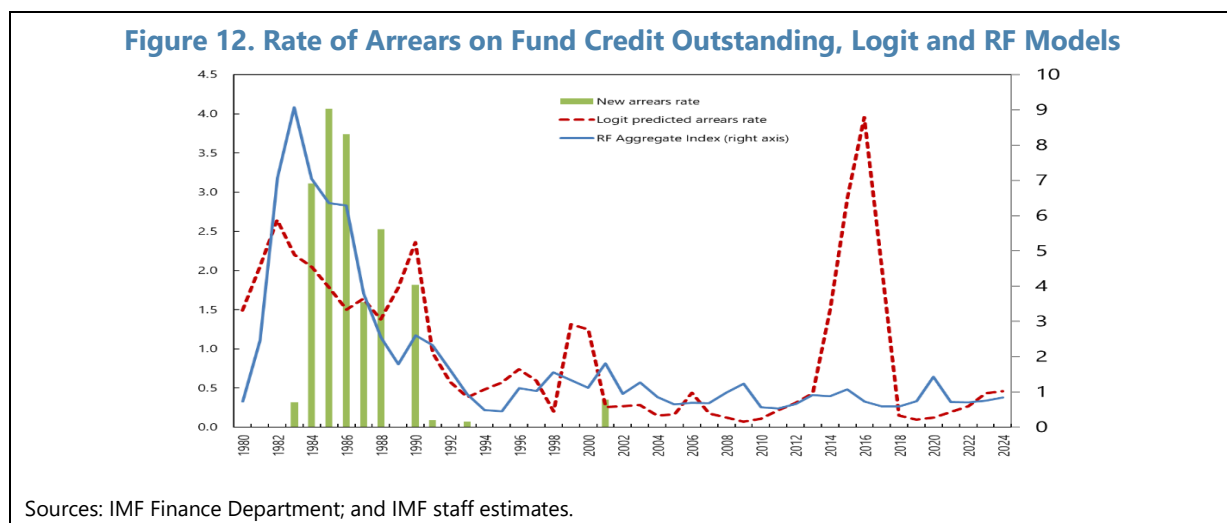
3/ Sovereign spreads weighted by respective shares in Fund credit to largest five borrowers. Sovereign spreads are measured by the EMBI spreads for emerging economies, and by the 10-year government bond spreads over the German bonds for the euro area members.

40. The sovereign spreads for the largest five borrowers remain at highly distressed levels, with credit ratings of the Fund's borrowers slightly worsening since the previous review. The weighted average of the sovereign ratings for the Fund's credit portfolio worsened since the last review, although it remains well below the levels reached in 2020 (Figure 11).¹⁸ The number of borrowers in CCC+ ratings and lower increased, reflecting the tighter external financing conditions

¹⁸ Staff does not apply internal credit ratings to assess the adequacy of PBs, in line with Board guidance. The information presented in Figure 11 draws on market-based indicators and reflects risk calculations tailored to the private sector and therefore not directly applicable to the Fund's portfolio and credit risk. These figures are nonetheless provided to facilitate the analysis of the global context and the level of risks perceived by the private sector for the current composition of the Fund's portfolio.

that many EMDEs continue to face (Figure 11). As a result, the share of Fund lending to this group of borrowers increased from 45 percent to 53 percent. The weighted average of the sovereign spread of the Fund's largest five borrowers has decreased compared to the previous review (Figure 11). This metric reached a peak in April through May 2023, as spreads for Ukraine and Pakistan widened before decreasing somewhat by end-December 2023.

41. The results of new staff analysis suggest that while the likelihood of new cases of overdue financial obligations remains modest, risks are increasing from earlier low levels. To assess credit risks for the Fund's portfolio given the unique nature of the Fund's lending and its de facto preferred creditor status, staff carried out an empirical analysis of previous cases of protracted overdue financial obligations (arrears) using a logit model and a random forest model (see Annex IV). The analysis focuses on credit risks after applying layers of credit risk mitigations, including lending policies, program designs, post financing assessments etc., and before applying the arrears strategy and burden sharing (Annex I). Despite the scarcity of cases of arrears to the Fund that poses some empirical limitations, preliminary results identify several factors associated with episodes of protracted arrears to the Fund in the past, including: (i) domestic macroeconomic conditions (lower growth, high domestic inflation); (ii) external liabilities and buffers (low international reserves to external debt); (iii) institutional quality (higher levels of fragility, lower state capacity); (iv) IMF-specific factors (recent short term arrears, and recent increases in IMF credit outstanding); and (v) the global environment (geopolitical risk, global financial conditions). Figure 12 plots the logit model predicted arrears rate and the Random Forest aggregate index using latest values and forecasts for 2023 – 2024. The logit model-fitted arrears rate, weighted by outstanding credit, is predicted to remain below 1 percent in 2024, and the RF aggregate index to increase from 0.7 percent in 2022 to 0.85 percent in 2024. The analysis furthermore suggests that, although overall macroeconomic fundamentals of Fund's borrowers have improved since the 1980s when most of the arrear cases occurred, some key indicators are increasing (e.g. inflation and external debt), pointing to potential increases in credit risks.



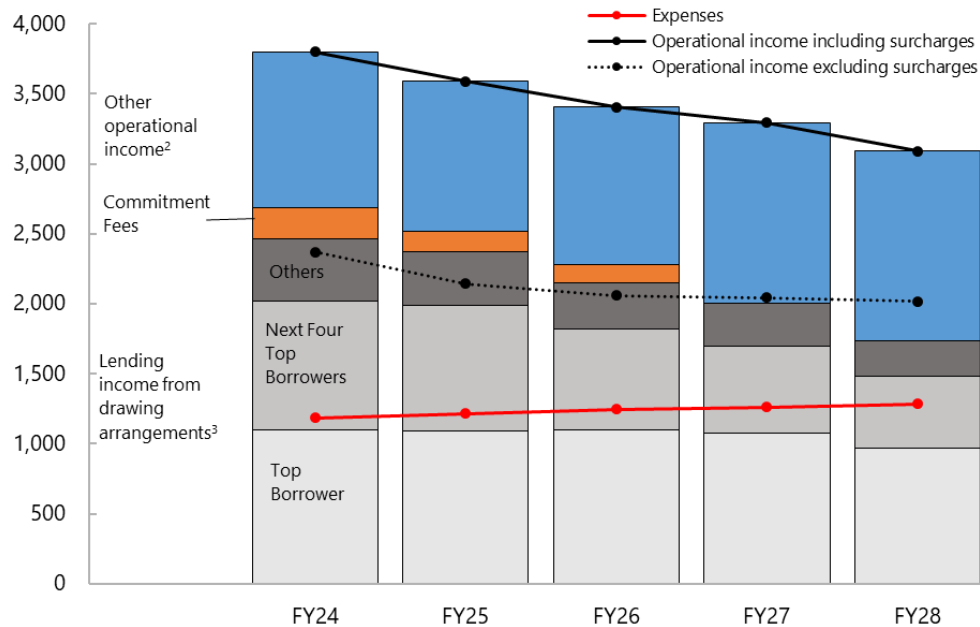
C. Income Risk

42. Updated projections point to stronger medium-term operational income than expected at the time of the 2022 review, still subject to concentration risk.

- Based on the existing arrangements scenario, total operational income, excluding the impact of any pension-related (IAS 19) gains or losses, would exceed total expenditures by about SDR 2.2 billion annually on average in the five-year period through FY2028 (Figure 13).¹⁹
- Operational income is strengthening and is about one-third higher than at the 2022 review, underpinned by both higher lending and non-lending income projected over the medium term. Higher lending income under current arrangements reflects mainly the 25 percent increase in the medium-term average credit outstanding. Investment income is projected to rise gradually over the medium term on account of: (i) a sizeable upward shift in the projected medium-term SDR interest rate path since the last review on the back of inflationary expectations; and (ii) the accelerated pace of reserves accumulation and subsequent investment.
- Medium-term expenses are projected to be higher than at the last review because of the higher U.S. inflation rate.
- Concentration risks remain substantial. Of the average lending income projected for the two-year period through FY 2025, surcharges account for about 55 percent of the total, while margin income contributes around 35 percent. About 53 percent of surcharge income is accounted for by the Fund's largest borrower and another 39 percent by the next four largest borrowers. Besides concentration, risks to income continue to include: (i) possible cancellations and changes in the timing of purchases under existing arrangements; (ii) uncertainty around inflation, the global interest rate environment, and the U.S. dollar/SDR exchange rate path; and (iii) the potential need for impairment recognition under IFRS 9, even though no provisions for impairment have been recognized to date (Box 3).

¹⁹ Operational income is made up of lending income (the margin for the rate of charge, service charges, commitment fees, and surcharges); and non-lending income which comprises mainly income from investments.

Figure 13. Medium-Term Projected Operational Income and Expenses: FY2024–28^{1/}
(In millions of SDRs)



Source: IMF Finance Department.

1/ Operational income (including surcharges) excludes IAS 19 gains and losses, includes investment income from the FI and payouts from the EA, and assumes no new arrangements. The endowment payout projection assumes a constant payout of the net asset value (in USD) starting in FY2024, adjusted for inflation in the following years. Operational income excluding surcharges systematically exceeds operational expenses.

2/ The item "other operational income" includes investment income, interest free resources income, and reimbursements related to the SDR Department and a recommencement of the PRGT reimbursement in FY2027. Cost estimates for RST reimbursement reflect initial estimates for the scale and unit costs of RST operations. Decisions on annual reimbursements of costs are expected to be made by the Board in the annual income paper starting FY2024.

3/ Includes margin income, service charges, and surcharges.

D. Financial Risks Related to Investment

43. Investment income (or loss) is part of the Fund's operational income, which feeds into the PBs. Its share in operational income has increased recently amid rising interest rates and is expected to account for one fourth of operational income in FY2024, and around a half in FY2029, based on the existing arrangements scenario. Hence, investment risk is a key consideration in PB reviews.

44. Financial risks related to the investment assets of the fixed-income subaccount (FI) and endowment subaccount (EA) remain elevated but the medium-term outlook for investment returns has improved given the recent increase in real interest rates. These two subaccounts of the IA have distinct investment objectives and pursue different strategies accordingly.²⁰ The FI comprises the bulk of the Fund's PBs and is invested to support its dual

²⁰ Please see *Annual Report of the Investment Account and Trust Investment Assets for FY2023* (EBS/23/88, July 2023).

objective of income generation and balance sheet protection. The EA's purpose is to provide meaningful income contribution to cover the Fund's administrative expenditures while preserving the long-term real value of the Subaccount's resources. Since the last PB review, the performance of all investment portfolios has improved as market returns began to recover from a sharp market correction. The return outlook for the portfolios has also improved thanks to higher interest rates. Relatively high US inflation and inflation uncertainty continue to present challenges over the short to medium term, particularly for the EA which has a US dollar real return target. The investment strategy refinements implemented following the Board's Review of the Investment Account in January 2022 will help ensure that the specific strategies for each portfolio maintain an appropriate balance of risk and income generating potential. Highlights for each IA subaccount follow below:

- **FI investments.** The FI's performance has recovered in FY2024 as higher bond yields have provided some cushion to further interest rate increases. In FY2022, the FI experienced its first annual loss since inception as short duration fixed-income assets recorded their worst performance in decades. With its two-tranche structure, the FI strategy remains relatively resilient as it outperformed comparable benchmarks such as the SDR 1-3 year government bond index.²¹ With government bond yields and credit risk premia now at higher levels, prospective returns of the FI as well as investment income are notably higher than in the past. While the FI strategy has a reasonably high chance of meeting its investment objective over a 3 to 4 year investment horizon, the expected margin over the SDR interest rate remains highly uncertain and dependent on the path of short-term interest rates as well as the adverse effects of inverted yield curves in most SDR markets.
- **EA investments.** Following a sharp market correction in both fixed income and equity markets in FY2023 H1, the EA's performance began to recover in FY2023 H2, which continued in FY2024-to-date amid heightened market volatility. Recent market movements have markedly improved the long-term return outlook, particularly in nominal terms. The broader and more diversified allocation to real assets recently implemented in the EA is also expected to improve the portfolio's real return over time. The EA is projected to achieve its 3 percent real return target in US dollar terms with around 50 percent probability over a long-term 15-year horizon, taking into account the time needed for the EA to recover from the shortfall against the real return target driven mainly by the sharp increase in US inflation over the past two years. Commencement of the EA's payout was further delayed in FY2023 following the erosion of its cushion of retained investment income. Under the current Board-approved framework, the possibility of an initial EA payout will be evaluated in April 2024.

²¹ Tranche 1 is a short-duration portfolio in which external managers can invest actively across a broad universe of diversified fixed-income assets, while Tranche 2 is a longer duration portfolio managed according to a buy-and-hold approach.

ASSESSMENT OF THE ADEQUACY OF PRECAUTIONARY BALANCES

The medium-term PB target of SDR 25 billion remains comfortably within the indicative range and above its mid-point in the most plausible demand scenarios, as was the case in the 2022 review. While credit outstanding has increased compared to end-September 2022, there are no expectations of a major further surge in the demand for Fund resources at this stage. The overall balance of credit and financial risks is broadly unchanged from the previous review, with a stronger burden sharing capacity providing some additional risk mitigation. Against this backdrop, staff proposes to retain the current target of SDR 25 billion. The current level of PBs, together with other elements of the financial risk management framework and the IFRS 9 provisioning framework, provides a robust level of financial protection for the Fund's balance sheet and creditor claims. Staff proposes to increase the minimum floor to SDR 20 billion, which is justified by expectations of higher and longer credit cycles, with elevated commitments under precautionary arrangements, and would help reduce income risks.

A. Indicative Precautionary Balances Target

45. The adequacy and robustness of the current PB target is assessed using the forward-looking measure of GRA credit outstanding over three years under different lending demand scenarios. An “existing arrangements” scenario, which assumes no new Fund arrangements beyond those approved as of end-December 2023, purchases and repurchases made as scheduled, and no early repurchases and no drawings under existing precautionary arrangements (FCLs, SLLs and PLLs), served as a starting point of the analysis. Staff considered demand for Fund lending through FY2026 under three additional scenarios: (i) desk survey scenario; (ii) WEO model-based scenario; and (iii) adverse scenario.

46. Under the “existing arrangements” scenario the SDR 25 billion PB target stays within the indicative range in FY2024 and exceeds it in FY2025. In this scenario, the forward-looking measure of credit outstanding would reach SDR 86.9 billion in FY2024, SDR 12 billion higher than projected previously (Table 4, column 1). The PB target would be close to the upper bound of the calculated indicative PB range of SDR 17.4 – 26.1 billion in FY2024 (Table 4, columns 2–4, Figure 14). In FY2025, the target would exceed the upper bound of the indicative range of about SDR 24 billion.

Table 4. Forward Looking Credit Measure and Calculated Range for Precautionary Balances: FY2020–2025^{1/}
(In billions of SDRs)

	Forward-looking Credit Measure ²	Coverage		Mid-point of Bounds	Precautionary Balances Target ³
		Lower Bound 20%	Upper Bound 30%		
	(1)	(2)	(3)	(4)	(5)
Aug. 2020	82.2	16.4	24.6	20.5	20
Sept. 2021	88.3	17.7	26.5	22.1	25
Sept. 2022	86.4	17.3	25.9	21.6	25
<i>1. Current arrangements</i>					
FY2024	86.9 [75.1]	17.4 [15.0]	26.1 [22.5]	21.7 [18.8]	
FY2025	80.1	16.0	24.0	20.0	
<i>2. Desk survey</i>					
FY2024	89.5 [81.6]	17.9 [16.3]	26.8 [24.5]	22.4 [20.4]	
FY2025	85.6	17.1	25.7	21.4	
<i>3. WEO model-based scenario</i>					
FY2024	90.1 [106.8]	18.0 [21.4]	27.0 [32.0]	22.5 [26.7]	
FY2025	87.5	17.5	26.3	21.9	
<i>4. Adverse scenario</i>					
FY2024	129.3 [237.1]	25.9 [47.4]	38.8 [71.1]	32.3 [59.3]	
FY2025	166.6	33.3	50.0	41.6	
Memo					
Adverse scenario (100% FCL/PLL drawdown)					
FY2024	148.2	29.6	44.4	37.0	
Desk survey (10% FCL/PLL drawdown)					
FY2024	93.2	18.6	28.0	23.3	

Source: IMF Finance Department.

1/ Figures in square brackets represent projections at the time of the last review (see [Review of the Adequacy of the Fund's Precautionary Balances](#)). Figures for August 2020, September 2021 and September 2022 are calculations, based on existing arrangements from the previous three reviews, respectively.

2/ Three-year average of past 12 months average and projections two years forward.

3/ Before review completion.

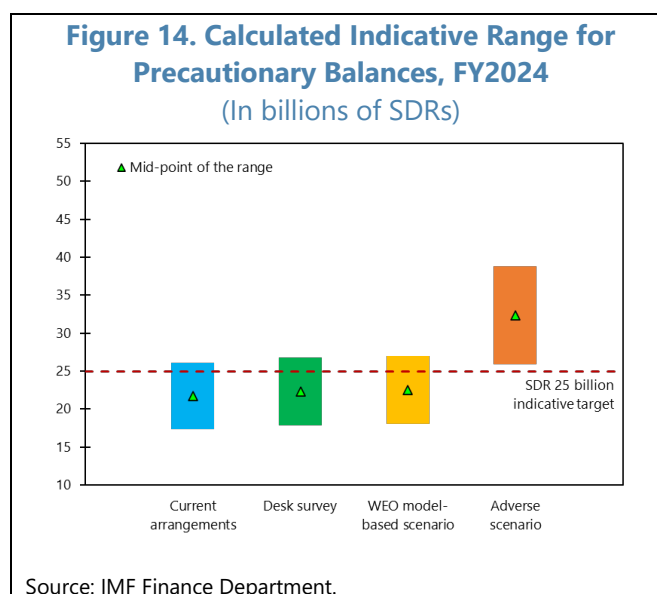
47. The target is expected to remain within the indicative range over the medium term in all but the adverse scenario, consistent with the results of the previous review (Table 4, Figure 14). Staff considered additional demand for non-precautionary Fund programs under three scenarios:²²

- **Desk survey scenario.** Projections for Fund GRA credit are derived from desk assessments of the likelihood of a program request in the next 24 months as of end-December 2023, based on member countries' economic outlook, financing needs, and political landscape. Compared to last year, the desk survey scenario also includes countries for which the timing of Fund support is judged by desks to be uncertain but the likelihood remains high based on financing needs. These additional cases are assumed to occur within the projected two-year timeframe covered by the forward-looking credit measure. This scenario comprises 12 countries that are expected

²² The data cut-off used for all the scenarios is end-December 2023.

to enter a new arrangement in FY2024–26 for a total demand of about SDR 14.7 billion, resulting in a higher forward-looking credit measure of SDR 89.5 billion in FY2024. The indicative range would increase to SDR 17.9 – 26.8 billion in FY2024, higher than in the previous review, with the current target for PBs still above the mid-point of the indicative range (Table 4). The target is just below the upper bound of the indicative range in FY2025.

- Model-based WEO scenario.** New demand for Fund arrangements is modeled on the *October 2023 World Economic Outlook (WEO) baseline* and is projected to reach SDR 21 billion over FY2024–26, bringing the indicative range to SDR 18 – SDR 27 billion in FY2024 (see Annex V for details), marginally higher than the desk survey scenario. The projected lower demand compared to the previous review reflects stronger global growth in 2022, lower external financing needs, lower financial market volatility, and strengthened buffers for net commodity exporters. The forward-looking credit measure in FY2024 would thus be SDR 17 billion lower than projected at the time of the last review. The indicative target of SDR 25 billion would remain within the indicative range in FY2024, above its mid-point. In FY2025, the target will be below the upper bound of the indicative range.



- Adverse scenario.** Demand for Fund resources is projected under worse global economic and financial conditions than in the model-based WEO scenario.²³ Under this scenario, new demand for Fund arrangements would reach SDR 185 billion in FY2024–26 (see Annex V). Following feedback received from Executive Board members in past reviews, the scenario assumes that existing FCL and PLL arrangements are drawn only partially (i.e., 50 percent, or SDR 28 billion) in FY2024–25, instead of the full drawing (100 percent) assumed in past reviews. Thus, the scenario is somewhat less severe than in earlier reviews and implies a forward-looking credit measure in FY2024 close to SDR 130 billion, about SDR 108 billion lower than under previous calculations. As a result, the FY2024 indicative range would fall to SDR 25.9 – 38.8 billion, with the SDR 25 billion target approaching the lower bound, compared to between SDR 47.4 – 71.1 billion in the 2022 PB review, based on full drawing of FCL and PLL arrangements.

48. Possible drawings under the precautionary arrangements in the desk survey demand scenario would shift the indicative range upward but would not alter the broad conclusions of the assessment. Commitments under existing and possible precautionary arrangements are

²³ The adverse scenario does not cover extreme tail risks such as those considered to assess the adequacy of Fund resources in the context of the 16th General Review of Quotas.

currently considered as part of the judgement in setting the medium-term target and are not reflected in the forward-looking credit measure. To further support Executive Directors in the application of judgment, staff calculates the impact of possible and simultaneous drawings under precautionary arrangements in the desk survey scenario. In Table 4, a memo line shows the forward-looking credit measure including a one-time partial drawdown of 10 percent of commitments under FCL and PLL arrangements in FY2024-25, close to the highest historical drawing rate experienced in 2020 (about 7 percent), for a total of about SDR 5.6 billion, with the remaining access treated as precautionary.²⁴ The resulting indicative range in the desk survey scenario would then shift to SDR 19 – 28 billion in FY2024, with the medium-term target still falling within the range.

49. The Fund's lending capacity stood at SDR 696 billion as of end-December 2023, slightly higher than at the previous review.²⁵ While lending capacity is not formally part of the framework for setting the indicative PBs target, it gauges the potential for future credit risks and has been considered relevant when setting the target as discussed in previous PB reviews. Before the introduction of the current PBs framework, the Executive Board had discussed a PB target to lending capacity ratio of 6 percent.²⁶ This ratio would yield an indicative target of about SDR 42 billion, 67 percent higher than the current target and just at the mid-point of the indicative range under the adverse scenario in Table 4.

B. Adequacy Assessment

50. The relevant risks faced by the Fund and risk-related mitigating factors appear broadly balanced, despite an unfavorable global outlook.

- **Global outlook:** The global economy is slowing as inflation declines from the multidecade peak in 2022 (see October 2023 WEO). The forecast is for near-term global growth to remain below historical standards – falling to 3.0 percent in 2023 and 2.9 percent in 2024 down from 3.5 percent last year. Global financial conditions have eased somewhat since March 2023. While the likelihood of a hard landing has subsided, the balance of risks to global growth remains tilted to the downside on account of growing headwinds from China's property crisis and ongoing climate and geopolitical shocks. Moreover, inflation remains uncomfortably high, fiscal buffers

²⁴ This analysis does not cover precautionary SBAs, as the undrawn balances are relatively small, amounting to SDR 1.4 billion as of end-December 2023.

²⁵ The Fund's lending capacity consists of the Fund's total usable resources, before any lending, less relevant prudential balances. As of end-December 2023, it comprises SDR 308.7 billion from quotas; SDR 278 billion from the New Arrangements to Borrow (NAB) which runs through end-2025; and SDR 108.8 billion from the Bilateral Borrowing Agreements (BBAs), the terms of which have been extended to 2024.

²⁶ At the 2002 Review of Precautionary Balances, before the current framework for the adequacy for PBs was adopted, staff had argued that the assessment of the adequacy of the Fund's PBs should be geared primarily to the Fund's credit capacity because of the Fund's ability to lend to individual members in large absolute amounts, cumulatively up to its credit capacity. At that time, staff had proposed to aim for a ratio of PBs to credit capacity of 6 percent. The Board, however, urged staff to develop a more comprehensive analytical framework to take into account credit capacity, credit concentration, and credit outstanding, which led to the adoption of the current framework for PBs in 2010.

have eroded in many countries, debt levels remain elevated, and funding costs are still high for emerging markets, leaving many Fund members vulnerable to crises.

- Credit and concentration risks:** Credit risks have increased, as highlighted by the worsening in weighted average sovereign ratings, along with the increase in credit outstanding. On the other hand, concentration risks have slightly decreased, even though the credit portfolio remains heavily concentrated. In particular, as PBs grew further, the ratio of the projected peak credit outstanding for the top borrower to the PBs level has fallen to 140 percent as of end-December 2023 from 158 percent in September 2022. More broadly, PB coverage ratios to credit, commitments and lending capacity continue to strengthen. Repurchases (including RFIs) remain concentrated in FY2024-25 albeit lower than at the 2022 PB review, with RFIs accounting for 37 percent. Regional concentration of credit exposure has declined slightly since the last review, while it has declined substantially on a commitment basis (see next bullet). As discussed in the 2022 PB review, the risks of correlated drawings under precautionary arrangements remain significant.
- Level and concentration of precautionary arrangements:** Commitments under the Fund's precautionary arrangements, including SBA, FCL, SLL and PLL arrangements have declined recently to about SDR 58 billion as of end-December 2023 reflecting reduced access in Mexico's successor FCL arrangement, and their concentration in the Western Hemisphere has declined as well, following the approval of new FCL arrangement for Morocco and PLL arrangement for North Macedonia.²⁷ Commitments under FCL and PLL arrangements in Western Hemisphere now account for around 59 percent of total commitments compared to 68 percent in the previous review.
- Emergency financing:** No new Rapid Financing Instrument has been approved since the 2022 review. The share of the credit portfolio accounted for by emergency financing instruments fell to 15.5 percent. However, repurchases are bunched in FY2024–25, and associated risks remain relatively high given the lack of ex-post conditionality.
- Burden sharing capacity and impact of arrears.**²⁸ The capacity of the burden sharing mechanism has more than doubled since the previous review to about SDR 1.3 billion, mainly on account of the surge in the SDR interest rate from about 2 percent at end-September 2022 to 4.1 percent at end-December 2023 (Annex VI). The current burden sharing capacity can cover about 22 percent of the Fund's projected charges falling due in FY2024, a marked increase compared to about 17 percent for FY2023 at the time of the last review. Staff estimates that in a hypothetical scenario where a member (or a group of members) accounting for about one-third of total credit outstanding become overdue in Fund obligations (charges and repurchases) over the medium-term (FY2024-FY2029), PBs in FY2029 would be about 20 percent lower than projected under the desk survey scenario, mainly driven by insufficient coverage of basic

²⁷ There is currently no short-term liquidity line (SLL) user. Under the framework, these commitments are not included in the calculation of the forward-looking credit measure but are taken into account judgmentally when setting the PB target.

²⁸ Charges that are overdue for six months or more are subject to burden sharing that is applied prospectively.

charges and surcharges through burden sharing. However, with current income projections (assuming unchanged charges and full transfer of net income to reserves), PBs would remain above the SDR 25 billion indicative target.²⁹

- **Lending policies.** Lending policies changes since the last PBs review do not appear to have significantly affected credit growth so far.³⁰ Going forward, reforms to the precautionary lending toolkit approved in October 2023 are expected to have a limited impact on the demand for GRA resources, even in a range of relatively severe scenarios.³¹

51. Based on the above considerations, staff proposes to retain the PBs target of SDR 25 billion for the time being. The current medium-term target for PBs would remain well within the indicative target range under the most plausible forward looking demand projections. There is no expectation of a major further surge in the demand for Fund resources in all but the adverse scenarios. The level of Fund commitments under FCL and PLL arrangements has declined most recently. Lending capacity would remain unchanged over the medium-term. The overall balance of credit and financial risks is broadly unchanged from the previous review, considering also favorable developments in a number of risk mitigants, and there have been no protracted arrears cases despite some recent challenging country cases. The targeted level of PBs provides a substantial buffer against financial losses and any adverse impact of potential protracted arrears cases would be expected to materialize only gradually and incrementally, buffered by a stronger burden sharing capacity, providing time for the Executive Board to revisit the target and adjust policies impacting the net income position as needed.

52. Staff will continue to closely monitor the adequacy of PBs to ensure that the Fund remains financially strong in the context of large global uncertainties. Staff proposes to maintain biennial review cycles, with earlier reviews if there are developments that could materially affect the adequacy assessment, including significant deviations of Fund lending from projections or material increases in credit or financial risks, including due to changes in lending policies.

C. Revisiting the Minimum Floor

53. The PB floor was included in the framework to ensure adequate income and address credit volatility. Under the framework, the floor is expected to be changed only occasionally, as it is based on long-term considerations. The floor was included in the framework for two main reasons: (i) Fund credit can be highly volatile and increase unexpectedly and rapidly, while it usually takes time to build PBs, which must thus remain above an adequate minimum level to protect against an unexpected rise in credit or deterioration in credit risks; and (ii) PBs represent an important source of

²⁹ The hypothetical scenario assumes that members in aggregate would have similar repurchases profiles and credit outstanding as a percentage of quota.

³⁰ These include: (i) temporal modification of the Fund's annual and cumulative access limits ([March 2023](#)); (ii) changes to the financial assurance policy in the context of exceptionally high uncertainty ([March 2023](#)); (iii) Six month extension of the Food Shock Window Under the RFI and RCI ([June 2023](#)); and (iv) review of the flexible credit line, the short-term liquidity line and the precautionary and liquidity line ([October 2023](#)).

³¹ See [Review of the Flexible Credit Line, the Short Term Liquidity Line, and the Precautionary and Liquidity Line, and Proposals for Reform](#)

Fund income, so a certain minimum level is essential for a sustainable income position under the New Income Model. Both income and credit risk considerations therefore need to be taken into account when assessing the adequacy of the minimum floor.

54. Staff proposes to raise the minimum floor from SDR 15 billion to SDR 20 billion based on developments in Fund credit and income risk considerations. The following arguments support raising the floor to SDR 20 billion:

- **Fund credit.** The Fund's credit environment, with higher and longer lasting credit peaks, as well as higher and more volatile total commitments (see Figures 2 and 3 and related discussion in paragraph 17), provides a rationale for maintaining a higher base level of PBs. In an environment of increased likelihood of successive global shocks, Fund lending can rise rapidly and remain at a high level for a prolonged time, implying increased and sustained credit exposures that require adequate buffers against financial losses. The increasing role of precautionary arrangements adds to the potential for sudden expansions in Fund credit. Since PBs take time to accumulate, preventing their possible erosion in periods of lower credit is becoming more important, which can be achieved in the current PB adequacy framework by setting a higher floor. A floor of SDR 20 billion would provide PB coverage for SDR 80 billion in credit at the midpoint of the current 20-30 percent indicative range, which appears prudent considering the Fund's recent lending history.
- **Income.** A higher PB floor would have the added benefit of reducing income risks. Fund income has historically been highly reliant on lending income. Investment income from precautionary balances provides for a greater diversification of the Fund's income sources, with a higher PB floor helping to stabilize Fund reserves and income during potential periods of lower Fund credit (Box 4).

Box 4. The Role of Precautionary Balances in Reducing Income Risks

Investment returns on PBs are increasingly contributing to Fund income and can help reduce income risks. To illustrate the stabilizing nature of investment income, staff has updated the analysis included in the 2016 PB review, which seeks to determine the minimum level of PBs needed to preserve overall Fund income at a sustainable level if lending income were to decline during a potential period of reduced Fund lending. The exercise is based on the following assumptions:^{1/}

- In a simulated low credit environment, Fund credit is assumed to decline to a range of SDR 30-50 billion by 2033. The lower end of this range exceeds the average credit outstanding in the five-years prior to the GFC but is consistent with the historical average of credit outstanding in nominal terms over 1960-2023. The upper end of the range represents the historical average over 1990-2023, reflecting a much higher level of Fund credit observed in recent decades.^{2/}
- No surcharge income is assumed and the margin for the rate of charge remains at the current level of 100 basis points.
- The SDR interest rate is assumed to stabilize at around 2 percent, moderately lower than the 2016 projection of 3 percent. Despite the recent spike, the SDRi remains at levels that are moderate by historical standards.

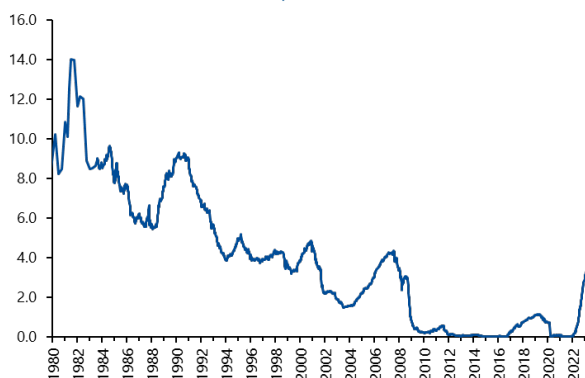
Box 4. The Role of Precautionary Balances in Reducing Income Risks (concluded)

- It is further assumed that the premium earned in the Fixed Income Subaccount (i.e. excess returns over the SDR interest rate) is 50 basis points, unchanged from the 2016 assumption.
- A more conservative payout from the endowment account of 1.5 percent per year is assumed (relative to 3 percent employed in the 2016 exercise) to better align with the prevailing return outlook and improve consistency with the EA's payout policy framework adopted in 2018.

Under these assumptions, the Fund's net GRA income position would be balanced with the returns generated by PBs in the range of SDR 21.2 – 29.2 billion. These illustrative simulations suggests that a floor of SDR 20 billion would be broadly appropriate to preserve a sustainable income position during a potential period of reduced Fund lending.

SDR Interest Rate, 1980-2023

(In percent)



Source: IMF Finance Department.

^{1/} See *Review of the Adequacy of the Fund's Precautionary Balances*, [April 2016](#), which reassessed the adequacy of the PB minimum floor and proposed to raise the floor from SDR 10 billion to the current SDR 15 billion.

^{2/} Fund credit averaged SDR 23.4 billion in 2004 – 2008. It peaked at SDR 65 billion in 2003 and then dropped to SDR 6 billion in 2007.

D. Projected PB Accumulation

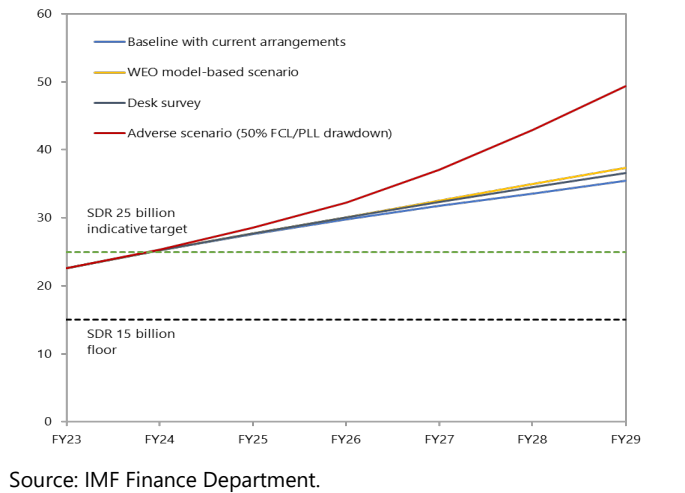
55. Under current policies, continued PB accumulation is expected that would soon push PBs above the medium-term target (Figure 15). The pace of accumulation of PBs has remained robust, given historically high levels of income. Under the most plausible lending demand scenarios, assuming unchanged policies on charges and no income or reserve distributions, PBs would reach around SDR 36–38 billion in FY2029.³² Under the adverse scenario, which leads to significantly higher new lending, the pace of accumulation would be even faster.

56. The projected path of PBs is subject to significant uncertainty and dependent on a range of policy decisions. Projections are sensitive to assumptions about potential new arrangements, and timely completion of program reviews. Further uncertainty arises from the elevated credit risks noted above and their potential impact on income. Additionally, the projections

³² All projections of PBs take into account the five-year suspension of the PRGT reimbursement of expenses for the FY2022–26 approved by the Board in July 2021; a 6 percent budget augmentation starting in FY2023 and phased-in in three equal increments before commencing full augmentation in FY2025; and unchanged levels of charges, surcharges and fees. Starting in FY2022, based on the new approach for calculating PBs, the impact of the IAS 19 gains and losses calculated under the accounting basis are excluded.

assume no transfers between FI and EA.³³ The Executive Board is expected to review and set the margin for the rate of charge in the context of the *Review of the Fund's Income Position for FY2024 and FY 2025* in April 2024 and a review of the surcharges policy is scheduled to take place during the course of 2024.³⁴ Any changes to current policies would have implications for projected income and PBs, as would any decisions related to distributions of net income or reserves, including as part of the discussions on the use of internal resources in the context of the *2024 Review of PRGT Facilities and Financing*.

Figure 15. Projected Precautionary Balances Under Alternative Scenarios: FY2023–29
(In billions of SDRs, end of financial year)



ENTERPRISE RISKS

57. The proposals of this paper seek to mitigate financial, business, and reputational risks for the Fund and residual risks remain low:

- Financial risks.** The proposals in this paper of maintaining the medium-term target at the current level, raising the floor for PBs, and making refinements to the framework for assessing the PB adequacy are expected to preserve adequate financial buffers. Adequate reserves are a crucial mitigation against residual financial risks, especially credit risks arising from large credit exposures and concentration in a context of weakening debt and growth prospects for many current and potential borrowers. Even with broadly adequate levels of PBs, residual risks remain. In particular, amid heightened global uncertainty and economic and financial challenges facing the Fund's borrowers, lending demand and credit outstanding could rise significantly more than projected in the paper and PBs could fall below the indicative target range, leaving the Fund with relatively smaller financial buffers to absorb ultimate credit losses. In this case, staff would engage the Board ahead of the two-year review cycle.
- Business risks.** The proposed medium-term target and floor for PBs provide added comfort regarding the quality of creditor claims at a time when the Fund is stepping up its engagement

³³ Under the Rules and Regulations for the Investment Account, the Board may authorize transfers between the accounts. Such transfers would have an impact on income as well as on the path of PB accumulation. The volatility of FI investment returns could also have an impact on PB accumulation, but staff estimates that it would be marginal compared to other factors affecting PB accumulation.

³⁴ Under Rule I-6(4), the Executive Board sets the margin for the basic rate of charge for a period of two years. The current margin of 100bps was set by the Executive Board in April 2022 and reaffirmed in a mid-period review in April 2023.

with members, thus mitigating business risks, in particular relating to the member engagement risk.³⁵

- **Reputational risks.** Relatedly, effective external communication about the rationale for the PBs proposal would be needed to address any reputational risks regarding the Fund's credibility in managing financial risks.

ISSUES FOR DISCUSSION

58. Directors may wish to comment on the following issues:

- Do Directors agree that the framework for the assessment of the adequacy of PBs remains broadly appropriate, including with the proposed refinements?
- Do Directors agree with staff's assessment of the credit risks facing the Fund?
- Do Directors agree that the indicative medium-term target for PBs should be retained at SDR 25 billion while being monitored closely?
- Do Directors agree that the minimum floor for PBs should be raised to SDR 20 billion?

³⁵ Risk that staff inadequately engages with members, including that the products and services offered by the IMF do not meet the needs of members.

Annex I. Financial Risks and the Role of Precautionary Balances

The Fund faces a range of financial risks in fulfilling its mandate. Precautionary balances complement other components of the Fund's risk management framework and provide buffers to absorb losses, should these arise as a result of credit, income, and other financial risks. This function is critical to protecting the value of members reserve assets and underpinning the exchange of assets through which the Fund provides assistance to members with financing needs.

1. The Fund faces a range of financial risks in fulfilling its mandate (see Box 1 in the section on Framework for Assessing Reserves Adequacy).¹ Credit risk is inherent in the Fund's unique role in the international financial architecture and is typically the predominant risk. The Fund also faces risks to its liquidity and adequacy of lending resources, risks to operational income and cash flows, market risks, and risks of financial loss in operations.²

2. PBs are a key element of the Fund's multilayered framework for managing credit risk from non-concessional lending.³ PBs complement the other components of the Fund's risk management framework and provide buffers to absorb losses, should these arise as a result of credit, income, and other financial risks.⁴ This function is critical to protecting the value of members reserve assets and underpinning the exchange of assets through which the Fund provides assistance to members with financing needs.⁵ The other components of the Fund's multilayered risk framework are:

- *Program design and conditionality*, supported by a rigorous internal review process, are tailored to the borrowing country to help members resolve their balance of payments difficulties and address other vulnerabilities while supporting growth.
- *Lending policies*, which aim at helping members resolve their balance of payments difficulties, include elements designed to discourage long or excessive use of Fund resources (standard

¹ Financial risks are a component of the large set of enterprise risks that the Fund faces. Other enterprise risks include reputational risk, strategic risk, business risk, environmental, social and governance risk, and operational risk.

² The Fund has no exposure to exchange rate risk on its holdings of member currencies as Fund credit and borrowings are all denominated in SDRs, and members are required to maintain the SDR value of the Fund's holdings of their currencies. The Fund does not incur interest rate risk on its credit as the rate of charge is linked by means of a fixed margin to the cost of financing (the SDR interest rate).

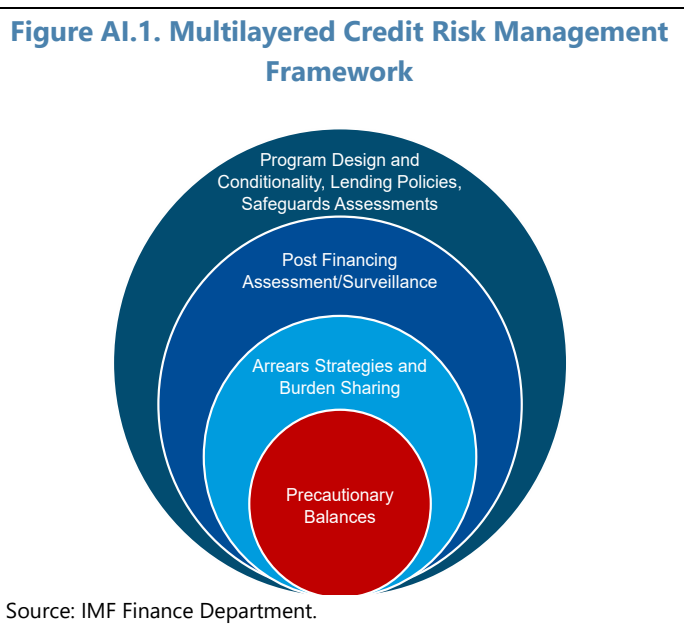
³ The Fund's concessional lending operations are trust-based, so the associated credit and liquidity risks cannot impact the GRA's balance sheet. In addition, Article V, Section 2(b) requires that financial services provided to the trusts may not be on the account of the Fund, and such operations cannot impact GRA resources.

⁴ For instance, the Fund drew on its PBs during FY2007–08 and in FY2020 to cover net income losses due to a large IAS 19 adjustment. Starting in FY2022, based on the new approach for calculating PBs, the impact of the IAS 19 gains and losses calculated under the accounting basis are excluded.

⁵ Although the Fund's gold holdings are another important factor of strength in the Fund's financial position, they are not part of or an alternative to the Fund's PBs given the limitations and restrictions on their use.

access criteria and limits, charges and surcharges, the exceptional access and early repurchase policies).

- *Safeguards assessments* aim to provide assurance that Fund resources are adequately monitored and controlled.
- *Post financing assessments and surveillance* allow the Fund to monitor and help strengthen policies affecting the repayment capacity of members with credit outstanding beyond the program period, as well as members with credit from outright purchases under emergency financing.
- *The Fund's de facto preferred creditor status* supports its ability to lend when others may be unwilling or unable to do.
- *The cooperative arrears management strategy and the burden sharing mechanism* help address overdue financial obligations when they arise and limit their impact on the Fund's income and balance sheet.
- *Precautionary balances* are available to absorb losses that may arise from any residual credit or other financial risks that could materialize after the application of the other risk management layers.



Annex II. The Special Contingent Account-1 (SCA-1) and Potential Successor Account

This annex summarizes previous Executive Board discussions on a successor account to the First Special Contingent Account, which yielded mixed views on the merits of establishing such an account.

1. The First Special Contingent Account, or SCA-1, was established in 1987 in the context of rising arrears to the Fund. The SCA-1 protected against the risk of a loss resulting from the ultimate failure of a member to repay its overdue obligations in the GRA, playing an important role in protecting against the need for provisioning. With the exception of the initial placement in FY1987, it was funded largely through contributions made via the burden sharing mechanism. From the period of the establishment of the SCA-1 in 1987 until the suspension of accumulations in 2006, SDR 1.7 billion was raised. Relative to the size of recent protracted arrears to the Fund, the SCA-1 provided a meaningful buffer that could cover potential losses due to the ultimate failure from these members in arrears to repay the Fund. Distributions of SCA-1 balances have been used to facilitate the provision of debt relief for three protracted arrears cases (Liberia, Somalia, and Sudan). Following the clearance of the last arrears case (Sudan) in June 2021, the balance on the account was reduced to zero and is inoperative.

2. The SCA-1 added to the Fund's precautionary balances alongside its reserves. However, it differed from reserves in that it was intended to provide protection against the risks posed by overdue obligations only, and the Fund's Executive Board had the discretion to allocate to the SCA-1 and reduce its balance by distributing the resources when deemed necessary. Reserves instead constitute an accumulation of income over time to protect the entity from various forms of future losses, including credit losses.

3. Previous discussions on a successor account to the SCA-1, including during the 2021 interim precautionary balances review, yielded mixed views among Directors on the merits of such an account. Any new funding for a successor account would require the Executive Board to agree on a new framework for the operation of the account. While there was broad recognition that the SCA-1 had served the Fund well over the past three decades in protecting the Fund against the need for provisioning for impairment losses, views differed on the merits of establishing a successor account. The merits of establishing a successor account, most notably the potential to protect against the need for provisioning, were weighed against other considerations including the small level of protection such an account would provide in case of a default by a large debtor member, and the related cost to members given other pressing financing needs.

4. The SCA-1 has proven to be most relevant for relatively small credit exposures and the same would apply to any successor account, assuming that it is funded via the burden sharing mechanism. As of December 31, 2023, the largest five users of GRA credit represented 68 percent of the total credit outstanding balance. In contrast, the pace of accumulation of a potential successor account would be limited by the burden sharing capacity and therefore expected to be slow even

with the SDR interest rate reaching decade highs in recent months. Given the level of credit concentration, along with the Fund's credit outstanding hovering at levels close to all-time historical highs, and the slow pace of accumulation, establishing a successor SCA-1 account is unlikely to provide adequate protection against the need to provision under current circumstances.

5. In staff's view, the accumulation of balances in a successor account would impose a burden on both debtors and creditors in an already challenging global financial environment.

Debtor members would be further burdened in addition to their borrowing obligations, and while GRA creditors and borrowers would contribute in roughly equal proportions to the potential successor account, creditors in aggregate have a much larger quota share than borrowers.

Annex III. Overview of Capital Adequacy Frameworks in IFIs

This annex summarizes the capital adequacy frameworks of selected IFIs presented in the 2010-2020 reviews and updates it with developments since then.¹ The IFIs have over time generally moved towards frameworks of capital adequacy covering several risk classes and using quantitative and risk-based measures to assess their risk exposure. More recently, changes to the capital adequacy frameworks have been in the direction of re-defining risk tolerance, and re-defining usable capital in response to the shareholders' recommendations to boost their lending and investment capacity.

1. IFIs' capital adequacy framework address credit risks, market risks, and operational risks. Credit risk generally remains the most important risk faced by IFIs, and usually accounts for the largest share of capital requirements.

- The **International Bank for Reconstruction and Development** (IBRD) holds capital to cover credit risks, market risks (including interest rate risk, exchange rate risk, and liquidity risk) and operational risks. The key measure of capital adequacy is the equity-to-loans ratio (ELR). The minimum ELR was decreased from 20 to 19 percent as a part of reforms aiming at increasing the IBRD's financing capacity in June 2023.²
- The **Inter-American Development Bank** (IDB) establishes capital requirements for credit risks, market risks, operational risks as well as for obligations related to retirement. The IDB introduced the risk-equity measures as part of its new capital adequacy policy in 2010. In 2017, the Bank started using a debt-to-equity measure to complement its capital adequacy risk-based constraints. The ratio, based on a gross debt concept, has an upper limit of four (gross debt cannot be larger than four times equity, i.e., equity cannot be lower than 25 percent of gross debt).³
- The **Asian Development Bank** (ADB) holds capital for risks including interest rate risk as well as currency risk and operational risk, in addition to equity investment risk, treasury counterparty risk, pension risk, currency risk, and as a risk buffer for noncredit risk. The ADB used the equity-to-loan ratio as key capital adequacy measure until 2008, with a target of 35 percent. In 2017, the ADB established a minimum ELR at 34 percent, after the Asian Development Fund lending resources were merged with the ADB's ordinary capital resources. However, the reporting of the

¹ International Monetary Fund, 2021, Review of the Adequacy of the Fund's precautionary balances, [Review of the Adequacy of the Fund's Precautionary Balances \(imf.org\)](#).

² International Bank for Reconstruction and Development, 2023, Financial Statement, [IBRD MD&A FY23 Q4 \(worldbank.org\)](#).

³ This was done to provide a transparent and easily comparable measure that could be used by credit agencies and to benchmark against other MDBs. See Inter-American Development Bank Annual Financial Statements [Inter-American Development Bank Annual Report 2022: Financial Statements \(iadb.org\)](#).

ELR has since been discontinued, and the capital utilization ratio (CUR) is now used to measure capital adequacy and for planning. The CUR is capped at 90 percent in the base scenario.⁴

- The **European Bank for Reconstruction and Development** (EBRD) uses a measure of required capital to available capital as part of its capital adequacy framework, which assesses risks including credit risk, market risk and operational risk. Required capital is defined as the amount of capital that, considering the potential capital losses that could be incurred into, would still allow the Bank to maintain an AAA credit rating. The policy threshold for the ratio of required capital to available capital is 90 percent.⁵
- The **African Development Bank** (AfDB)'s risk management framework covers risks including credit risk, operational risks, counterparty and legal risks, and interest rate, currency, and liquidity risks. The framework requires the bank to maintain risk capital to manage such risks, and the AfDB uses a Risk-Capital-Utilization Ratio as key metric for the Bank's capital adequacy. The total risk capital utilization for any country is capped at 15 percent of the Bank's total risk capital.⁶
- The **Bank for International Settlements'** (BIS) capital framework covers credit risk, market risk, and operational risk. Economic capital, calculated using value-at-risk (VaR) analyses, is set aside for these risks. In addition, the BIS capital framework prescribes that a minimum floor of capital reserve of 15 percent of Common Equity Tier 1 capital should be maintained as "minimum capital cushion".⁷ The calculation of minimum capital requirements for credit risk follows the Basel advanced internal ratings-based approach, with the minimum capital requirement set at 8 percent of the risk-weighted assets. Similarly, the minimum capital requirement for market risk is 9 percent following a banking book approach and the requirement for operational risk is 8 percent of risk-weighted assets, based on a VaR approach.
- The **European Stability Mechanism** (ESM) uses a Risk Management Framework to handle both financial and non-financial risks, including credit risk, market risk, liquidity risk, and operational risk. The framework sets forward limits so that risks are maintained within the defined risk appetite. Credit risk deriving from financial assistance is mitigated through the ESM capital

⁴ Asian Development Bank, 2003, Financial Report 2022, [ADB Financial Report 2022: Management's Discussion and Analysis and Annual Financial Statements](#).

⁵ European Bank for Reconstruction and Development, 2023, Financial Report 2022, European Bank for Reconstruction and Development [EBRD Financial Report 2022](#).

⁶ African Development Bank Group, 2003, Financial Report (2022) Financial Management and Financial Statements for the Year Ended 31 December 2022, [AfDB Annual Reports / Financial Reports | African Development Bank Group - Making a Difference](#).

⁷ Bank for International Settlements, 2023, Annual Report 2022/23, [Annual Report 2022/23 \(bis.org\)](#).

structure and the possibility of capital calls.⁸ A minimum 15 percent ratio between the paid-in capital and outstanding amount of ESM issuance should be maintained.⁹

2. The capital adequacy frameworks of multilateral development banks (MDBs) are undergoing important improvements to boost lending and investment capacity to strengthen their role in addressing global crises. In 2021, the G20 commissioned an independent review of Capital Adequacy Frameworks (CAFs) for MDBs which recommended improvements in addressing shareholders' risk tolerance, financial innovation, and in the incorporation of market indicators into capital adequacy frameworks. Currently MDBs are at various stages of implementing some of the guidelines of the Independent Review and are estimated to increase their lending capacity in the next 10 years through following CAF review recommendations.¹⁰ Examples include the ADB, where a new CAF introduced in September 2023 is expected to increase resources for lending by \$100 billion over a decade.¹¹ The AfDB has followed several of the G20 recommendations, including using financial innovation to create more space for lending through hedging its portfolio credit risk ("Room 2 Run Sovereign Operation"). The IDB and EBRD are also expected to increase their lending capacity in the next ten years through measures such as hybrid capital issuance and portfolio risk transfers.¹²

⁸ European Stability Mechanism, 2023, 2022 Annual Report, [2022 Annual report \(europa.eu\)](#).

⁹ European Stability Mechanism, 2012, Terms and conditions of capital calls for ESM, [02 April 2012 \(europa.eu\)](#).

¹⁰ See Table 2 from "G20 Roadmap for the Implementation of the Recommendations of the G20 Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks" (2023) [G20 Roadmap for MDBCAF.pdf](#).

¹¹ Asian Development Bank, 2023, The Balance Sheet Optimization Journey, [The Balance Sheet Optimization Journey \(adb.org\)](#).

¹² See Table 2 from "G20 Roadmap for the Implementation of the Recommendations of the G20 Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks" (2023) [G20 Roadmap for MDBCAF.pdf](#).

Annex IV. Credit Risks on IMF Lending—Modeling Previous Episodes of Protracted Overdue Financial Obligations¹

This annex explores credit risks to the IMF's lending portfolio by identifying factors associated with previous episodes of protracted overdue financial obligations ("arrears") to the institution. Quantitative analysis finds that the likelihood of arrears has been influenced by domestic macroeconomic conditions, external liabilities and buffers, state fragility, institutional quality, and a previous history of arrears and credit outstanding to the IMF. Overall, these quantitative factors do not currently point to a substantial likelihood of new arrears cases, though risks are rising from earlier low levels. However, given the rarity of instances of arrears to the Fund as well as the sizable heterogeneity among individual cases, this does not rule out risks from other factors.

Table AIV.1. Protracted Arrears Cases^{1/}

Arrears start	Countries				
1975	Cambodia				
1983	Guyana	Nicaragua			
1984	Chad	Liberia	Sierra Leone	Vietnam	Sudan
1985	Gambia, The	Peru	Tanzania	Zambia	
1986	Jamaica	Zambia			
1987	Honduras	Panama	Sierra Leone	Somalia	
1988	Congo, Dem. Rep. of the	Haiti	Honduras		
1990	Congo, Dem. Rep. of the	Dominican Republic	Iraq		
1991	Haiti				
1992	Bosnia and Herzegovina	Yugoslavia, Fed. Rep. of			
1993	Central African Republic				
1995	Afghanistan				
2001	Zimbabwe				

Source: IMF Finance Department.

1/ The Socialist Federal Republic of Yugoslavia ceased to be a member, effective December 13, 1992, and is not included in the analysis.

1. Arrears to the IMF escalated rapidly during the 1980s before gradually subsiding.

Protracted episodes of overdue financial obligations have been predominantly clustered in the 1980s and early 1990s, with the number of cases dropping off rapidly after that (Table AIV.1).² The majority (75 percent) of these episodes were observed in Low-Income and Developing Countries (LIDCs), while the remaining 25 percent were in Emerging Markets (EMs). As of 2023, there are no ongoing episodes of protracted arrears.

2. This annex uses random forest (RF) and logit models to investigate the degree to which episodes of arrears can be explained by country-specific economic and institutional

¹ Prepared by Tsendsuren Batsuuri, Chiara Ferrero, Ruofei Hu, Kalika Likhi, and Andrew Swiston.

² Protracted arrears are defined as overdue financial obligations to the Fund of six months or longer.

factors, global conditions, and IMF-specific credit indicators.³ The data poses econometric challenges stemming from the small number of arrears onsets—only 29 since 1980—and the clustering of most episodes in the 1980s and early 1990s. Thus, variables sharing the same trend could be significantly correlated with the emergence of arrears without a causal role in triggering them. The logit model was estimated to provide a direct correspondence between independent variables, model coefficients, and country-specific predicted likelihoods. The RF model was deployed to help address the severe class imbalance (countries with outstanding IMF credit enter protracted arrears in fewer than 1 percent of observations), by employing sampling techniques and stratified cross-validation during the model training process. The RF approach also automatically considers non-linearities and interactions, which can provide insight to the substantial heterogeneity across arrears cases.⁴ The models focus on identifying the triggers of new protracted arrears episodes using lagged explanatory variables in order to identify factors that provide early warning of the likelihood of arrears, and are estimated using data from 1980 through 2019 for all countries with IMF credit outstanding.

3. The logit and RF models reach broadly similar findings about the factors that are associated with the onset of protracted arrears. Table AIV.2 shows coefficients and statistical significance for the logit model, with separate models for 1980-1994 and 1980-2019 given the clustering of episodes in the earlier period. Figure AIV.1 shows variable importance and effect size and direction for the RF model. The main findings are as follows:

³ See Oeking, A., and M. Sumlinski, 2016, "Arrears to the IMF—A Ghost of the Past?," IMF Working Paper 16/225. See also Aylward, L. and R. Thorne, 1998, "An Econometric Analysis of Countries' Performance to the International Monetary Fund," IMF Working Paper 98/32, and C. Oka, 2003, *Anticipating Arrears to the IMF: Early Warning Systems*, IMF Working Paper 03/18.

⁴ The Random Forest (RF) model is optimized differently from traditional econometric methods by prioritizing out-of-sample performance to prevent overfitting in-sample. In this case, to match the Logit model, the RF model was trained on data from 1980-1995 and fine-tuned using expanding window cross-validation with a one-year gap considering the time dependence in the data.

Table AIV.2. Logit Model Estimation Results

VARIABLES	(1)	(2)	(3)	(4)
	Protracted arrears: Episode start year			
	Base model		Macro only	
	1980-94	1980-2019	1980-94	1980-2019
Institutional quality	-0.602** [-1.961]	-0.672* [-1.906]	-0.644** [-2.297]	-0.686** [-2.127]
5-year real GDP growth	-0.028** [-2.093]	-0.011 [-1.425]	-0.027*** [-2.611]	-0.014* [-1.718]
Reserves to external debt	-0.114** [-1.972]	-0.159*** [-3.139]	-0.154** [-2.525]	-0.197*** [-3.367]
Inflation > 20 percent	0.981* [1.940]	1.292** [2.419]	1.110** [2.345]	1.353*** [2.754]
Previous short-term arrears to the Fund	1.332** [2.387]	1.467*** [2.716]		
IMF credit outstanding: change over previous 3-6 years	0.005** [2.473]	0.002*** [2.648]		
Constant	-4.325*** [-7.716]	-4.693*** [-9.764]	-3.716*** [-8.469]	-4.233*** [-9.887]
Observations	1,002	2,913	1,028	2,949
Number of countries	91	134	93	134
Pseudo R2	0.241	0.297	0.190	0.263

Source: IMF staff estimates. Explanatory variables are lagged one period. Robust z-statistics in brackets. *** denotes significance at 1 percent level; ** at 5 percent level; and * at 10 percent level.

Source: IMF staff estimates.

- *Domestic macroeconomic developments:* In both models, lower real GDP growth over a period of several years is associated with a higher likelihood of arrears, though the effects were stronger in the subsample through 1994. Higher domestic inflation is also associated with a higher likelihood of arrears, with the logit model finding the effects to be especially strong above a threshold of 20 percent per year.
- *External buffers and liabilities:* A lower ratio of international reserves to external debt is strongly associated with a higher likelihood of incurring arrears in both models. The RF model also finds the change in outstanding external debt to be important.
- *Institutions and fragility:* Lower state capacity as measured by the International Country Risk Guide's index of bureaucratic quality is associated with a higher likelihood of arrears. State

fragility and relative levels of GDP per capita are also associated with higher likelihood of arrears in the RF model.⁵

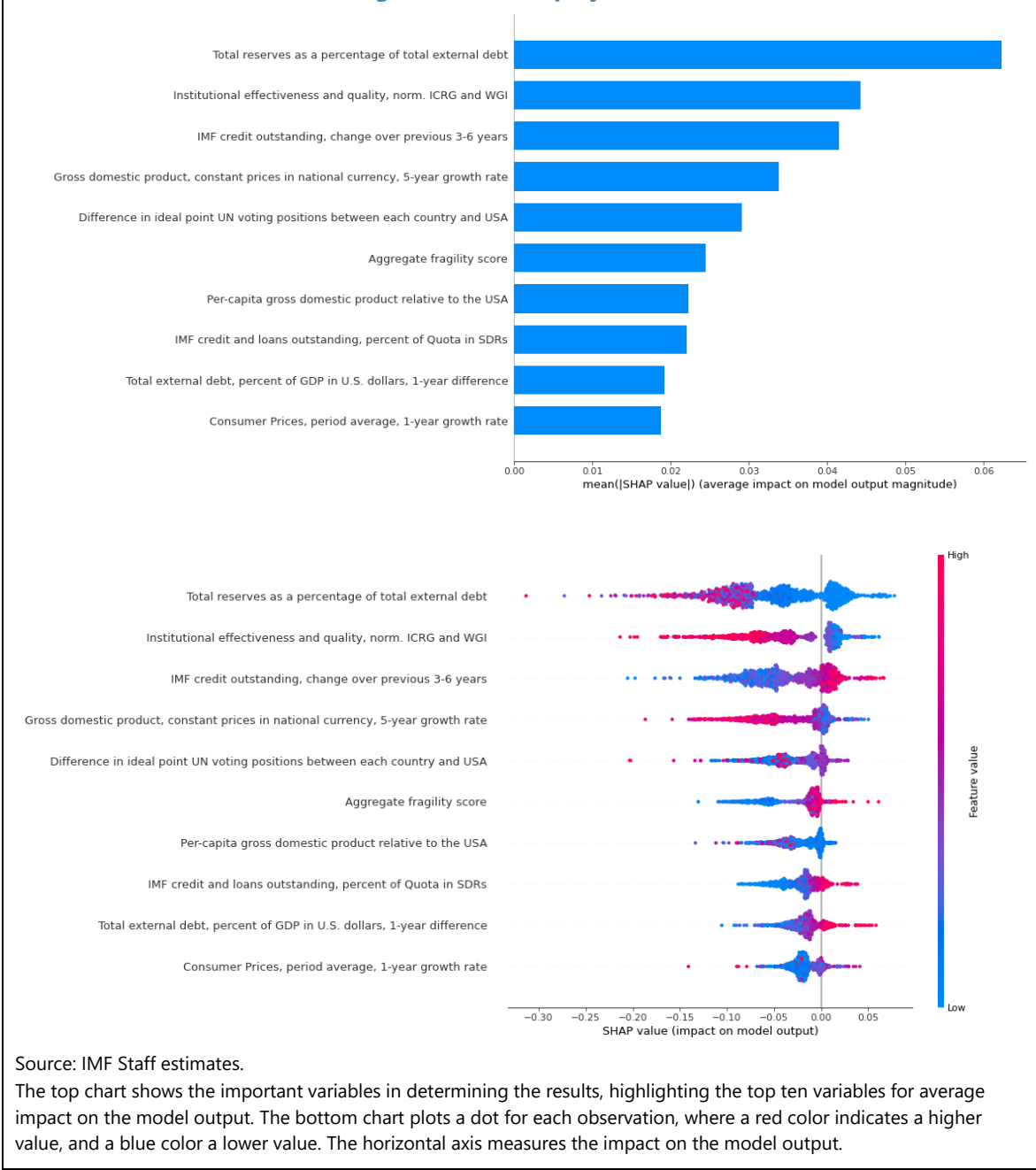
- *IMF-specific*: The existence of previous arrears to the IMF is associated with a higher likelihood of beginning a new episode of arrears. In particular, countries running short-term arrears (between one and six months) in one year have had a higher likelihood of beginning an episode of protracted arrears in the following year in the logit model. Moreover, both models find that countries with recent increases in IMF credit outstanding (from 3 to 6 years in the past, to proxy for the typical schedule of repurchases) have had a higher likelihood of arrears. However, in the logit results this effect weakened after 1994, as timely repayments were made on all exceptional access programs, some of which were for advanced economies whose repayment risk profiles differed relative to the earlier subsample.
- *Global environment*: In the RF model, distance between UN votes as measured in Bailey, Strezhen and Voeten (2017), geopolitical risk, and changes in the federal funds rate are also associated with the likelihood of arrears.⁶

4. Nevertheless, the models' predicted probabilities expose a wide range of unexplained heterogeneity. This is reflected both in arrears cases and in countries that remain current on their obligations to the IMF, highlighting the limitations to capturing all the relevant factors in any given model.

⁵ Fragility is measured using the index described in Atashbar, T., 2023, "How Nations Become Fragile: An AI-Augmented Bird's-Eye View (with a Case Study of South Sudan)." IMF Working Papers, WP/23/167

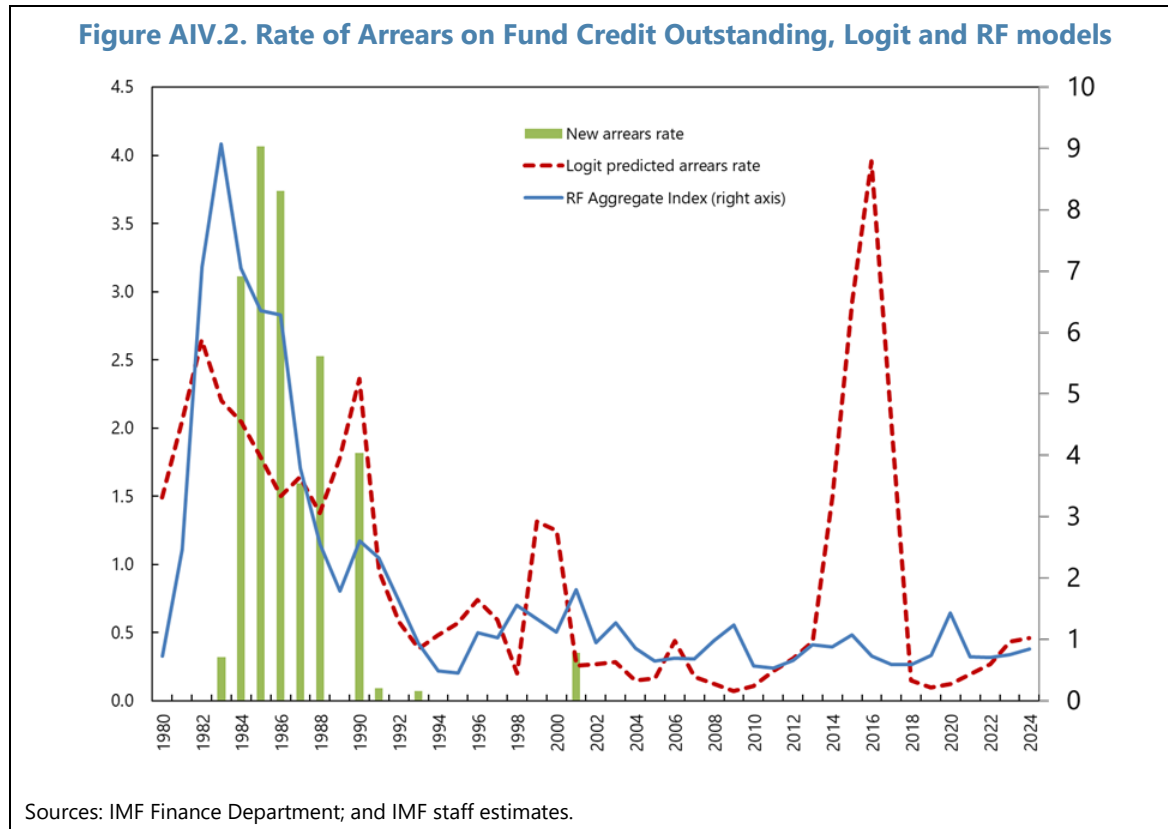
⁶ Bailey, M. A., Strezhnev, A., and E. Voeten, 2017, "Estimating Dynamic State Preferences from United Nations Voting Data," *Journal of Conflict Resolution*, 61(2), 430–456. <http://www.jstor.org/stable/26363889>

Figure AIV.1. Shapley Charts



Source: IMF Staff estimates.

The top chart shows the important variables in determining the results, highlighting the top ten variables for average impact on the model output. The bottom chart plots a dot for each observation, where a red color indicates a higher value, and a blue color a lower value. The horizontal axis measures the impact on the model output.



5. The models continue to predict a low likelihood of arrears in the IMF's current credit portfolio. Using macro forecasts for 2023 and 2024 and the latest values for the slower-moving variables, the logit model fitted arrears rate weighted by outstanding credit would remain below 1 percent in 2024, and the RF aggregate index would go from 0.7 percent in 2022 to 0.85 percent in 2024. These modest likelihoods appear to contradict the trends reflected in other indicators of the underlying credit risk of borrowers from the IMF, such as credit ratings weighted by outstanding IMF credit (Figure 11: Section Developments since the 2022 Review), which point to deteriorating creditworthiness over the last decade. With credit ratings focused on risks of sovereign distress and possible losses for market participants and thus not directly applicable to the IMF, the difference may be due to the fact that the IMF's current credit portfolio looks much like that of the recent past, with no new arrears cases, and therefore the models, which are fitted on historical arrears, continue to predict low probabilities.

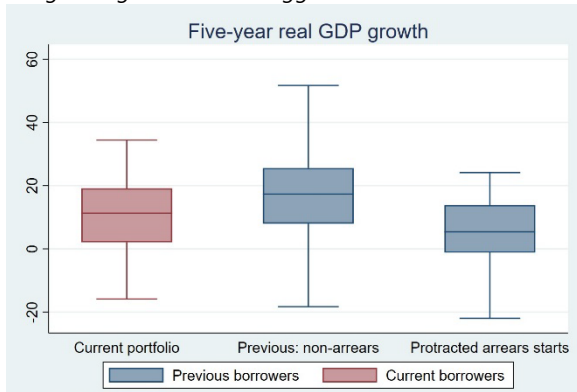
6. The low predicted probabilities generated by the models are in line with generally stronger macroeconomic fundamentals among current borrowers than those that have incurred arrears, though some key indicators are pointing to rising risks. Figure AIV.3 shows the distribution of variables among current borrowers, previous borrowers that have made timely repayments of their outstanding credit, and those that have incurred protracted arrears. Current borrowers are less likely to be experiencing extended slow real GDP growth, have substantially lower inflation, have lower external debt, and have higher institutional quality than typical protracted

arrears cases. However, the level of Fund credit outstanding is high among current borrowers, and while current borrowers generally have higher reserve coverage than those in the past, some borrowers have relatively limited reserves. These indicators, along with rising inflation and external debt among some borrowers could pose risks to repayment capacity.

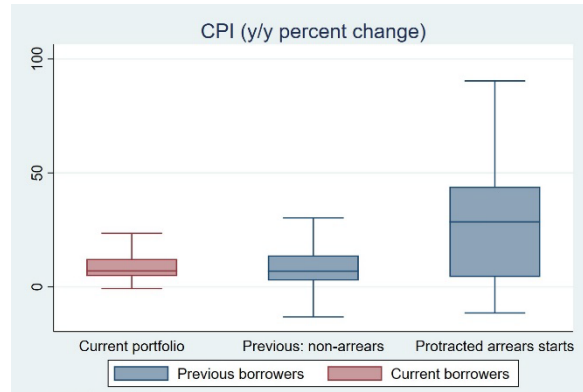
7. Overall, these quantitative factors do not point to a substantial likelihood of new arrears cases, though risks are rising from earlier low levels. The models' results highlight the existing limitations to including all credit risk-relevant factors in a single measurement or model, given the unexplained heterogeneity in estimates for both arrears cases as well as countries current on their obligations to the IMF. Economic fundamentals, structural features such as institutions, and repayment capacity metrics are all able to explain some of the historical occurrence of arrears cases, however the remaining unexplained heterogeneity points to a role for more qualitative factors. This suggests that the assessment of credit risk may benefit from using a range of tools and indicators, including both quantitative results and qualitative considerations.

Figure AIV.3. Economic Fundamentals of Countries Entering Protracted Arrears^{1/}

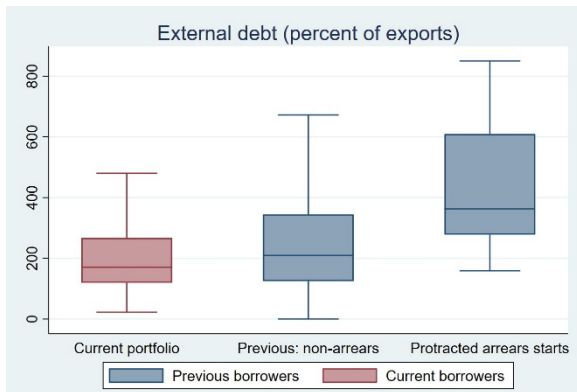
For borrowers in the current credit portfolio, economies are growing, albeit at a sluggish rate.



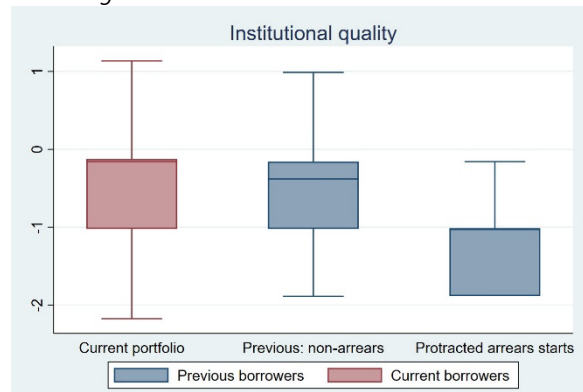
Inflation is generally below the levels typical of prior arrear cases...



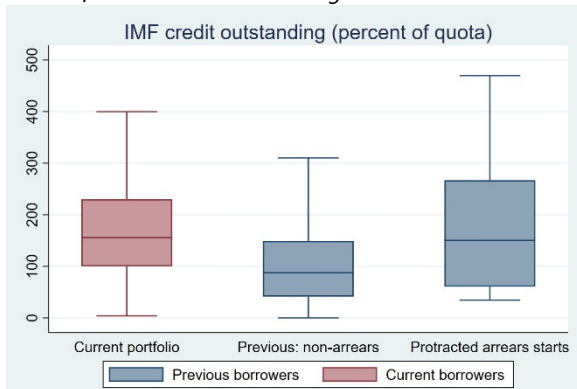
...as are external debt ratios.



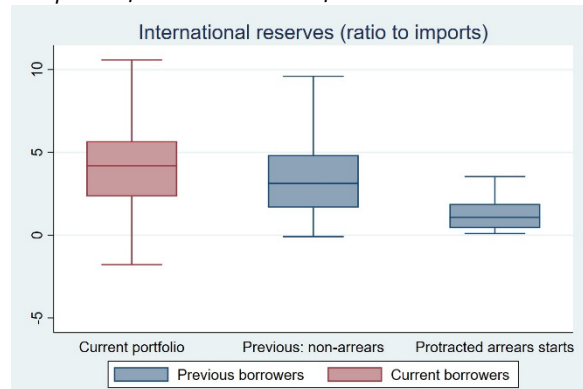
Institutional quality is higher overall, though there is a wide range across borrowers.



A substantial percentage of current borrowers have high levels of Fund credit outstanding.



However, reserves coverage is relatively strong, with the exception of a small number of borrowers.



Source: IMF staff calculations.

^{1/} The reference year for the current credit portfolio figures is 2023. The previous, non-arrears figures depict countries without IMF arrears over the 1980-2022 period. The protracted arrears starts figures depict countries with IMF arrears in the year when arrear episodes start (see Table AIV.1 for the list).

Annex V. Demand for New Programs

This annex explains the methodology used to project demand for new Fund credit under the WEO-based scenarios using the October 2023 WEO data. The updated analysis shows that under the baseline WEO global outlook new Fund arrangements would raise credit outstanding by around SDR 21 billion over the medium term. Precautionary balances would achieve the medium-term target of SDR 25 billion in FY2024, and assuming unchanged policies, could reach SDR 37 billion over the medium term, slightly higher than projected previously.

1. The analysis uses a panel logit regression to identify countries that are likely to tap IMF resources under the General Resources Account (GRA). Drawing from the literature, the model relates the probability of entering a new Fund arrangement to global and country-specific determinants. The sample covers 96 advanced, emerging and frontier market economies and 148 GRA arrangements over the period 1992–2021. Estimated results suggest that the probability of a country requesting Fund support increases with higher external financing needs, higher financial market volatility, tighter global financial conditions, and lower GDP growth, among other factors (Table AV.1). A threshold for the probability of entering a program is then determined by minimizing the weighted average of missed new arrangements (Type I error) and false alarms (Type II error) for the in-sample forecasts. Under the assumption of equal weights for Type I and Type II errors (i.e., a 1:1 ratio), the threshold is 3.1 percent.¹ Using this threshold, the model correctly identifies 93 percent of new programs over the period 1992–2021.

2. Estimated results are then used to predict the probability of sample countries entering an IMF arrangement in FY2024 and FY2025. The analysis uses the October 2023 WEO baseline data for each sample country for the next two years, and the 2023 year-to-date average VIX level of 17.4 to reflect the global economic outlook and financial market conditions. A country is assumed to enter into a new IMF arrangement if its predicted probability exceeds the 3.1 percent threshold in a given year. Under this approach, 21 countries are predicted to approach the Fund for a new arrangement, of which 12 are assumed to enter into an arrangement in FY2024-26.²

3. The potential call on Fund resources would be lower than estimated at the previous review. This reflects a combination of stronger global growth, lower external financing needs, and positive terms of trade shock. Access is calculated using the average size of Fund programs (excluding precautionary arrangements) in the past decade of about 5 percent of GDP, in each

¹ Type I error represents the ratio of actual new programs that the model failed to predict to total new program observations, while Type II error refers to the ratio of predicted programs that did not occur to total non-program observations. Higher thresholds of 8.8 and 16.2 percent are identified when Type I and Type II errors are minimized in the ratios of 2:1 and 3:1, respectively, as such an approach penalizes false alarms more and flags fewer countries requesting Fund's program.

² Staff assessed members' probability to request Fund financial support taking into account whether potential borrowers had already active precautionary and non-precautionary arrangements with the Fund, whether they had access to markets or other financing sources (e.g., through regional facilities), and whether they were eligible to obtain Fund credit under current policies.

identified case adjusting for outstanding Fund credit, projected disbursements and repurchases consistent with applicable exceptional access limits. Aggregate new demand for IMF financing under 12 arrangements could reach about SDR 21 billion over FY2024–26 compared to the 17 new arrangements totaling SDR 63 billion projected at the previous review.

4. Under the WEO model-based scenario, the outstanding stock of Fund credit and PBs are projected to increase by about SDR 21 billion and SDR 2 billion by FY2029, respectively, relative to projections based solely on current arrangements. A combination of two Stand-By Arrangements (SBAs) and 10 extended arrangements is projected, with even phasing over three years for SBAs and four years for extended arrangement. The average outstanding stock of Fund credit would stabilize at SDR 77 billion in FY2029 compared to SDR 56 billion if only current arrangements are taken into account (Figure AV.1). PBs would peak at SDR 37 billion over the medium-term, slightly higher than projections based only on current arrangements.

5. Additional demand for Fund resources over the WEO-based scenario could materialize in an adverse scenario.³ Staff considered, as in the previous review, an adverse scenario where the projected growth for 2023–24 for a country is assumed to fall by $\frac{1}{2}$ standard deviation of its historical values relative to the October 2023 WEO data. The growth shock is combined with a high financial market shock (VIX level of 40). In addition, it is assumed that (i) average access per arrangement is significantly higher than under the WEO model-based scenario at about 7 percent of GDP (excluding precautionary arrangements), given that access levels have historically been higher during crisis episodes and (ii) all current FCL and PLL arrangements are partially drawn (50 percent) compared to full drawing (100 percent) in the previous review. Under this scenario, demand for Fund program is estimated at SDR 184 billion, broadly unchanged from the previous review. Credit outstanding is projected to peak at SDR 233 billion in FY2028, exceeding the projection under the WEO model-based scenario by about SDR 149 billion. PBs would reach SDR 49 billion in FY2029, about SDR 12 billion higher than under the WEO model-based scenario

³ This scenario is reflective of significantly more challenging global economic and financial conditions.

Figure AV.1. Projected Precautionary Balances and Credit Path under Alternative Scenarios
(In SDR billions)

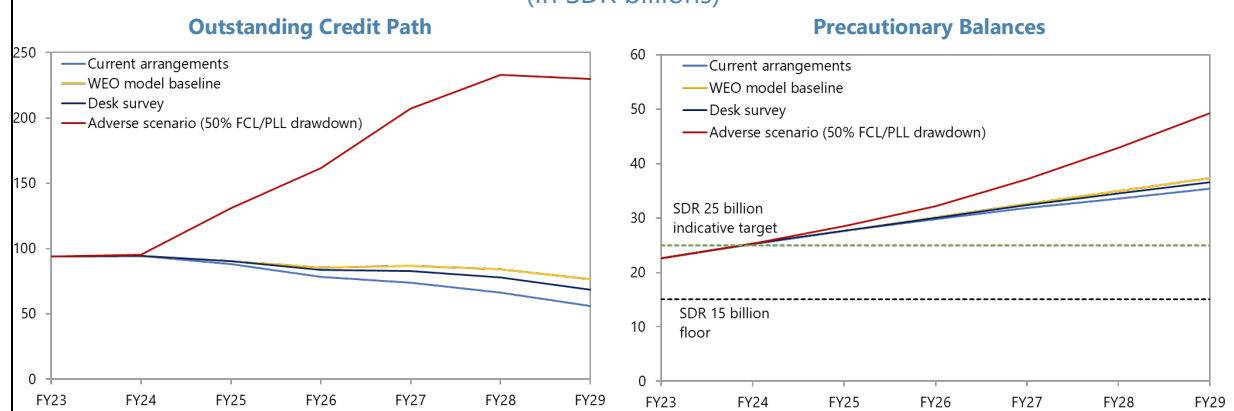


Table AV.1. Model Output

Independent Variables	dy/dx	Robust SE	P-value
Past program (dummy)	0.407***	0.063	0.000
Reserve accumulation	-0.0431	0.027	0.112
External Financing Needs	0.740**	0.310	0.017
GDP growth	-0.0663***	0.022	0.002
GDP per capita	-1.090***	0.190	0.000
GDP	0.0231	0.115	0.840
Credit gap	0.0203**	0.009	0.028
Exchange rate variation	0.0400	0.116	0.730
Government stability	-0.294***	0.075	0.000
3M US int. rate variation	0.120	0.128	0.350
Import coverage	-0.142***	0.046	0.002
VIX	0.0688***	0.026	0.008
Oil price	-0.00959	0.006	0.112
Access to RFA (dummy)	0.290	0.311	0.351
Pseudo R2	0.453		
Observations	2,289		
Countries	96		
GRA Arrangements	148		
Likelihood ratio (p-value)	0.000		

Notes: the table reports the coefficients of the panel logit estimation using random effects. A constant is estimated but not reported.

***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

Annex VI. Burden Sharing Capacity

This annex discusses the role of the Fund's burden sharing mechanism as well as the factors that determine its capacity. Since the 2022 review, the current burden sharing capacity has doubled, providing a stronger buffer to cover scheduled charges falling due under the Fund's exposures.

Role of the Burden Sharing Mechanism

1. **The burden sharing mechanism was established in 1986 to compensate the Fund for any unpaid charges by members in arrears (“deferred charges”), and in so doing, to offset the impact of unpaid charges on Fund income.** Under burden sharing, the Fund's creditor and debtor members contribute temporary financing in equal amounts to cover the amount of unpaid charges. This is achieved through increases in the rate of charge paid by debtor members and reductions in the rate of remuneration to creditor members.¹
2. **The burden sharing mechanism has proven important in protecting the Fund's income position and in enabling the Fund to recognize no impairment for its credit outstanding under International Financial Reporting Standards (IFRS).** Specifically, even though a member may not be meeting its obligation to pay charges, the collection of an equivalent amount from other members through the burden sharing mechanism enables the Fund to demonstrate that, on a net present value basis, there is no impairment of outstanding credit under IFRS.
3. **Should the loss of income from deferred charges exceed the capacity of the mechanism, the carrying value of the asset in arrears on the Fund's balance sheet may need to be reduced.** The deferred charges in excess of the burden sharing capacity would reduce the Fund's annual lending income and lower the pace of accumulation of PBs accordingly. Moreover, future cash flows due from members in arrears would not be expected to be collected in full, which could undermine the Fund's ability to demonstrate that the carrying value of credit outstanding has not been impaired, giving rise to the possibility of an impairment loss.² Recognition of an impairment loss arising from deferred charges would need to consider a variety of factors, including the unique nature of the Fund's financing mechanism, but could have a further negative impact on the Fund's net income and PBs.³

¹ These adjustments are currently set to match charges in arrears.

² Under IFRS, the amount of the loss is measured as the difference between an asset's carrying amount and the present value of estimated future cash flows.

³ Recognition of an impairment loss is not equivalent to writing off the outstanding claims against the member in arrears, since it does not relieve the member of its obligations to the Fund. The impairment loss may be reversed in future years as the arrears are cleared.

Capacity of the Burden Sharing Mechanism

4. The total capacity of the burden sharing mechanism to cover unpaid charges is the sum of the maximum feasible reduction in remuneration expenses and the maximum feasible increase in income from charges:

- Article V, Section 9 (a) of the Fund's Articles of Agreement states that the rate of remuneration shall be no less than four-fifths (80 percent) of the SDR interest rate, limiting the maximum reduction in remuneration expenses to: $0.2 * SDR \text{ Interest Rate} * Remunerated \text{ Reserve Tranche Positions}$. The Board has set the current floor for remuneration at 85 percent of the SDR interest rate, which may be changed with a 70 percent majority of the total voting power.⁴
- The maximum capacity of a symmetrical burden sharing mechanism is simply twice the above amount because debtors and creditors contribute equally.⁵ However, the contributing debtor base declines in the event of arrears, which may in practice limit the maximum feasible adjustment to the rate of charge without overburdening these members.

5. The burden sharing capacity depends on the following factors:⁶

- **Quota payments:** Quota increases typically result in higher reserve tranche positions (RTP), as members acquire additional liquid claims on the IMF as part of their quota payments.⁷ As reserve tranche positions increase, the remunerated portion also increases, thus allowing for a larger maximum reduction in remunerated expenses and higher burden sharing capacity.
- **Outstanding credit and borrowing by the Fund:** Reserve tranche positions also move in tandem with changes in outstanding credit financed from quota resources. Remunerated reserve tranche positions stood at about SDR 108 billion at the end of December 2023, slightly lower than the level at the time of the previous PB review and about SDR 9 billion in June 2008. However, no burden sharing adjustment is made to the interest paid to creditors on borrowed resources (New Arrangements to Borrow and bilateral loan or note purchase agreements). Therefore, outstanding credit financed by borrowed resources would not affect the Fund's burden sharing capacity.

⁴ See Decision No. 12189-(00/45), April 28, 2000, as amended.

⁵ Under the terms of the burden sharing Decision No. 11945-(99/49), adopted on April 30, 1999, the operation of the mechanism would need to be reviewed if the adjustment in the rate of remuneration falls below the agreed floor of 85 percent of the SDR interest rate. Absent any Executive Board decisions at such a review, debtor members would be required to cover any remaining amounts of unpaid charges through further (uncapped) adjustments to the rate of charge, and burden sharing would become asymmetric.

⁶ Burden sharing capacity can also be affected by other Fund operations and transactions involving changes in the GRA currency holdings, such as transfer of currencies to the Investment Account and sales of SDRs to members in exchange for currencies.

⁷ Quota increases paid in currencies do not affect members' aggregate RTP positions.

- **SDR interest rate:** as the burden sharing adjustment to the rates of remuneration is set as a proportion of the SDR interest rate, a higher SDR interest rate increases the total burden sharing capacity. The surge of SDR interest rate from its floor of 0.050 percent as of end-September 2021 to 4.103 percent as of end-December 2023, triggered the rise of total burden sharing capacity.

6. The burden sharing capacity has increased rapidly since the 2022 review of precautionary balance primarily owing to the rise in the SDR interest rate and a sustained level of remunerated reserve tranche positions. As of end-December 2023, the annual burden sharing capacity (based on the current floor for remuneration at 85 percent of the SDR interest rate) was about SDR 1,330 million, compared to SDR 657 million at the time of the previous review in 2022, SDR 23 million as of end-August 2020 for the 2020 review, and SDR 77 million in June 2008 (Figure AVI.1).

